Physicians' engagement

Qualitative studies exploring physicians' experiences of engaging in improving clinical services and processes

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Each of us tends to think we see things as they are, that we are objective. But this is not the case. We see the world, not as it is, but as we are – or, as we are conditioned to see it.

- Stephen Covey

Movements of individual thought are always social movements and none of us can change how we think all on our own; nor can we know in advance just how these changes in thinking will change how we find ourselves working.

- Ralph Stacey

Knowledge is like a sphere, the greater its volume, the larger its contact with the unknown.

- Blaise Pascal

ABSTRACT

Background: Physicians are engaged in the bio-medical and technical development of health care. In spite of consensus between researchers and practitioners that change initiatives benefit from engaging multiple care professionals, it is a persistent and well documented problem that physicians' engagement in developing clinical services and processes often is limited or missing.

Aim: The overall aim was to explore physicians' experiences of engagement in improving clinical services and processes, in order to gain more understanding about why such initiatives have problems engaging physicians.

Methods: Qualitative and explorative studies with semi-structured physician interviews as data collection method were used. Particular analytical approaches facilitated paying close attention to individual physician's experiences, while at the same time analytically striving towards finding an empirically grounded conceptualization of their experiences.

Results: *Striving for professional fulfillment* was found to be a central motivator affecting physicians' engagement for both clinical and development work. This conceptual model had two dimensions: *being useful* and *making progress*. Engagement was reinforced if the task at hand was experienced as contributing to professional fulfillment. Which tasks contributed to professional fulfillment was related to how medical practice was understood. Two alternative understandings emerged: the *traditional doctor role* and the *employeeship role.* Continuity, recognition, task clarity and role clarity were organizational conditions that facilitated engagement (I). Physicians and manager have different mindsets. This hinders cooperation. In order to improve the situation managers need to be appreciative of the mindset of physicians, and physicians need to better understand the mindset of managers (II). Physicians' experiences from the patient-centered and team-based ward round were predominantly found to contribute to better informed clinical decisions, fewer follow-up questions from patients and increased professional fulfillment. The new ward round also led to challenging experiences of reduced autonomy and exposing knowledge gaps in front of others (III). Different ways to understand medical practice were found based upon physicians' focal points during ward rounding; the *We-perspective* and the *I-perspective*. The *We-perspective* adheres to a more comprehensive and inclusive understanding of medical practice than the *I-perspective* (IV).

Conclusion: Physicians' engagement was enhanced by experiences of professional fulfillment. Which tasks contributed to this was related to individual understanding of medical practice. The societal demand for patient-centered healthcare could be experienced as an identity challenge for physicians with a professional identity grounded in a traditional bio-medical understanding of medical practice. If this challenge to identity is not handled resistance toward the societal demand is likely to follow.

Keywords: Physician, engagement, professional identity, healthcare development, patient-centered, ward round, paradox, complex responsive processes.

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LIST OF PAPERS

This thesis is based on the following papers, referred to in the text by their Roman numerals.

I Lindgren Å., Bååthe F., Dellve L. (2013). “Why risk professional fulfilment: a grounded theory of physician engagement in healthcare development.” *The International journal of health planning and management 28(2): 138-157.*

II Bååthe F. and Norbäck L-E. (2013). “Engaging physicians in organisational improvement work.” *Journal of health organization and management 27(4): 479-497.*

III Baathe F., Ahlborg G. Jr., Lagstrom A., Edgren L., Nilsson K. (2014). “Physician experiences of patient-centered and team-based ward rounding – an interview based case-study.” *Journal of Hospital Administration 3(6): 127-142.*

IV Baathe F., Ahlborg G. Jr., Lagstrom A., Edgren L., Nilsson K. (2015). ”Uncovering paradoxes from physicians’ experiences of patient-centered ward-round.” *Submitted*

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SAMMANFATTNING PÅ SVENSKA

Bakgrund

Hälso- och sjukvården står inför stora utmaningar utifrån en alltmer åldrande befolkning, tekniska och medicinska framsteg, osäker tillgång på arbetskraft och begränsade ekonomiska resurser. Samtidigt ökar samhällets förväntningar på vårdens kvalitet, effektivitet och bemötande med fokus på ökad patientcentrering. För att hantera dessa utmaningar råder enighet mellan forskare och praktiker att det krävs utvecklingsarbete där olika vårdprofessioners perspektiv integreras.

Läkare är engagerade i vårdens utveckling utifrån ett bio-medicinskt och tekniskt perspektiv. Samtidigt har forskning visat att läkare ofta har ett lägre engagemang i projekt som handlar om organisatoriska aspekter, såsom att utveckla arbetsprocesser t.ex. avdelningsronden. Tid och resurser investeras ofta i utvecklingsprojekt som inte leder till de förväntade förbättringarna eftersom det sent i processen kan framkomma centrala invändningar från läkargruppen. Då avstannar ofta själva initiativet, grundproblemet kvarstår och nyttan för patient, medarbetare och organisation uteblir.

Syfte

Syftet med avhandlingen är att beskriva och analysera läkares erfarenheter av eget engagemang i organisatoriskt utvecklingsarbete för att bättre förstå varför läkares engagemang i sådant arbete är begränsat. Arbetet görs i form av två delstudier där den första fokuserar läkares erfarenheter av att engagera sig i att utveckla arbetsprocesser. Den andra studien fokuserar läkares erfarenheter av att arbeta i en patient-centrerad och team-baserad rond.

Metod

Avhandlingen utgörs av två explorativa kvalitativa studier. Semistrukturerade intervjuer med läkare (25 respektive 13) utgör det empiriska underlaget. Olika kvalitativa analysmetoder har tillsammans med teori använts för att belysa individuella läkarerfarenheter, samtidigt som det finns en analytisk strävan ett nå konceptuell förståelse för engagemang hos läkare som yrkesgrupp.

Resultat

En ständig strävan efter *att utvecklas* och *att vara till nytta*, framkom som centrala drivkrafter för läkares engagemang. Detta gällde för såväl kliniskt arbete som organisatoriskt utvecklingsarbete. I den framarbetade konceptuella modellen benämndes detta *professionellt självförverkligande*. De organisatoriska förutsättningar som förstärkte *professionellt självförverkligande* vid deltagande i organisatoriskt utvecklingsarbete var; kontinuitet på arbetsplatsen, gensvar, effektiva strategier och processer samt tydlighet att det i rollen som läkare ingår att delta i organisatoriskt utvecklingsarbete. Dessutom ansågs det utvecklande att lära sig mer om sjukvårdsorganisationen och hur förbättringsarbete sker (I).

Läkare och chefer har väsentliga skillnader i sina respektive professionella identiteter vilket kan medföra svårigheter i både kommunikation och samarbete. Om chefer vill att läkare ska engagera sig mer i organisatoriskt utvecklingsarbete skulle det underlätta om chefer bättre förstod vilka aspekter som är centrala inom ramen för en läkares professionella identitet; och att läkare förstod mer om chefers uppdrag och ansvar (II).

Från läkares erfarenheter av att arbeta i en patient-centrerad och team-baserad avdelningsrond framkom att den mindre hierarkiska relationen till patienten, kombinerat med att arbeta i ett multiprofessionellt team, sammantaget bidrog till mer välgrundade medicinska beslut, färre följdfrågor från patienter och anhöriga samt ökad upplevelse av *professionellt självförverkligande*. Samtidigt uttryckte läkare att deras autonomi blivit reducerad och att den nya ronden skapade en ökad risk för att exponera eventuella kunskapsbrister inför patient och medarbetare i arbetslaget (III).

Under analysarbetet framkom att de intervjuade läkarna förstod sin medicinska praktik olika. Denna förståelse relaterade till vilka arbetsuppgifter som bidrog till *professionellt självförverkligande*. I den första studien innebar den ena förståelsen att läkare vidmakthöll en *traditionell doktorsroll* med stor autonomi i relation till organisation och ledning, där kliniskt arbete utgjorde det som bidrog till läkares upplevelse av *professionellt självförverkligande*. Det andra perspektivet innebar att läkare hade ett bredare *medarbetarperspektiv*, där samarbete med andra professioner och delaktighet i organisatoriskt utvecklingsarbete också upplevdes bidra till *professionellt självförverkligande* (I).

Vid fördjupad analys av resultat från studien om patient-centrerad och team-baserad avdelningsrond, växte det också fram olika sätt att förstå medicinsk praktik baserat på vad läkare fokuserade under rondarbetet (IV). Den ena benämndes *Jag-perspektiv* eftersom arbetet var fokuserat runt vad läkare själva tänkte, gjorde och kunde. Erfarenheter från nära samarbete med andra var ambivalent. Det kunde bidra med nya perspektiv men samtidigt störddes den egna tankeprocessen. Interaktionen med patient var främst inriktad på att inhämta information för att bekräfta eller dementera läkares framarbetade hypotes utifrån journalförda uppgifter och provresultat. Patienten sågs som mottagare av vård och behandling med fokus på aktuella riktlinjer och målvärden. Det andra sättet att förstå medicinsk praktik benämndes *Vi-perspektiv* och där var rondarbetet mer inkluderande och betonade utbytet med patient och övriga vårdmedarbetare. Läkare uppskattade att få kompletterande perspektiv på en patients tillstånd och situation genom det nära samarbetet med andra. Rondinteraktionen fokuserade på patientens aktuella berättelse och handlade både om att inhämta information men också om att ge information åter till patienten. Läkares beslut om vård och behandling utgick från aktuella riktlinjer och målvärden, men strävade samtidigt aktivt efter att integrera patientens subjektiva perspektiv, individuella förmågor och sociala förutsättningar (IV).

Slutsatser

I avhandlingen framkom att strävan efter *professionellt självförverkligande* är grundläggande drivkraft för läkares engagemang. A*tt utvecklas* och *att vara till nytta* utgör två fundamentala dimensioner i den konceptuella modellen. Centralt för chefer som

vill stödja läkares engagemang är att reducera hinder, ge administrativt stöd och underlätta utvecklingen av läkares professionella identitet genom att arbeta med gensvar, kontinuitet och uppdragstydlighet.

I avhandlingen presenteras resultat som pekar på att olika läkare förstår innebörden av de empiriska begreppen, *att utvecklas* och *att vara till nytta*, på olika sätt. Det innebär att hur man som enskild person förstår sin medicinska praktik att vara läkare blir centralt, det vill säga professionell identitet. Denna identitet utgör en grundläggande förförståelse som ger struktur för hur en person tolkar det som sker dagligen. Människor agerar sedan utifrån sin egen förståelse.

Läkares engagemang är således relaterat till hur man som enskild individ förstår innebörden av att vara en kompetent läkare. Det finns en lång medicinsk tradition av ett bio-medicinskt och reduktionistisk förhållningssätt där strävan varit att reducera komplexa, ickelinjära sjukdomstillstånd till något komplicerat, linjärt och därmed mer medicinskt hanterbart. Denna utvecklingsinriktning har varit mycket fruktbar och inneburit stora medicinska framsteg. Samtidigt har en professionell identitet vuxit fram som är mindre funktionell för det ofta oklara, komplexa och långsamma utvecklings- och förbättringsarbetet av vårdens patientnära processer.

Sverige har sedan januari 2015 en ny lag med syfte att tydliggöra patientens ställning samt främja patientens integritet, självbestämmande och delaktighet d.v.s. att göra vården mer patientcentrerad. Avhandlingens resultat visar att samhällets krav på att göra vården mer patientcentrerad utmanar professionell identitet hos åtskilliga av dagens kliniskt verksamma läkare med en huvudsakligen bio-medicinskt formad förståelse vad det innebär att vara en kompetent läkare. Om denna utmaning av professionell identitet inte tas om hand, är det troligt att det skapas motstånd mot förändringen. Avhandlingens resultat pekar också på att det samtidigt finns åtskilliga yrkesverksamma läkare som har en mer inkluderande och mångsidig förståelse av sin medicinska praktik, en professionell identitet som möter samhällets krav på patientcentrering.

Läkares engagemang i att utveckla vårdens patientnära processer och arbetsrutiner är ett komplext område med stor potential, både för arbetet med att möta vårdens olika utmaningar och stödja utvecklingen av en mer patientcentrerad hälso- och sjukvård. Men också för att stödja en utveckling som bidrar till läkares ständiga strävan efter *professionellt självförverkligande*.

Denna avhandling bidrar med ökad kunskap och förståelse om läkares engagemang. Ett centralt område för vårdens vidare utvecklingsarbete där det behövs ytterligare forskning.

CONTENTS

THE CONTEXT OF THE DOCTORAL THESIS

This thesis has a contextual background from an interactive research and development project between a midsized Swedish hospital and a transdisciplinary research group. A research and development grant was awarded from the Swedish innovation agency Vinnova (2009-01730) with the intention to increase the knowledge about organizing, leading and sustaining trans-professional development work in healthcare. That project was organized with one experienced researcher in charge of the research activities, and another senior person overseeing the development activities. This separation was done to facilitate for ourselves as engaged individuals to be explicit and thus more readily aware when alternating between research-related work processes, and work processes related to supporting development initiatives at the hospital. Striving for this balance between detachment and involvement there was also a structure for integration, with regular meetings (monthly or bi-monthly) to reduce the risk for science to become too distant from clinical matters, and development work moving too fast without a reasonable grounding in data.

The project group was meeting with the hospital leadership team, consisting of eight Head of Departments, four administrative managers, a chief medical officer and the Hospital director. In two conversations based meetings we strove to find areas that were both important for the practitioners, and at the same time were considered to contribute valuable knowledge to the scientific community. Interacting with clinically focused practitioners is what Greenhalgh et al. (2004) suggest to help outline valuable research areas. Sustainable engagement for organizational development work was an area with mutual interest. The group of practitioners was also troubled about the lack of physician participation in ongoing development projects with the intent to improve clinical processes.

Therefore the research group initiated the explorative work by interviewing managers from different levels, nurses, assistant nurses, medical secretaries and physicians, about their individual experiences engaging in clinical development work. Emerging across these interviews was a pattern of limited physician participation reducing the outcome from this type of work. Many projects were never reaching the intended practical usage since physicians during the process of implementation brought forward important aspect that had not been considered when developing the change proposal. Thus, time and energy from many health professionals were invested in development work that never came to fruition and the intended benefits for patients, care professionals and the organization were never realized.

There was an overarching irritation about this and many seemed to have their own established views why physicians were not more engaged in this type of work. Paradoxically also physicians expressed a frustration about the situation and expressed experiences of not being able to contribute within the work-role as physician. When the research group was searching for previous research to further the understanding of this phenomenon, there was limited scientific work empirically focusing physicians' perspective about their own engagement in development work. Accordingly, this thesis has the intent to expand the knowledge about physicians' experiences engaging in improving clinical services and processes.

INTRODUCTION

> "We need to stop regarding ward rounds as 'ordinary and unremarkable' but in need of our focused attention just as much as the most expensive technology or complex drug treatment. The benefits to quality, safety, effectiveness, efficiency and staff satisfaction would be enormous, and patients would be hugely happier as well." (Caldwell 2013)

The Lancet wrote in their October 2012 editorial: "Naturally, as medical practice has changed over the years, the 21st Century ward round will need modification." (p. 1281) Ward rounding is central to hospital care all over the world, however according to O'hare (2008) the practice does not feature in the index of most textbooks on medicine, and there is little research to illuminate what goes on from the patient or the physician perspective (Launer 2013). In this thesis the ward round is used as an empirical example of a central clinical process where physicians' engagement is of utmost importance when developing.

Limited physician engagement in improving healthcare delivery processes, such as the ward round, has been acknowledged by researchers and change practitioners as a key aspect to further understand when developing healthcare and improving quality of care for patients (Berwick and Nolan 1998; IOM 2001; Guthrie 2005; Davies et al. 2007; Liebhaber et al. 2009; Walsch et al. 2009; Greening 2012; Lee and Cosgrove 2014).

In the fragmented and highly specialized hospital care reality, improvements of clinical services and processes benefit from interaction between different professional groups, and perspectives from patients are also valuable to include. Exploring patient experiences is beyond the scope of this thesis, however there is an assumption that engaging physicians when developing clinical services and processes will lead towards improving patient care. Physicians in their professional role with medical responsibility for many care decisions have the power to either support or hinder development initiatives and the physician focus relate to the following pragmatic perspective from Reinertsen et al. (2008):

> "Clearly all members of the health care team need to be engaged if leaders are to succeed in making quality and safety improvements. So why single out physicians? …whereas physicians themselves cannot bring about system-level performance improvement, they are in a powerful position to stop it from moving forward, and therefore their engagement is critical. Simply stated, leaders are not likely to achieve system-level improvement without the enthusiasm, knowledge, cultural clout and personal leadership of physicians." (p. 23)

However as argued by Snell and colleagues (2011), there is limited research that take a contextual view, where perspectives and experiences from physicians are studied by use of appropriate research methodologies. This is echoed by Edwards and Barker (2014) who reported that while much attention is given to rigorous cause-and-effect fixed-protocol designs for efficacy and effectiveness research, the usefulness of these

studies is limited in the more complex settings and systems that are encountered outside of the controlled study environments. A Cochrane report also showed this and recommended more qualitative studies (Zwarenstain et al. 2009). The need to include contextual factors in healthcare research was stressed by the World Health Organization (WHO), who emphasize that there was a need to strengthen investigations and research close to the supply of and demand for health services (WHO 2000).

Problem area – many related challenges in healthcare

Healthcare face many challenges (IOM 2001; McKee and Healy 2002; Mol 2006; Frenk et al. 2010; Gordon and Karle 2012; Øvretveit et al. 2012; Lee and Cosgrove 2014; Porter and Lee 2015), for example an increasing number of elderly, technological advances, demands for a more patient-oriented approach, continuous cost-pressures, higher service quality expectations, increased chronic-illness burden, welfare diseases and mental health issues. The need for thoughtful and resource effective development work is central and in spite of the overall consensus that development work benefit from engaging multiple care professionals there is, as previously mentioned, a reported problem that physicians' engagement in developing clinical processes and health care delivery is limited or missing (Berwick and Nolan 1998; Davies et al. 2007; Reinertsen et al. 2007; Tingle 2011; Lee and Cosgrove 2014).

There are many previous studies concentrating on different aspects of the physician role and the relation with management, in particular how professionalism and managerialism are leading towards different ways to understand healthcare. For example there are studies about conflicts and communication issues between managers and physicians (Fulop et al. 2002; Degeling et al. 2003; Edwards 2005; Choi and Brommels 2009; Greening 2012). Management strategies to further engage physicians in organizational development work is also considered (Rundall et al. 2004; Guthrie 2005; Liebhaber et al. 2009; Walsch et al. 2009; Greening 2012). There are also studies about physicians working in the role as manager (Doolin 2002; Idema et al. 2004; Jespersen 2005; Opdahl Mo 2008; Waring and Currie 2009; Knorring 2012; Andersson 2015). However, empirical studies' concentrating on the larger group of clinically active physicians' perspectives about hinders and enablers for engaging in improvement work are limited. This knowledge gap is also brought forward by Snell and colleagues (2011). Thus, scientific knowledge about physicians own experiences engaging in improving clinical services and processes, like the ward round, seems to be missing. This thesis strives to contribute towards increasing the research based knowledge about why many improvement initiatives regarding clinical services and processes have problems engaging physicians.

AIMS

The overall aim of this thesis was to explore physicians' experiences of engagement in improving clinical services and processes, in order to gain more understanding about why such initiatives have problems engaging physicians.

The first specific aim was: To explore how physicians' experienced their engagement in healthcare development.

Two papers, with the following purposes, responded to this first specific aim:

- Paper I: To gain a deeper understanding of how physicians experience their engagement in healthcare development.

- Paper II: Based on empirical findings how physicians experienced their engagement use theory to better understand the mindset of physicians and managers, and by basis of that suggest management considerations to facilitate physicians' engagement.

The second specific aim was: To explore physician experiences after changing to a patient-centered and team-based ward round.

Two papers, with the following purposes, responded to this second specific aim:

- Paper III: To explore physician experiences after changing to a patient-centered and team-based ward round, in an internal medicine department at a Swedish mid-size hospital.

- Paper IV: To uncover paradoxes emerging from physicians' experiences of a patient-centered and team-based ward round, and relate empirical findings to the theory of complex responsive processes to further understanding.

BACKGROUND

Healthcare in the western world is, as previously outlined, facing a number of challenges. There are ongoing changes and priorities to better reflect expectations from society about increasing quality, patient-centered care, increasing efficiency and effectiveness and balancing tight financial budgets (Sahlin-Andersson 1999; IOM 2001; McKee and Healy 2002; Davies et al. 2007; Tingle 2011; Porter and Lee 2015)

With an increased focus on financial control and related budgetary sanctions in Sweden, impacting number of care beds and personnel, the overall working climate in healthcare has deteriorated (Hasselbladh et al. 2008). Ethical stress is created for health professional when managerial financial dilemmas are not managed at the department level but instead is allowed to trickle down to be handled in the patient encounter (Edvardsson et al. 2014; Lantos 2014). This can increase occupational stress and burnout (Glasberg et al. 2006; Privitera et al. 2014). Bodenheimer and Sinsky (2014) report 46% of US physicians experience symptoms of burnout, which they characterize by loss of enthusiasms for work, feelings of cynicism, and a low sense of personal accomplishment. They argue care of the patient requires care of the provider, and suggest physician dissatisfaction is a warning sign that the healthcare system is creating barriers to high-quality care, since the principal driver of physician satisfaction is the ability to provide quality care.

Regardless of what kind of reform being used, for example internal buy-sell systems, free choice of care provider, balanced score-card, wait-time warranties and new financial steering systems, independent researchers and evaluators seem to agree that all these different activities have only had minor impact in relation to the often substantial plans (Glouberman and Mintzberg 2001a; Brunsson 2009; Øvretveit et al. 2012). One way to better understand this is brought forward by Glouberman and Mintzberg (2001a), who consider healthcare as one of the most complex organizations in modern society:

> "Why are the so-called systems of health care so notoriously difficult to manage? No country appears to be satisfied with the current state of its system; almost everywhere reforms are being contemplated, organized, or implemented, some in direct contradiction to others. Each is claimed to make the system more responsive to user needs, yet most are really designed to bring its component parts under control - particularly financial control. Still nothing seems to change. The obvious explanation is that this is one of the most complex systems known to contemporary society. Hospitals, in particular…" (p. 56)

In order to get a sense of the inherited complexity Glouberman and Mintzberg illustrate the hospital as being differentiated into four different and separated worlds: community (public or private owners/politicians), control (managers and administrators), cure (physicians) and care (registered nurses and other care professionals).

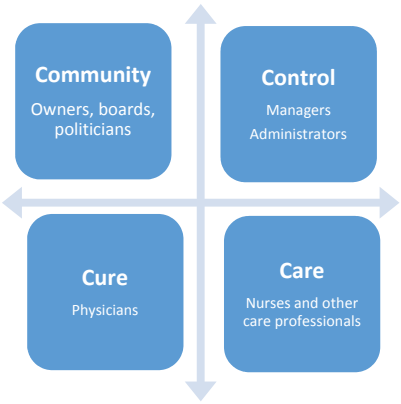

Figure 1. The four worlds in the hospital organization, adapted from Glouberman and Mintzberg (2001a).

In community we find representatives, such as owners, politicians, public agencies and lobby groups. Some of them are closely linked to the hospital and others more remote. They impact overarching financial matters and national or regional priorities. National administrative agencies act at the societal level to regulate health care.

In control, the world of administration is presented. Managers have formal authority for the quality of care, budget and resource allocation, with individual accountability. They are expected to cope with demands from community, such as quick access, quality and security for the patients and financial control. Many managers' approach to change is top-down, following a linear and instrumental planning rationality, and management by budgetary numbers has a long tradition. Managers typically need no medical license. This is also the case in Sweden for the Heads of departments starting 1997, when the law was changed (Act 1982:763 updated with 1997:316).

Cure is the world of the physicians. This is the medical community with clinical responsibility for autonomous medical decisions, even if many treatments can be carried out by other health professionals. It is the domain of bio-medical expert knowledge based on licensed medical education, clinical experience and continuous development. Subspecialties and status differences exist within the group of physicians.

In the world of care, registered nurses and other health professionals provide care to the patients and execute physician decisions. Registered nurses provide nursing care and coordinate the complex work flows around the patients and their relatives, even if the coordinating tasks are mostly subordinated to physicians' diagnostic and treatment decisions.

A central reason for the complexity in hospitals, according to Glouberman and Mintzberg (2001a), is that each world is run according to its own understanding of how the organization works, i.e. its own mindset. The disconnection stems from limited understanding *between* the different mindsets. As long as the worlds are disconnected, they argued that nothing fundamental will change.

Kippist and Fitzgerald (2009) critiqued the model for its seemingly clear divide's or boundaries, and suggested the divides are fuzzy and more difficult to identity due to different roles and relationships between the actors. From their writings Glouberman and Mintzberg (2001a) seem aware that their simplified picture is not to be confused with actual reality. However the message they stress, which is informative for this thesis, is not about clarity of the divides, quite the opposite. Their schematic picture (figure 1) in combination with their text, make explicit a central challenge with the hospital which is the existence of four separate worlds (mindsets) within the same organizational body. This can also be expressed as four different ways of understanding what the purpose of work is.

Glouberman and Mintzberg (2001a) argued that the four worlds are divided by a horizontal and a vertical cleavage. The horizontal is the great divide of health care, separating those who work clinically from those who do not. Below the horizontal cleavage professional requirements and technological imperatives reign, and above are those "sensitive to the needs for fiscal control" and reform friendly. The vertical cleavage separates nurses and managers on one side, working with coordination and optimization for the hospital, from physicians who engage in individual patients and politicians who engage with a keen eye towards attracting future voters. The two most powerful worlds are managers and physicians and they are described as having different power bases. Managers have a positional power in controlling the resources while physicians have the power of exclusive medical expertise. There is both a horizontal and a vertical cleavage separating these two most powerful worlds. This separation is hindering development of healthcare (Dent 2003; Mueller et al. 2004; Waring and Currie 2009). While Glouberman and Mintzberg are primarily basing their model on experiences from healthcare in America, Canada and Great Britain, also research within the context of Swedish healthcare have found similar cleavages, gaps or chasms. Here different ways of understanding has been described as; politicians, administrators, medicine and care (Östergren and Sahlin-Andersson 1998; Dellve and Wikström 2009; Andersson 2015). While the research community seems to concur about separation being a key issue when describing health care, there are ongoing initiatives trying to unite the separate worlds. An example could be the American demonstration project for the patient-centered medical home (Crabtree et al. 2009; Nutting et al. 2011; Chang and Ritchie 2015).

Increased societal demand for patient-centeredness

Curing and caring for patient needs has always been part of healthcare professionals way of understanding work. Patient-centeredness, meeting needs, values and preferences as expressed by individual patients, has been advocated as a missing dimension in the prevailing bio-medical healthcare model by individuals at the periphery of the medical community (Brant and Kutner 1957; Balint et al. 1969; Engel 1977). However, during the 21th century patient-centeredness has become an explicit quality aspect of health systems, propagated by influential institutions. For example WHO has patient-centeredness as an aim for high-performing health system (WHO 2000). The US Institute of Medicine (IOM) included patient-centeredness as one of the six core aims for future healthcare system (IOM 2001). The Organization for Economic Cooperation and Development (OECD) stated that quality health care should produce

outcomes that patient's desire and accommodate individual preferences for different treatment options (Hurst and Kelley 2006).

There is no global consensus definition, but to act in a patient-centered way physicians also need to pay particular attention to "life over disease" and not only to the more traditional bio-medical attention to "disease over life" (Zoffman and Kirkevold 2005). Patient-centeredness is to provide care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions (IOM 2001). Some propose the concept of patient-centeredness could be understood by outlining that it is not; hospital-centered, technology-centered, disease-centered or doctor-centered (Stewart 2001). Others claim that that the essence is about changing the question to the patient from "What is the matter with you?" – towards – "What matters to you?" (Bisognango 2012). University of Gothenburg Centre for Person-centred Care (GPCC) would assert that patients are persons and should not be reduced to their disease alone. Instead their experiences, goals, desires and life-situation should be taken into account and healthcare should shift away from models where patients are passive targets of bio-medical interventions towards a model where patients, and when applicable also relatives, are involved as active partners in the care and cure process (Ekman et al. 2011).

In response to concerns from health professionals that patient-centeredness goes against evidence based medicine, it has been clarified that a commitment to patient-centered care does not imply that clinicians provide unnecessary services just because a patient request them. Since all un-needed services have the potential to cause harm, ethical principles mandate a physician to not recommend or prescribe any treatment that is of no known benefit – weather the request is for antibiotics, different diagnostic tests, or specific invasive procedures (IOM 2001).

Patient-centeredness in Sweden, policy and related impact on practice

Strengthening the position of patients in healthcare has been a policy aim in Sweden for more than three decades (Act 1982:763 updated with 1997:316). Still, Sweden scored very low on the four questions addressing patient-centeredness and patient involvement when the Commonwealth Fund compared eleven countries based upon how local patients scored experiences from their specific healthcare system (Schoen et al. 2011). The survey was repeated in 2014 and Sweden scored low again on the four questions addressing patient-centeredness and patient involvement, based upon five thousand patients (Osborn et al. 2014).

Policy makers in Sweden have looked into the regulatory structures and a revised patient-law with the aim to strengthen the position of the patient and increase patient integrity, self-determination and participation was introduced by 1 Jan. 2015 (Patient-law 2014:821).

While patient-centeredness seem to be an undisputable way forward for healthcare, IOM (2001) argues it calls forward physician capabilities not fully within the traditional bio-medical model. In this thesis patient-centered care is considered a recent societal demand on healthcare.

Some distinguish between patient-centered and person-centered care models, but regardless of the naming what is unifying them is to take the starting point in an individual patient perspective including biological, psychological, and social aspects of care (Leplege et al. 2007). The author of this thesis associate with the content of both models but will in line with the terminology used in paper III and IV use patient-centered going forward.

Following this brief introduction we look into some aspect of Cure - the world of physicians.

Physicians – from healer to science informed towards patient-centered

The traditional physician role – if there is such a thing

Physicians have a long occupational tradition originating in early healers. One well-known early physician was Hippocrates, 500 BC. He has been granted as amongst the first to consider disease a natural process, and not a result from supernatural forces (Dall'Alba 2009).

What it means to be a medical professional is changing considerable over time, and different professional bodies and societal groupings are likely to have different understandings of concepts and definitions (Hilton 2008; van Mook et al. 2009). Gawande (2014) summarized his view of becoming and being a physician:

> "You become a doctor for what you imagine to be the satisfaction of the work, and that turns out to be the satisfaction of competence. It is a deep satisfaction very much like the one a carpenter experiences in restoring a fragile antique chest or that a science teacher experiences in bringing a fifth grader to that sudden, mind-shifting recognition of what atoms are. It comes partly from being helpful to others. But it also comes from being technically skilled and able to solve difficult, intricate problems. Your competence gives you a secure sense of identity. For a clinician, therefore, nothing is more threatening to who you think you are than a patient with a problem you cannot solve." (p. 8)

Technical skill, and the role of the physician as a care giver, is two seemingly opposing aspects of the physician role that has been in tension with each other for a long time, and Donabedian (1988) suggested that the interpersonal process is the vehicle by which technical care is implemented and on which its success depends. Groopman (2007) considered this dynamic a central aspect of being a good physician and introduced what he calls the clinical paradox that needs to be faced every day in the role as physician:

> "If we feel our emotions deeply, we risk recoiling or breaking down. If we erase our emotions, however, we fail to care for the patient. We face a paradox: feeling prevents us from being blind to our patients' soul but risks blinding us to what is wrong with him." (p. 54)

Thunborg (1999) described the work of all physicians as medically oriented and that they are expected, both by themselves and by others, to be highly competent and make correct medical decisions. She concluded that physicians make decisions based on their own judgment, individually or with colleagues, meaning that they are supposed to act independently and autonomously. Cruess et al. (2015) suggest, in line with Thunborg, that the traditional physician role is about individual accomplishment, responsibility and accountability.

The bio-medical model

The bio-medical model has been called a somatic model of disease, since mind and body are considered separate entities (Lock and Nguyen 2010). While this reductionistic bodily focus has contributed to a long and successful way to advance medicine (IOM 2001), there has been critique about the reductionist perspective in the bio-medical model and arguments for a bio-psycho-social model (Engel 1977). Revisiting Engels proposed model 25 years later Borrell-Carrio et al. (2004) suggest that Engel did not deny the important advances from the bio-medical research but criticized the narrowly focused model for leading clinicians to regard patients as objects. Wen and Kosowsky (2013) argue along the same lines that science and technology has brought positive impact on medical practice in many ways, especially as it relates to advances about treating diseases. However, when it relates to the matter of diagnosis and the patient-physician interaction they find the contribution less beneficial. Instead they state the risk that an one-sided focus on science is gradually eroding the art of medicine, and technology being used as substitute to physicians listening actively to patients: "Understanding the scientific foundation for diagnostic principles is important, but by having scientists rather than clinicians defining medical education, the art of diagnosis is becoming extinct." (p. 41)

A similar concern was expressed by Greenhalgh and colleagues (2014), pointing towards a potential downside of evidence-based medicine. If physicians are led to believe that medicine is primarily about causal relations, then there is an inherited risk that professional identity as physician becomes more about mechanically following rules then honing the life-long journey towards sound judgment. Adler and Kwon (2013) talked about "mutation of professionalism" and considered clinical guidelines as part of a quieting of physicians, and rationalizing healthcare delivery. They presented two alternative ways of understanding this ongoing change in healthcare:

> "Guidelines proponents argue that they represent a shift from craft, tacit forms of medical know-how towards more public and scientific forms, promising less variability, higher average quality and lower total cost. Critics, however, argue that they undermine doctors' decision-making ability, their motivation to serve the individual patient, and the quality of care delivered." (p. 953)

The bio-medical model was a natural consequence building on the rise of the modern scientific model during the 16th and 17th century, when the more organic perspective was shifted towards a more mechanistic conception of nature (Capra and Luigi Luisi 2014). During the late 16th century Descartes is said to have contributed to the separation of mind and body. In line with that he outlined a conceptual framework of

the world as a perfect machine (including living organisms) governed by exact mathematical laws, which in principle could be understood by analyzing it in terms of its smallest components (Capra and Luigi Luisi 2014). This was crowned during the 17th century by Newton with his grand synthesis; Newtonian mechanics (Prigogine 2004). By the end of the 17th century the modern scientific method was established, and central to this was the individual scientist who objectively observed nature, formulated hypothesis about the laws governing it and then tested these laws against quantified data. The laws were understood to be universal, deterministic with explicit linear, if-then, causal links (Stacey 2011).

Lock and Nguyen (2010) suggest that early Newtonian truth claims still impact science and the bio-medical model today. They provide four examples of this and concluded that although people increasingly question these axioms, the dominant ideology holds firm:

> "First, many people involved in the enterprise of "development" argue with little reflection that further technological mastery of nature is essential to continued progress and improving the state of the world economically and in terms of health and wellbeing. Second, many researchers in the biological sciences continue to assume that biology is subject to universal laws similar to those established for physics based on the insights of Newton. Third, it is commonly assumed in the medical sciences that the human body is readily standardizable by means of systematic assessments, bringing about a further assumption that the material make-up of the body is, for all intents and purposes, universal. Forth, the global dissemination of knowledge, biomedical technologies, and ways of life and moral underpinnings associated with modern Western civilization are an essential part of an enlightened humanistic endeavor." (p. 20)

The above reflected some historical dimensions still part of today's discourse about evolving healthcare toward the changing needs and wants of society. Below follows considerations from the arena of medical education preparing physicians for an increasingly complex future.

Medical education for the 21th century – an integrative approach

A global independent commission, reviewing the status of postsecondary professional education in health concluded that there is a mismatch between professionals' competences, and patient and population priorities for the 21st century needs (Frenk et al. 2010). The commission argued it is time for a new generation of medical education which they call "transformative professional education", where engaging in critical reasoning, ethical conduct, and participating in patient-centered health systems is central. A new professionalism for the 21th century was suggested to: "promote: quality, embrace teamwork, uphold strong service ethics, and be centered on the interests of patients and populations" (Frenk et al. 2010, p. 1946).

The World Federation for Medical Education responded they do not agree with the Commission that there is failure and a general crisis in education of health professions warranting radical changes and restructuring (Gordon and Karle 2012). At the same

time they agreed with the Commission about the need to continue the work to improve medical education but they emphasized that many changes were already on its way "there is a progressive positive change in medical education, to meet the continuing challenges of medical practice and healthcare delivery in a changing world" (p. 12). Gordon and Karle also stressed that worldwide progress is far from being uniform, funding is sparse and faculty could be conservative.

The reflection about medical education continues and in a more recent publication the president-elect for the World Federation for Medical Education outlined five main challenges for medical education (Gordon 2014):

> "What are doctors for, both now and in the future?, When we have defined the functions of the doctor, how many doctors do we need?, What are we doing now to meet this need: how many doctors are being educated, where and how well?, How do we educate doctors to a globally acceptable standard, while also meeting the local needs of society?, How will we ensure that our students have a holistic view of medicine, always considering psychological and social factors in health and disease?" (p. 149)

While there seem to be conflicting views about how many changes that already are in progress in medical education (Frenk et al. 2010; Gordon and Karle 2012), there appear to be an intent to reach beyond the bio-medical model towards a more multi-faceted educational perspective where also psychological and social factors are to be considered in parallel with the biological factors (Frenk et al. 2010; Gordon and Karle 2012; Gordon 2014).

CanMED roles – an international framework guiding medical training

While there are different models relating to medical education CanMEDS roles is a competency-based framework guiding medical training in Canada and United States and influencing many other countries (Frank 2005; Frank and Danoff 2007). The CanMED roles provides a structure where it is evident that central to physician education is being a medical expert, trained and skilled in the bio-medical sciences. At the same time, there are complementing abilities to foster leading and learning, and capabilities to facilitate the interpersonal exchange between patients, and others in the larger care team. See Figure 2 for a graphic illustration of the 2005 framework.

Andersson and colleagues (2012) described that Sweden use a translated version of CanMEDS roles adopted to the Swedish specialist medical education. In the ongoing 2015 revision of CanMEDS roles particularly relevant to this thesis that notions of complexity being introduced, as well as the explicit mentioning of the need to train physicians about the clinical uncertainty inherited in the role of practicing medicine. These dimension are considered beneficial for quality of care, but also to support physicians own well-being and professional fulfilment (Frank and Snell et al. 2014).

Measuring a learner's competences in key elements is necessary but not sufficient to determine if this learner is a "good doctor" (Carracio et al. 2008). In order to reduce

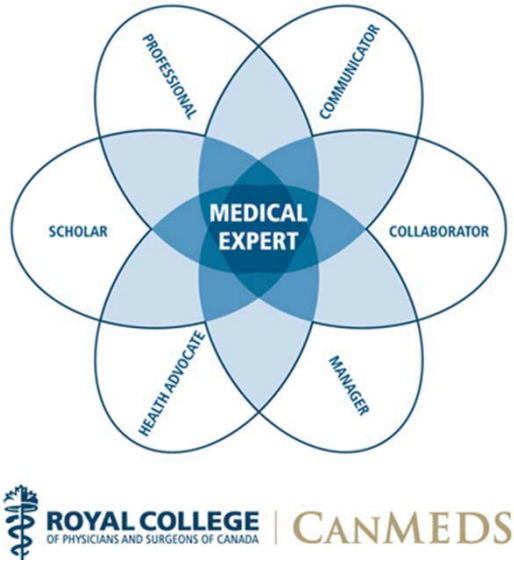

Figure 2. The CanMEDS Physician Competency Framework describes the knowledge, skills and abilities that specialist physicians need for better patient outcomes. Copyright © 2009 The Royal College of Physicians and Surgeons of Canada. http://rcpsc.medical.org/canmeds. Re-produced with permission. (Figure text as defined by the copyright holder)

these types of concerns about excessive reductionistic ways of measuring, breaking the CanMEDS roles into small discrete measurable competencies, Jarvis-Selinger et al. (2012) was proposing adding identity alongside competency to allow a reframing of inquiries towards questions that include a focus on being rather than exclusively a focus on doing.

Medical education and its role in this thesis

Medical education moving forward, can paradoxically also be seen as bringing back history. About 2500 years ago, Hippocrates is said to have suggested *that it was as important to understand who the patient is as to understand what disease the patient has*.

The ongoing changes in medical education are direct and indirect, valuable to understand as it relates to responding to the aim of this thesis. It can be concluded from above, directly linked to the aim of this thesis, that physicians' engagement in change, patient-centeredness and working in teams are outlined as central capacities to complement medical education going forward. The notion of uncertainty and the concept of complexity, as extracted from the 2015 revision of CanMEDS roles, are aspects that will be coming back later in this thesis, from an empirical as well as a theoretical basis. Indirectly, overarching principles from international bodies of medical education are likely to have major impact on national medical curricula, which in turn influence local strategies for educating future physicians.

Medical education and the teaching of medical professionalism have received much focus during the last 10-15 years, while the concept of professional identity has received relatively little attention (Wilson et al. 2013). Professionalism is considered another construct then professional identity, according to Wilson and colleagues (2013), and they suggest: "professional identity is how an individual conceives of him or herself as a doctor, while professionalism involves being and displaying the behavior of a professional." (p. 370) Recently educators have started to consider the teaching of professionalism as a means to an end, with the actual end seen as individuals developing a professional identity as physician (Cruess et al. 2015).

Next we look into consideration about the professional identity as physician.

The professional identity of physicians

For every person, to become a physician is part of a larger life journey, and those entering medical school all bring a personal identity that has been formed since birth (Cruess et al. 2015). Each person has an individual trajectory going from layperson to the professional identity as physician and there is a dialectic tension between who they are at the beginning and who they wish to become in their role as physician (Dall'Alba 2009).

Socialization into a profession is about students acquiring knowledge, skills and attitudes that are part of that specific occupation and through this process a professional identity is starting to be formed (Merton et al. 1957; Frost and Regehr 2013). The professional identity formation, from medical student, resident and into a specialist physician, is a dynamic process (Cruess et al. 2015). To facilitate a patient-centered professional identity there must be ongoing engagement with patients in medical education, preferably commencing early in a student's journey so that it becomes the expected norm (Barr et al. 2015). They found in their study from Australia that true patient-centered emphasis was encountered too late in medical students' socialization process.

The professional identity of physicians is critical to the practice of medicine, in the service to societal and individual patients' needs, as well as for the well beings of physicians themselves (Holden et al. 2015). According to Wald and colleagues (2015) there has been an unbalance in favor of bio-medical knowledge, facts and skills which now is being reconsidered by medical educators.

Junior physicians' professional development is highly dependent on interaction with experienced physicians, both in formal education and in supervision (Abbot 1988; Dall'Alba 2009). The culture of medicine at hospitals does not support young physicians in their striving towards becoming *good doctors* since it is hard to reconcile the educational and the clinical *covert* curricula (Coulehan 2005). This is resonating with Pratt et al. (2006) who concluded from their empirical study about identity construction amongst residents (surgery, radiology, primary care) that the "hidden curricula", as conveyed in interaction with senior physicians, is an important source for identification. They suggested "professional educators periodically assess faculty not only

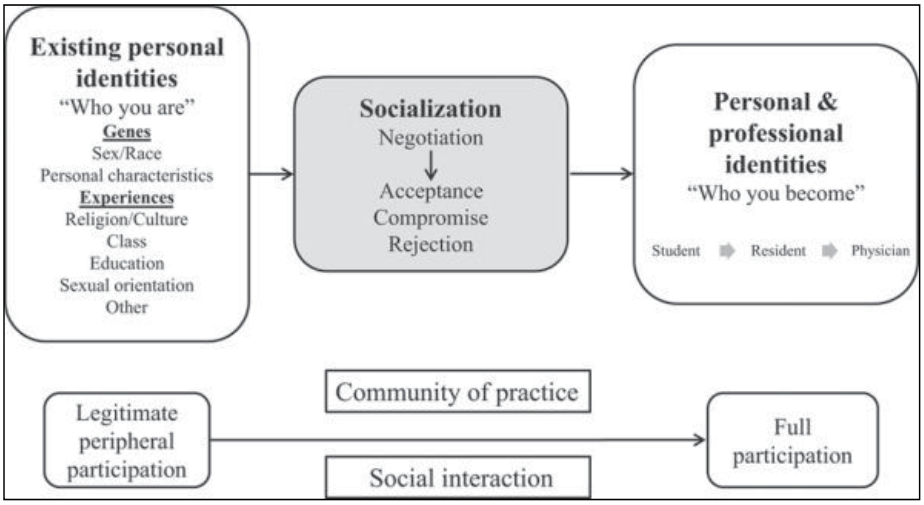

Figure 3. A schematic representation of professional identity formation, indicating that individuals enter the process of socialization with partially developed identities and emerge with both personal and professional identities (upper portion). The process of socialization in medicine results in an individual moving from legitimate peripheral participation in a community of practice to full participation, primarily through social interaction (lower portion). From Cruess et al. (2015). (Figure text was included with the figure.)

for their skills, but also for their fit with professional values and beliefs." (p. 258) Thus in order to facilitate junior physicians updated curricula to become manifest in their professional identity, there seem to be a parallel need to also consider how to evolve senior physician professional identity towards the same converging goal, i.e. 21th century healthcare (Frenk et al. 2010; Gordon and Karle 2012).

We now move towards clinical praxis and consider research about different ways to understand the physician role.

Different ways to understand the same occupational role

Sandberg and Targama (2013) argued that individual understanding of occupational role forms the basis for individual attention to what is interesting, important and relevant, and also to what skills a person strive to develop and how everyday work is performed.

Dall'Alba (2004) followed how students in medical education understand their physician role, and how this understanding changes over the years in school. Dall'Alba found that while future physicians understanding about their own way of being a physician, in relation to patients, was evolving towards a more complex understanding during the medical education there seemed not to be any major individual changes. She found six qualitative different understandings. (p. 684)

(a) Providing help or saving life.

(b) Diagnosing or treating patients using a required sequence of procedures.

(c) Locating the problem and informing the patient.

(d) Interacting with patients in a supportive way, while diagnosing and treating.

(e) Seeking a way forward together with the patient.

(f) Enabling the patient to better deal with his or her life situation.

Dall'Alba sorted the different understandings from a more bio-medical centered understanding towards a more patient-centered understanding, and concluded: "Accordingly, the students focused on the role of the medical practitioner in (a) to (c), while also incorporating the patient and his or her life to increasing degrees from (d) to (f)." (p. 685)

While the sorting should not be considered a defined and sequential way of developing, the patient-centered understanding of the physician role is a more comprehensive understanding than the bio-medical understanding (Dall'Alba 2004; 2009).

Dall'Albas findings about medical students are in line with studies about clinical behaviour of anesthetists (Klemola and Norros 1997; Larsson 2004). Klemola and Norros (1997) found two distinct professional practices which they called *realistic orientation* and *objectivistic orientation*. One key differentiator between the two orientations was if uncertainty and unpredictability was recognized as a feature of the anesthesian process, and another was if the relationship with the patient was *communicative* or *authoritative.*

Larsson (2004) suggested there was the *good Samaritan* way and there was the *professional artist* way of understanding work as physician specialized in anesthesiology. "The good Samaritan understanding means to see the patients as subjects whereas the *professional artist* understanding means to focus on patients mainly as physiological objects." (p. 45) With anesthesiology often being considered a technical specialty with much focus on physiology and pharmacology, Larsson initially questioned the importance of being patient-centered in the practice of anesthesiology. However he concludes, with reference to safety being a major objective of anesthetic practice, that physicians specialized in anesthetics with a patient-centered view pay more attention to safety issues:

> "Anesthetists, who have in their focus the patient as an individual subject, talk about preparing themselves beforehand to have a strategy ready in case of complications. On the other hand, anesthetists who do not focus on the patient as an individual do not talk about safety issues but instead about exciting challenges and about performing difficult procedures elegantly." (p. 46)

Stålsby-Lundborg et al. (1999) found four qualitative different ways of understanding ways of experiencing asthma management, amongst general practitioners in Sweden. Similar to Dall'Allba (2004) she outlined a gradual shift from the more transactional

understanding focusing what the physician consider the patient need to be informed about, towards a more inter-relational understanding where the physician also consider how to support patients to integrate the new situation into quality of life.

The above studies present that there are different ways to understand medical practice, also within the same medical specialty. Some are more inclined towards a more distant bio-medical way of practicing and others are more inclined towards a more interacting patient-centered way of practicing. Dall'Alba (2002) stresses that these types of differences "should not be confused with personal style of being a medical doctor but relate to understanding what medical practice involves." (p. 174)

The recent societal demands for a more patient-centered healthcare create a new tension and sense of urgency about these previous research findings. In Sweden with a new law passed 2015, enforcing the national request for patient-centered care this is particularly evident. Taken together with the ongoing recalibration of the medical curricula, from a bio-medical focus towards a more comprehensive bio-psycho-social medical curricula, there seems to be a direction towards broader inclusiveness in the understanding of medical practice going forward. Gawande (2014) provides his perspective:

> "We've been wrong about what our job is in medicine. We think our job is to ensure health and survival. But really it is larger than that. It is to enable well-being. And well-being is about the reasons one wishes to be alive. Those reasons matter not just at the end of life, or when debility comes, but all along the way. Whenever serious sickness or injury strikes and your body or mind breaks down, the vital questions are the same: What is your understanding of the situation and its potential outcomes? What are your fears and what are your hopes? What are the trade-offs you are willing to make and not willing to make? And what is the course of action that best serves this understanding?" (p. 259)

With that we move towards methodological consideration and then to empirical findings, but first some considerations relating to "engagement".

Engagement

Motivation, participation and commitment are terms used exchangeable with engagement (Berglund 2010). Participation and involvement relate to engagement and are both seen as impacting engagement for the task at hand, as well as the other way around (Pfeffer and Veiga 1999).

The main drivers of motivation were considered extrinsic rewards, such as promotion and salary raise, until Herzberg et al. (1959) introduced that work itself could function as a motivator. They claimed problem solving and individual discretion to act as you deem most appropriate, and the appreciation of the social relations at work, could be seen as intrinsic motivators. One dimensions of physicians' intrinsic motivation, striving to be the best and do well by patients, has been found to be a stronger driver towards improving care, compared to the extrinsic motivator of receiving higher pay (Kolstad 2013; Crosson 2015). Self Determination Theory (Ryan and Deci 2000) fur-

ther developed the relation between extrinsic and intrinsic motivation and suggested autonomy, competence and relatedness were central human needs.

Engagement could be considered as doing something outside of the minimum work required (Morrison and Phelps 1999). When engagement is defined by vigor, dedication and absorption in your work Privitera et al. (2014) argue that engagement can be seen as the opposite to burn-out. According to Shaufeli et al. (2002) energy and involvement constitute the two core dimensions of work engagement and is central for both individuals and organizations.

Berglund (2010) explored employee engagement and, following an extensive discussion and literature review summarized there were much research arguing for benefits with engaged employers, but the research community was not clear about definitions or ways to measure engagement. He recommended to consider complexity science to further understand engagement. Davies et al. (2007) considered physician engagement a complex and challenging phenomenon. This is in line with Stacey (2011) who argued that human phenomena, like physicians' engagement, are complex and researchers need to consider non-linear models. Dickson (2012) working to form a research based framework about enhancing physician engagement considered an organic complex system perspective most relevant. He suggested the theory of complex responsive processes could be "an appropriate lens to apply to the improvement of physician engagement." (p. 7)

Engagement in this thesis relates to involving oneself and contributing outside of the individual understanding of minimum work required. In order to further the understanding of engagement, as a complex phenomenon, we next introduce complex responsive processes. This theory handles complicated linear relations, but more importantly for this thesis, also caters to non-linear relations, known as complex phenomena.

COMPLEX RESPONSIVE PROCESSES - A THEORETICAL FRAME TO UNDERSTAND CHANGE AND CONTINUITY, AT THE SAME TIME

Many traditional managerial models are based upon reductionistic and mechanistic theories where planning, control, certainty and predictability have been central aspects (Sandberg and Targama 2007; Burnes 2009; Capra and Luigi Luisi 2014). Complexity science has on the other hand introduced the science of uncertainty where the unpredictable nature of human organizations has been a definitional prerequisite (Stacey 2011). Complexity science has attracted healthcare practitioners and researchers (IOM 2001; Plsek and Greenhalg 2001; Glouberman and Zimmerman 2002; Crabtree et al. 2011; Sturmberg 2014). People that have tried to make the everyday intricacies of healthcare to fit in traditional managerial models with limited success have been particularly appreciative of the introduction of complexity science (Suchman et al. 2011). In general practice, complexity science has been used for almost twenty years when grappling with organizational aspects (Sturmberg 2014).

Complex responsive processes (Stacey 2011) is a theory that has been established during the last twenty years by combining pragmatic philosophy and social science from the early twentieth century with complexity science insights from the twenty-first century. The theory of *complex responsive processes* explores ways of understanding actions by human beings in organizations (Stacey 2011). In Stacey's reflexive narrative (2012) about his own movements in thinking and how that evolved his own way of working he introduced the theory of *complex responsive processes* as:

> "…taking abstract relationships from the complexity sciences to provide analogies of human interaction which have to be clothed in the attributes of human agency. In coming to describe these attributes, we drew on certain key writers in psychology, sociology and philosophy." (p. 153)

Below some aspects within this theory will be introduced. Please note that the following short text is by no means claiming to make this quite extensive theory justice. However some key points that have contributed to an increased understanding of findings in this thesis will be presented.

Simple, complicated, complex - similar words with different meanings

Simple, complicated and complex are words that relate to each other. Stacey (2011) argues that complex can be understood in relation to simple and complicated. In simple systems a linear causality and rationality apply. Goals can be set up – desired future states – and plans made, listing specific means to be carried out, in order to reach the goals. The same goes for complicated systems, but to account for the possible interplay between subsystems, feedback loops need to be introduced.

Baking a sponge-cake could be used as an everyday example of a simple task. Without much experience a person could follow the recipe and produce a good result. Dismantling a car into its component and then putting it all back again, and make the

car actually start, would be an example of complicated. To succeed one needs to be an expert mechanic and probably have to work together with other sub-specialized expert mechanics. Simple and complicated are both sharing a linear causality, if you do *a* then *b* will follow. For complicated matters there could be many parallel causalities and feedback-loops, but as long as you understand and follow the detailed manuals the outcome is still considered predictable.

Complex has different characteristics than simple and complicated. One central distinction is that there is no linear causality, and as such surprise and unpredictability is part of what is considered normal. In complex systems a small change may emerge as a major effect or no effect at all. Human relations are part of the complex domain and as such healthcare where the essence is about the encounter between patient and care giver is by definition complex. Since human interaction is complex, causality is non-linear and rationality is called transformational. Weather forecasting or the relation between teenage children and parents, provide everyday examples of a non-linear relation many can relate to. How the complexity perspective is showing in a teenage-parents relation is exemplified in the below scenario. Even though the parents could have had the best of intentions for the teenager with a certain action, the outcome might not be as expected. Maybe a very small gesture was responded to in a surprisingly emotional way. Or a major endeavor from the parents was responded to with a shrug of the shoulders. Surprise and unpredictability is mostly present.

As it relates to the weather an often told example of non-linearity, or complexity, is called the *butterfly effect*, where one flap of the wings of a butterfly outside San Diego can create a hurricane in Australia, if the small current of air is continuously taken up and over time amplified by the right conditions. Thus large and seemingly powerful complex systems can in certain initial conditions be very sensitive to small changes.

In Table 1, differences and similarities for simple, complicated and complex are put together to clarify the terminology by comparing and contrasting. Non-linear causality (complex) is marked with grey to distinguish between linear causality (simple and complicated). Simple and complicated aspects could be present within a complex phenomenon. For example within the complex hospital (Glouberman and Mintzberg 2001a) there are many detailed and specific guidelines and protocols (complicated) that are to be followed. However, guidelines are interpreted in the local setting via an ongoing interaction between the persons working together to apply the guidelines, that is, via the *complex responsive processes* of conversations and relating. Research suggest that if clinical guidelines and medical protocols where to be used exactly as they were formulated and not adjusted to the local infrastructure, procedures and practices, many fatal errors would occur (Timmermans and Berg 1997).

A reason to emphasize the distinction between simple, complicated and complex relate back to the aim of this thesis. With human interaction being part of the complex domain the phenomena of physician engagement is also considered complex. Also, with the understanding of healthcare as being complex, and many change proposal formulated as if healthcare was complicated (Glouberman and Zimmerman 2002; Suchman et al. 2011), there might be less of a wonder why so many proposals and solutions have not lead to the intended results.

With that we look further into some key aspects of the theory of *complex responsive processes* (Stacey 2011), a theory that caters to complicated linear relations, but more importantly also for the non-linear relations, known as complex phenomena.

Table 1. Simple, complicated and complex related to everyday aspects. This table is re-worked from the original version by Glouberman and Zimmerman (2002, p. 2).

Linear causality		Non-linear causality
SIMPLE	**COMPLICATED**	**COMPLEX**
Baking a cake	**Dismantle/assemble a car**	**Raising a child**
The recipe is essential	Rigid protocols needed	Rigid protocols have a limited application or could be counter-productive. Engaged and authentic curiosity valuable
Recipes are tested to assure easy replication	Dismantling and putting one car together increases likelihood that the next will also be successful	Raising one child provides experience from that specific child but does not guarantee success with the next
No particular expertise is needed, but experience increases success rate	High levels of expertise and training in a variety of fields needs to be combined for success	Expertise helps but only when balanced with responsiveness to every particular child
A good recipe produces nearly the same cake every time	Key elements of each car must be identical to succeed	Every child is unique and must be understood as an individual
The best recipes give good results every time	There is a high degree of certainty of outcome	Uncertainty of outcome remains high
A recipe notes the quantity and nature of the "parts" needed and specifies the order in which to combine them, but there is room for individual experimentation	Success depends on a blueprint that directs both the development of separate parts and specifies the exact relationship between them, and how to assemble them	It is not possible to separate the parts from the whole. The relation between different people, different experiences, different moments in time, is the essence

Conversations being the paradoxical foundation for continuity and change

Complex responsive processes regard organizations as patterns of conversation between interdependent individuals, and place much emphasis on paradox as something normal and inevitable. Organizational members have the possibility to include their own intentionality when responding to a proposed change. Attention is focused on the interplay between individual intentions and organizational intentions and the often complex and unexpected patterning from such responses, sometimes called the interplay of intentions. Small adjustments in conversation patterns can escalate and produce astonishing and unpredicted results. Meaning, knowledge, power relationships, strategies, and individual and collective identities that are emerging can take directions that are far from the intended.

Power is a characteristic of all human relating, enabling and constraining each other. It arises from the fact that people are interdependent and thus need each other. When we need others more then they need us, then they have more power over us then we have

over them. However, Stacey argues power relations are dynamic and never absolute because any power depends upon a temporary and local agreed recognition that there is a powerful and a less powerful. Inclusion and exclusion in different groups and settings are emotionally charged power activities. The experience of inclusion and belonging is creating feelings of affection and loyalty to the group, while the mere threat of exclusion and related loss of identity, arouses feelings of shame and anxiety.

The paradox of simultaneous predictability and unpredictability

Particularly important for the study of life in organizations is the paradox of simultaneous predictability and unpredictability. Stacey states that contradictions, tensions and dilemmas are recognized by many management theories, but that they are mostly seen as resolvable. Many management theories see the resolving of paradoxes as the purpose of management. This is a major difference compared to the theory of *complex responsive processes*, where paradox is seen as a natural part of organizations and as such needs to be coped with. Paradox according to *complex responsive processes* cannot be resolved or harmonized, only endlessly transformed. One central paradox is that managers are considered to be *in control* and *not in control* at the same time. The distinguishing feature of management is thus not control, but courage and capabilities to carry on effectively and creatively, interacting with others in local processes, despite not knowing and being in control.

As an example of my interpretation of what Stacey means when saying "paradox cannot be resolved only endlessly transformed", I draw from the previous discussion about physicians' professional identity. In the role as a *good* physician, you need to combine the notions of reductionism and holism, as integrated aspects of who you are and what you do in your professional role. Stacey talks about the paradox of detachment and involvement, which can be considered relevant to the physician-patient relation. According to the previously presented research about medical education, one side of the paradox, detachment and the related bio-medical science foundation has been the primary focus. There is now an ongoing recalibration in medical education to also include the other side of the paradox, involvement or the ability to meet the patient as a person and a subject. Stacey suggests, as I understand, that the tension between these two aspects of the physician role is central to keep, with his saying *cannot be resolved or harmonized*. Stacey suggests the notion of reflexivity might be the vehicle to support the endless transformation. That we have to first 'step back' in order to later engage more fully, both processes going on at the same time. By reflecting on our own practice, we step back, that is we become more detached, however we do this, with the intent to over time, spiral towards deeper involvement in the *here and now*. Thus, Stacey's term *endlessly transformed* refers to how this spiraling motion, over time, moves in a dialectic between detachment and involvement, fueled by further reflexivity.

Organizations are fundamentally about the identities of people

Stacey (2011) asserts that organizations and their strategies are fundamentally about the identities of people and that identities are shaped and reshaped through everyday

human interaction. Further he states that there seems to be consensus between traditional management theories (Stacey calls this *the dominant discourse*) and the theory of *complex responsive processes* about the fact that organizations are groupings of people engaged in joint activity with some kind of purpose. Stacey argues that the *dominant discourse* where people claim to be independent autonomous individuals is a fiction because human beings are always fundamentally and inescapably interdependent. Through this change, Stacey claims that the theory of *complex responsive processes* leads away from all individual-centered theories, and instead understands individual selves as being thoroughly social, formed by social interaction, which they themselves form at the same time. Focus is directed towards the responsive perspective of how humans interact with, or relate to each other. Human interaction is perpetually constructing the future as the known-unknown, that is, as continuity and potential transformation at the same time. This is defined by Stacey as a paradoxical theory of causality, and what is being perpetually constructed as continuity and potential transformation is human identity.

Normal practice when talking about organizations is to concentrate on the collective identity Stacey argues, but the theory of *complex responsive processes* concentrates on both dimensions, individual as well as collective identities. The proposition is that individuals and groups form and are being formed by each other simultaneously, and the fundamental motivator of human behavior is the urge to relate.

Change impacts identities which may cause anxiety

Stacey (2011) stresses that organizations are about evolving identities and sees human identity as having two inseparably interwoven aspects, the individual and the collective identity. Change in organizations involves deeply personal change for individual members. In any change process, new ways of talking publicly are reflected in new ways of individuals making sense of themselves. Stacey asserts that such shifts unsettle the way in which people experience themselves. The experience of relating is not only expressed in public conversations between people, but also resonates with, and impacts, the silent, private conversations that are thoughts or individual minds. During periods of change, anxiety is seen as an inevitable companion, since uncertainty is created, in particular uncertainty about individual and collective identities. It is important to understand what enables persons to live with that anxiety, so that they also can experience excitement and get energy from the new ways of working. This energy is essential to enable them to continue struggling with the search for new meaning and revised identity.

The theory of *complex responsive processes* focuses attention on the importance of fluid conversations to enable people to search for new meaning. Without these shifting patterns of conversation which give rise to anxiety, there would be no change, no emergence of innovation and new ways of relating. Trust between those engaged in difficult conversations is central to handling the anxiety that change generates, and Stacey highlights the importance of paying particular attention to factors promoting or destroying trust in a particular organization at a particular time.

Quality of action in a complex, unpredictable world

According to Stacey (2011), the biggest and most radical difference to most other theories of organization is the major limit to certainty and predictability of the long term evolution of organization that his theory points to. Surprise is inevitable no matter how well informed, competent and well-behaved people are, since surprise is part of the internal dynamics of *complex responsive processes* themselves. It is considered natural for a person to not always know in advance what result a decision will lead to. The resulting potential feelings of incompetence and shame that this might arouse do not have to incapacitate one.

In a linear and predictable world, quality actions are often seen as those that produce desired outcomes. However, within the understanding of *complex responsive processes*, outcomes of an action involving humans cannot be known in advance. This does not make actions impossible or futile, Stacey states. It simply means there are other bases for determining the quality of actions.

A quality action in a highly uncertain world, according to Stacey, is one that creates a position from where further actions may be taken. Another aspect of quality actions is that errors should be possible to detect faster than for alternative actions. Finally the most important criterion for quality actions within the understanding of *complex responsive processes* is moral and ethical in nature. An action may be taken without the person knowing the outcome simply because the action is judged to be good in itself. Even when a person does not know the result of an action, one is still responsible and will have to deal with the consequences of the action, as best one can.

METHODS

The studies contributing to this thesis are part of a qualitative research tradition. Malterud (2001; 2014) describes qualitative research methods as a spectrum of strategies for systematic collection, organization, and interpretation of textual material, primarily obtained from talk or observation, which allow the exploration of meanings in social phenomena, as experienced by individuals themselves, in their natural context.

Exploring the last 200 years of medical research at the Karolinska Institute in Sweden, Nilsson (2010) presents the notion of research as it relates to the medical field in Sweden has two understandings. The German term *Wissenschaft* and the anglosaxian term *Science*. Wissenschaft is inclusive and spans over all university based disciplines, from theology to physics, thus including both the more interpretative and uncertain (non-linear) studies as well as the more mathematical and certain (linear) studies. *Science* on the other hand stands for a more one-sided ideal striving towards certainty with mathematical causality and predictability as found in the nature sciences, exemplified by physics. In Sweden both of these terms were equally used during the 19th century, but thereafter the linear English versions has come to dominate and thus reducing the understandings of medical science towards the more restricted meaning of examinations performed in a laboratory by use of experimental methods (Nilsson 2010). There seems however to be a movement towards *Wissenschaft* with leading medical journals like The Lancet (Horton 1995) and BMJ (Jones 1995) propagating for the need to understand more about the many interpretative processes in medicine. They argue for the need to include qualitative studies as a complement to the quantitative research tradition in medical research. As expressed by Horton (1995):

> "Interpretive medicine is neither the privileging of a single ideal method for conducting clinical research nor the abandoning of reason for the freedom of arbitrary clinical judgment. Rather, it reflects a recognition that clinical decisions are made through a plurality of means, each of which requires profound interpretive scrutiny in its own right. This broader view of how we construct and apply medical knowledge allows us to fuse evidence with experience and to make connections between apparently incommensurable disciplines-for instance, medicine and humanities, epidemiology and basic science, and health issues facing non-industrialised and industrialised nations. The unifying science of medicine is an inclusive science of interpretation, one that *The Lancet* will nourish with enthusiasm." (p. 3)

This historical distinction between experimental (laboratory) and field (natural) is part of explaining why qualitative research sometimes is referred to as naturalistic studies. However, today the most common term used is qualitative research (Denzin and Lincoln 2011). The relation between qualitative research and other research traditions is shown in Table 2.

Table 2. The scientific tradition of this thesis, qualitative research, in relation to some other research traditions. Modified from the original by Crabtree and Miller (1999).

	Experimental	***Survey***	***Documentry/ Historical***	***Qualitative/ Field***	***Philosophic***
Tool	Laboratory	Instrument	Multi-method	Researcher	Thinker
Focus	Causal Hypothesis	Probability Sample	Artifacts	Human field	Ideal concept
Method	Quantitative	Quantitative	Qualitative/ Quantitative	Qualitative	Logic
Activity	Test causal Hypothesis	Generalize to populations	Description or Explanation or prediction of non-active data	Descriptions, understandings, holistic, realistic	Establish underlying principles
Key task	Active manipulation and measures of the variable of interest in tightly controlled conditions	Passive manipulation (statistical) of the variable of interest from a defined population	Analysis of archives, literature, art, clothes…	Researcher engaged in interpreting empirical data Often from a human source, collected via interviews or observations	Researchers personally engaged to examine and clarify an idea or concept
Research design example	Randomized Controlled Trial (RCT)	Observational epidemiology cohort study	Literature reviews, archive analysis, meta-analysis	No prepacked research design. Data collection methods, and interpretative strategies chosen to correspond to aim	Thought experiment based upon single case or hypothetical case, no empirical evidence

Accordingly, a qualitative approach was chosen for this thesis as it is well suited for research questions that inquiry into the meaning people make of their experiences (Crabtree and Miller 1999; Malterud 2001; 2014), and it is also well suited when there is limited knowledge about a phenomenon (Patton 2002). The qualitative research process facilitated paying close attention to the individual physician experiences, while at the same time remain open and attentive towards finding an empirically grounded collective physicians' voice, based upon individual physician experiences. When choosing qualitative methods the aim is more about understanding than explaining (Malterud 2014).

When engaging in qualitative research there are no predefined research designs (Malterud 2014). Instead the researcher needs to make decisions about specific methods

for data collection and the analytical interpretative process based upon the aim of the study (Denzin and Lincoln 2011). Below some methodological considerations for this thesis.

Data collection

Based on the overall aim for the study, interviews were chosen as data collection method. It can be noted that the term *data* in this qualitative thesis is referring to words, or as expressed by Miles et al. (2013), "data in the forms of words – that is, language in the form of extended text" (p. 10). The qualitative research interview can be seen as a way to gather rich information to try to understand the world as seen by the interviewees and develop meaning from their personal experiences (Kvale and Brinkman 2009). What people present in interviews is but the results of a person's perception; however, research infers that perception informs actions (Czarniawska 2004; Kvale and Brinkman 2009; Stacey 2011). Qualitative interviewing allows us to enter into the other persons' perspective (Patton 2002).

A semi-structured interview guide with open ended questions was constructed to ensure a consistent overview of central themes and related questions to be covered during each interview. An interview guide is valuable to ensure that the same basic lines of inquiry are pursued for different interviews (Patton 2002). At the same time in-depth richness was searched for and this structure allowed freedom to probe further into interesting aspects relating to the aim of the study, arising during the interview process. Open-ended questions were used since they encourage the interviewees to freely express their perspective and experiences which foster richness in the empirical material (Kvale and Brinkman 2009). To stay close to actual experiences individual examples were actively asked for during the interviews. Group-based interviews could have contributed towards meeting more physicians, but with a priority to capture depths and nuances from each physician's experiences and perceptions related to the specific aims, individual interviews were considered more suitable.

Setting and participants

The setting for this thesis was a regional mid-size emergency-hospital in the western region of Sweden. The hospital provided specialist care in general and orthopedic surgery, internal medicine, geriatrics, and psychiatric care, with a total of 200 beds 1,500 employees and care responsibility for an area with 118,000 citizens.

Setting and participants for Paper I and II

For the study about physician experiences related to engaging in development work we strove to find a multitude of physician voices and strategically sampled physicians according to a variation strategy (Patton 2002) about workplace, gender and seniority. After acceptance and support for the study from the local managers we recruited physicians from three departments: orthopedics and surgical care, anesthetic-intensive care, and internal medicine. Written information about the project was distributed to the physicians. The related physicians were then contacted in person by the researchers, who informed them about the study, asked about their interest in participating, and

when interested looked for available times to schedule an interview at the hospital's conference area.

Twenty-five physicians were interviewed, whereof twelve were women and thirteen were men. Eight worked in the surgical clinic, eight worked in the orthopedic clinic, five came from the internal medicine department, and four worked in the anesthetic-intensive care clinic. Twenty were experienced physicians (consultant or residents) and five were less experienced (interns).

Setting and participants for Paper III and IV

The study about physician experiences from a patient-centered and team-based ward round was carried through at the internal medicine department. The internal medicine department had about 134 employees of whom 32 were physicians, 49 registered nurses and 31 assistant nurses. The physicians were comprised of 12 consultants, 13 residents and 7 interns. The department had about 4 400 inpatients a year, whereof 86% were admitted via the emergency. The department was divided into two wards with 25 beds each, with an average length of stay around four days. Each ward had three single rooms available for the most critical ill patients and three rooms with double occupancy. The remaining beds were available in 4-bed ward rooms. The ward patients were equally divided between men and women with an average age around 67 years. The department catered for both emergency and chronic patients with a spectrum of diseases related to hormone-based, intestinal, hematology, cardiac and pulmonary disorders.

A variation strategy (Patton 2002) was used and we strove to find a variety of physician voices with rich, divergent information when we considered physicians to be interviewed. We also wanted variation in physicians' gender and seniority. Thirteen physicians were interviewed of whom six were experienced physicians (3 male and 3 female consultants), three were physicians in their specialist training (3 female residents) and four were less experienced physicians (2 male and 2 female interns).

Patient-centered and team-based ward round – a specific setting for Paper III and IV

Based upon many years of internal conversations amongst the different professional groups at the internal medicine department a new way to do the ward round was being developed and tested. The initiative was driven from and by clinically active persons with no extra internal resources and no external support. The head of the department was in favor of the initiative.

The new ward round was based upon three principles: 1) increasing patient integrity, 2) minimizing information-handovers between health professionals and 3) finalizing all possible tasks related to each patient.

Care teams were formed to minimize information-handovers and to be able to finalize the tasks related to each patient. There were three teams for every ward and each team shared a small office. The care team consisted of senior and junior physician,

registered nurse and assistant nurse. The senior physician was scheduled Monday, Wednesday and Friday, and the junior physician was scheduled for the full week.

In the morning the care team would meet shortly at a pre-defined time. The day was planned and patients prioritized. Patients were prioritized based upon medical criticality and progress in the care process. In the new round all patient were not rounded every day. Instead patients were rounded for a cause, for example just admitted, change of patient condition, results of lab-tests, patient could soon return home. Patients due for discharge were managed after the brief morning meeting, and before the actual rounding started.

With most of the ward rooms catering to a four-bed setting, some of the existing expeditions were transformed into dedicated rounding rooms to enable patient integrity. The rounding rooms were set up with chairs facing each other to enable patient and physician to talk to each other on the same physical level. For most patients it was medically possible to walk to the round room (estimated to 80% by the department). Following each round meeting patient related findings and conclusions were entered as a single team-documentation in the electronic medical record. Before bringing the next patient in, the team strove to finalize all tasks related to the previous patient.

In the new patient-centered and team-based ward round, rounding went from loosely structured, where traditionally each individual physician decided how to round, to a structured and defined team-based work plan. Table 3 outlines key differences comparing the new ward round with the previous, traditional, ward round.

Table 3. The new ward round compared to the previous ward round*.

	New round	**Previous round**
Structure	Pre-defined work plan, same structure for all	Undefined, senior physicians had individual structure and style
Team	Senior physician, physician, nurse, assistant nurse	Senior physician, alone or together with different groupings
Patients round frequency	Need-based, for a special cause	Every day
Location	Room reserved for rounding	4-bed ward room
Patient position	Sitting in a chair (80% of patients)	Lying in bed
Physician position	Sitting in a chair	Standing next to bed
Documentation	Team documentation, physician was responsible	Each health professional was responsible for own documentation
Office space	Team was sharing one office	Separate offices; physicians, nurses and ass nurses

*Table 3 is from paper IV. "Uncovering paradoxes from physicians´ experiences of patient-centered wardround". Submitted.

Analysis

This thesis builds upon two studies responding to the aim with two papers emerging from each study. The analytical approach for each paper is briefly covered below.

New knowledge in this thesis is seen as emerging in an iterative process where increased understanding about empirical phenomena was facilitated by a reflexive process originating in focused attention to empirical material and striving towards conceptualizations thoroughly grounded in the empirical material (Glaser and Strauss 1967; Glaser 1992; Miles and Huberman 1994; Crabtree and Miller 1999; Patton 2002; Stacey 2011). Empirically based findings were further developed, understood and solidified by interacting with existing theory (Glaser and Strauss 1967; Glaser 1992; Miles and Huberman 1994; Crabtree and Miller 1999; Patton 2002; Stacey 2011). Striving towards an increased understanding via an interactive dynamics between empirical data and theories is in line with abductive reasoning (Coffey and Atkinson 1996; Alvesson and Sköldberg 2008). Abductive analysis is considered in accordance with Coffey and Atkinson (1996):

> "Abductive reasoning or inference implies that we start from the particular. We identify a particular phenomenon – a surprising or anomalous finding, perhaps. We then try to account for that phenomenon by relating it to broader concepts. /…/ In other words, abductive inferences seek to go beyond the data themselves, to locate them in explanatory or interpretive frameworks." (p. 156)

Paper I – Grounded Theory chosen as qualitative method

Grounded Theory is well suited for discovering and generating of new understandings in previously unexplored areas of research since it allows people to qualitatively describe the meanings they attribute to phenomena and also consider how they understand their everyday behavior in relation to the phenomena being studied (Glaser and Strauss 1967; Glaser 1992; Charmaz 2006). The process of bringing empirical interview material to a higher level of abstraction, thereby creating an empirically grounded understanding of a phenomenon is of essence in Grounded Theory (Glaser and Strauss 1967; Glaser 1992; Charmaz 2006). Common elements in Grounded Theory are verbatim transcriptions of the recorded interviews, continual sampling, and constant comparisons between original material and analytical findings to ensure consistency in interpretations, challenge or broaden early findings with new empirical material. When the constant comparison between existing analytical findings meeting new empirical material does not yield any new or deviating aspects the material is considered saturated and the analytical process is coming to a conclusions.

In line with Grounded Theory, data collection and analysis were conducted in parallel to be able to adjust aspect of the data collection to cater to interesting early findings (Glaser and Strauss 1967; Glaser 1992; Charmaz 2006). During the first step in the analytical procedure, the verbatim transcripts of the first sixteen interviews were read and physician statements that were related to the aim of the study were tagged with preliminary descriptive codes, close to the data. This was done without any predefined categories, focusing solely on what was being talked about in the interview mate-

rial, also known as open coding. By staying close to the data this step in the analysis is reducing researchers' pre-understanding from overpowering the analysis. In the second step, these codes were compared with each other to generate more abstract categories combining clusters of codes. These categories were in turn compared with each other, and as in the previous steps also compared with the original data, in what is called focused coding. In this step of the analytical process, overarching categories were developed from the data. The core category 'striving for professional fulfilment' was the end result from an iterative analytical process and was based upon patterns that repeated themselves across the data. This emerging abstract understanding was challenged by nine more interviews. Saturation was considered to have been reached when the data from these additional interviews did not add any more properties to the core category.

The core category was relating to, and enabled making sense of other categories, codes and original data. During the analytical process theoretical notes and memos, were continuously written, presented and challenged amongst the group of authors. Tentative categories and preliminary ways to understand the empirical material were also presented to a larger group of researchers in the same research area.

Semi-finished results were reiterated back to practitioners and the leadership groups at the involved departments. The findings seemed to make sense and be useful also outside the research context. Nothing new came up but the exchange enriched the analytical process.

Paper II – Increased understanding of empirical findings by use of theory

To try to deepen the understandings about the empirical findings in Paper I, a dialectical process between empirical findings and three theoretical perspectives was initiated. Managing understanding (Sandberg and Targama 2007), organization culture (Alvesson and Svenningsson 2008; Schein 2009) and complex responsive processes (Stacey 2011) were used to further an understanding about physicians mindset. Relating this understanding to the managerial mindset, as outlined in previous studies, provided an increased clarity about likely issues when these two mindsets were to communicate and cooperate. The empirical findings together with these theories opened up for considerations about what a manager in healthcare need to know and do, as well as suggestions about who a manager would need to be or become, in order to facilitate and promote physicians' engagement.

During the analytical process preliminary findings and tentative conclusions were continuously presented and challenged amongst the authors, and also presented and grappled with amongst a larger team of researchers in the same research area.

Paper III – Qualitative analysis as outlined by Miles and Huberman

The analytical process followed principles for qualitative analysis as outlined by Miles and Huberman (1994). All thirteen interviews were transcribed verbatim. Each interview was read with a focus on the aim. Empirical dimensions where formed within each interview, leading towards a condensed and focused material. Empirical patterns

or regularities were analyzed for across interviews, and combined into emerging clusters or themes spanning multiple interviews. During the analytical process the transdisciplinary group of authors worked in parallel to enrich the empirical interpretations and reduce the risk of any author overpowering the empirical physician voices. First interview material was red individually and individual interpretations were presented. Different understandings or additional nuances were compared and contrasted leading towards a converging and richer understanding amongst the group of authors. Alternative interpretations were continuously looked for in critical reflections. The analytical process continued in this iterative spiral until data reached a point of convergence where eight conceptual themes encompassed the empirical material.

Semi-finished results were reiterated back to the clinical practitioners in two sessions during the medicine department development days. The resulting exchange was rich, the emerging findings seemed to make sense and be useful for the practitioners. The exchange was reflected upon by the research team and was integrated in the continued analytical process.

Paper IV – Increased understanding by use of abductive analysis

To further the understandings about a particular aspect of the emerging empirical findings we engaged in an abductive analysis where empirical material was related to the theory of complex responsive processes.

The multi-professional author group engaged in an iterative abductive analysis until reaching a rich and balanced interpretation that was true to the empirical material, provided overarching resonance and increased mutual understanding. The first author would formulate a written account which would be distributed to the others, and subjected to potential reconsiderations in a subsequent gathering. This process continued until the group reached an enhanced level of understanding about the related empirical material. At that time the analytical findings in the emerging text material were considered at a conceptual level where it would contribute valuable findings to the scientific community.

Ethical considerations

In this doctoral thesis physicians were interviewed. The risk for harm to participating physicians was considered low, and thus the project did not meet criteria justifying an application to the ethical board according to the Swedish law concerning ethical application for research relating to humans aims (Act 2003:460 amended 2008:192). Ethical demands for qualitative research; informed consent, confidentiality, the consequences of the study and role of the researchers, have been considered and followed. Written communication outlining the study was given as standardized information in advance of interviews. The first minutes of each interview were taken to personally inform each physician about the aim of the study. Each individual was asked if it was acceptable to record the interview and that they were free to stop the interview and leave whenever they wanted, but none of the interviewees ended their participation in the studies. They were also informed that their responses were treated in confidentiality amongst the researchers.

Qualitative interviews often unfold as an intense interaction between the researcher and the interviewee. Sometimes the exchange becomes very rich and emotional and that is an ethical aspect of interview studies that is central for the role as qualitative researcher to be prepared for (Kvale and Brinkman 2009). There were three interviews when the interviewee asked the interviewer to stop recording. After a brief conversation between the researcher and the interviewee the interview process proceeded without recording but taking notes. These instances were related to interviewees sharing personal and private stories. When the piece of information shared was directly related to the aim of the study the interviewee was explicitly asked if it was acceptable to use the information in the research process. The related interviewees agreed to this. Before concluding the interview there was a final questions about any aspects not covered during the interview that the interviewee would like to add.

An orientating introduction and an open question when closing the interview are recommended when doing qualitative interviews, both to facilitate richness in the empirical material, but also as an ethical way to honor the person to person interaction (Kvale and Brinkman 2009).

RESULTS - SUMMARY OF FINDINGS FROM THE FOUR PAPERS

Physicians' engagement in healthcare development was found to be reinforced when the task at hand was experienced as contributing to physicians' experiences of professional fulfillment. This empirically emergent core category was conceptualized as s*triving for professional fulfillment.* It was described as the satisfying inner experience of *being useful and making progress* (I).

The core category, s*triving for professional fulfillment*, was a central motivational drive in physicians´ everyday working lives and in their career-making decisions, affecting both clinical engagement and development engagement. Professional fulfillment from participating in development activities was experienced when physicians achieved meaningful results, had an impact, learned to see the greater context and fulfilled the individually perceived role as physician (I).

Two opposite role-taking tendencies emerged from the empirical material, where professional fulfillment was constructed differently. One upheld a more *traditional doctor role* with high autonomy in relation to organization and management, and with patient work serving as the main source of fulfillment. The other approached a more *employeeship role*, in which organizational engagement also contributed towards a sense of professional fulfillment (I).

Recognition, continuity, role clarity and task clarity were found to be essential organizational conditions to reinforce and support physicians' engagement. This can be understood in the light of their contributing towards the experiences of *being useful and making progress* (I).

Findings showed that physicians and manager have fundamentally different mindsets. This hinders communication and cooperation. In order to improve the situation managers need to be appreciative of the mindset of physicians, and physicians need to better understand the mindset of managers (II).

Findings suggest that mindset could be evolved by adjusting everyday conversations. Thus, engaging in local conversations with physicians is a central task for managers. This relational interaction of everyday conversations could serve as fuel for managers and physicians to better understand the professional identity/mindset of the other. It would help physicians with their professional identity work if management made explicit that patient work and organizational development work are both considered central tasks within the role as physician (II).

Findings further showed that in order to evolve physician identity (with limited anxiety levels) managers need to: provide opportunities for physicians to be challenged and acquainted with other ways of understanding important aspects of their work; develop forums that enable physicians to reflect on their experiences; find ways of acting that stimulate trust, involvement and participation. If managers address how contra-

dictions in the organization can be understood, rather than abstract values of customer orientation or service quality, this will serve to reinforce physicians' engagement (II).

It was found that the process of interaction via participating in everyday conversations could be seen as a vehicle to evolve managers' and physicians' respective professional identities over time, and as a potential consequence, to contribute towards increased engagement from physicians in improving clinical services and processes (II).

Physicians experienced that working in the patient-centered and team-based ward round contributed to better-informed clinical decisions, fewer follow-up questions from patients, and increased professional fulfillment. However, physicians also experienced a reduction in their autonomy and there was uneasiness about exposing potential knowledge gaps in front of others (III).

Physicians considered that a less hierarchical relationship with the patient was an important result following from the new round. This change was attributed to a combination of three separate, but interrelated changes: firstly, moving from a very hierarchical structure, with physicians standing and patients lying down, towards a more balanced perspective with both sitting in a chair facing each other; secondly, using a special room allowing integrity during the round conversation; and thirdly, having patients meet physicians together with the registered nurse and the nurse assistant (III).

It was found that physicians with the same specialty, equal seniority, and working at the same hospital department in the same ward, had qualitatively different ways of understanding their role as physician. Based upon what the physician considered most important during ward rounding, two divergent perspectives were formed: the *We-perspective* and the *I-perspective*. Reality is of course much more intertwined, complex and multifaceted than these two perspectives can do justice to, and it was clear that the *I-perspective* and the *We-perspective* were not static dichotomous phenomena, but opposing perspectives on a continuum (IV).

These empirical findings were further understood with the help of theory clarifying that changes challenging identity trigger anxiety, and when anxiety is aroused and neither acknowledged nor handled, resistance is likely to follow. It was found that when the new round principles were in line with individual physician's professional identity, the new round was appreciated. When the new round principles challenged individual physician's identity, the new round was not appreciated (IV).

Findings showed that political and organizational leaders need to better understand the challenges relating to physicians' professional identity, in order to establish a nurturing policy environment with considerate expectations and time frames, to facilitate progress towards a more patient-centered healthcare (IV).

DISCUSSION

Responding to the first specific aim

The first specific aim: "To explore how physicians' experienced their engagement in healthcare development" was responded to by Paper I and II.

Paper I: Why risk professional fulfilment: a grounded theory of physician engagement in healthcare development

Physicians were found to be interested in developing processes and practices in an abstract, general sense. Whether a physician actively engaged in actual activities was found to depend on if previous similar activities had contributed or not towards the experience of individual professional fulfilment. Thus, physicians' engagement in healthcare development was reinforced when the task at hand was experienced as contributing to physicians' experiences of *being useful and making progress* – the two dimensions building up the core category *striving for professional fulfillment.* The importance of professional fulfilment for physicians' relationship to their present organization has been stressed in previous research (Brown and Gunderman 2006; Lieff 2008; Lee and Cosgrove 2014).

Organizational conditions to support physician engagement were found to be; recognition, continuity, role-clarity and task–clarity. This can be better understood when considering that all of these conditions are contributing towards reinforcing physicians' experiences of *being useful and making progress,* the two foundational dimensions to the core category *striving for professional fulfilment*.

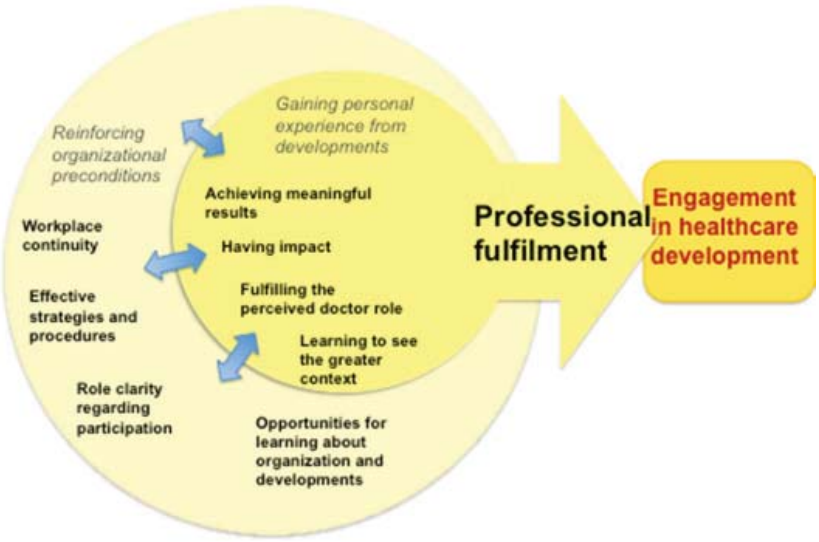

Figure 4. A conceptual model of physician's engagement combining central individual expe-riences towards professional fulfillment with reinforcing organizational factors. Source: Paper I.

The conceptual model emphasized the importance of workplace continuity as it allows physicians to be at the workplace long enough to experience the results of their engagement. Interviewees expressed experiences of being left outside the workplace-based community of other professionals, while physicians themselves tended to shift between workplaces and workgroups owing to the scheduling practices of their profession. This experience of lack of workplace continuity, conceptualized as *vagabondering*, and the related sense of being left out of the ongoing conversations at the workplace, could cast light on previous findings that problematize the cultures of collaboration amongst physicians compared with non-physicians (Stoller 2004; McAlearney et al. 2005). Conversations were considered a central foundation to successful interventions in healthcare (Jordan et al. 2009). Participating in local conversations is emphasized by Stacey (2011) as these conversations contribute to continuity and change regarding individual meaning and professional identity.

Considerate scheduling, providing workgroup continuity for physicians was recognized as a practical prerequisite for cooperation, as well as supporting workgroup climate where ideas can be openly expressed. McAlearney et al. (2005) argued that physicians are fostered in a culture characterized by autonomous expert decision making, a reactive approach to problem solving and a focus on individual patients. This mindset/professional identity is well suited for a bio-medically oriented patient interaction, but the same mindset can be less functional when participating in development work where there typically are no immediate right answers and there is a need to improvise and over time iterate different solutions until it works in the local context. Berwick and Nolan (1998) argue that development work asks for different skills and professional identity than those considered traditional clinical physician skills. The importance of a supporting and safe environment to dare to improvise was emphasized by Stenström (2009). He further suggested the importance of an individual being attuned to listening and interaction with the other, as central for improvisation.

Clinical training and development was regarded as not providing physicians with a more organizational understanding or system-level focus (McAlearney et al. 2005; Kaissi 2014). This could arguably be altered, for example, by educational programs for clinical physicians (McAlearney et al. 2005; Kaissi 2014), or by teaching the benefits of interdisciplinary collaboration in medical school (Stoller 2004). These aspects from previous research seem to be considered in the ongoing development of medical education for the 21th century (Wilson 2013; Cruess et al. 2015; Wald et al. 2015). Physicians' engagement in change, patient-centeredness and working in teams are outlined as central capacities to complement medical education moving forward (Frenk et al. 2010; Gordon and Karle 2012; Gordon 2014).

The study found that physicians were engaged in development work in an abstract sense. More active participation depended on whether these activities contributed towards professional fulfillment, as much as clinical work. These findings are in line with Davies et al. (2007) who considered physician engagement a challenging and complex phenomenon, and suggested from their literature review about clinical engagement in improvement work that going from an abstract to an active engagement is the key challenge:

> "In summary, active engagement in quality improvement is likely to entail profound and disconcerting changes, greater uncertainty, and some potential loss of face for individuals and professions in acknowledging other parties, giving up cherished turf and altering everyday routines and established ceremonies." (p. 129)

Two opposite role taking tendencies were found emerging from the empirical material. One was upholding a *traditional doctor role* with high autonomy in relation to organization and management, clinical work serving as the main source of fulfilment. The other role was approaching a more encompassing *employeeship role* in which organizational engagement also provided a sense of professional fulfilment as physician. Upholding the autonomous *traditional doctor role* was associated with less engagement in healthcare development, whereas approaching a more *employeeship role* was associated with more engagement in development work. A model combining these findings is presented in Figure 5.

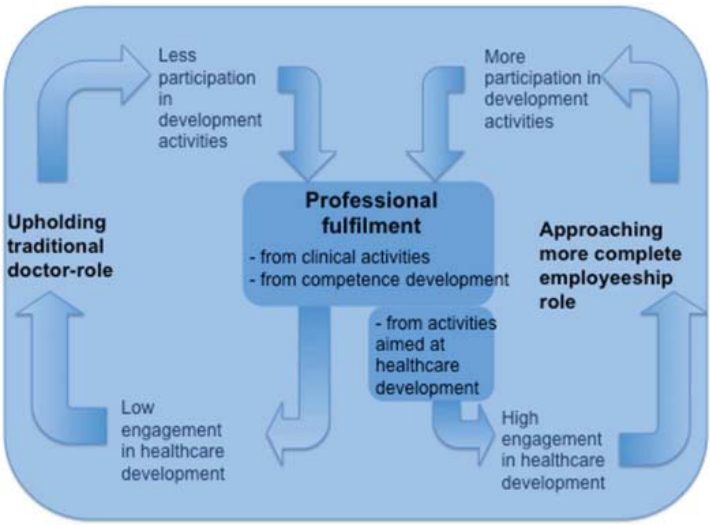

Figure 5. Conceptual model how the findings of two different ways of relating to professional fulfilment, *traditional doctor-role* or *encompassing employee-ship role*, interrelate to physician engagement. Source: Paper I.

For physicians to strive for professional fulfilment from participation in healthcare development processes (a.k.a. improving clinical services and processes), these experiences arguably need to differ qualitatively, to complement, the fulfilling experiences from clinical practice. The need for experiences of social interaction and relating via involvement with continuity-development alongside other professionals, and recognition — by oneself and others as contributing to better patient care — could be small but efficient aspects in facilitating an increased physician engagement. The need for experiences of social interaction is resonating with Stacey (2011) who proposed that the fundamental motivator of human behavior is the urge to relate.

Paper II: Engaging physicians in organisational improvement work

Physicians' engagement in healthcare development was found to be reinforced when the task at hand was experienced as contributing to physicians experiences of professional fulfillment (I). To further understand how this empirical finding would interact with the relation between physicians and managers Paper II used three perspectives; managing understanding (Sandberg and Targama 2007), organization culture (Alvesson and Svenningsson 2008; Schein 2009) and the theory of *complex responsive processes* (Stacey 2011). These perspectives focus on how mindsets emerge and evolve trough lived experiences, and direct us towards everyday communication, conversation and interaction between interdependent individuals to bridge cleavages between the different mindsets in the complex hospital (Glouberman and Mintzberg 2001a).

Glouberman and Mintzberg (2001a) argued there are four separate mindsets cure, care, community and control. Each mindset represents different understanding of the organizational reality, which can lead to misunderstandings. As previously mentioned, the interaction between managers and physicians has been acknowledged as a relationship that can contribute negatively to work performance (Fulop et al. 2002; Greening 2012).

The difference in socialization, training and everyday practice contribute to different values, norms and expectations between managers and physicians (Kaissi 2005). He suggested "each group represents a different ´tribe´, with its own basic assumptions, values and artifacts." (p. 168) This is in line with what Nash et al. (2003) pointed out following a written research conversation about *improving the doctor-manager relationship* in the British Medical Journal. In summary, it was argued that physicians and managers have different tasks, live in separate worlds and speak different languages. Physicians focused on professional autonomy, the individual patient, evidence-based medicine and an urge for independence. Managers tended to focus on patient populations, societal needs, system levels, financial control, efficiency, and resource allocation.

Chang and Ritchie (2015) suggest that nearly every medical students and practicing physician aspires to provide the best possible patient-centered care, but there are hinders in the healthcare system to carry out this aspiration. They argue physicians need to engage in *changing* the delivery system and that physicians should strive to "achieve fluency in domains beyond medical knowledge and technical skills." (p. 870)

Previous research has suggested that single- and double-loop are two distinguishable different ways change occurs (Argyris and Schön 1978; Fiol and Lyles 1985, Argyris 1990). Single-loop change and problem solving takes place within a particular frame of reference. It has the character of more of the same, and does not bring up any examination of the underlying basic mental models, nor does it conflict with the fundamental values and norms in the organization. Single-loop change improves the functioning without challenging the understanding, mindset, or professional identity. If the circumstances are stable this can create high efficiency and expertise.

As a contrast, when engaging in double-loop change, people start questioning their own individual mental model as well as the taken for granted assumption they share with each other. Suggested solutions might conflict with existing practices, power relationships and local routines and can look surprising and paradoxical. These types of changes or solutions cannot be utilized without changing the underlying mental models, interaction patterns and mindsets. In other words, double-loop change might challenge existing professional identities. The findings in Paper I, of two opposite role taking tendencies; one upholding a *traditional doctor role* and a more encompassing *employeeship role* could be seen as different mindsets, i.e. different ways to understand the professional identity as physician.

Linked to this are the terms *espoused theory* and *theory in use*, which Argyris and Schön (1978) used when explaining their findings that experts are often claiming they do one thing (espoused theory), but when observing their actions that are often doing something different (theory in use). Stacey (2011) suggest managers often claim that free and open communication is important, while there could be an unspoken norm that encourages subordinates to hold back information that managers will find negative. According to Chang and Ritchie (2015) there is an espoused theory that medical practice always is about being patient-centered. However, findings in Paper I show that there seems to be multiple theories in use; one more comprehensive understanding of medical practice that is patient-centered, but also a less patient-centered understanding of medical practice. These findings are in line with previous studies where different ways of understanding medical practice, as it relates to patient-centeredness, is shown to already be manifest during medical education (Dall Alba 2002; 2004; 2009). And to be present across different medical specialties as anesthesiology (Klemola and Norros 1997; Larsson 2004) and primary care physicians (Stålsby-Lundborg et al. 1999).

Stacey (2011) stated that, organizations and their developments "are fundamentally about the identities of people." (p. 294) Engaging in double-loop learning identities are being challenged, and this can excite many fears among those involved, and fear can evoke defensive routines (Bion 1961; Argyris 1990). Defensive routines can result in resistance, especially if change ideas threaten to reallocate authority, demand new competence, affect status relations, and belittle previous arrangements in ways that make people feel embarrassed, shameful, incompetent, threatened and doubtful if they can live up to the new requirements (Kets de Vries and Miller 1984; Schein 2009). A potential way forwards suggested by Argyris (1990) is for managers and the managed people to reflect together on what processes they are engaged in, and defuse the potential fears and embarrassments by making them explicit. Different ways of understanding is argued to be based upon individual experiences, conversations and interactions with other persons (Sandberg and Targama 2013). To evolve individual understanding, Sandberg and Targama (2007) suggest, in line with Argyris (1990), reflection as a way to distance oneself from the everyday work. Stepping back enables a look at the own way of working, and as such facilitates an increased awareness of individual pre-understanding of work.

To understand the mindset of managers it is valuable to bear in mind that management is not a profession in the sense that managers need a license to practice as is the case

for physicians (Norbäck and Targama 2009). On the contrary, managers often have a background in one occupational area. Frequently well-performing specialists become promoted into the generalist manager position. Managerial identities might be affected both at the occupational and at the activity level by such primary occupational identities. Many physicians act in managerial roles, and individually must balance the two worlds/mindsets (Cases from different nations can be found, e.g. Jespersen 2005 (Denmark); Opdahl Mo 2008 (Norway); Iedema et al. 2004 (Australia); Doolin 2002 (New Zealand); Waring and Currie 2009 (UK)).

New management concepts and ideas, management fads, promising simple and quick solutions to complex problems, travel around the world supported by well-articulated management consultants who promote the latest managerial fashion (Czarniawska and Sevón 2005). Business schools and management-training institutes follow to attract clients. Organizations can gain legitimacy by adopting the latest management ideas. This is paradoxical and an example of wishful thinking, since many novel ideas only promise more of the same rationality, but under new labels. Stacey (2011), representing the theory of *complex responsive processes* has another way of understanding management. He argues that managers face a challenging paradox every day of *being in control* and *not being in control*, at the same time. He emphasize that managers need to have the courage and capabilities to carry on interacting with others in local complex responsive processes, despite not knowing and being in control.

It was found with support from Stacey (2011), Sandberg and Targama (2007), Alvesson and Sveningsson, (2008) and Schein (2009) that mindsets/identities are shaped and reshaped via everyday human interaction. This indicates that mindsets could be evolved by adjusting everyday conversations. Managers are recommended to consider themselves as active participant in the ongoing local conversations. By paying attention to small changes in everyday conversation patterns this can, in the long run, evolve managers' identities and physicians' identities towards increased mutual understanding, with limited anxiety arousal.

Findings suggest that to increase physicians' engagement in improving clinical services and processes managers should *remove barriers, give administrative support* and *help physicians' with their identity work.* In order to support physicians with their identity work it was found that managers need to incorporate a deeper knowledge about physicians´ professional identity, and thus also managers need to evolve their own professional identity. These suggestions are very much in line with what Kaissi (2014) found when summarizing the evidence on physician engagement and providing an integrative framework to help managers to better understand and improve physician engagement.

Dickson (2012) working in parallel to Kaissi in a regional attempt to enhance physician engagement emphasized that managers and physicians need to work together for maximum value to patients and citizens, but concluded:

> "Physician engagement is a very laudable goal and a very elusive one that challenges many of our leadership practices to their very core." (p. 29)

Responding to the second specific aim

The second specific aim "To explore physician experiences after changing to a patient-centered and team-based ward round" was responded to by Paper III and IV.

Paper III: Physician experiences of patient-centered and team-based ward rounding – an interview based case study.

It was found that physicians' changed relationship with patients was one of the most important aspects of the new round. The traditional relation of superiority and subordination, embodied by the patient lying down in bed and the physician standing next to the bed, was changed. The new less hierarchical relationship made interactive communication possible, which in its turn supported physicians' continuous striving towards better clinical decisions, quality of care and more suitable ways to inform patients. Physicians experienced that this less hierarchical relationship with patients, combined with working in a multi-professional team (senior physician, junior physician, a registered nurse and an assistant nurse), contributed to better-informed clinical decisions, fewer follow-up questions from patients, and increased professional fulfilment. These findings are in line with Donabedian (1988) who stressed the importance of interpersonal exchange for quality of care. He argued that it is through interpersonal exchange that patients communicate information necessary for arriving at a diagnosis, as well as preferences necessary for selecting the most appropriate care. He further suggested that the interpersonal exchange is also where the physician provides information about the nature of the illness and its management and motivates the patient to active collaboration in care.

Sweet and Wilson (2011) suggest that the problem with the hospital round is that its traditional style has remained rather impersonal or objective, focusing more on the disease than on the sick person. The Royal College of Physicians and the Royal College of Nursing (2012) echoed this point of view in their ward round guidelines; emphasizing that healthcare professionals should not underestimate the importance of interaction on rounds, from the patient's perspective. This is in line with The Lancet editorial (2012) emphasizing the importance of the relationship between caregivers and patient: "if you do not communicate with your patients clearly, and do not treat your patient in a dignified manner, you are not providing even the bare minimum of health care". (p 1281)

In the analysis we found that working in multi-professional teams were abstractly appreciated by the physicians, while at the same time it was considered a new and ambivalent experience for physicians to adapt their own way of working to other professionals. This finding resonates with research by Bharwani and colleagues (2012). When they followed four different medical rounding teams it showed caregivers had formed working groups, rather than working teams. Participants consistently exhibited parallel interdependence rather than reciprocal interdependence, the hallmark of effective teams (Bharwani et al. 2012).

In this study physicians acknowledged the challenge involved in adapting from a traditional position as an autonomous decision maker into a conforming and responsive

team-player. However, as far as could be concluded from the empirical material, the praxis at the wards exhibited signs of reciprocal interdependence, indicating well-functioning teamwork.

Weller et al. (2014) argue that mutual trust, closed-loop communication and shared mental models are the underpinnings for effective teamwork. The way the patient-centered and team-based ward round was structured it contributed to all three of these underpinnings. Mutual trust was reported being established as individuals were starting to know each other, both as persons and as professionals, working closely together in the round-team and sharing an office. Closed-loop communication and shared mental model was established by meeting the patient as a round-team, and by summarizing a tentative care plan, before rounding the next patient.

Previous studies have reported that interdisciplinary rounding reduced medical errors (Zwarenstein et al. 2009), and improved the quality of care for hospitalized patients (Begue et al. 2012). Findings from the physician interviews indicated that clinical quality was experienced as positively impacted in many ways due to the new ward round, however no data about medical error were collected to quantity this.

Physicians experienced that the communication with patients was enriched by the less hierarchical relation with patients. Physician-patient communication in single-bedded versus four-bedded hospital rooms was studied by van de Glind and colleagues (2008). They concluded that single rooms seemed to contribute to physician-patient communication in a positive way since patients asked more questions and affective reactions from physicians were more frequent. They continued their line of argument by assuming that patient understanding of the health and care process is likely to be positively affected. Our study confirms their findings and also substantiates their assumption about increased patient understanding with the interview based findings that follow-up questions from patients and their relatives were reduced in the new ward round.

Research, studying patient perception of a person-centered care model suggested some patients felt listened to and experienced that their view of the situation had been noted (Alharbi et al. 2014). Open listening was perceived by these patients to be a positive experience, and these patients also expressed that not every aspect of their illness needed to be addressed or resolved. It was experienced valuable as a patient to have been given the space to tell a more complete story and not only focusing on the disease. Alharbi and colleagues also noted that care practice was not very consistent, and reported patients, at the same ward and at the same time period, experienced health professionals ignoring the patient perspective.

Physicians experienced a need for improved strategies to manage patient conversation when working according to the new round. The less hierarchical setting accentuated the need for skillful patient conversations since patients, as intended, naturally expanded their stories when sitting up in a chair compared to lying down in bed. This finding builds on what Levinson and colleagues (2010) reported when studying physician communication skills for patient-centered care. They argued that practicing physicians have typically not received any structured training related to communication

since they left medical school. The pedagogical challenge to make information available in a patient-centered way was studied by Friberg et al. (2015) who suggested that teaching pedagogical theories for the development of reflected expertise in complex learning practices can play a major role in physician continuing education. Saldert and colleagues (2015) found that teaching theory is not enough. To create a change in the actual patient interaction testing the new theories by actively experimenting in role play and reflecting about the experiences in an educational safe setting was needed.

Physicians experienced a reduction of autonomy working in the new round and this was primarily expressed by some of the senior physicians. Previously, each senior physician decided how the round was to be carried out and other health professionals adapted to this, but in the new round there was a predefined structure to follow. Reduction of physician autonomy is in line with recent studies (Halpern and Detsky 2014) and seems neither to be a uniquely Swedish nor a uniquely local hospital phenomenon. Halpern and Detsky reported how autonomy has been stepwise reduced in the internal medicine residency programs since the 1970s.

Gawande (2011) argued that reduction of autonomy might be a reasonable change since the medical knowledge base now is so large, and increasing so fast, that no individual clinician can any longer claim to be able to know and do it all. At the same time physicians have for a long time been trained to feel personally responsible and therefore place great value on their individual autonomy (Gosfield and Reinertsen 2008). Healthcare has a unique and complex relationship to the autonomy of its individual actors where human virtue is seen as the basis for safety, and human incompetence as the source of risk (Santomauro et al. 2014). The most successful healthcare organizations going forward, are likely to be the organizations that can support physicians to live up to their aspirations of professional fulfilment as caregivers (Lee and Cosgrove 2014). Closely linked to that, they argued, is to facilitate physicians' understanding that giving up part of their autonomy is not really to surrender, but a noble act of humility in the interest of the patients, the core of physician professional identity.

Physicians found that working in patient-centered and team-based rounding structure increased their professional fulfilment, but in a paradoxical way the new round also introduced a new risk of losing face. There seemed to be a cultural predisposition that a senior physician always should know, or would come up with, the answer. This seemed to be a workplace dimension that the senior physician has to cope with. This is in line with previous research (Christensen et al. 1992) reporting how profound emotional distress was experienced if physicians had made a mistake. These physicians also admitted that fear of humiliation, litigation, or punishment had prevented some of them from talking about their feelings with other physicians. Another perspective is brought forward by Mørk and colleagues (2010) who found that experienced physicians might be uncomfortable changing clinical practices since power relations may be substantially reconfigured when introducing new practices.

Stacey (2011) argued that an organizational change is always a personal change for an individual. The extra challenge for experienced physicians, having spent many years doing their individual ward round praxis, resonates with what Gosfield and Reinertsen

(2008) outlined as an argument from physicians about proposed change impacting patient care: “If I´m doing it this way now, what I´m doing can´t be bad, because I´m a good doctor, and I´m trying hard to do what’s best for my patients.” (p. 30)

Previously there was no uniform structure or method for carrying out ward rounds. It was implicit that each senior physician had her/his own individual way, and that each junior physician was to establish their way of doing the round, as part of their way of becoming a physician. Local conversations between people engaged in their everyday work-task are considered a powerful vehicle to increase understanding about work and also to initiate change (Stacey 2011; Sandberg and Targama 2013). However, without any established structure explicitly defining how to carry out the round there has been limited common ground to enable productive local conversations comparing and contrasting different ways of doing the round, and thus the platform for improvement has not been there. Regarding ward rounds as *ordinary* and *unremarkable* (Caldwell 2013; Launer 2013), and leaving every physician to figure out her/his own individual way of working might be one of the more central aspects responding to the question posed in The Lancet (2012); why round praxis in the 21st century has not changed much since the 20th century?

Paper IV: Uncovering paradoxes from physicians’ experiences of patient-centered ward-round

By the use of abductive analysis, relating the empirical material to the theory of *complex responsive processes*, paradoxes in physicians’ responses to the patient-centered ward round were uncovered and better understood. In furthering the understanding about these responses to the new ward round two empirically divergent perspectives about understanding the role of physician emerged. The author group concluded on a descriptive name for each perspective based upon where the physician’s role was centered during ward rounding.

The two perspectives were called the *We-perspective* and the *I-perspective*. These two-perspectives are in line with what Klemola and Norros (1997) presented as *realistic orientation* and *objectivistic orientation* studying clinical behavior of anesthetists. Patient uniqueness, uncertainty and a cumulative interpretation of situational information was part of the *realistic orientation,* and these are considerations associated to the *We-perspective*. Considering patient as an object, certainty, a reactive habit of action based on implementing a deterministic plan typified the *objectivistic orientation,* which are ways of relating that are associated more to the *I-perspective.*

Larsson (2004), found different ways of understanding the work as anesthetist. His findings are resonating with the empirical ward round findings in relation to if the patient is considered more of a subject (*We-perspective*) or considered more of an object (*I-perspective*). He introduced the *good Samaritan* way and the *professional artist* way of understanding work. “The *good Samaritan* understanding means to see the patients as subjects whereas the *professional artist* understanding means to focus on patients mainly as physiological objects.” (p. 45) Larsson concluded physicians with a more patient-centered view (*good Samaritan*) pay more attention to safety issues.

The two perspectives also resonated with Dall'Alba (2004; 2009) who studied how individual physicians developed their understanding of medical practice. While she found six different ways of understanding medical practice, similar to findings in Paper IV she suggests two overarching descriptions of medical practice; one with a more bio-medical understanding of the role as physician, and another with a more patient-centered understanding of the role. In line with Dall'Alba (2009) it can be argued that the *We-perspective* adheres to a more comprehensive and inclusive understanding of medical practice than the *I-perspective*.

Physicians with their understanding of medical practice in line with the *We-perspective* experienced the new round was enabling them to work in greater alignment with their professional identity, and the new round was embraced. Physicians who had rounded many years from more of an *I-perspective* were not as appreciative of the change. The different responses can be understood with the support of Stacey (2011) who suggested that defensive routines and resistance are likely to be triggered when identity is challenged. This is also expressed in psychological change theories arguing anxiety is aroused when changes reallocate authority and demand new competences, and when people feel doubtful about whether or not they can live up to the new requirements (Kets de Vries and Miller 1984; Schein 2009). When anxiety is not handled resistance is likely to follow and changes are likely to be hampered.

According to Stacey (2011) a fundamental change at the workplace, for example altering the ward round, also implies a deeply personal change for the individuals. Anxiety is inevitable for these types of changes since it creates uncertainty about individual and collective identity. Physicians that have worked for many years with more of a bio-medical *I-perspective* as the basis for their physician identity and rounding practice will have their professional identity challenged by the new round principles. The theory of *complex responsive processes* emphasize it is then central to understand what enables different persons to bear the anxiety and find some energy and excitement also in the new ways of working. This energy is essential to continue struggling with the search for new meaning and evolved professional identity as physician. While anxiety could be seen as something we all strive to avoid, Stacey concludes, that without shifting patterns of local conversations, which give rise to anxiety, there would be no change, no emergence of innovation and no new ways of relating. He emphasized the importance of creating forums where difficult and trustful conversations about the search for new meaning can take place. This would be a practical suggestion how to handle the necessary anxiety in a responsible way.

When new societal needs and demands are integrated in the clinical processes, such as patient-centered and team-based ward round, the response from physicians related to whether the new demands challenged or confirmed individual physician's professional identity. Coulehan (2005) suggest that professional identities "represent the physician's interpretation of what being a good doctor means and the manner in which he or she should behave." (p. 895)

In a recent study Carlström and Olsson (2014) found that deeply rooted standards and models, in combination with work schedules, were hindering the introduction

of patient-centered models. At the same time, they found low overall resistance to change, which they commented was not in line with previous research about change in healthcare. This paradox of high and low resistance at the same time can be understood when healthcare is being considered a complex organization. As such non-linear transformative causality is expected to be found in parallel to a linear causality (Glouberman and Zimmerman 2002). This can also be related with the view of *complex responsive processes* (Stacey 2011) claiming that certain small actions can, if taken up in local conversations, contribute to sudden larger changes (as previously exemplified as the *butterfly effect*). The direction of the change might not be what the often linear plan for implementation was planning for. Complexity science infers that it is not possible to fully predict which specific action will create what specific change. Prigogine and Stengers (1997) point out that this is why complexity science is called the science of uncertainty, and they suggest this is to be understood in relation to the traditional natural sciences, where causal relations are the basis for predictable outcomes, and thus is called the science of certainty.

Findings indicated that changing healthcare into a patient-centered way of working is not likely to be an immediate and linear consequence following the passing of a new Swedish patient law as of Jan 1-2015. However as suggested by Stacey, identity has two interwoven and inseparably aspects, the individual and the collective. And new ways of talking publicly, about the societal demand for patient-centered care (as manifested in a law) will be reflected in how physicians make sense of their own professional identity, and also resonate in their private individual considerations. However, for the Swedish society to seriously support a transformation of healthcare towards more patient-centeredness, research suggests (Crabtree et al. 2009; Nutting et al. 2011) it will take both time and thoughtful supportive structure to facilitate the journey towards a more comprehensive and inclusive understanding of medical practice.

OVERALL DISCUSSION OF THE FINDINGS

In the process of writing this compilation thesis and working with findings from the four related papers, there were some overarching patterns emerging that will be introduced below.

Bridging the specific aims – searching for engagement-finding identity

Many findings pointed towards a correspondence between physicians' engagement in improving clinical services and processes and individual understanding of medical practice, physicians' professional identity. At the same time we must bear in mind that individual identity is inseparably interwoven with collective identity (Stacey 2011).

Individual experiences of *being useful and making progress*, contributing to the *striving for professional fulfillment*, were found to conceptualize physicians' engagement. This empirically based construct was valid for clinical engagement as well as for engagement related to healthcare development. Two opposite role-taking tendencies emerged related to engaging in development work. The one *upheld a more traditional 'doctor' role*, with high autonomy in relation to organization and management and with clinical work serving as the main source of fulfillment. The other *approached a more complete 'employeeship' role* in which engaging in healthcare development also provides a sense of fulfilment.

Exploring physician experiences from a patient-centered and team-based ward round, the overall conclusion was that physicians found this a fruitful development journey for healthcare. However, physicians also experienced that their autonomy was reduced, and there was uneasiness about exposing potential knowledge gaps in front of others. Some physicians were reluctant to engage in the patient-centered and team-based ward round. It was found that when the new round principles were in line with individual physician's professional identity, the new round was appreciated. However, when the new round principles challenged individual physician's identity, the new round was not appreciated.

The paradox of two qualitatively different ways of understanding the physician role was uncovered when analyzing experiences from working on the new ward round. The naming of each perspective was derived from where the physician's role was centered during ward rounding, thus the adoption of the terms *We-perspective* and the *I-perspective*. With support from the theory of *complex responsive processes*, these different ways of relating to the new ward round were considered to emerge from different ways of understanding medical practice.

Within the physician community there has been tension between the parts and the whole, and this is a scientific tension that is present also in the larger society. Capra and Luigi Luisi (2014) described this as either an emphasis on the parts; called mechanistic, reductionist or bio-medical, or an emphasis of the whole; called holistic, systemic, or organic. It seems plausible that our findings of different conceptual ways of understanding medical practice (I and IV) draw on this historical but still present

tension within the professional community of physicians (Wenger 2000). The theory of *complex responsive processes* (Stacey 2011) has provided a way to transform the understanding of these findings, from an abnormality that we need to strive towards resolving, into realizing that we must expect to find paradoxes when seriously trying to understand local praxis in complex organizations. The empirically based findings in this thesis could as such be seen as providing a more nuanced understanding about organizational actualities.

How an individual understands her/his professional identity as physician, and if that individual professional identity is being challenged or strengthened (or not impacted at all) when interacting with proposed change initiatives, is at the core of the individual response to change initiatives. The individual identity is, in accordance with *complex responsive processes*, dialectically linked to group or organizational identity. Stacey (2011) argues that individual selves, being thoroughly social, are formed by social interaction, which they themselves form at the same time, and thus individual identity is shaped and reshaped through this everyday human interaction with others.

The uncovering of paradox should not lead to paralysis, cautions Stacey (2011). Findings in this thesis can instead lead towards the realization that the notion of different mindsets in hospitals, as depicted by Glouberman and Mintzberg (2001a), is not only valid *between* the four worlds of cure, care, control and community. Different professional identities (or mindsets) are also found *within* the world of cure. This paradox, of different physician identities existing alongside each other, within the same medical specialty, confirms and extends previous findings by Waring and Currie (2009) who studied hospital physician responses to a risk management system and concluded:

> "The way in which professionals respond to change therefore reflects important pre-existing characteristics at both the local, organizational and institutional levels. These responses also emphasize that professional groups should not be excessively homogenized, as there are clear cleavages across medical specialties." (p. 773)

While findings in this thesis point towards an overall agreement with Waring and Currie (2009) about the need to understand local, organizational and institutional levels, Paper IV uncovers yet another layer to be considered. It suggests that there are *cleavage*s not only across medical specialties, but also between individual physicians within the same medical specialty. It should be noted that these differences in understanding the role as physician while practicing at the same ward existed between individuals of an equal professional seniority. These findings are in line with earlier studies about the clinical behavior of anesthetists (Klemola and Norros 1997; Larsson 2004).

Paralleling the empirical findings about different ways to understand medical practice, and the related need for evolving physicians' professional identity to better cater to societal demands for increased patient-centered healthcare, our study suggest that the professional identity of management also need to evolve to better cater to physicians' engagement in improving clinical services and processes. A more comprehensive understanding of the manager role where uncertainty is acknowledged, complexity is

understood and conversations with employees are considered a vehicle for handling uncertainty and the inherent organizational paradoxes, are some suggestions from this study to complement the managerial mindset for the 21st century.

Stacey (2011) expressed the view that these types of paradoxes are to be expected in complex organizations and cannot be resolved but have to be continually worked on and coped with. As previously mentioned, the notion of reflexivity is suggested to be a central and sustainable vehicle to support a continuous evolvement of identity. By reflecting on our own practice, we step back and become more detached, however we do this, with the intent to over time develop our own way of understanding our professional role so that we spiral towards deeper involvement in the *here and now* (Schön 1983; Stacey 2011; Sandberg and Targama 2013).

Recognizing uncertainty or not – a way to understand professional identity

Physicians regarded engaging in organizational development work as a *risk without reward*. This was because development work did not offer any cut and dried solutions and there were also uncertainties as to whether or not development work was actually part of the work specification of physicians. The opposite was true of working with patients, which of course no one could question (I). The different mindsets of physicians and managers were explored and both seemed to be striving towards an appearance of certainty. However, coming from different knowledge traditions, the risk was clearly that managers would not understand physicians' way of reasoning, and that physicians would have trouble understanding what managers really wanted. With a positional tradition on both sides of this *power-axis*, both expecting to be right and that others should listen and comply, mutual irritation or frustration with each other is a seemingly natural but unproductive result (II).

Not recognizing uncertainty as a normality became explicit when analyzing ward round interviews where *the risk of exposing potential knowledge gaps in front of others* was experienced as a new concern when having round conversation with the patient in a team (III). In Paper IV, the *We-perspective* and the *I-perspective* was introduced. Establishing an individual way of rounding that reduced the risk for making mistakes was a central aspect for both of these two perspectives. While the two perspectives shared this end-goal, the means of getting there were found to be different and related in many ways to how uncertainty was recognized and worked with. How physicians related to uncertainty was found by Klemola and Norros (1997) to distinguish different ways of understanding medical practice amongst physicians specialized in anesthesiology.

In order to better understand the attraction of certainty we look to Bernstein (2005) who introduced the notion of Cartesian anxiety. He explained this as depicting the need for societal leaders and people in hierarchical positions to frequently reduce the pluralistic and contested reality into a simplified either-or perspective. Bernstein argued that this is because there is an anxiety-reducing need to provide uncontestable evidence about the right way forward. This can also be related to the prevail-

ing critique of the bio-medical model (Engel 1977; Gordon 2014), separating body and mind. Engel and colleagues (2008) concluded that "the general thrust of all the critiques of biomedicine is to reconnect mind and body and to return the patient as a reflecting and reflexive self to the center of clinical care." (p. 28).

The arguments from Bernstein (2005) resonate with how *complex responsive processes* consider quality of action in a complex non-linear world where certainty of outcome is most certain to include moments of uncertainty. There is still a need to make decisions, take action and be responsible and manage the result of the action to the best of one's ability. The arguments presented from the recent medical education discourse seem to indicate that medical education is moving beyond the notion of Cartesian anxiety and the associated reductionism, towards teaching bio-medical skills while also supporting the development of a humanistic and resilient physician identity (Wald et al. 2015).

Relating findings to ongoing changes in medical education

It has been claimed there is a mismatch between existing physicians' professional competencies and the societal needs (RCP 2005; Frenk et al. 2010; Gordon and Karle 2012). A new professionalism focusing on promoting quality, embracing teamwork, building strong service ethics and being centered on the interests of patients and populations has been outlined as central for medical professionals in the 21st century (Frenk et al. 2010; Gordon and Karle 2012). Previously, criticism of medical education questioned how the well-articulated curriculum mostly *engaging the brain and not the heart* (Coulehan 2005; Dall'Alba 2009; Halpern 2011). The professional identity of physicians is shaped by social and cultural expectations of who and what a physician should be and is a constantly evolving and shifting construct, rather than a set of attributes or goals to be achieved (Wilson et al. 2013). While professionalism has been in focus for medical educators, physicians' professional identity formation has received relatively little attention (Wald et al. 2015).

The notion of pragmatic fallibilism is also introduced by Bernstein (2005) and he suggests, in line with Stacey (2011), that we need to accept that decisions and actions will never be absolutely certain, but always include a degree of uncertainty. Explicitly acknowledging uncertainty seems not to have been part of the traditional bio-medical model. Recent developments in medical education address the complex and uncertain nature of medical professionalism and how to best teach and assess it. They also focus on complexities of professional identity formation to support humanist and resilient healthcare professionals (Cruess et al. 2015).

Dall'Alba (2002; 2004; 2009) has problematized the dominant focus in medical education on epistemology (knowledge and skills), while ontology (being and becoming) has been overlooked. She argued for integrating knowing, acting and being, but also posed some questions that seem prudent to consider in relation to the recent developments in medical education presented above. She states (2009) in a fallibilistic conversation with her own suggestion:

> "…, the part that professional education programs can and do play in forming and shaping professionals raises complex ontological and ethical questions. For instance, in what ways and to what extent is it appropriate to shape another's becoming? Whose knowing, acting and being serve as 'golden standard'? Questions such as these underpin the design and implementation of professional education programs, whether or not they are explicitly addressed in those programs." (p. 43)

Research has shown there are global trends in management as well as in fashion (Czarniawska and Sevón 2005). Looking back at the material previously presented about medical education, it seems that medical education also has a share of that. Surprisingly little published resistance, or critique about moving beyond the traditional bio-medical model towards more of a bio-psycho-social model was found. In *complex responsive processes* paradox is considered natural (Stacey 2011), and to strive towards more inclusive comprehension of medical care would mean keeping the tension between the more reductionist and the more holistic perspectives alive, at the same time. Stacey argued that the way change is occurring is via many, many local interactions between people, picking up on certain aspects that are being talked about, locally and in the public. When patterns of local conversations start to change, that is also when changes start to occur in practice.

The notion of considering paradox as something natural in organizations might be valuable for medical educators when evolving towards the medical professional in the 21st century. A central challenge moving forward is to allow these tensions to be in a dynamic balance, to endlessly and thoughtfully evolve the professional role of physicians over time. Coming back to the balanced formulation by Jarvis-Selinger (2012) arguing that competency is not enough, there is a need to integrate identity formation into medical education:

> "Including identity alongside competency allows a reframing of approaches to medical education, away from an exclusive focus on "*doing* the work of a physician" toward a broader focus that also includes "*being* a physician." (p. 1185, italics as in the original text)

The natural sciences model providing the basis for the bio-medical model was formed by many, with Descartes, Galilei and Newton as key contributors in establishing the logic of modern science, with linear relation and predictability, and thus striving towards the sciences of certainty (Prigogine and Stengers 1997). However, in the ongoing 2015 revision of the internationally used medical competency framework CanMED roles, the notion of complexity is introduced, as well as the need for physicians to become trained in managing the uncertainty inherited in the complex role of practicing medicine. Surely for the benefit of patients, but also for the benefit of physicians' well-being and professional fulfillment.

Societal considerations moving towards patient-centered care

Becoming a physician is a life-time endeavor and senior physicians today were trained and socialized into the occupation according to bio-medical principles that the larger

society and the medical community required at that time. It needs to be acknowledged that there is now a revised societal requirement for a more comprehensive way of understanding medical practice, striving towards integrating patient-centered considerations in the way of being a physician. Healthcare as a just organization and society as a just society need to acknowledge and support a balanced evolvement of professional identity, integrating patient-centered dimensions into the role of physician. This journey, with a specific focus on the established physicians' way of understanding medical practice, needs to be ongoing and in tandem with the changes in medical curricula as presented in this thesis. The professional identity of established physicians is central, since upcoming physicians are trained and formed in a clinical socialization process where skills and competences are traditionally in focus, but where their professional identity as physicians also is formed (Cruess et al. 2015)

From findings in this thesis it was evident that there were senior physicians who were already well prepared for more patient-centered and team-based healthcare models. However findings also indicated that there were physicians with more of a traditional bio-medical understanding of medical practice. For them to evolve their professional identity, an organized scaffolding structure, with methodological support from research about change and learning would be desirable (Argyris and Schön 1978; Schein 2009; Kolb 2014). Over time, and with organized support, physicians with more of a bio-medical understanding are likely to evolve their professional identity towards a more patient-centered, fallibilistic or complex understanding of medical practice.

From an ethical standpoint, society needs to honor the societal contract established with the more senior physicians who were trained when bio-medical competency and skill acquisition was the focus for medical education. This is also important from a more pragmatic perspective, since although what is conveyed in medical education is important, what goes on in the clinical setting and the professional identity confessed to by senior physicians, often implicitly, have a larger impact on junior physicians socializing into their professional identity (Coulehan 2005; Dall'Alba 2009; Wald et al. 2015). If the revised medical education, combining bio-medical knowledge with social and psychological aspects of health and disease, is to have a fair chance of actually become part of the future professional identity, then society needs to make sure that senior physicians are also involved in this transformative process, explicitly or implicitly in their roles as a clinical mentors and role-models for junior physicians.

Healthcare as such and physicians in particular have a long and strong tradition of evolving methods and practices, as research provides new evidence. The American national demonstration project, where patient-centered care has been a core aspect to be implemented into primary care practices, might add to the understanding of why certain aspects of the care process are harder to influence and change than others. The 15-year longitudinal research program concluded that the transformation of healthcare requires more than incremental improvement in clinical quality indicators or implementation of technological solutions (Crabtree et al. 2011). They further assert that larger changes or transformation often involve a change of professional identities (in line with our findings from Paper II and IV), which in turn requires not just a change of technical aspects, but also involves an emergent change in relationships amongst

the different people working together (as found in Paper III). These are the type of challenging changes that previously are discussed as double-loop changes (Argyris and Schön 1978; Argyris 1990).

In a parallel study from the same group of researchers, Nutting et al. (2011) stressed the importance of long-term commitment to be able to impact identity and roles, and indicated that three to five years with external support were needed as a minimum, emphasizing the importance of "a nurturing policy environment that sets reasonable expectations and time frames." (p. 444)

Crabtree and colleagues (2011) highlight the limitations of viewing care practices from the mechanistic perspective that underlie many current or traditional managerial approaches to change initiatives. Instead, in line with this thesis, they suggest complexity theory as a relevant theoretical framework with its view that care practices evolve in highly dynamic and complex processes with the capacity to learn, or not, and with an inherent development capability with surprising and unpredictable ways and results. Bodenheimer and Sinsky (2014) argued that for healthcare to be sustainable over time, increased care for the patients also requires increased care for the providers. This resonates with findings in this thesis.

Striving towards a more comprehensive way of understanding medical practice is a way to respond to the societal demands for more patient-centered healthcare. This is in line with the new legal requirements in Sweden and for the benefit of patients, but equally important is the potential for increased *professional fulfillment* for physicians themselves.

REFLECTIONS ABOUT METHODOLOGICAL CHOICES

Malterud (2001; 2014) suggest that qualitative research methods are founded on an understanding of research as a systematic and reflective process for development of knowledge that can be contested and shared, implying ambitions of transferability beyond the study setting.

According to Malterud (2001; 2014) there are three criteria for scientific knowledge independent of if the method used is being quantitative or qualitative; reflexivity, relevance and validity. There are other terms from other qualitative scholars that also would serve this reflective purpose well. Lincoln and Guba (1985) propose that trustworthiness is an aspect of a qualitative research study that is important to evaluate. They suggest four ways to consider this: Credibility - confidence in the 'truth' of the findings, Transferability - showing that the findings have applicability in other contexts, Dependability - showing that the findings are consistent and could be repeated, Confirmability - a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest. Having been part of a trans-disciplinary research group I appreciate Malterud's notion of trying to establishing common grounds between different research traditions. Reflecting about the methodological choices in this thesis I will use the three foundational criteria's for scientific knowledge as suggested by Malterud (2001; 2014); reflexivity, relevance and validity.

Reflexivity

Reflexivity, or being aware of own voice and perspective is a central theme in qualitative inquiry (Patton 2002). Individual background, professional and educational experiences all contribute to create an individual way of seeing the world and the way we ourselves understand the world is strongly influencing what we observe, hear and respond to during fieldwork. Within qualitative inquiry self-awareness is important, when interviewing but also during analysis and the writing process (Malterud 2014).

All pre-understandings contribute with potential advantages and disadvantages, and thus the notion of being explicit and aware about one´s individual background is considered an important aspect (Malterud 2001; 2014). With a professional background from consultancy and line management in healthcare and industry, I was bringing a perspective where physicians' engagement in developing healthcare was considered beneficial and would lead towards the ultimate end goal of better care for patients. From a more definitional standpoint my own assumptions (implicit as well as explicit) about most effective way to manage people is aligned with what McGregor (1960) was calling theory-Y. In short, I consider people as honest and willing to do a good job if the preconditions are not hindering (contrasted to McGregor's theory-X which contends employees must be commanded and controlled).

One could consider a potential risk that I could be seen as a management representative which could influence what and how physicians described their individual experiences. In order to limit this impact there was a decisions to engage with a hospital

where I had no previous management position. Also my role as researcher was naturally in focus when engaging in interviews. While I could experience an initial hesitation from some of the physicians it did not take much interaction until I experienced candid and honest openness. From a positive side my individual learnings from my previous positions contributed to an authentic curiosity about physicians' experiences. I had limited pre-understandings about what was going on with their limited engagement, but I was really interested to find out more from empirical material. Halpern (2011) uses the term *engaged curiosity* when considering how she would like physicians to relate to the patient meeting, and *engaged curiosity* might well describe the way I was approaching the physician interviews and the following analytical and writing processes. As I was engaging in the interviews I found I was benefitting from my own experiences as Head of Department at a university hospital's accident and emergency department. I was contextually oriented about Swedish healthcare, updated about healthcare regulation and laws and had enough awareness about recent national and regional development project to be able to follow somewhat fluidly with the interviewed physicians.

To cater for a multifaceted interpretation of empirical data, the analytical process involved a team of four researchers, in addition to myself. The researchers had complementary experiences to my own, being a doctoral candidate in medicine, trained in group relations theory and educational background from industrial engineering and management. One was an experienced physician and associate professor in medicine, one an experienced nurse and professor in healthcare pedagogics, one a senior lecturer in healthcare pedagogics and one a professor in business administration with experience from healthcare research. Members of the research team had extensive experience of qualitative analysis. Each of them read selected interviews and in face-to-face meetings presented their own, and challenged each other's, emerging dimensions and themes. Analytical grapplings over how to understand the empirical material were solidified by critical conversations in this trans-professional and trans-disciplinary group. With the goal to reach rich, robust, comprehensive and well-developed findings, this way of considering multiple interpretations of an empirical material could be called research group triangulation (Patton 2002).

My own way of reflecting was primarily based upon making reflective notes during the PhD process, including fieldwork but also my own experiences and thoughts when analyzing and writing as well as following PhD-tutoring meetings. Over time I have come to appreciate the smart-phone recording device to collect reflective thoughts on the go, primarily when bike-commuting to the office, or to catch flashes of insight waking up at night. Most of these short recording were later listened to in front of a notepad or a computer and have added value to the analytical process and the end results.

Working with and reflecting about all empirical material and related findings in this thesis, it is increasingly clear that the journey towards deeper levels of understanding will never be fully completed.

Relevance

In a pragmatic striving towards relevant research this thesis process started with a meeting between researchers and hospital representatives to find aspect that were everyday grapplings for the clinically orientated practitioners while at the same time being considered valid contribution to the research community. This is in line with Greenhalgh and colleagues (2004) who suggested researchers need to engage with local practitioners in order to establish research areas that are truly relevant. The phenomenon of physicians' engagement was found to be a topic that attracted joint interest.

Improving communication or mutual understanding between physicians and managers has been brought forward as a central aspect to improve healthcare (IOM 2001; Davies et al. 2007; Snell et al. 2011; Dickson 2012). At the same time it has been raised concerns about a lack of empirical studies to further the understandings of this research area (Snell 2011; Kaissi 2014). This study provide empirically grounded findings substantiated with theory.

Understanding physician experiences from a locally initiated patient-centered and team-based ward round emerged as another aspect with mutual resonance. There seemed to be institutional and strategic consensus about the need for more patient-centered care models (WHO 2000; IOM 2001; Frenk et al. 2010; Gordon and Karle 2012). However, the gap between policy and clinical reality was large and the research based knowledge limited. Thus this study strove to contribute with empirically grounded research about how the societal demand for patient-centered care was interacting with physicians' professional identity.

The overall interest from professional bodies as well as lay persons when presenting the focus area for this thesis or when presenting findings at international conferences might also indicate that there is some relevance to the research area and also a societal resonance.

Internal validity

Internal validity is about considering if methodological choices provide a valid understanding of the phenomena we are intending to explore (Malterud 2014).

The aspiration for the thesis was to bring forward the collective voice of the physicians, based upon individual physicians experiences engaging, or not, in improving clinical services and processes. With the aim in this thesis concerning a phenomenon with limited scientific knowledge, and since the studies inquiry into the meaning people make of their individual experiences in their natural context, it made sense to choose a qualitative approach (Malterud 2014).

Interviews were chosen as the method to collect empirical material to try to understand the world as experienced by the physicians (Kvale and Brinkman 2009). We

were two persons doing interviews. With myself being a man (around 45 years) with background from people management roles and the other interviewer being a woman (around 30 years) recently concluding her psychology studies and with previous experiences from the first third of the medical education program, our profiles complemented each other. Within the research group we considered group interview or individual interviews but since we wanted to develop meaning from physicians personal experiences it seemed important to be able to allow full focus, depth and richness on each individual physician. We also considered it important in this explorative study to be able to probe deeper and ask for clarifying examples. We were aware that what people present in interviews are only their perceptions, and only what they choose to talk about (Kvale and Brinkman 2009). However by asking for individual experiences and practical examples, perception could then also be related to their actions. Thus we made the choice to prioritize richness and depth with fewer individual interviews, than meet more interviewees and not be able to come as deep by use of group interviews.

The choice for individual interviews also had a pragmatic aspect with a belief that via interaction with another person the implicit (taken for granted) assumptions can become explicit and as such become open for reflection and potential modification. This aspect was primarily considered a potential beneficial side-effect for the interviewed physicians, but over time it also became apparent that this also worked in a reciprocal way. The interactive process seemed to sometimes also impact own emotional reactions, like feelings of surprise, anger or sadness. When this happened this was noted on the interview pad to be reconsidered at a later time. While the aspect of jotting down notes can sometimes be considered hindering the flow in the interview, there also is a reciprocal positive aspect. By making notes there is a possibility to consciously slow down the process, and create a silent open-space. Since the interviewer is silent and writing, it allows further reflections for the interviewee and sometimes this opens up another facet of the ongoing conversation, allowing a deeper exploration and a potentially increased understanding.

With the choice to have face-to face interviews we also made arrangements to facilitate for the often time pressured physicians to engage in a candid and fluid conversation based interview. During the interview scheduling process there were frequent cancellations and rebooking due to change of physician schedules or due to sudden patient situations that did not allow the specific physician to leave for an interview. We were fortunate to have the hospital in driving distance proximity and could thus manage rescheduled interview with limited hassle. The initial concern that is was unwillingness from the physicians to be interviewed proved itself wrong as the planned physicians eventually participated. There was a conference facility based centrally in the hospital and this is where almost all interviews were done.

Preliminary findings were presented to clinicians and managers at the involved departments. Findings made sense and it was commented that this type of research were providing a new and interesting dimension to their own understanding of work.

As presented above there have been a number of considerations to balance the challenge, which is also the hallmark of qualitative research, of interpreting another per-

son's account. With that said, I am the first to acknowledge that there is by definition a dimension of uncertainty in the presented findings. One cannot rule out that another way of approaching the complex human phenomena of physicians' engagement could have come to alternative conclusions. Different ways of sampling interviews and another group of researchers analyzing the empirical material could have resulted in findings with greater depth and/or different conclusions. At the same time, previous research in related areas have come to conclusions that are solidifying findings in this study. I hope that readers of the individual papers, or this thesis, can relate to the findings and conclusions, and experience a flavor of what Miles and colleagues (2013) consider a sign of quality in qualitative research, a sense of *undeniability*.

External validity or transferability

Malterud (2014) use the term external validity as a way to capture how well findings are valid outside of the specific context. Generalization, where a sample represents the whole population and the result of the sample is said to be statistically valid to the overall population, is not the aim in qualitative research. The qualitative methods used in this thesis do not make claims for the results to be definitive or true for all physicians regardless of context. In contrast there is an explicit awareness about the contextual perspective, and this is in line with the theory of *complex responsive processes* where local interaction is emphasized. It is in the local interactions where meaning is created (Stacey 2011).

It should be acknowledged that these findings are based upon interviews with Swedish physicians and the patient-centered and team-based ward round was studied in a specific internal medicine department. From a linear and complicated way of thinking about change this would be considered reducing the transferability to other contexts. However with the perspective of *complex responsive processes* there is always a need to adjust and relate any change to local contextuality. It should also be noted that findings have been well aligned with previous research substantiating the results.

As it relates to the ward round study it might be prudent to consider that the ward round is an institution that has its place in most hospital settings around the world and to consider creating a structure, as the one studied to enable a conversation between the patient and the team of caregivers might be a considerate way to improve patient care and professional fulfillment in many places.

The above mentioned awareness about the importance of local context does not by definition exclude the potential of transferability. I argue that findings from the qualitative contextually based studies in this thesis have the potential to be transformed and provide value elsewhere. I claim this with support from previous researchers that have studied physicians in different contexts, and concluded there was a large degree of communality amongst physicians in the western world (Van Maanen and Barley 1984), sometimes referred to as one occupational community of praxis (Wenger 2000). I base further reasoning about transferability on Larsson (2009), who considered all usage of a piece of research a dynamic act, which is completed if, and only if, someone else can make sense of situations or processes or other phenomena with the help of descriptions from the research texts.

The different papers in this thesis have had the ambition to convey many details about context and localities. Lincoln and Guba (1985) consider these kinds of *thick descriptions* a way to support individual readers to make their conclusions about what of the findings are transferable to other contextual settings and as such facilitate transferability. Experiences from presenting the different findings in both national and international settings also indicate that other people have been able to make better sense of their local situation following they have been introduced to findings and conclusions from the different papers comprising this thesis.

Reflections about the theory of complex responsive processes

Complex responsive processes theory (Stacey 2011) is a way of using the mathematical foundation of complexity sciences into the human and social domain of organizations. There is of course many other possible theoretical models that could have been used in this study, however it was a considerate choice to explore if the theory of complex responsible processes, as a recent theoretical construct, would be usable when studying complex phenomena in healthcare. This is further elaborated in the contributions segment of this thesis.

Complex responsive processes brings, as I understand it, a thoughtful way of taking the understandings about human interaction in organizations seriously. It takes relating and conversations as the focal point for experience, identity formation, learning and change, and it also emphasize the dialectical, paradoxical and non-linearity as inherent in all organization.

Complex responsive processes as an overarching theoretical perspective was used in this thesis as a guiding and enriching perspective to better cope with, relate to, and sometimes also have moments of understandings about some of the inherent complexities and paradoxes related to physicians' engagement. The many theoretical and philosophical underpinnings of complex responsive processes have not allowed myself to fully grasp the theory during this PhD journey. In line with the concepts of fallibility as presented by Bernstein (2005), I am far from claiming certainty but have acquainted myself with *complex responsive processes* to a level of certitude.

CONCLUSIONS

From these explorative qualitative studies about physicians' experiences of engaging in improving clinical services and processes I conclude that:

- *striving for professional fulfillment* is a central motivational drive in physicians' everyday working lives, affecting engagement for improving clinical services and processes, as well as clinical engagement

- physicians' engagement, *striving for professional fulfillment* with the two dimensions *being useful* and *making progress,* could be seen as a conceptual model

- physicians' engagement relates to whether the task at hand is experienced as contributing towards professional fulfillment or not

- physicians' individual understanding of medical practice determines which tasks are experienced as contributing to professional fulfilment

- continuity, recognition, task clarity and role clarity are organizational conditions that facilitate and reinforce physicians' engagement

- physicians and managers have fundamentally different mindsets that hinders cooperation, however if managers were to remove barriers, give administrative support and help physicians with their identity work, this would facilitate physicians' engagement

- the patient-centered and team-based ward round was a fruitful development journey contributing to better-informed clinical decisions, fewer follow-up questions from patients and increased professional fulfillment, but it also reduced physicians' autonomy and added the risk of exposing uncertainty in from of others

- based upon physicians' different focus during ward rounding, the two opposing ways to understand medical practice, the *We-perspective* and the *I-perspective*, were found coexisting at the same ward

- the societal demand for patient-centered healthcare could be experienced as an identity challenge for physicians with a professional identity grounded in a traditional bio-medical understanding of medical practice

- to facilitate progress towards patient-centered healthcare, there is a need to recognize that when identity is challenged anxiety is aroused; if anxiety is not handled, resistance to the required change is likely to follow.

CONTRIBUTIONS

Research

This thesis contributes with its first specific aim towards a better understanding of the complex phenomenon of physicians' engagement in improving clinical services and processes (I and II).

The thesis contributes with its second specific aim to increased understanding how a patient-centred and team-based care model was interacting with hospital physicians' professional identity (III and IV).

This thesis contributes conceptually by providing an empirically grounded model regarding physicians' engagement (Figure 1).

A theoretical contribution from this study was to explore if the theory of complex responsive processes (Stacey 2011) was usable for understanding empirical paradoxes from physicians' experiences of the patient-centered and team-based ward round. The theory worked well in an abductive analysis and enabled uncovering and better understanding some of the paradoxes inherent in the empirical material. *Complex responsive processes* also contributed to a deeper understanding of organizational actualities and clarified that paradox, non-linear causality, surprise and unpredictability, are normalities and always present in the complex organization of hospitals.

Practical usage

A practical piece of knowledge stemming from the theory of *complex responsive processes* is that sustainable change cannot be commanded. Neither can change be implemented as a linear consequence of a top-down decision. All management decisions could be considered as gestures in a certain direction. And these gestures are responded to by the employees according to how they have understood them. It is in this interaction between gestures and response that change comes about, or not.

This thesis provides individual physicians with empirically based scientific knowledge about physicians´ engagement. It is intended to contribute towards reflection about individual way of understanding medical practice in their local workplace.

This thesis provides healthcare managers with organizational aspects to strive for, in order to facilitate physicians' engagement. Managers should also reflect upon their own professional identity and strive to evolve their mindsets towards understanding physicians not only as employees but also as members of an occupational community.

This thesis provides healthcare politicians and leaders with an empirically based knowledge about challenges, particularly for physicians with a professional identity grounded in a traditional bio-medical understanding of medical practice, when moving towards patient-centered care. This might lead towards a societal reflection about its own part of creating this challenge, calibrated expectations about the speed of

change, and the need to support the process towards a more comprehensive understanding of medical practice.

This thesis also brings forward the potential in organizing the ward round to enable a genuine conversation to take place, or at least provide a fair possibility for the patient's voice to be heard. This structure was found to contribute to increased learning for patients while also contributing to better and more fulfilling healthcare; for patients, physicians and other care professionals.

There have been claims above about contributions from this thesis to three out of the four hospital worlds, as mentioned in the background chapter: Cure (physicians), Control (managers), and Community (local politicians). It is assumed that the world of Care (registered nurses and other health professionals) would appreciate the evolution of physicians' identity towards more of a patient-centered and comprehensive understanding of medical practice.

The assumption when focusing on physicians' engagement in improving clinical services and processes was that this would lead to better patient care. When healthcare makes progress towards a more patient-centered care model, integration between the worlds is likely to follow.

Education

For the society wanting to make progress towards a more patient-centered care, findings in this thesis point towards a paradox. Society needs to honor the informal societal contract with physicians who have been trained towards a more bio-medical I-perspective, and at the same time create supporting structures to facilitate the evolution of physicians' identity towards the societal needs and requirements of today.

As discussed, the medical curriculum is facing a paradox; pushing forward the frontiers of bio-science and medical technology, while at the same time balancing biomedical knowledge with social and psychological considerations of care. While the international medical curricula seem to have already evolved towards this goal, national and local medical education need to reconsider their curricula accordingly. In line with Pratt (2006) it is also suggested to assess faculty and consider evolving their professional values towards this revised medical curricula.

In line with Wenger (2000), it is suggested that the forming of future physicians is a trade between medical education and practical experiences. What is traded to the junior physicians is based upon how senior physicians consider their own professional identity, and even more powerful is the way the senior physicians interact with patients and other care professionals. Thus, some of the findings in this thesis point towards the importance of not overlooking the need to also support the development of senior physicians' professional identity so that they can evolve in the same direction as the medical curricula are evolving. Educational offerings to experienced physicians also need to reflect the journey towards a more comprehensive way of understanding medical practice.

FUTURE RESEARCH AND DEVELOPMENT

Taking the findings in this thesis forward, there seems to be a need to understand more about ways to evolve physicians' professional identity. Interactive projects are a good method, potentially using experiential learning models (Kolb 2014) and closely cooperating with clinicians (potentially divided into groups based upon initial individual ways of understanding their professional identity). The aim would be to understand more about individual experiences of evolving professional identity towards a more comprehensive and patient-centered understanding of medical practice.

An interesting way to do this is to integrate the findings in this thesis with another recent thesis into an empirically grounded, research-based model to facilitate identity evolvement (Romanowska 2014). Romanowska used bio-markers (for example DHEA-S) in her leadership study and combined this with a culturally based intervention. She argues that her intervention contributed towards a deep reflective process leading towards a more complex mindset for managers, and also showed a positive development in relation to the bio-marker development. It would be interesting to find out if this model also could be valuable for evolving professional identity for experienced physicians towards a more complex mindset (Kegan and Lehay 2009) that means a more comprehensive understanding of medical practice. It would be interesting to engage in an interactive research process together with clinicians and empirically test the usability and refine the model in iterative processes. Preferably this would include some measurement of biological responses.

The ongoing Swedish initiative concerning value-based healthcare (Porter and Teisberg 2007) is also an interesting avenue for further exploration. Early findings indicate that physicians find the value-based way of defining healthcare engaging, and with the model explicitly pointing towards the need to understand what the patient considers valuable, there are many interesting aspects to follow for new research.

There is surely also an interest and need to understand more about patient experiences relating to the patient-centered and team-based ward round. The substantiating and impact on related process indicators like infection rates, length of stay, and patients returning for the same symptoms would also be a valuable addition to the early empirical knowledge about patient-centred care models.

EPILOGUE

In fall 2014 I was out on the island of Nassa at the outer Stockholm archipelago in Sweden. The nature is very harsh, the ocean is wide and it is a good place for contemplating and conversations.

I was walking around with a good friend from the University of Linköping where we both studied industrial engineering and management during the early 1990th. I was telling my friend about the ongoing research and my PhD journey that was coming to an end in about a year, when she suddenly smiled and brought to my attention something I had totally forgot for the last 25 years:

- It´s so great, she said with enthusiasm, that you will be doing your thesis as part of your work in healthcare, and with your research degree as PhD in Medical science.
- Well, sure that is nice, I responded, not quite sure where she was going with this.
- Ahh, don't you remember, she said, you had this funny title in the Swedish phonebook when we were students: *Medically interested engineering student.* (*Med. intr. tekn. stud.)*

I was baffled, and was trying hard to recall this, and as we kept on walking, I suddenly remembered! Entering university I was ambivalent about what to study. I included medicine, law, engineering and international business on my application form. With a physician father and a physiotherapist mother, I somehow concluded on Industrial Engineering and Management as my first choice. I was admitted on my first choice but as the phonebook-title from 1990 indicated, some ambiguity was still there.

For a number of years following university, first as management consultant and later as manager, I was facilitating organizational changes and working with concept and people development in the high-tech industry. Following some intensive years at the beginning of the 21th Century, as expatriate at the American headquarters of Avnet Inc in Phoenix, Arizona I wanted to find an alternative work-arena where things mattered more than maximizing shareholder value and expanding market share. To my surprise I soon found myself working in healthcare. Leadership experiences in combination with many years of grappling with complicated logistic processes came in use as the Head of the Emergency Department at Sahlgrenska University Hospital, Mölndal. As a professional outsider at the inside of hospital management, I was sometimes struggling. However, I was frequently finding that when I was working in tandem with clinically trained persons our combination of knowledge came up with solutions to challenges that had been known for long time, but never really taken care of.

In my everyday work as manager I was experiencing frustration from many health professionals, especially from physicians, about the way the system worked. At the same time physicians were mostly not involved when groups were put together to improve care processes, "they do not have time or they are not really interested" were the explanations I was given from superiors and other management colleagues (most

of them physicians themselves). But when I, in my way of managing, sat down and talked about clinical improvement challenges with different physicians I almost always found engagement and willingness to contribute to improve care processes. This mismatch between the "common management explanation" and my own experiences of physician engagement troubled me since there were many ongoing projects shaping future healthcare with limited physician participation. Slowly there was a realization that "someone" needed to take this mismatch seriously. When an opportunity to explore physicians' engagement under the scrutiny of a scientific process came up, "someone" turned out to be myself. This doctoral thesis is the formalized result of that journey.[1]

One central perspective I had (and still have) about change in healthcare was that it could only happen from within. Healthcare, as a rich and complex dynamic structure, needed to evolve by involving "the voices" from the many constituents. The professional group of physicians seemed active and engaged as it related to bio-medical - "in the wound" - issues. But when it related to improvement of processes or developing future ways-of working, physicians seemed not to be much involved. This thesis is devoted to make the "physicians' voice" heard, and by use of a research based attentive "listening" strive to deepen the understanding about this puzzling phenomena of physician engagement.

The "voices" from other health professionals, managers and politicians are surely also important, and my view about sustainable healthcare development is grounded in the need for having a patient-journey perspective. This often means bridging professional disciplines and organizational boundaries and fosters trans-disciplinary conversations and agreements. With that said this thesis focused physicians' experiences with the pragmatic rational that what a physician decides, about diagnosis and treatments, initiates many patient journeys in healthcare. However to still cater to the multifaceted aspects of healthcare, I was fortunate to benefit from a trans-disciplinary research team with complementary experiences to my own. The group consisted of two senior researchers, both combining research with previous clinical experience (physician and registered nurse) and a senior researcher with educational background in business administration. For some of the time the group also benefitted from the perspectives from a younger psychologist and a senior lecturer in healthcare pedagogics. Due to the course of life some individuals were leaving, and others were joining, but the trans-disciplinary structure was maintained over time. This group was actively engaged in the research process, and during the analytical work each person presented her/his interpretation of empirical material to the others in conversations based meeting. I appreciate how this process contributed towards a rich and nuanced interpretation of the empirical interview material.

In spite of the physician focus in this doctoral thesis, I want to emphasize the importance of actively recognizing the "patient-voice". The original reason for healthcare

[1]In the spirit of this explorative study, and in line with the theory of complex responsive processes where fluid conversa-tions serve as the principal way to evolve individual and collective understanding, I invite you as reader to use the supplied contact data, and reach out for elaborations or contestations of the findings. I will respond to this gesture to the best of my abilities.

systems to exist was, and still is, to serve the needs of patients. Maybe this statement come out as seemingly self-evident, for some persons maybe even insulting, but I have realized when writing this epilogue that some of my own understandings from this research journey (could be seen as un-intended side-effects), is that in the hurly-burly, time-pressured, highly specialized and cost-focused every day work, in our mostly well-functioning Swedish healthcare system, the “voice” of the individual patient seems sometimes not to be heard, or listened to.

Concluding this epilogue I realize my short story about the phone-book title could be taken as “indicative evidence” for a long and linear progression towards a distant but clear goal, a PhD in Medical science. However, I would argue that is really stretching the case. Earlier in this thesis, with the support of theory, I argued for an increased awareness about the inherited non-linearity in human behavior. Thus, for me this has been more of a serendipitous learning journey towards a more evolved understanding - of myself but primarily of others – engaged in the multifaceted and continuously evolving work arena called healthcare.

I associate this humbling learning endeavor with a special sentence, energizing and soothing all at the same time, written by the 2011 Nobel Laureate in literature Tomas Tranströmer (Romanska Bågar, from the 1989 collection of poems called ”För levande och döda”).

You´ll never be complete, and that´s as it should be. (Du blir aldrig färdig, och det är som det skall)

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