Frontline employees as participants in service innovation processes
- Innovation by Weaving -

Marit Engen
Doctoral dissertation
Philosophiae Doctor (PhD)

Høgskolen i Lillehammer
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Frontpage illustration: Part of the artwork ”I’m no good at walking. 500 pairs of shoes pointing in the direction of Nidaros” by Borgny Svalastog. Lillehammer University College has 14 of 500 pairs exhibited on floor 3 at the southern exit. Published with the permission of the artist.
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Abstract

Innovation is today a phenomenon that is promoted in private and public organizations as a critical success factor for growth and survival. Early work on innovation primarily focused on R&D and technology as the main drivers of innovation within an organization. This has shifted towards viewing innovation as a more interactive and open process, involving different actors across different practices, organizations and sectors. This thesis is concerned with *frontline employees* as actors in service innovation. It aims to develop new understanding of how frontline employees are engaged, and act in service innovation processes. The overall purpose is to contribute knowledge of frontline employees as *participants* in service innovation processes.

This thesis argues for a balanced approach to innovation, innovation with care, as a framework to view and discuss frontline employees as actors in bottom-up, practice-based processes and in top-down, strategic-based processes. The empirical studies, presented in four appended papers, investigate employees' innovation activities by studying the micro processes they are engaged in, in particular the interactions between employees and managers, between employees themselves, and between employees and customers.

The findings place frontline employees as valuable actors in both strategic-, and practice-based innovation processes. The employees' gain knowledge in the customer-supplier interface. This knowledge together with their knowledge of the organization, is combined into new and useful solutions for the customers and/or the work practice. In top-down processes frontline employees actions are based on invitation by management, while in practice based innovation processes, employees innovate when having access to resources and/or by collaborating with managers.

The role of the participant, as described in the thesis, is one that gives the employees influence on their innovation activities, and the option to follow up on how the activities will affect their work practice and the organization. Frontline employees are found to exercise agency through three aspects: their workplace-related knowledge and skills, their interest and motivation to continuously improve their workplace and their access to resources. Here, the aspects are emphasized as the employees' *ability, willingness* and *opportunity* to contribute.

By understanding how frontline employees practise agency is influenced by management, this thesis contributes to the understanding of how employees become participants in service innovation.

This thesis argues that agency is exercised in practice-based innovation processes, where frontline employees initiate, develop and enact new solutions. Middle managers are identified as having significant enabling roles as gatekeepers, translators and facilitators.

Innovation by weaving is introduced as a metaphor to symbolize how new ideas emerging from different sources are thought of as threads woven into the existing structure in order to develop new patterns. The concept demonstrates accordingly how employee-based ideas and their innovation activities can become part of organizational innovation management through the roles of the middle managers.

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I also spent some time at Roskilde University. It was stimulating to be part of the innovation environment at RUC, and I am grateful for the warm and including welcome I experienced, from my fellow PhD students and the faculty in general.

I am glad to have been part of the Norwegian Research School in Innovation (NORSI). As a PhD student at the PING-programme, I not only got to attend very interesting PhD courses, but equally importantly, it gave me a great opportunity for collaborating with fellow PhD students. Many laughs, good discussions – I hope the network remains after our studies.

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Lillehammer, 3 December 2015

Marit Engen

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I. Engen, M. and Holen, I.E. (2014). Radical versus Incremental Innovation: The Importance of Key Competences in Service Firms. *Technology Innovation Management Review*, 4(4). 15–25. http://timreview.ca/sites/default/files/article_PDF/EngenHolen_TIMReview_April2014.pdf

II. Engen, M. (2012). En eksplorativ studie av innovasjonsprosesser i reiselivsbedrifter. [An explorative study of innovation processes in tourism firms]. I Rønningen og Slåtten (red): *Innovasjon og næringsutvikling i en reiselivskontekst* (29-52). [Innovation and business development in a tourism context]. Fagbokforlaget. Bergen.

III. Engen, M. and Magnusson, P. (2015). Exploring the role of front-line employees as innovators. *The Service Industries Journal*, 35(6), 303–324. DOI:10.1080/02642069.2015.1003370 http://www.tandfonline.com/doi/full/10.1080/02642069.2015.1003370 ([An extended abstract in English is presented in this PDF]

IV. Engen, M. and Magnusson, P. Casting for service innovation: the frontline employees' roles. *Submitted for publication.*

"When we engage in what we are naturally suited to do, our work takes on the quality of play and it is play that stimulates creativity."
- Linda Naiman

1. Introduction

1.1 A personal detour

My first steady job was as a waitress. The restaurant was about to open, and from day one, it was a full house. As an inexperienced worker, it did not go very well for me, and although I smiled continuously, the quality of the more technical part of my services to the customers (e.g. recommending the right wine and serving the food in a professional manner) was less adequate. In a rather harsh meeting, my manager, who was about to fire me, gave me a second chance when he heard my arguments about my lack of training. This incident made me turn to my much more experienced and professionally trained co-workers for help. When my co-workers acknowledged their role as "coaches", my skills improved and I became a waitress in a more professional sense. Something else also came out of this learning process. We who worked in front, waiting tables, became a team that not only served customers, but interacted with the customers in a way that enabled us to learn from them. This resulted in a team of workers that was quite flexible, adjusting and customizing our services. But even more, we developed a kind of work style that made us continuously improve elements of our services, and our regular customers experienced something new whenever they came back. As an example, we came up with the idea of introducing an element of surprise (e.g. a "drink-shot", or an [informal] gift certificate to use next time) to our most regular customers when we handed them the check. In some sense, we became innovators for the firm, implementing ideas that only we, who worked in front, and the customers were aware of.

This anecdote is an example of how frontline employees develop their understanding of the customer through their work practice, enabling them to create these small, customized adaptions and alterations of the service provided. It is not a story about a breakthrough event, but more importantly, neither is it a story that depicts a rare incident in services. On the contrary, this is more likely to be an everyday description of a workplace in a service organization. Looking back, I don't think any of us defined ourselves as innovators;[1] we were just doing our job. We were not employed to be involved in innovation activities;[2] there was no reward, either monetary or support from our leaders

1 The question of whether the examples are illustration of innovation, and the service workers were innovators, will be addressed when the concept of innovation is discussed and defined in the following chapters.

2 In this thesis, I use innovation activities as a broad concept, referring to activities, e.g. which are part of an innovation process (contributing with ideas) and also to the whole innovation process, from idea generation to implementation at both the organizational and individual level (e.g. West & Farr, 1989).

for any creative activity; and there was no expectation of us, other than serving tables. Despite of this, we continuously developed our workplace.

At the time, I did not think much about it, but as an academic, the story puzzles me. If you are not supposed to innovate, and preferably not wanted to, why then innovate? Did we develop some logic of our own to guide our actions? And were these actions apt to the organization's strategy? It is more than twenty-five years since I was that waitress. Now, I am observing former experiences in new ways, and through this thesis, I explore further what part service workers play in service innovation. In the next section, I address how I study service workers, my approach as well as limitations.

1.2 Point of departure

Moving away from my early work experience and the personal setting, towards a professional and theoretical context, the question of what part service workers play in service innovation is highly relevant in innovation research. Traditionally, innovation has been perceived as an outcome of a rather closed and intra-organizational process, mostly involving dedicated business units assigned to do innovation tasks, e.g. R&D departments. However, some attention has been paid to innovation as a more open and interactive process: a process relying on various sources of knowledge, thus involving different actors across different practices, organizations, industries and sectors (e.g. Bessant, 2003; Chesbrough, 2003, 2011; Fuglsang, 2008b; Lundvall, 2010; Sundbo & Fuglsang, 2002b; von Hippel, 1988). This view, represented by different perspectives, like "user driven innovation" (e.g. von Hippel, 1986), "open innovation" (e.g. Chesbrough, 2003), "high-involvement innovation" (e.g. Bessant, 2003), "employee-driven innovation" (e.g. Kesting & Ulhøi, 2010) and the social process perspective as in "innovation with care" (e.g. Fuglsang, 2008a), all have in common that they open the possibilities for various actors to become important players in the innovation activities of an organization. Yet, little attention has been paid to the micro processes of the different actors' activities in these open and socially embedded innovation processes (Obstfeld, 2005).

The perspective of innovation as an interactive process, holding everyone in an organization as potential actor and contributor to innovation, is a central premise in the thesis. By "everyone", I mean the ordinary employees, in the sense that they are not specifically assigned to the general innovation tasks of the organization, like a R&D department (Kesting & Ulhøi, 2010). As I focus on service innovation, the frontline employees represent this thesis' group of ordinary employees. I understand frontline employees as employees who through their work practice interact with customers and are often the first and only point of contact between the organization and the customer or user (Lages & Piercy, 2012).

Ordinary employees as actors in innovation processes is a phenomenon that certainly

is not limited to service innovation, frontline employees and service organizations (e.g. Axtell, Holman, Unsworth, Wall, & Waterson, 2000; Høyrup, 2012). However, as I point out next, frontline employees represent a particularly important link between the consumer and the organization (Melancon, Griffith, Noble, & Chen, 2010). Moreover, although employees are argued to be important idea-makers (Sundbo, 2008), more studies of service innovation have been occupied with the customer (or user) part of the interaction than that of the employees (Alam, 2006; Edvardsson, Gustafsson, Kristensson, Magnusson, & Matthing, 2006; Oliveira & von Hippel, 2011; Sundbo & Toivonen, 2011b). Consequently, further knowledge is needed on the employees' activities in the frontline to understand service innovation (Crevani, Palm, & Schilling, 2011; Sundbo, Sundbo, & Henten, 2015). Hence, I have chosen frontline employees and service organizations as the context for the theoretical and empirical discussions in this thesis. The focus is primarily on the employees and their activities on the micro level. Therefore, the thesis does not discuss innovation and innovation processes from a system perspective or based on type of organization. As an example, the thesis does not distinguish between public and private service organization, or the nature of work conducted as frontline employees.

The relevance of frontline employees as actors in service innovation is emphasized in how service and service innovation is conceptualized as a change in behaviour rather than a change in technology. According to Sundbo, "a service is fundamentally a behavioural act, and innovation in services a renewal of human behaviour. This behaviour often implies the use of technology, but the act is essential, which is why care is so important" (2008, p. 27). Frontline employees act; they are users of, for example, new technology introduced in the service delivery process, they interact with customers and they act together as colleagues, to mention some of their activities. These actions, in the border between the organization and the customers, are often used as an argument to define frontline employees as in a position to learn from customers (e.g. getting ideas when interacting with customers). Hence, they come forward as potential contributors of relevant knowledge of innovation (e.g. Cook et al., 2002; Martin & Horne, 1995; Melancon et al., 2010). However, with a few exceptions (e.g. Fuglsang & Sørensen, 2011; Sundbo et al., 2015), the micro processes of the frontline employees' activities are rarely studied (Crevani et al., 2011). Furthermore, the employees are in innovation studies primarily considered as contributors to innovation processes (e.g. idea makers) and not themselves as innovators and initiators of innovation processes (Kesting & Ulhøi, 2010). Therefore, the picture of frontline employees as central actors in innovation has not yet been given much attention in studies of service innovation (Sundbo et al., 2015). Crevani et al. (2011) further emphasize this in their review article. Setting the research agenda for innovation management, the authors identify gaps between research and practitioners. They underline the need for more studies on both innovation work

at a micro level in service firms, as well as the innovative potential of service workers.

In this thesis, I seek to understand more of the actions of frontline employees in service innovation processes. I focus on the employees' actions through their workplace, and not on employees as single entre-/intrapreneurs (e.g. Hellmann, 2007). Furthermore, a central premise for this thesis is that the frontline employees are viewed as knowledgeable actors or agents.[3] Employees can construct their actions within the workplace, suggesting that individuals (or employees in this context) are not merely subjugated to organizational processes, but practise agency (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013). However, it is important to point out that in this thesis I focus on studying the micro processes that the frontline employees engage in: *how may employees act, why do they act as they do and what may follow from these acts?* Then, based on the empirical studies of these micro processes, I seek to build an understanding of how frontline employees can construct their participation in service innovation processes. I see the concept of participation as related to the concept of professional agency; which is practised when employees make choices and exert influence on their work practice (e.g. Eteläpelto et al., 2013). The concept of professional agency is often used in learning research, in particular in addressing workplace learning (Eteläpelto et al., 2013). In this thesis, the concept of agency is related to employees becoming participants of service innovation processes. It is not a concept that I set out to study a priori. When working on the thesis, discussing the research questions holistically, I saw the relevance of using agency as a concept to identify the frontline employees as participants. My use of the term in this thesis is clarified in section, 2.5, but it is not the central objective. Hence, agency and professional agency as theory and research stream is not elaborated in the thesis.

In the following, I briefly introduce how I choose to frame the questions of frontline employees' actions, as listed above, before formalizing the overall research purpose and questions of the thesis.

1.3 Framing frontline employees in service innovation processes

Service innovation as a concept includes both the renewal (the output) and the process through which renewals are achieved (Toivonen, Tuominen, & Brax, 2007). It is in the innovation processes – the creation of a new idea and the process of developing and implementing it (Van de Ven, Polley, Garud, & Venkataraman, 2008) – that employees contribute and engage in innovation activities.

3 Agents and actors are used interchangeable in this thesis (e.g. Giddens, 1984).

Innovation processes can be studied using two types of model (as extreme points):[4] one where innovation is deliberately pursued as in a planned process, or a second model, where innovation derives from activities that are not pre-planned (e.g. Toivonen, 2010). The first model depicts innovation as a top-down process, management-led and initiated, where frontline employees are typically involved by invitation[5] (e.g. participating in project-/development groups), (e.g. Alam & Perry, 2002; Scheuing & Johnson, 1989). The second sees innovation as a bottom-up process, where ideas emerge through and from the practice (by for example frontline employees), and can be employee-driven (Gallouj, 2002; Høyrup, Bonnafous-Boucher, Hasse, Lotz, & Møller, 2012). A challenge with these two models in their pure form is when they depict the paths to innovation as either/or: as either management- or practice-driven. More importantly, the two models depict two different approaches to how frontline employees can be involved in innovation processes.

In this thesis I draw upon a third perspective, that of innovation with care, which sees innovation as an interactive process, something that takes place among many actors holding different perspectives, ideas and cultures, that has to be carefully woven together in order to achieve the benefits of innovation (Fuglsang, 2008b, p. 3). This perspective sees the innovation process as a broad coherent process (Sundbo, 2008). It recognizes a duality of structure within the organizations: a hierarchical one, which is defined as managerial, and a loosely coupled interactive one, that is intended for employees and managers to participate in (Fuglsang & Sundbo, 2005; Sundbo, 2002). Hence, the previously described models of innovation processes, top-down and bottom-up, are integrated, and innovation with care can be understood as a balanced approach to innovation (Rubalcaba et al., 2012). Innovation with care is also designated as a strategic reflexive process combining management strategy and employee reflexivity (Sundbo & Fuglsang, 2002a). I elaborate on the perspective of reflexivity in section 2.3. Here I want to clarify that in this thesis I use the term "innovation with care" interchangeably with that of the balanced approach to innovation, that combines top-down, management-led approaches to innovation with bottom-up, employee-driven approaches.

Few empirical studies illuminate frontline employees as actors in both strategically initiated top-down processes, and in processes emerging from their work practice (for exceptions see e.g. Saari, Lehtonen, & Toivonen, 2015; Sørensen, Sundbo, & Mattsson, 2013). By applying the balanced perspective, innovation with care, the question of how frontline employees become participants of service innovation can be studied under the lenses of duality, instead of actors in innovation activities as a question of "either/or". Innovation

4 There are nuances of the models as well as processes that will fit in between the extreme points (see, e.g. Fuglsang & Sørensen, 2011; Rubalcaba, Michel, Sundbo, Brown, & Reynoso, 2012; Toivonen & Tuominen, 2009). I will address these nuances and models of innovation processes in Chapter 2.

5 I use invitation in this thesis, although the invitation may be more a request or instruct from management.

with care as a perspective of innovation is more conceptual than empirical. In this thesis, the perspective is used as a framework to build the picture of frontline employees as actors, participating in innovation activities. The duality that innovation with care represents provides the thesis with a model not to test, but as a point of departure to integrate existing knowledge, and add new. The perspective places frontline employees within different innovation processes related to how ideas emerge. At the same time, it places employees as actors in between the structure of managers and the structure of interacting with customers. Both of these represent micro processes we need to learn more about to explore the innovation potential of frontline employees, as problematized in the next section.

1.3.1 Problem discussion; the questions of what, how and why

The issue of *what* frontline employees contribute is emphasized within existing research on service innovation, all of which points to the importance of involving frontline employees (e.g. de Jong & Vermeulen, 2003; Ordanini & Parasuraman, 2011; Sundbo, 2008). de Brentani sums it up in the following: "an expert frontline is the primary company resource" (2001, p. 182). At the same time, there are recent studies that partly contradict each other regarding frontline employees and their input to innovation. Where Ordanini and Parasuraman (2011) find frontline employees to be holders of key competence for service innovation, Melton and Hartline (2010) conclude in their study that involving frontline employees in idea generation has no effect. Two ambiguous studies are by no means surprising or conclusive in any way. However, they do point to an important factor that, to my knowledge, is rarely addressed in service innovation research: one thing is the fact that frontline employees do contribute, but what about their limitations? How can we know the potential of frontline employees without knowing more of the employees' boundaries related to their contribution? As just stated, studies do confirm how frontline employees contribute to innovation. To some extent, these studies have led to what can be argued as an established (conceptual) truth in service research: that when frontline employees co-create value with customers, they absorb and develop knowledge from them (Melancon et al., 2010; Vargo & Lusch, 2004, 2008). However, the aforementioned empirical studies and others like them, within service management and innovation, are to a great extent effected taking the managerial point of view and with a quantitative approach. Thus, the processes frontline employees are involved in are quite descriptive in their presentation, and they do not represent the processes from the perspective of the employees. Hence, the studies lack a depiction of what frontline employees actually do extract from interacting with customers, and how it potentially influences the employees' innovation activities.

The question of what frontline employees contribute is closely related to *how* they contribute. To be creative and have ideas does not mean that the ideas are ever acted upon

and become part of the innovation processes of the organization. By employing the balanced approach to innovation, the question of how frontline employees contribute can be studied acknowledging how employees may contribute through both top-down initiated innovation processes and by ideas that emerge from the employees themselves through their daily work. As pointed out, innovation is mostly studied from one or the other of these angles. However, not limiting the employees' participation in innovation to one type of process may make it possible to illuminate the employees' innovation activities and contribution more completely. Furthermore, as pointed out in recent empirical studies (e.g. Saari et al., 2015; Sørensen et al., 2013), there is not necessarily only one path to innovation within an organization; there may be multiple processes ongoing concurrently. Hence, using a balanced approach as a research lens may present a more realistic and complete picture of innovation processes in service organizations.

Finally, to the question of *why* frontline employees engage in innovation. The way the structure between management and employees is connected is central in the balanced perspective, introducing the importance of care in service innovation. According to Sundbo, "care means that the top management is aware of the innovative potential of managers, employees and customers (and other external actors) and nurses these potentials, but also set limits for intrapreneurships based on the strategy", (2008, p. 31). The quotation points to the relation between frontline employees and managers, a relation that constitutes a premise for employees to engage in some innovation activities (e.g. Sørensen et al., 2013). But what does it mean to care for employees' innovation activities? There are studies that address how managers may facilitate employees' involvement in innovation. However, most of this type of studies fall within creativity research, focusing on the first part of the process: idea generation (e.g. Shalley, Zhou, & Oldham, 2004; Zhou & Shalley, 2003). Facilitating idea generation amongst frontline employees might demand other means than their implementation. Furthermore, research on how to foster employees' innovation activities throughout the innovation process is scarce (Axtell et al., 2000).

Moreover, the question of *why* brings me back to the beginning of the thesis. My initial story, of employees innovating without anyone knowing, is not unique. Studies do show that employees may engage in innovation activities without the awareness of managers (Fuglsang, 2011; Fuglsang & Sørensen, 2011). Accordingly, managers do not necessarily care for the innovation activities. Why then, do frontline employees engage in innovation?

Based on this reasoning, I argue that current research does not fully address the complexity and diversity of frontline employees and their activities as actors in service innovation processes. As pointed out, there are several studies that address the involvement of frontline employees, and from various theoretical perspectives. However, they leave a

fragmented picture of the employees, and in order to grasp the innovative potential of frontline employees, it is essential to tie the pieces together, and to complete them with new knowledge. According to J. Sundbo (2011), we need to develop our understanding of service innovation processes. These processes are, as pointed out, complex and social processes, involving diverse actors interacting and multiple paths by which ideas emerge and become developed. There are of course no easy answers nor a single model of how innovation activities should be understood or managed. In this thesis, I use the questions of *what*, *how* and *why* to create a meaning of the frontline employees' innovation activities, and how they are engaged in innovation processes. Therefore, I aim to develop a new understanding of the employees' innovating potential in organizations and of the processes the employees are part of. More specifically, in this thesis I discuss frontline employees from the perspective of becoming participants of service innovation processes. I distinguish between the concept of *participation* and that of *involvement* in innovation processes. Involvement is often used without identifying what it implies to be involved. Furthermore, I wish to demonstrate that this thesis discusses frontline employees as actors beyond the concept of employee-driven innovation, which strictly defined sees employees as the initiator and implementer of the idea (Kesting & Ulhøi, 2010)[6].

By applying the concept of becoming a participant, I do not identify the employees with any specific type of process (e.g. top-down processes versus employee-driven processes). I focus on the employees' own actions and their possibility of constructing agency to participate in service innovation processes, through the balanced approach recognizing a duality of innovation processes. It is an approach that with its strategic scope is argued to be primarily management focused (Saari et al., 2015; Sundbo & Fuglsang, 2002a). In this thesis, the employee and practice-based view is included, and therefore contributes new knowledge to the approach.

1.4 Research purpose and questions

Following from the above, the overall purpose of the thesis is to contribute knowledge about frontline employees as participants in service innovation processes. The research purpose is further divided into the following questions.

First, *what* can frontline employees contribute to service innovation?
Second, *how* can frontline employees contribute to service innovation?
Third, *why* do frontline employees contribute to service innovation?

6 Høyrup defines employee-driven innovation to also include involvement of employees in management-driven processes as well as the combination of top-down and bottom-up processes, referring to his own definition as first order, second order and third order EDI (2012, pp. 9 –10). However, to be able to meaningfully distinguish employee-driven innovation from innovation processes in general, I will use the concept as originally defined when the ideas are initiated and implemented by the employees.

The aim of the thesis and the research questions are explored through four appended papers and this framework. All of the papers are empirical studies of innovation in service organizations. Each of the papers illuminate, to different extents and in different forms, frontline employees as actors in service innovation processes, hence reflecting the questions of what the employees can contribute, and how and why they may contribute to service innovation. Paper I places frontline employees as contributors to incremental service innovations. In Paper II, frontline employees are recognized, together with managers, as a significant internal driving force to service innovation. The paper also suggest that frontline employees greatly depend on their managers to become part of the innovation processes. Paper III follows up, exploring the role of managers in greater depth, and examines middle managers in three different roles, all important for enabling frontline employees to become part of innovation processes. Furthermore, the paper introduces frontline employees as actors of both informal and formal innovation processes. In Paper IV, the roles of frontline employees are studied more thoroughly. They are shown to take on different roles, depending on the type of process in which they are active. The paper further demonstrate how these roles influence how employees may contribute to service innovation. Hence, the papers step by step expose a deeper understanding of what frontline employees contribute, how they engage in service innovation processes and why they contribute.

Based on the four papers, this thesis then discusses frontline employees from the stance of becoming *participants* in service innovation processes. Furthermore, this thesis attempts to understand not only how frontline employees practise agency and become participants, but also the potential they as participants may represent for the innovating service organizations. Just as important is therefore how the potential: the innovating activities of the employees, can be understood by the organization. In the thesis, I introduce *innovation by weaving* as a meaningful construct to understand frontline employees as participants in service innovation processes. Interpreting innovation as an interactive, complex and social process must incorporate the co-existence of the different paths, and actors, contributing to it. Innovation by weaving indicates how innovation processes can be understood by adding threads emerging from different sources, to combine and develop new patterns, based on the existing. The construct also suggest how actors within loosely coupled structures interact, in particular from the perspective of frontline employees as participants, thereby contributing to the balanced approach of innovation with care.

1.5 The structure of the thesis

The thesis is structured as follows.

Chapter 1 introduces the thesis background through a personal detour, introducing the motivation for the study, and a theoretical positioning of the thesis. The purpose and the research questions are then presented.

Chapter 2 presents the theoretical framework of the thesis. Innovation is an interdisciplinary field, and this is demonstrated in framing this chapter. Service innovation, innovation processes and the activities of frontline employees are introduced and discussed from different theoretical perspectives. This in order to illuminate the concepts and their relation from the applicable angles. The chapter ends with a model and a discussion of this thesis framework, which guides the empirical studies.

Chapter 3 presents the methodological reflections and discuss the choices made in this thesis. The chapter includes a description of the cases and empirical data used in the different papers, as well as a reflection on the choices made during the course of study.

Chapter 4 gives an outline of the papers on which the thesis is built. Although the content of the papers is not included in detail, an overview is provided before the link between the papers and the research questions is presented.

Chapter 5 synthesizes and discusses the main results of the study, based on the theoretical framework and the papers. The chapter presents the contributions of the thesis, and ends with practical implications and suggestions for future research.

"Innovation has nothing to do with how many R&D dollars you have. When Apple came up with the Mac, IBM was spending at least 100 times more on R&D. It's not about money. It's about the people you have, how you're led, and how much you get it."
- Steve Jobs

2. Theoretical framework

This chapter provides the theoretical framework of the thesis. In the first part of the chapter, I define and discuss the concept of service innovation. I introduce innovation and its origin briefly, before presenting the emergence of service innovation as a research field, and follow by describing the conceptualization of service innovation in this thesis. In the second part of the chapter, I introduce service innovation processes. As just discussed, frontline employees are not defined as contributors to one specific innovation process. On the contrary, they may be part of innovation activities in the organization on different levels and in different processes that are concurrently ongoing, e.g. innovation related to activities that arise from the workplace of the employees: bottom-up processes; as well as top-down processes in which managers involve employees through inviting them to participate (Høyrup, 2012). The lines between innovations as a top-down management-led process versus a bottom-up, employee-initiated process are blurry. Yet, I have chosen this classification as point of departure, enabling me to draw the major distinction between the two perspectives. I introduce the balanced perspective subsequently, providing this thesis with a dual lens for studying frontline employees as actors of service innovation processes. Then, I introduce a model that illuminates the micro processes of frontline employees connected to their different innovation activities. The model points towards the empirical work of this thesis. The chapter ends with an introduction of the concept of agency: how can frontline employees become participants of service innovation processes?

2.1 Defining service innovation

2.1.1 What is innovation and what is service innovation?

When defining service innovation, it is natural to relate it to its core concept, that of innovation. All definitions of innovation include the development and implementation of something new (de Jong & Vermeulen, 2003). The origin of the concept harks back to Joseph Schumpeter, considered as "the father" of innovation, and his way of conceptualizing innovation will be used initially in this section as a reference to innovation versus service innovation.

Schumpeter's first interest was the activities of entrepreneurs (1934), while his later work (1947) addressed the work of laboratories, and innovation as a function of the

routines embedded in business firms (Fuglsang, 2008b). Schumpeter was one of the first to focus on the role of innovation in economic and social change, viewing economic development as a process of qualitative change, driven by innovation, taking place in historical time (Fagerberg, 2005). He defined innovation in a broad manner, as carrying out "new combinations" (Schumpeter, 1934), combining existing ideas and resources in a novel way. Lundvall describes Schumpeter's choice of term, "new combinations", as enlightening, since "almost all innovations reflect already existing knowledge, combined in new ways" (2010, p. 9). Consequently, Schumpeter's definition is often employed as a point of reference to innovation independent of context, including studies of service innovation (e.g. Gallouj & Weinstein, 1997; Sundbo & Fuglsang, 2002b). Whether new services or new products are to be developed, new combinations need to be implemented and set in practice (hence distinguishing innovation from invention [Fagerberg, 2005]). Furthermore, Schumpeter's definition is applied in studies where innovation is viewed as an interactive process, emerging from the active combination of people, knowledge and resources (Obstfeld, 2005).

Innovation can also be classified as an output, referring to the type of innovation. Again, following Schumpeter, it was conceptualized into five parts: (1) the introduction of a new good (new to the market) or a new quality of a good; (2) introduction of a new method of production, although not necessarily scientifically new; (3) the opening of a new market; (4) the conquest of a new source of supply of raw material or half-manufactured goods, and finally, (5) the carrying out of a new organization (Schumpeter, 1934, p. 66). The same categories are still used, although there are examples of adding nuances to the understanding of the categories and defining new classifications: e.g. Abernathy and Clark (1985); Abernathy and Utterback (1978); Henderson and Clark (1990). When defining innovation as an output in services, the same classification as Schumpeter's is also used. New services may be new service products (e.g. new restaurant concepts), process innovations (e.g. new procedures for producing the service and/or delivering the service); market innovations (e.g. creating new behaviour), or organizational innovations (e.g. new organizational forms). Innovation in services is however often described as being more complex and integrated than that of innovation in manufacturing, in the sense that innovation in services can be product, process, organizational and market innovation in one (Sundbo, 2008). One may use Airbnb as an example, an online platform where ordinary people may rent out their spaces as accommodation for travellers. The service is technology-based, as the Web 2.0 has permitted the Airbnb's business model (Guttentag, 2013). It has created new market behaviour, as tourists do not have to use formal businesses, such as hotels, to acquire the desired accommodation service. Airbnb is cheaper and offers new attributes. It can also be described as a process innovation: as a new way of delivering the service.

Finally, central in Schumpeter's conceptualization of innovation is the question of newness: "In so far as the 'new combination' may in time grow out of the old by continuous adjustment in small steps, there is certainly change, possible growth, but neither a new phenomenon nor development in our sense", (Schumpeter, 1934, p. 65). In his view, something new is something radical. Continuous small steps, regarded as incremental innovation, which is a typical characterization of service innovation (e.g. Gallouj, 2002; Sundbo, 1997) is thus in Schumpeter's view not considered an innovation. While the literature in general in recent years holds a more balanced view, in which the cumulative impact of incremental innovations is seen as equally important as that of radical ones (Fagerberg, 2005; Lundvall, 2010), the focus has been on technology. Schumpeter's perception illustrates how innovation was understood in the early research stream, in which the focus was on technological, R&D-based breakthroughs.

So, as just seen, service innovation can be understood using the general conceptualization of innovation. However, although service innovation may be technologically based, it can also take place without the use of technology (Gallouj, 2002). Hence, is important to address how a departure from considering innovations only through the lenses of R&D and radicalness has influenced the study of innovations in services. In this thesis, the innovation activities of frontline employees constitute a focal point. Therefore, it is important to view innovation in the making: how innovation occurs. Viewing the development of an idea through the lenses of a stepwise process, which is emphasized in service innovation research, adds a different perspective to that of purely technologically based developments. Next, I elaborate on the emergence of research on innovation in services, and how this influences its rendering in abstract terms in research today and in this thesis in particular.

2.1.2 Approaches to service innovation research

From the outset, innovation research, although divided into different research fields – the economics of R&D, innovation systems and organizing innovation (Fagerberg, Fosaas, & Sapprasert, 2012) – was, as just said, to a great extent equated with technology development (e.g. Hannan & Freeman, 1977; Nelson & Winter, 1977; Schumpeter, 1934). When technology is taken as the core of innovation, the expertise of employees is primarily related to single development units, e.g. R&D, or particular professions, like engineers. There are examples of research recognizing innovation as taking different forms depending on the type of industry, and relying on diverse competences. Pavitt for one introduced a taxonomy identifying the sectorial difference of technology change (1984). By dividing firms depending on technological trajectories, he identified three different sectors: firms that are (a) supplier dominated, (b) production-intensive and, (c) science-based. While production-intensive and science-based firms rely on more "traditional" expertise, like R&D-based knowledge and patents, the supplier-dominated

sector is defined by weak R&D departments and engineering capabilities, comprising firms mainly in traditional manufacturing, agriculture and many professional, financial and commercial services, amongst others. However, although Pavitt found these firms to "appropriate less on the basis of a technological advantage, that of professional skills, aesthetic design, trademarks and advertising" (1984, p. 356), he defined innovation in these firms as coming mainly from their suppliers of equipment and materials, and only from minor contributions by the firms themselves. So, innovation is still perceived to be technological in nature.

Technology as a dominant aspect of innovation also influenced the early studies of service innovation (e.g. Barras, 1986), and research on service innovation was to a great extent treated as a variety of that in manufacturing industries. These manufacture-based studies, the assimilation approach, although important to show that service organizations do innovate, were criticized for not taking into consideration the peculiarities of service and service production that separate it from manufacturing industries (Miles, 2000). Services are commonly understood as a representation of activities, deeds or processes, and interactions (Edvardsson, Gustafsson, & Roos, 2005). This way of conceptualizing services as intangible and process-based, relying on interactions, is traced back to the early contributors to the field like Carman and Langeard (1980), Grönroos (1982) and Normann (1984). Services are characterized (at least originally) by the features of inseparability, heterogeneity, intangibility and perishability (IHIP), (e.g. Parasuraman, Zeithaml, & Berry, 1985). These factors influence how services are produced, and are thus seen as influencing how organizations innovate and organize the innovation processes. Lately, the relevance of IHIP has been questioned: are these characteristics representative of services (Edvardsson et al., 2005; Lovelock & Gummesson, 2004). However, it was the focus on these particular characteristics that led to the development of the demarcation approach, which covers studies that emphasize the distinct features of services in the study of innovation (Droege, Hildebrand, & Heras Forcada, 2009; Nijssen, Hillebrand, Vermeulen, & Kemp, 2006). The questioning of the mere adoption of product development models for service innovation led to central contributions viewing innovation as something more than technologically radical changes dependent on R&D knowledge. Instead, studies pointed out that service organization are active innovators, and that innovation is more a result of stepwise, iterative processes, leading to incremental innovation. Consequently, the studies also asserted that service innovation does not so much rely on R&D-based knowledge, but rather on internal sources for knowledge from employees and managers (Djellal & Gallouj, 2001; Sundbo & Gallouj, 2000). Furthermore, the studies demonstrate that new ideas often emerge from the supplier-client interface, and when implemented, represent a new form of innovation for organizations (e.g. ad hoc innovation, [Gallouj & Weinstein, 1997]), that are not necessarily based on an intended and pre-planned process, (Fuglsang & Sørensen, 2011; Gallouj, 2002; Sundbo, 1998).

I will elaborate on the above-mentioned studies later, for now I merely point to how the demarcation approach brought new elements into the understanding of service innovation. Where the assimilation studies emphasize the technological dimensions of innovation, the demarcation studies focus on the non-technological dimension. Innovations are however rarely a question of either/or, but dependent of context, a matter of both dimensions. Innovations in different sectors might therefore be more similar than previously assumed. Consequently, a third approach, the synthesis approach to innovation, has developed out of the two separate approaches: assimilation and demarcation. The core premise for the synthesis approach is in short how studies of innovation in manufacturing and services can learn from each other, contributing together to a better understanding of the complex phenomena of innovation in general (Coombs & Miles, 2000; Drejer, 2004; Gallouj & Savona, 2010). There are also examples of research areas where manufacturing and service are integrated, e.g. studies of servitization (e.g. Gebauer, Edvardsson, Gustafsson, & Witell, 2010; Oliva & Kallenberg, 2003). Furthermore, the perspective of service-dominant logic proposes that service is the central mechanism of any economic exchange, arguing a perspective beyond the dichotomy of goods versus services (Vargo & Lusch, 2004).

Droege et al. summarize the relation between the three approaches to service innovation as follows: "the stream of demarcation or assimilation seems to decline in its impact and relevance, and many researchers now turn to the most recent approach of trying to 'synthesise' innovation research in product and service innovation" (2009, p. 135). I support the authors' line of argument. Although I focus on the innovation activities of frontline employees in service organization, my studies can develop knowledge of how ordinary employees in general, are engaged and act in innovation processes. Hence, the thesis can be placed as a contribution within and to the synthesis approach to innovation.

2.1.3 The approach in this thesis to service innovation

In service innovation, frontline employees, as previous argued, are seen as important sources for innovation, and with a potential to engage in innovation activities, based on their interaction with customers. However, innovations that are characterized as unintended, such as ad hoc innovations, are criticized. Drejer (2004) for one argues that these forms of innovation are too close to continuous improvement that would come out of regular learning activities in any organization, and thus do not represent innovation. Based on Schumpeter's conceptualization, Drejer also points to how innovation should have an economic impact. Innovation is therefore seen as an intended and planned change, versus ad hoc innovation that although containing reproducible elements (Sundbo, 1997), can occur from an unplanned situation.

The classification of what should "count" as an innovation is a challenging, yet impor-

tant point in the thesis, and is a discussion that encompasses more than the dichotomy of radical and incremental.[7] Today it is recognized that most innovations are incremental, building on what is already there, requiring modifications in existing system functions and practices (Van de Ven et al., 2008). Innovation is basically a cumulative learning process, hence difficult to date in time (Lundvall, 2010). Lundvall also points to how innovation appears now, not primarily as a single event, but as a *process* (2010, p. 9, italics in original). As I see it, categories of innovation, like ad hoc innovation, is not just a representation of a type of innovation, but a recognition of knowledge that is embodied in the practice of employees, employed in a stepwise process. Through the process, the frontline employees' knowledge may then be expressed in new combinations that creates value: adding a new service to the customer or changing the process of service delivery. When the new elements can be reproduced, these changes can be defined as innovations (Fuglsang & Sørensen, 2011; Gallouj, 2002; Sundbo, 1997). I argue that including these forms of innovation provides an important addition to the understanding of innovation in the making. I follow the argument from Fuglsang that an overly narrow definition of innovation can hinder us from developing an understanding of how innovation occurs in real life, in practice, not only as a remarkable renewal, but also as continuous incremental changes that can only be recognized as an innovation in the long term (2011, p. 26).

To sum up: Following previous studies on innovation and service innovation, these two concepts are understood in this thesis as the process of creating new combinations, resulting in new products or services, processes, input and output markets, or organizations. As I focus on service innovation, Sundbo's emphasis on innovation as the renewal of behaviour is considered a central premise for innovation. Furthermore, I choose to follow Van de Ven et al., who argue that "as long as the idea is perceived as new to the people involved, it is an 'innovative idea', even though it may appear to others to be an 'imitation' of something that exists elsewhere", (2008, p. 9, quotation marks in the original). This opens up for understanding innovation as stepwise processes, intertwined with practice, and the notion from, for example, Gallouj and Weinstein (1997) and Fuglsang (2010, 2011) that an innovation may be both intentional and unintentional.

2.2 Perspectives on service innovation processes

In this section, the innovation processes within which frontline employees act are discussed. Before I draw the lines of innovation processes as seen from a top-down and bottom-up perspective, I briefly present some underlying common characteristics of innovation processes, followed by their categorization. Frontline employees and how

7 The distinction between incremental and radical innovation does not follow exact categories with clear definitions, but is more to be understood as extreme points on a scale of innovativeness (de Brentani, 2001).

they are perceived as contributors to service innovation are discussed briefly when addressing the processes, and addressed more explicitly in the final section which presents the conceptual model of the thesis.

2.2.1 Service innovation processes

All innovations are said to begin with creative ideas (Amabile, 1988; Amabile, Conti, Coon, Lazenby, & Herron, 1996). Hence, creativity is seen as a necessary, but not sufficient, factor enabling innovation (Carayannis & Gonzalez, 2003). Although creativity is understood as an important part of innovation, the two aspects should be regarded as different, yet integrated processes. A new idea has to be explored or generated in a creative way, and at the same time there will be a parallel process going on where these ideas are selected, exploited and implemented (Fuglsang, 2008b). Thus, innovation can be seen as the process of successful implementation of creative ideas within the organization (Amabile et al., 1996).

The innovation process is frequently described through the main phases of idea generation, development and implementation. Although the phases can be further divided, as in the Stage-Gate model, (e.g. Booz, Allen, & Hamilton, 1982), these three main phases constitute the cornerstones. Beyond these "clear" phases, the innovation processes are generally described as complex, with stages that are overlapping and intertwined. As Klein and Rosenberg state in their conclusion; "any model that describes innovation as a single process or attributes its sources to a single cause, or gives a truly simple picture will therefore distort the reality and thereby impair our thinking and decision making" (1986, p. 302). The complexity of the process is also emphasized by Van de Ven et al. (2008), "innovation journey". The authors' presentation of the innovation journey entails innovation as generic, in the sense that it (1) consists of a purposeful, concentrated effort to develop and implement a novel idea; (2) is of substantial and technical, organizational, and market uncertainty; (3) entails a collective effort of considerable duration, and (4) requires greater resources than are held by the people undertaking the effort, (Van de Ven et al., 2008, p. 22). However, as I address next, in these criteria the authors omit types of innovation processes that may also lead to implementation of creative ideas.

Van de Ven et al. (2008) see the innovation process primarily as activities within an organization as part of a (more or less) defined and planned project. There follows a great deal of literature on innovation, including research on service innovation. Then again, innovation may arise alongside practice in organizations, not necessarily planned. As previously reasoned, this notion is highly applicable in services, which rarely develop innovation primarily based on own R&D knowledge. Rather, service innovation occurs throughout the organization. The innovations are often connected to the service pro-

cess, and the development of the ideas is thus partly intertwined with the organizational structures and processes of the company (Sundbo, 1997; Toivonen & Tuominen, 2009). Both the concepts of ad hoc innovation and bricolage can be used to exemplify innovation processes evolving from practice. Ad hoc innovation is defined as "a solution to a particular problem posed by a given client" (Gallouj & Weinstein, 1997, p. 549), where bricolage refers to a concept originating from Lévi-Strauss (1966), implying changes based on "do-it-yourself" problem-solving activities that create structures from resources at hand (Fuglsang & Sørensen, 2011, p. 583). Bricolage innovation is closely related to the concept of "tinkering" (Styhre, 2009), used in the sense of a "leeway to adjust the protocol (that is normally in use) to unforeseen events" (Timmermans & Berg, 1997, p. 293). In the following, and throughout the thesis, I will refer to bricolage, as this term is used in previous studies of innovation and service innovation (e.g. Baker & Nelson, 2005; Fuglsang, 2011; Fuglsang & Sørensen, 2011).

The common ground between bricolage and ad hoc innovation is that they both depict a type of innovation where the process is initiated within the practice of the organization. The ad hoc innovation is the practice of co-creation with the customer or client; bricolage is based on the same, but is not necessarily related to a process involving customers; it can be changes that are implemented within a work practice between colleagues. Although closely related, the difference between an ad hoc innovation and that of bricolage is that the former concept is the result of a process that is based in improvisation, while the latter also includes intended changes (Fuglsang & Sørensen, 2011). Bricolage and ad hoc are defined as types of innovations.[8] However, based on their characteristics, they also depict types of processes, primarily by defining how and where they originate, as practice-based.

The above shows how generic innovation as discussed by Van de Ven et al. (2008) excludes some types of innovation processes. Both bricolage and ad hoc represent innovation processes within a practice model, that violate criteria 2–4 as brought forth by Van de Ven et al. (2008). As just reasoned, in studies of service innovation these processes have been argued to be strongly present, based on the characteristics of services. Yet, most research is still focused on the more project-defined, management-oriented way of defining innovation and its processes. As the next section will emphasize, this does not exclude the frontline employees as contributors, however, as I argue later, it may weaken the participant view of frontline employees in service innovation processes.

In the next section, I present and discuss how service innovation processes are depicted in the literature. The point of departure is how the process is conceptualized, as

8 Other concepts used in practice-driven innovation processes are posteriori recognition of innovation, where a solution (the innovation) is discovered in retrospect, and then further developed (Toivonen, 2010; Toivonen & Tuominen, 2009).

either primarily driven by (top) management and strategically oriented, or from and within the practice of the organization, representing bottom-up processes. The first research stream is primarily grounded within service management and marketing theory, and reflects some of the early studies within research on service innovation.[9] The second is fragmented, with its roots in organizational studies and workplace learning. The discussion of frontline employees within these perspectives follows.

2.2.2 Service innovation processes from a top-down, strategic-based perspective

"Successful new services rarely emerge by mere happenstance. Rather, they tend to be the outgrowth of an appropriately designed structure and a carefully orchestrated process" (Scheuing & Johnson, 1989, p. 25). The quotation marks the introduction of the article from Scheuing and Johnson, who were among the first to address how new services are developed, from ideas to commercialization. The inspiration for the article and its theoretical background is based on that of products and product development. The authors apply the same line of thought for the development of services, and they build on the work from a consultancy firm which influenced the mainstream product development literature from the 1960's (Booz, Allen, & Hamilton, 1968; Booz et al., 1982). Scheuing and Johnson propose a normative model for developing new services, a model that depicts 15 different steps from the "formulation of new service objectives and strategies" as the first, and the "post-launch review" as the last.

This is the early beginning of research on NSD. Studies like Cooper and de Brentani (1991); de Brentani (1989); Edvardsson, Haglund, and Mattson (1995); Edvardsson and Olsson (1996); Martin and Horne (1993); Martin and Horne (1995) are early contributors to the field (for full review of the early studies see, e.g. Johne & Storey, 1998). While Scheuing and Johnson (1989) propose a normative model, the above-mentioned studies are empirical. The studies, although with somewhat different origins, bear in common much of what is expressed by Scheuing and Johnson (1989): the need for formalization of the processes for NSD. Formalization is portrayed as an important factor distinguishing successful projects from the less successful, and is the main lesson learned from product development theory applied to NSD. The processes are not necessarily defined in conformance with Scheuing and Johnson's normative model. According to Edvardsson et al. (1995), the phases: idea phase, the project formation phase, the design phase, and the implementation phase, are sub-processes that overlap more than the sequential model of Scheuing and Johnson (1989). However, although service develop-

9 Within this research, service innovation is normally referred to as New Service Development (NSD). As will be addressed, this literature evolved from new product development (NPD). In the thesis, NSD will be used when referring to the NSD literature. It is seen as a synonym of service innovation; implying innovation activities of services. However, in the thesis, service innovation is the concept primarily used.

ment processes are described as more complex than those of products (e.g. de Brentani, 1989; Edvardsson et al., 1995), the idea of a formalized, pre-planned phase model is emphasized in the studies.

Studies on NSD processes recognize that services differ from products, but still there is little discussion to be found on how the separation occurs and what it implies. The factor that is normally emphasized is how features of service, the IHIP characteristics, influence the development of new services (de Brentani, 1989; Edvardsson et al., 1995), and in particular how the interaction between the organization and customer calls for closer customer involvement in the development process. More recent studies, like that of Alam and Perry (2002), define two models for developing new services, both models with 10 stages, either parallel or sequential. The phases are similar to those outlined in the early models, but differ on elaborating the role of the customers, by defining activities performed by customers in each phase of the development process. Hence, the service feature of inseparability is pinpointed and explicitly made part of the development process.

Alam and Perry's (2002) study wraps up to some extent the early studies on NSD processes and also marks a kind of closure on how NSD processes are to be carried out. It is a research stream that sees innovation as a strategically managed task that to a large extent implies activities that need to be pre-planned and formalized, managed and controlled, and that evolve through some main stages. As NSD relies on a strategic and management-led process, the ideas are primarily discussed within a top-down perspective – although not in the sense that all ideas must be owned or carried out by management. On the contrary, foremost customers, but also frontline employees are addressed as actors of interest with valuable input and ideas (e.g. Alam, 2006; de Brentani, 2001; Martin & Horne, 1995). However, the ideas and the process are driven and controlled by management through a formalized process, often portrayed stepwise. This group of NSD-studies varies of course in how "tightly" the process is portrayed, as the following point out:

> Creativity and innovation cannot only rely on planning and control. There must be some elements of improvisation, anarchy, and internal competition in the development of new services. Consequently, the innovation and adoption of new services must be both a planned process and a happening! We believe that a contingency approach is needed and that creativity on the one hand and formal planning and control on the other can be balanced with successful new services as the outcome. (Edvardsson, Haglund and Mattsson 1995:34)

As the management-based and top-down process primarily relies on the planning part, the next perspective is closer to the happening aspect, here addressed next.

2.2.3 Service innovation processes from a bottom-up, practice-based perspective

The practice-based perspective is rooted at the opposite end of the former, the strategically based NSD-processes. While the latter perspective relies on pre-planned activities, primarily initiated by management, the practice-based, on the other hand, has a bottom-up approach, meaning that it relies on activities initiated from different work practices within an organization. The perspective is not constricted within a defined theoretical framework, but the common element, which is the essential one in the thesis, is how the employees and their workplace are seen as an arena for learning and innovation. According to Ellström, practice-based innovation refers to "the employees' or the management's renewal of their own operations in some respect – for example by the development and use of new working methods, routines, products or services – where the renewal is based on learning in and through work processes with the operations concerned", (2010, p. 28). The definition used by Ellström is closely related to the concept of employee-driven innovation. Employee-driven innovation refers to "the generation and implementation of significant new ideas, products, and processes originating from a single employee or the joint efforts of two or more employees who are not assigned to this task", (Kesting & Ulhøi, 2010, p. 66). The authors further note that employee-driven innovation is about the "ordinary employees", meaning employees who are not hired to engage in innovation activities per se, ranging from shop-floor workers, to professionals, to middle managers across existing boundaries within the organization.

Although different concepts with slightly different definitions, the two theories give voice to the same type of employees representing the same type of asset for the organization, with the same type of challenge.[10] The employees are as mentioned, the "ordinary ones", the ones working within a work practice not hired as "innovators". The asset is the continuous improvement of their practice by employees through learning, thus innovating or getting ideas that may lead to innovation. Finally, the challenge lies within the assumption that the employees and their abilities to innovate are hidden in the organization. As a consequence, their potential abilities and assets are not exploited.

A central notion in the practice-based perspective is how the innovation process is embedded within the employees' work practice and their reflective experiences, linking learning, innovation and organization of work. This idea of learning as a bridge between working and innovating (Brown & Duguid, 1991) is based on the theory of community of practice (Brown & Duguid, 2001; Wenger, 2000), where innovation is viewed in the context of community, as expressed by changes in a community's "ways of seeing" or

10 Employee-driven innovation is also closely related to approaches as high-involvement innovation (e.g. Bessant, 2003) and studies of innovative behavior (De Jong & Kemp, 2003; Scott & Bruce, 1994; Tuominen & Toivonen, 2011).

interpretive view. Communities of practice is a broad concept referring to how human beings form groups that share cultural practices reflecting their collective learning, from the housekeepers at a hotel or a tribe around the cave fire (Wenger, 2000), and is viewed as a suitable organizational subset for examining organizational knowledge (Brown & Duguid, 2001).[11] Sharing work practice among or by a group creates a site for a tight effective loop of insight, problem identification and learning, and by that knowledge production. The same community (or group) is furthermore a significant repository for developing, maintaining and reproducing the knowledge (Brown & Duguid, 2001).

Central in sharing the work practice, being part of the same "community" is the notion of the "what is done": the work process. The work process can be defined as a set of recurrent actions that are performed – with or without the help of tools or machines – to handle a certain task and thus to achieve a certain result (Ellström, 2010, pp. 29–30). It is through these processes that routines and experiences are shared and learning and knowledge developed. The work process can further be divided into an explicit and implicit dimension (Ellström, 2010). Explicit work processes refer to the officially prescribed ones, as in the formal job descriptions and standards, while implicit work processes are described as the way the work is perceived by the employees and performed in practice, not necessarily as intended by the formal ones.[12] The implicit work process (or noncanonical practice) is opposed to the explicit work process (or canonical practice), based on a subjectively interpreted way of performing the work task, and the knowledge base is primarily tacit (Brown & Duguid, 1991, 2001; Ellström, 2010). Deviations from the prescribed way of doing the work call for variation and improvisation, initiate a change from what is known or formally routinized, and therefore cause the change or innovation. As the change becomes a routinized way of performing the work (from, for example, sharing the narratives), it becomes part of the explicit work practice and the logic of production. And so a practice-based innovation can be described as a cyclical process of learning, where the interchange between the explicit and implicit work processes create breaks from the routines, initiate the learning process and the development of the practice (Ellström, 2010; Nonaka, 1994).

The above points to how the workplace and the work processes, learning and innovation are deeply connected. The practice brings employees together, it represents an arena for mutual understanding and developing the work. The workers enact their jobs at the same time as they reshape the same jobs. According to Price, Boud, and Scheeres, this bottom-up innovation "arises from the everyday cultural practices of workers – the ways in which workers enact their jobs, interact with each other and seek to become fuller

11 The research field on the concept of community of practice is multifaceted, and here limited to the context of innovation, and especially employee-driven innovation and learning.

12 These two dimensions capture the same as the canonical and noncanonical practices discussed by Brown and Duguid (1991), based on the studies of Orr.

members of their organizations. It occurs through workers finding ways of meeting their own interests and desires as well as those of their employers" (2012, p. 77). These are ongoing processes (Hernes, 2014) with no necessarily clear starts and endings, as with a defined project. Through the working and learning processes their practice changes and (may) become part of the organization's innovations.

As opposed to the top-down, management-driven approach to innovation, where frontline employees are invited to contribute; the practice-based processes are initiated by the employees. The processes can typically be described as bricolage innovations when frontline employees initiate and implement alterations or new elements in their work practice using resources at hand. The processes may as well be characterized as ad hoc innovations, when frontline employees together with customers define and implement new ideas in the processes of co-creating services. The processes may lead to changes in both the implicit and explicit work processes, however and importantly, not all ideas initiated from employees can bypass the structure of management – for example, when ideas need resources outside the control of the employees to be further developed and implemented. Hence, as the top-down innovation processes call for interaction between managers and employees, also bottom-up based processes point to an interplay between employees and management.

Summing up, the two different perspectives of management-led, top-down innovation processes and practice-based, bottom-up processes are two different perspectives on how frontline employees engage in innovation activities. As stated in Chapter 1, these two types of processes do not necessarily depict an either/or approach to service innovation, indicating how frontline employees contribute and act within both. Next, the balanced approach, innovation with care, is presented as a framework to integrate the two perspectives to service innovation processes.

2.3 Service innovation processes from a balanced perspective: innovation with care

Innovation with care represents a conceptual framework where innovation processes are viewed through a dual lens. The framework combines the necessity of strategic directions for innovation along with the recognition of including ideas arising throughout the organization. A central element in understanding the duality is through the concept of strategic reflexivity (Fuglsang & Sundbo, 2005; Sundbo & Fuglsang, 2002b). Strategic reflexivity is seen as a form of instrument for managing the chaos (the uncertainty) that innovation and the process constitutes (Sundbo & Fuglsang, 2002a). Strategy is here seen as interpretative; as strategy is about the future, (which can't be predicted), the interpretative view is all about how managers interpret the future. Hence, a processual view of strategy is taken (Burgelman, 1996; Mintzberg & Waters, 1985), where strategy

is something that is realized based on what is emerging, as opposed to what is pre-planned and deliberated. From this it follows that the innovation process is based on an interpretation of the environment and the internal resources the organization has or that can be acquired (Fuglsang & Sundbo, 2005; Sundbo, 2002).

While strategy marks that the organization may need to change, reflexivity refers more to the process of how and when to change (Sundbo, 2003). Reflexivity then represents the human behaviour; it is the individuals of the organization who interpret and create meaning through interactions (Sundbo, 2003). Reflection and interpretation are not actions that are preserved in one distinct group. Strategic reflexivity needs to lean on an organization that is described as dual (Fuglsang & Sundbo, 2005; Sundbo, 2002). The duality reflects two structures within the organization. A hierarchical one, which is defined as managerial, and a loosely coupled interactive one, that is intended for employees and managers to participate in. The strategy (hierarchy) functions as a guideline for the ideas that employees and managers are expected to contribute (loosely coupled), thus the structures are dependent on each other and need to be combined in order to ensure an innovation process that is continuous and inclusive (e.g. employees).

Employees, middle managers and top managers are, although representative of different structures, viewed as important contributors to both interpreting the current situation and contributing ideas to processes that are continuously ongoing and emergent. Frontline employees are seen in this perspective as particularly important ideas makers, based on their interaction with customers (Rubalcaba et al., 2012; Sundbo, 2003). The innovation processes are portrayed as both top-down initiated, where employees are involved, as well as bottom-up processes, based on the employees' own initiatives; often a mixture of both (Sundbo, 2002, 2003). Consequently, strategic reflexivity seems to approach innovation processes as somewhat in the middle of the two perspectives discussed in the previous sections, drawing on both strategically defined processes and practice-based processes. The model acknowledges the valuable input of ideas throughout the organization, while at the same time these ideas need to be fitted within the course (strategy) of the firm. Hence, the process can be understood as a balanced approach to how innovation processes take place (e.g. Rubalcaba et al., 2012). However, there are few empirical studies within the balanced perspective. It is more of a conceptual depiction of innovation processes, its structures and actors, viewed through a strategic, top management lens. A recent study takes the mediating view, by addressing middle managers' coordination modes to integrate the structure of top management and employees (Saari et al., 2015). This thesis studies the structures and actors through the practices of the employees, whose ideas the balanced approach depend on.

Strategic reflexivity includes different levels of understanding the interactions and reflection of and within an organization. It can be defined on three levels: of the organization

and its environment; between the structures of the organization (e.g. the hierarchical and the loosely coupled, and between individual actors (Saari et al., 2015). This thesis, as shown in the next sections, is concentrated on the latter two.

2.4 The micro processes of frontline employees in a balanced approach to service innovation

The balanced approach makes conceptual sense by combining managerial strategic competence with the competence that is embedded in the work practices in service organizations, in particular the frontline. However, knowledge about how the two structures could be integrated is scarce (Saari et al., 2015), and there are only a handful of empirical studies illuminating the innovation processes from a balanced perspective, (e.g. Saari et al., 2015; Sørensen et al., 2013). Hence, there is a lack of understanding about how the duality may work in practice, in particular how the actors within the two structures of the organizations are integrated. As presented in Chapter 1, in this thesis the balanced approach is employed as a framework, not to test, but as a platform to build new knowledge about frontline employees and their participation in service innovation processes. Figure 1 defines the micro processes this thesis seeks to learn more of, and is elaborated subsequently.

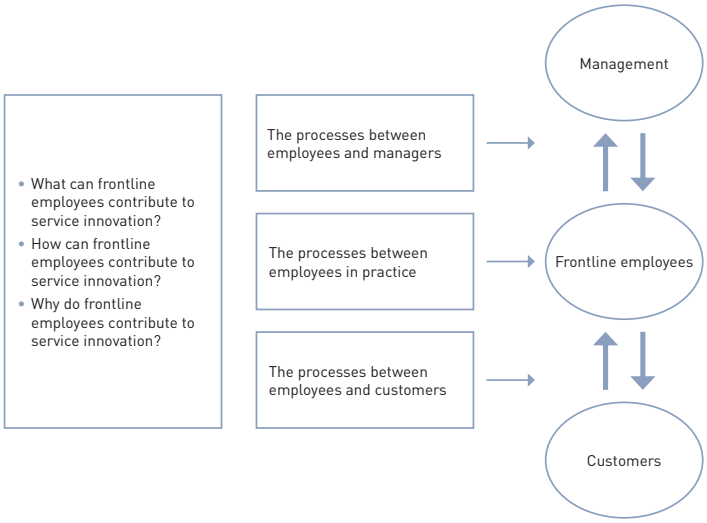

Figure 1: The micro processes of frontline employees in a balanced approach to service innovation

2.4.1 The processes of what frontline employees can contribute to service innovation

Hall and Williams have elegantly described knowledge as the hearth of innovation (2008, p. 55). New combinations derive from a process of learning and knowledge creation, where new problems are defined and new knowledge is developed to solve them (Lam, 2005, p. 124).[13] As innovation is a process depending on individual and collective expertise of employees (Leonard & Sensiper, 1998), the role of employees is acknowledged as vital. Kanter, back in 1988, recognized the importance of people working in the front line of an organization: "opportunity exists because need exists, so it is not surprising that close customer or user contact is an important innovation activator" (p. 173).

The customer, or the user of the service, is said to be the basis for service innovation (Sundbo & Toivonen, 2011a). The concept of users is applied in different expressions with different meanings – customers, users, clients, citizens – dependent on context and theory fields (for discussion see Sundbo & Toivonen, 2011a). In this thesis, "customer" is primarily used in the meaning of the user of a service, defined as: "a person or an organization who or which actually or potentially benefits from a service through receiving it or through participating more or less actively in its production or development" (Sundbo & Toivonen, 2011a, p. 6). Simply put, the customer will be the "the final judge" of the value created and offered by the organization and/or co-created with the customer. Consequently, new services must be accurately responsive to user needs if they are to succeed (von Hippel, 2001). In short, and as stated previously, frontline employees act in the border between the organization and the market when interacting with the customers; consequently placing the employees in the position to learn from the customers. The frontline employees are therefore argued as possible carriers and movers of customer-based knowledge relevant for innovation (Melancon et al., 2010; Michel, Brown, & Gallan, 2008). This is an argument used both from a top-down perspective (Alam, 2006), and bottom-up perspective (e.g. Fuglsang, 2011; Sundbo et al., 2015). However, do the employees gain knowledge that is relevant to innovation from interacting with the customers? Customer/user involvement or user-based innovation is in itself a research field distinct from this thesis (e.g. Edvardsson et al., 2006; Sundbo & Toivonen, 2011b; von Hippel, 1988). Yet, applying the framework of users' knowledge to conceptualize frontline employees' creation of knowledge to innovation, I argue may add a new understanding to frontline employees as contributors.

Following von Hippel (1994), at least two types of knowledge can be distinguished as necessary to succeed with innovation: supply-side knowledge and demand-side knowledge. The two types of knowledge reflect respectively the organization and the

13 Learning and knowledge creation opens up a wide theoretical field to innovation and organizational studies. In this thesis, the delimitation is defined through the focus of frontline employees as actors in innovation processes.

customers. Supply-side or technology knowledge concern how to produce the product or the service, both technical and organizational issues. The demand-side, or use knowledge, refers to knowledge obtained by being a user: how customer value is created (Lüthje, 2004; Magnusson, 2009). Whereas the company experts (or professional developers) have the technological knowledge, they usually lack the use knowledge. The users can be said to be in the opposite position; they know how to use the product or service, but may not know the technology behind. Since both the supply and demand sides of knowledge are said to be necessary for innovation (Kanter, 1988; von Hippel, 1994), together they make an ideal match. In research on user-driven innovation, this is often portrayed through the concept of lead users (Lüthje & Herstatt, 2004): users that have both the technical skills and the motivation to innovate.

The relevant question here, is whether frontline employees may possess the same type of characteristics as a lead user? On one side, they have knowledge concerning the technology underlying the organization, or more precise the technology of how they conduct their work. At the same time, they might absorb use knowledge through interaction with customers. Hence, it is reasonable to expect that frontline employees have, or are in the position to gain, both types of knowledge. Going back to my research question: asking what contributions frontline employees can make to service innovation, I argue that the angle of users' knowledge may provide an appropriate lens for studying the micro processes of frontline employees and customers. Hence, this thesis seeks to explore the contribution from frontline employees through their use knowledge and technology knowledge.

The use knowledge has already been discussed as the employees' interaction with customers, and the customers as representatives of an essential source of knowledge. The technology knowledge embraces the potential learning of frontline employees within their work practice. As previous discussed, a core in the practice-based understanding of innovation (as argued in for example employee-driven innovation, [Høyrup et al., 2012]), is how innovation is embedded within the daily work activities of the employees. The innovation processes take place when employees come to learn and actively remake – reconstruct – their occupational practices. The innovative activities are individual as well as changes that are imposed within the work practice, hence collective (Billett, 2012; Høyrup, 2012; Price et al., 2012). Frontline employees interact with customers and with co-workers. When the employees enact their job or practices are changed, the workplace forms an environment for learning (Brown & Duguid, 1991). In service innovation research, frontline employees are defined as assets to innovation primarily based on their interaction with customers. However, we know less of how their technology knowledge is developed and how it might contribute to innovation. Hence, this thesis seeks to learn more about how the micro processes within the workplace, between the

frontline employees, may contribute to their learning and the innovation activities of the organizations.

2.4.2 The processes of how frontline employees can contribute to service innovation

Kanter points to how ordinary employees (who are not necessarily technically skilled) are vital, especially related to ideas and the process of idea generation: "innovation begins with the activation of some person or persons to sense or seize a new opportunity" (1988, p. 173). These ideas need to become absorbed in the innovation processes of the organization for employees to contribute. As previously discussed, this opens up multiple types of innovation processes within an organization.

In the top-down, strategic perspective, frontline employees are described as contributors through formally defined, pre-planned processes that run alongside, but separated from practice. A common trait lies in how employees primarily become part of innovation processes through participating by invitation to formal projects or development groups (de Jong & Vermeulen, 2003). The empirical studies of top-down processes (primarily within a NSD-based tradition) mainly focus on the importance of involving frontline employees in innovation processes by measuring the effect of their contribution. The early studies like that of Martin and Horne (1995) found that within service firms, those innovation projects that are successful have a significantly higher degree of aggregate internal participation (involvement of employees with customer contact, non-contact personnel and senior management) than less successful newly developed services. In Atuahene-Gima's (1996) study, contact personnel are found to be a key factor for successful performance in service firms. De Brentani's study from 2001 points to similar effects of involving frontline employees in innovation, emphasizing highly skilled and motivated frontline employees as vital, regardless of whether the new service development is ranked as incremental or highly innovative.

There are several studies like those mentioned above[14] (e.g. Cadwallader, Jarvis, Bitner, & Ostrom, 2010; Gwinner, Bitner, Brown, & Kumar, 2005) , followed by more recent studies like Ordanini and Parasuraman (2011), which place frontline employees as a factor that enhances the performance rate of innovation projects in service firms. As these studies are quantitative in their methodological approach, the essence of frontline employees as actors lies in how they bring in customer-based knowledge to the processes, from a management perspective. Furthermore, these studies tend to focus more on organizational conditions for involvement of actors and conditions for successful processes, than of the actors' activities in the processes (e.g. de Jong & Vermeulen,

14 For an early review, see Johne and Storey (1998).

2003). Hence, taking part in the top-down processes is, to my knowledge, rarely portrayed and discussed from the perspective of the contributors themselves: the employees. Additionally, as the top-down processes are portrayed as quite systemic and formalized (although with some variance) (Avlonitis, Papastathopoulou, & Gounaris, 2001), the way of organizing the process leaves some aspects of frontline employees as potential contributors out of the equation. Recent studies of top-down processes, like Zomerdijk and Voss (2011), argue for innovation processes with room for flexibility, moving away from the Stage-Gate model with efficiency as a process goal. Their qualitative case study reveals the need for processes that are not limited to cross functional development groups, but from a broad base for creativity, in the sense that employees throughout the organization get to be involved.

The above argument opens up for a bottom-up approach to innovation as a way of ensuring a broad process across the organization. Within the practice-based perspective, recent empirical studies have taken a frontline employee-based approach to innovation, by introducing the concept of service encounter-based innovation (Sundbo et al., 2015; Sørensen et al., 2013). A service encounter is defined as "the meeting between producers of a service and its users at the different touchpoints of the marketing, negotiating, delivery and after-service processes", (Sundbo et al., 2015, p. 257). The concept of service encounter innovation combines frontline employees (seen as the service actors encountering the customers), with their roles as not only co-creators of value (e.g. Payne, Storbacka, & Frow, 2008; Prahalad & Ramaswamy, 2004), but as co-creators of innovation; hence co-innovation or encounter-based service innovation (Sundbo et al., 2015). According to Sundbo et al., the encounter-based service innovation differs from employee-driven innovation in its pure form. However, the authors exemplify the concepts as employees getting ideas for innovation from customers, or creating it through interactions with the customers, as well as bringing the ideas further in the service organization (2015, p. 260). Hence, I see these studies of encounter-based innovation as empirical contributions to a bottom-up, practice-based approach to service innovation, and not a distinct perspective in itself.

The few empirical studies of frontline employees engaging in service innovation from a practice-based perspective demonstrate how frontline employees represent a crucial link to connect customers to the organization, and to ongoing innovation activities. In Sundbo et al. (2015), drivers of and barriers to service encounters are discussed. Factors like mutual empathy between employees and customers are found to be a driver, while too many management layers are defined as a barrier. However, the study is focused on ideas that originate from employees interacting with customers, and does not follow up on how ideas are implemented. Hence, the study deals more with employees in their role as idea makers, and not as innovators. In studies like Fuglsang (2010) and Fuglsang

and Sørensen (2011), the micro processes of frontline employees are viewed through the innovating process of bricolage. The studies provide insight into frontline employees as innovators who change their work practice using resources at hand. The studies also point to how multiple innovation processes are ongoing in the organization, indicating frontline employees as actors in different processes. In Fuglsang and Sørensen (2011), the experiment conducted shows frontline employees as contributors of ideas that range from true bricolage to ideas that require additional resources for implementation. However, the experiment does not cover the further development or eventual implementation of these ideas, and these latter processes are not the objective of these studies.

The studies of frontline employees in practice-based innovation processes illuminate the employees' role in service innovation and adds to the top-down perspective of how innovation occurs. Although empirical studies on the balanced approach to innovation are scarce, there are studies that demonstrate how top-down processes and bottom-up processes of innovation are ongoing within organizations (Fuglsang & Sørensen, 2011; Sørensen et al., 2013). However, a core in the balanced approach is how the hierarchical structure (e.g. strategically oriented) is loosely coupled with a "lower" structure of the organization (employees and managers), in the sense that they interact. The empirical studies do however tend to address them separately, as either/or (for an exception, see Saari et al. [2015]). Although empirical studies of either top-down processes or bottom-up processes add to the understanding of service innovation, the research streams fail to illuminate what the coupling of the processes implies in practice. How can strategic and pre-planned innovation ideas and projects be combined with ensuring a broad base of creativity within the organization? What should be expected of both employees and managers in order to integrate the different structures? These are insights I argue are essential for learning how the balanced approach may be implemented in organizations, and the potential of and constraints on frontline employees as participants of service innovation processes: in top-down processes and bottom-up processes. Furthermore, as the value of incorporating user-based knowledge into innovation processes is clearly demonstrated, knowing frontline employees to be potential carriers of relevant knowledge stresses the importance of studies that incorporate practice-based, customer-related knowledge into innovation processes.

2.4.3 The processes of why frontline employees may contribute to service innovation

The final processes on which this thesis focuses is learning why frontline employees engage in and contribute to service innovation. Although only partly true, I claim that this is an issue that is rarely raised within research on service innovation. When turning to creativity research, studies of factors, both personal and contextual, that foster or

hamper employees' creativity are well demonstrated (e.g. Amabile et al., 1996; Shalley & Gilson, 2004; Shalley et al., 2004; Woodman, Sawyer, & Griffin, 1993; Zhou & Shalley, 2003). In the context of service innovation, frontline employees have been studied as to their motivation to participate in implementing innovations (Cadwallader et al., 2010), contextual factors influencing their creativity (Coelho & Augusto, 2010; Coelho, Augusto, & Lages, 2011), and drivers of their idea generation (e.g. organizational commitment and job satisfaction) (Lages & Piercy, 2012). Furthermore, studies of innovative behaviour[15] also touch upon organizational factors (e.g. climate, leadership support, job challenge), and the influence of innovative behaviour in service organizations (e.g. De Jong & Kemp, 2003; Scott & Bruce, 1994). Lastly, research on practice-based innovation endorses similar conclusions as does research on creativity and innovative behaviour, with a focus on organizational factors (e.g. culture, leadership) and job characteristics (e.g. autonomy) that foster employees' ability to engage in activities of transforming their workplace and work practices (Aasen, Amundsen, Gressgårs, & Hansen, 2012; Darsø, 2012).

Based on the above studies, it is only partly the case that the question of why frontline employees contribute to innovation rarely is discussed in service research. However, the studies are primarily quantitative in their approach. Taking a management perspective, the employees' perception is easily missed in studies of how employees contribute to innovation by enhancing their creativity (e.g. producing ideas that are useful and new). An exploratory qualitative approach may expose new mechanisms for work context and creativity, and support the call from Shalley et al. (2004). Furthermore, studies of frontline employees participating in service innovation processes are scarce (Sundbo et al., 2015), and studies tend to focus on the first part of innovation, the creativity phase (Axtell et al., 2000). As the role of frontline employees is defined as crucial for service innovation, it is equally important to understand why they engage in innovation activities. In top-down processes, one might argue that employees engage because they are invited to. Why the same employees engage in innovation activities not necessarily facilitated by management (Fuglsang, 2010; Fuglsang & Sørensen, 2011) is however less known.

In management literature, service workers' participation in organizational processes, (e.g. decision-making and ownership of processes) has been addressed through studies of employee empowerment (Bowen & Lawler, 1992; Sparrowe, 1994). The issue of empowerment has also been studied in regard to organizational processes linked to creativity (Zhang & Bartol, 2010) and innovation (Chang & Liu, 2008; Sundbo, 1996,

15 Innovative behavior can be defined as all individual levels of actions directed at the generation, introduction and application of beneficial novelty at any organizational level (West & Farr, 1989). The concept is normally used of workers at the shop-floor level, referring to a stepwise process of incremental innovation (Scott & Bruce, 1994), and has also been studied in the context of service workers in KIBS (e.g. De Jong & Kemp, 2003; Tuominen & Toivonen, 2011).

1999). Employee empowerment has often been seen as a means for enhancing employees' job satisfaction, with a focus on management practices that may foster empowered employees (Bowen & Lawler, 1992). Sundbo, using the concepts of corporate entrepreneurship and empowerment, addresses the involvement of employees in innovation processes, and how this may require a balanced approach of management stimuli and control (1996, 1999). "Empowering" employees can be argued as a way of making them contribute. However, in this thesis, I do not attempt to test existing models of what might hinder or foster employee empowerment, or its consequences. As I choose to study the micro processes within which frontline employees act, I take a more explorative approach and focus primarily on the employees' own practices and incentives for why they may participate in innovation activities. By focusing on frontline employees in general and their innovation activities in different type of structures and processes, I seek to expand the scope of who the entrepreneurs are and the innovation processes within which they may act.

2.5 Final comments on the theoretical framework: introducing agency

Based on the preceding literature review and the research gaps which have been identified, in this thesis I examine how frontline employees are engaged and act in innovation processes. I break the problem of employee engagement down into three research questions: *what* contributions can frontline employees make to service innovation; *how* can frontline employees contribute to service innovation, and *why* might frontline employees contribute to service innovation? By studying the micro processes that frontline employees take part in in the light of these three questions, I seek to build new and more detailed knowledge of frontline employees' agency in innovation activities and how the agency is influenced by management. As stated in the introduction, the overall purpose of this thesis is to contribute knowledge about frontline employees as participants in service innovation processes. The concept of becoming a participant is consequently central in the thesis.

Employee participation is about participation and influence of employees in decision-making throughout the company (Busck, Knudsen, & Lind, 2010). It refers to organizational processes in general, and is used as an umbrella category, which has various names depending on the context, such as employee involvement, industrial democracy, empowerment,[16] engagement, etc. (Ang, 2002; Busck et al., 2010; Kesting, Song, Qin, & Krol, 2015). Employee participation is however rarely associated with organizational

16 In the section above, I briefly discuss empowerment connected to the research question of why frontline employees may contribute to service innovation. As seen, the concept has a broader theoretical scope than what is applied in this thesis.

processes as in innovation processes. There are some exceptions. For example, participatory innovation has been used as a concept referring to how users can become participants in service innovation (Buur & Larsen, 2010; Buur & Matthews, 2008). There are also a few studies of employee participation in innovation processes (e.g. Kesting et al., 2015; Tonnessen, 2005). Yet, in innovation literature, it is much more common to refer to employee involvement. Following Kesting et al. (2015), employee involvement in innovation processes denotes employees as participants. It is not my intention to oppose the above argument, but this thesis aims to nuance the distinction between involvement and participation, and seeks to develop a more precise concept than employee involvement.

First, employee involvement strikes me as a having a passive element; someone (e.g. managers) involves you (as an employee). Ang (2002) does discuss the concept as a multidimensional perspective where an active aspect is included. However, the article discusses employee involvement from a management approach, within organizations in general. I argue that it is also important to study what it means to be involved from the perspective of those involved, the frontline employees, and in innovation processes in particular.

Second, the concept of participant indicates that employees are given influence over the process and decisions (e.g. Busck et al., 2010; Buur & Matthews, 2008). To my knowledge, this condition is rarely discussed in the current research stream on service innovation processes. As noted in Chapter 1, participation in this thesis is related to the notion of professional agency (e.g. Eteläpelto et al., 2013). Professional agency represents a research stream more occupied with studies of workplace learning in general, than with innovation in particular, (for an exception, see, e.g. Billett, 2012). It is a concept that has a wider meaning in the literature than frontline employees as participants in service innovation processes. The review article by Eteläpelto et al. (2013) points to how professional agency within a socio-cultural framework is linked to a wide range of socio-cultural conditions of the workplace (for example, physical artefacts, power relations and work cultures), in addition to the professional subject in itself (for instance, professional identity and professional knowledge and competencies). An important factor of agency is that it is not merely a matter of what is "given to" the employee, or facilitated by management or other organizational conditions. It is also related to how employees practise agency; in the sense that it is constructed by the employees themselves. Eteläpelto et al. (2013) point to how professional agency is practised, based on central features such as how it is resourced, constrained and bounded by contextual factors. Therefore, it connects employees as actors or agents, practicing agency, depending on workplace affordances (Billett, 2012; Eteläpelto et al., 2013).

I argue that this approach, viewing employees as active actors of innovation processes, in particular to separate this from mere involvement, brings in an important perspective

and opens the analysis of innovation to other perspectives of workplace studies. In this thesis, the notion of frontline employees as participants in service innovation processes is limited to the studies of the micro processes employees act in. These are, as illustrated in Figure 1, related to the structure of the workplace itself (amongst colleagues), between customers and employees and employees and managers, in both top-down processes and practice-based processes. Consequently, the conditions for practising professional agency, as well as the subject itself, are in my studies only partly illuminated. I seek to understand how employees become participants through exerting influence and making choices regarding their innovation activities. Agency in the workplace-learning context is primarily dealt with as suggesting new work practices, maintaining existing practices, or struggling against suggested changes (Eteläpelto et al., 2013). In this thesis, the question of frontline employees acting as participants is discussed through both management-led processes and employee-led work routines (Chapter 5). This is based on the premise that employees may achieve agency in different types of innovation processes, both practice-based and strategically based, under different types of conditions.

"The art and science of asking questions is the source of all knowledge."
- Thomas Berger

3. Methodological choices and empirical studies

In this chapter, I present the methodological choices made working on this thesis, and reflect upon the consequences of these choices. The chapter starts with methodological reflections focusing on my point of departure as a researcher, and reflections on the research process and the studies the thesis are built upon. Then the research design of each paper included in the thesis is presented, followed by a discussion about the trustworthiness of the research. The chapter ends with some reflections on the choices made during the research process.

3.1 Methodological reflections

The question of methodological choices is of course related to the research problem and the research questions asked, but also to the researcher and the beliefs and thoughts that influence the choices that are made (Bryman, 2008). Who am I as a researcher, why do I ask the questions that I do, and why do I choose to respond the way I do? Following Burrell and Morgan, all social scientists approach their subject via explicit or implicit assumptions about the nature of the social world and the way it may be investigated (1979, p. 1). I can understand why researchers do so implicitly, as I find it difficult to articulate precisely my stand in methodology. I cannot define myself as a "true" critical theorist, or social constructivist, or phenomenologist, or positivist (and so on, see, e.g. Strydom and Delanty [2003] for different approaches). However, I do recognize that I have more of a subjectivist than objectivist approach to the two main assumptions of the ontological nature (concerning the essence of the phenomena of investigations) and to the epistemological nature (the grounds of knowledge), (Burrell & Morgan, 1979). So, where the positivist views the human mind as starting out as a "blank sheet" (Benton & Craib, 2011, p. 14, quotation marks in original), and seeks new knowledge through searching for regularities and causal relationships, "being the observer" (Burrell & Morgan, 1979), I follow the interpretative tradition, believing that the context of what I study matters in order to understand; to quote Burrell and Morgan: "understanding from the inside rather than the outside" (1979, p. 5). Furthermore, that my research is influenced by my prior understanding of the research field.

I started this thesis by introducing a personal detour. The detour story is the practically inspired and short version of why I have chosen to study frontline employees as actors in service innovation processes. Both job experiences as a service worker and studies have triggered my interest in the service industry, and later more specifically in the field of service innovation. Working as an assistant professor, teaching students in service

marketing, creativity and innovation over many years at Lillehammer University College has also greatly influenced me and my choices as a researcher. In 2005, I developed together with two colleagues at Lillehammer University College a student course in tourism, small businesses and innovation. We struggled to find a textbook that would portray innovation and innovation processes as more than technical and R&D-based, and as a process set outside the practice. Based on our field experience, innovation in tourism firms does not necessarily fit within a top-down, strategic framework, and we wanted a textbook that would reflect reality closer to the work practice in small tourism businesses. In the search, we came across literature from the innovation-society of researchers at Roskilde University, and our choice fell on the textbook *Innovation with Care*[17] by Sundbo, Fuglsang, and Larsen (2001). The book (and similar literature) represented a challenge to the assumptions of R&D-based innovation, but to me the book also represented something more. This book, in particular the use of the concept "care" as referred to in the title, has inspired me as a researcher to ask the question that I do in this thesis. The element of care, specifically the care for employees became for me a type of metaphor that combined my own and early work experiences with a professional and theoretical angle on innovation and innovation processes. It influenced how I taught (and still teach) innovation to my students, as well as how I have conducted my research.

The section above sums up very briefly part of my prior understanding of the research field: an understanding which I believe influences how my research questions were defined, and how data were analysed and interpreted. Overall my research process can best be fitted within the reflective research approach as presented and discussed by Alvesson and Sköldberg (2008, 2009). The approach is described through the two characteristics of careful interpretation and reflection. The first refers to how all references to the empirical data are interpreted by the researcher. Reflection in the context of empirical research is related to the researcher him/herself and can be explained through interpretation of interpretation (Alvesson & Sköldberg, 2009, p. 9), pointing to the need to crucially examine one's own interpretations as well as the process. To me, interpretation and reflection are representations that clarify the research process as a learning process, and the need to continuously question what we do in the process of gaining and adding new knowledge. How I have worked within the notion of reflexive research with this thesis can best be illustrated by the use of abduction as a method. It is a method related to induction and deduction, but adds new elements. Alvesson and Sköldberg explain it as follows:

Induction has its points of departure in empirical data and deduction in theory. Abduction starts from an empirical base, just like induction, but does not reject theoretical preconceptions and is in that closer to deduction. The analysis of the empirical fact(s)

17 Original title: Innovation med omtanke.

may very well be combined, or preceded by, studies of previous theory in the literature; not as a mechanical application on single cases but as a source of inspiration for the discovery of patterns that bring understanding (2009, p. 4).

The authors' description sums up the core of how I have worked on this thesis. As I will subsequently present, the thesis is based upon four different papers, which are all based on different research methods and data. The papers are linked to the thesis research questions and also related to each other. The back and forth-process of theory and empirical data has not been a process isolated to any specific paper, but essential for building knowledge throughout the research process. Alternating between theory and empirical facts over time, and enabling me to question early work has also been crucial for working with this synopsis. Furthermore, the contribution of this thesis, as discussed in Chapter 5, is a result of how the papers and empirical data have been reinterpreted in light of each other.

In addition to my methodological stance, the thesis' research questions shape the research process and choices of design and methods. The thesis is built upon the three research questions of *what*, *how* and *why* to create a meaning of the frontline employees' innovation activities: what are the contributions frontline employees make to service innovation; how can they contribute to service innovation, and finally why might they contribute? Through these questions, separately and by viewing them holistically, I can explore frontline employees as actors in service innovation processes and contribute knowledge about frontline employees as participants in service innovation processes. The what, how and why represent a way to illuminate frontline employees and service innovation from multiple angles, which is also reflected in the papers appended to this thesis and their respective research strategy. Paper I is based on a quantitative method, while the remaining three are more explorative in their research questions, and are qualitative in their approach. I agree with scholars like Alvesson and Sköldberg (2008, 2009), arguing that the polarization between qualitative and quantitative methods is no longer the issue to debate, but more a question of the research problem and research object. To my understanding, more scholars are arguing that the choice of methods is not an either/or choice, but rather a need for methodological pluralism (Sechrest & Sidani, 1995), and that different methods tell different stories (Denzin & Lincoln, 2013). Since the papers are based on studies that differ in choice of design, methods and data, the thesis' research strategy is structured through the presentation of each paper. An overview of all papers is given in Table 1, followed by a more detailed description of each appended paper.

Paper	Type of paper	Purpose	Applied approach and method(s)	Empirical base
I	Empirical	To understand the influence of different type of competences, e.g. the employees', to service firms' innovativeness.	Quantitative Cross section survey, CIS-2010	2 636 Norwegian service firms
II	Empirical	To understand the innovation processes of tourism firms. In particular the role of employees and managers.	Qualitative, Collective case study Interviews	14 interviews with managers in tourism firms
III	Empirical	Exploring the creative process of frontline employees and the follow up of ideas.	Qualitative, Single case study Interviews, observations	22 interviews with frontline employees, back office employees and managers. 3 observations
IV	Empirical	Exploring the roles of frontline employees in service innovation processes.	Qualitative, Multiple case study (8) Interviews	50 interviews with frontline employees, back office employees and managers

Table 1: Overview of research design applied in papers appended to this thesis

3.2 Research design in the appended papers

3.2.1 Paper I

Paper I, "Radical versus Incremental Innovation: The Importance of Key Competences in Service Firms", is an empirical paper, based on data from the 2010 Community Innovation Survey (CIS). The CIS is a survey of innovation activities in enterprises. It originated in the early 1990s as an initiative of the Organisation for Economic Co-operation and Development (OECD). The first CIS was undertaken in 1992, and was the beginning of the development of an innovation manual, known as the *Oslo Manual* (OECD, 2005). In 1997, a second and updated edition was established, but with the same technological product and process definition of innovation as the first edition. It was only with the third edition, in 2005, that the view of innovation was expanded to better cover innovation activities in less R&D-intensive industries, like services and low-technology manufacturing. Both the definitions of innovation and innovation activities were changed to better accommodate the service sector in particular. By using

Schumpeter's (1934) categorization of innovation, not only product and process innovation were included, but also organizational innovation and marketing innovation (OECD, 2005). Furthermore, the CIS-questionnaire distinguishes between innovations that are new to the market or new to the firm, hence including innovations at both ends of the novelty spectrum (de Brentani, 2001), where new to the market represents a higher degree of novelty than new to the firm (OECD, 2005). Besides measuring types of innovation, the CIS-survey focuses on mapping innovation activities (e.g. competence building), expenditures and factors that foster or hamper innovation and creativity. For the theoretical background and the selection of indicators used in the CIS-survey, I refer to the *Oslo Manual* (OECD, 2005). Next, I will focus on how we employed the CIS (2010) in Paper 1. The limitations and critical reflections on the use of secondary data are discussed in the last section of this chapter.

Data collection. Paper I is based on the CIC (2010), encompassing innovation activities in Norwegian firms for the years 2008–2010. The data were collected by Statistics Norway,[18] and Lillehammer University College had access to the raw data file. The original sample included 6852 firms,[19] with a target population of service industries, oil and gas, aquaculture, the manufacturing industry and finally the mining industry (SSB, 2013). A total of 3,330 of these classified as service firms, which was the scope of our study. Organizations with fewer than ten employees answered a less extensive questionnaire, leaving our sample to include 2,636 firms.

The model. The CIS-data is rich regarding its scope and poorer on depth; the purpose of the first study was to examine how service workers influence the firms' ability to innovate. The factors that potentially will have an impact on innovation are multiple. Therefore, based on previous studies (e.g. Leiponen, 2005, 2012; Mention, 2011), we chose three types of competences: R&D-based competence, employee-based competence and customer-based competence, all constructed based on indicators in the CIS (2010) questionnaire. Under the assumption that disparate competences might influence differently the innovativeness of the firms, the dependent variable of the research model, innovation novelty, was divided into capturing firms' ability to introduce radical innovation and/or incremental innovation. The research model and the ten hypotheses deduced in the paper were tested using a multinomial regression model.

The use of CIS-data provided an overall picture of how service workers can contribute to service innovation, addressing this thesis' first research question. The analysis was a result of a joint effort with my co-author. I did the main part of the writing.

18 Statistics Norway has the overall responsibility for official statistics in Norway, and carries out extensive research and analysis activities.

19 All Norwegian business enterprises within the selected industries with 50 or more employees were included in the survey. For enterprises with fewer than 50 employees, a sample was drawn from the population.

3.2.2 Paper II

The second paper, "An exploratory study of innovation processes in tourism firms", is based on a qualitative study. The study (as well as the studies of Paper III and Paper IV) takes an in-depth approach to service innovation and service innovation processes, deepening the broader framework presented in Paper I. At this point, I chose the viewpoint of managers to explore how innovation processes emerge in service firms, set in the context of the tourism sector.

Data collection. The study is a collective case study. A number of cases are included to study some general phenomena (Silverman, 2005), here related to service innovation processes. A purposive sampling (Silverman, 2005) was used to select the organizations to be included in the study. The tourism sector appears fragmented, hence it made sense to choose cases that would represent the diversity of the sectors in this industry. Both sector (accommodation, food and beverage services, reservation services and experiences/recreation activities, including museums), localization (city versus region) and size/number of employees (small, medium sized and large) were set as criteria for the sample selection. A total of 20 organizations were contacted, of which 14 responded positively. Since these fourteen cases met the sample's criteria, the sampling process was considered completed.

The interviews were set up with the top manager of the organization as an informant. A semi-structured interview guide was developed based on the literature. It was important to have the informant tell his or her story of how innovations emerged and how the processes developed in the organization, hence the guide was left quite open, although with tipoffs on the important themes all the interviews were intended to cover. Furthermore, the interviewees should show room for some flexibility, in order to follow up on the informants' responses/stories. Each interview lasted between sixty and ninety minutes. The interviews were conducted by a student group writing their final bachelor assignment. The students had all finished a course in service innovation and had chosen innovation as their bachelor theme. I worked with the students in several seminars regarding interview techniques (in addition to their obligatory methodology course), and the students were involved in the development of the interview guide.

Data analyses. All interviews were recorded and then transcribed. Hence, I had access to the raw interview data. I first analysed the interviews following the stories told by the informants, to provide a picture of the kind of innovations that were developed in tourism firms. Furthermore, the interviews were analysed based on Sundbo's and Gallouj's (2000) model of driving forces to service innovation. The model served as a framework to understand the kind of internal and/or external factors the informants saw as dominant for developing new ideas and implementing them. The process was not about

testing the theoretical model, although it was used as a lens to understand more about how ideas emerged within the cases and the following processes through implementation. The data was analysed based on a cross-sectional categorization (Mason, 2002). Both internal and external driving forces were mapped in order to develop patterns for innovation processes across the cases. Based on the analyses four models were developed, each describing a pattern of service innovation, with different types of relationships between managers and employees. The study contributes to research questions one and two, illuminating what frontline employees contribute to service innovation and how they contribute. I am sole author of the paper.

3.2.3 Paper III

Paper III, "Exploring the role of frontline employees as innovators", is based on a single case study. This study was part of a research project called MKT, focusing on employee- and customer-driven service innovation. The research project was conducted during 2009–2012, by Karlstad University, Service Research Center (CTF). The organizations that were included in the research project were TESP,[20] Stamford, Resort[21] and County Council of Värmland (CCV). From the CCV, two divisions participated: Health Habilitation and Rehabilitation (HHR) and County Council Services (CCS). During the project, two more organization were included: Karlstads Stadsnät and Tieto. All of the organizations had ongoing innovation projects and/or activities that included the involvement of frontline employees. The main purpose of the research project was to identify the mechanism behind employee- and customer-driven service innovation, and develop knowledge about how to manage it.

Data collection. The paper is based on data collected from the Resort. The organization had started a process to develop and implement a sport and wellness concept that would focus more strongly on training and nutritious food than the existing concepts, which were more focused on relaxation and wellness. Two sets of semi-structured interview guides were developed, one directed to the management interviews and the other to the interviews with the employees. The interviews with the managers focused on how ideas emerged, how innovation activities were organized and how employees were involved through the processes. The interview guide intended for employees focused on the employees' perception of the innovation processes, as well as covering themes like creativity. Both interview guides were left open, to be able to let the informant tell the story and to have the flexibility to follow up on each story told. Furthermore, the interviews followed the informants' stories on both the process of the new sport and wellness concept, as well as the organization's innovation activities in general.

20 A multinational telecom equipment and service provider. The organization requested anonymity.
21 A spa and hotel resort. The organization is anonymized, since it is the single case studied in Paper III.

Both authors of the paper (Peter Magnusson and myself) were responsible for data collection at the Resort. Altogether, we conducted twenty-two interviews. Eight of the interviews were carried out together, whereas I did eight interviews and Peter Magnusson did six. In addition, we carried out one observation of an internal meeting and idea collaboration, as well as several observations of the work practice at the Resort. These included observation of the practice between colleagues as well as between customers and employees. The informants were the top manager, unit managers, frontline employees, and back office personnel. The interviews lasted between thirty and eighty-five minutes, all of them later transcribed.

Data analyses. All interviews and observations were analysed by my co-author Peter Magnusson and myself. We used a thematic approach (Boyatzis, 1998) in order to analyse the role of frontline employees in innovation processes. We followed the steps for a thematic analysis as recommended by Braun and Clarke (2006), hence both processed the data, and the themes that emerged from the analysis were established collaboratively by both researchers.

The paper takes an in-depth approach to explore frontline employees' creative processes, and how management follows up ideas that are generated in the frontline of the organization. Hence, the paper combines creativity with the development and implementation of the innovation process. This study contributes to all three research question of this thesis. I contributed to all parts of the paper, doing the main part of the writing.

3.2.4 Paper IV

The final paper, "Casting for service innovation: the frontline employees' roles" is based on a multiple case study. Three of the organizations that were part of the previously described MKT research project were included in this study: TESP, County Council of Värmland (CCV) and Resort. In addition, two more organizations that were part of another, yet thematically connected research project by CTF on service innovation processes, were included; ABB, Sweden and AGA, Sweden.

Data collection. The paper is based on the study of ongoing innovation projects and activities in eight organizational service divisions/units from the above-mentioned five organizations. These are TESP, Health Habilitation and Rehabilitation (HHR) and County Council Services (CCS) (from CCV), Hotel, Spa and Restaurant (from Resort), Mechanic (from ABB) and Gas (from AGA). Fifty interviews based on a semi-structured interview guide were conducted.[22] Several researchers, all employed at CTF, were involved in the research projects and were responsible for carrying out the interviews (number of

22 The data collection process also included observations and collecting of documents. The paper is however, based primarily on analyses of the interviews.

interviews used in this study written in parentheses): Peter Skålén and Erik Sundström for TESP (5), Jenny Karlsson for the two divisions at County Council of Värmland (16), Peter Magnusson for ABB (3) and AGA (4), and finally Peter Magnusson and myself for the three units of Resort (22). The informants included frontline employees (26), back office personnel (7) and managers (17). The interviews lasted between thirty minutes and two hours, the average being one hour. All the interviews were transcribed.

Data analyses. My co-author Peter Magnusson and I were responsible for the data analyses. I was responsible for the first round of analysis of the interviews from TESP, HHR and CCV from the Council Service of Värmland, and all three units at Resort (Hotel, Spa and Restaurant); and Peter Magnusson was responsible for ABB and AGA. In the second phase, all the cases were compared and discussed by both authors. There were also several occasions for discussion of the cases within the MKT research group, (e.g. article workshops).

The data analysis was based on a cross-case synthesis. This technique is applicable when the individual cases or parts of them have been conducted as independent research studies (Yin, 2009). In this study, we used cases from the MKT-project as well as including two other cases belonging to a separate research project (ABB and AGA). First, each case was analysed separately. The analyses of the interviews were framed by our research question on how service organizations structure innovation activities, and resulted in a written report for each of the eight cases (Yin, 2009). The analytical findings emphasized how new ideas emerge, how the process for further development is organized, and which tasks frontline employees were (expected) to perform in the processes. This analysis enabled us to display the data from the individual cases according to a uniform framework (Yin, 2009), portraying how innovation activities are organized within each case. Next, we analysed the data framed by the research question of how employees contribute. This part of the analysis was informed by Corbin & Strauss (2008), analysing each case by identifying open codes, followed up by axial coding. This process pointed out key themes concerning how frontline employees contributed and how their contribution is coupled to different roles.

The data were analysed for Paper IV with the purpose of exploring the roles of frontline employees in service innovation processes. The study contributes to all three research questions of this thesis. I contributed to all parts of the paper, doing the main part of the writing.

3.3 Reflections on the research process

There is no such thing as an error-free method of inquiry (Sechrest & Sidani, 1995). In this section, I discuss the trustworthiness of this thesis, based on Guba and Lincoln's (1982) four criteria, before reflecting upon the choices made.

3.3.1 The trustworthiness of the thesis

Validity, reliability and generalizability (or external validity) are three central concepts commonly used for assuring the quality, rigour and wider potential of research (Mason, 2002). According to Mason (2002), validity concerns the question of whether what is observed and identified or measured, relates to what you intended to study. Reliability involves the question of accuracy of the chosen research methods and techniques, whereas generalizability treats the question of whether the results of your study can be applied in a wider sense, outside your studies' sample or cases. Validity and reliability are concepts that are often used in quantitative research, where different statistical techniques and methods determine whether the validity and reliability criteria have been met. However, although qualitative research needs to assess its rigourousness and quality by other means than quantitative, this does not diminish the importance of addressing the issues of quality (Denzin & Lincoln, 2013; Mason, 2002). There are numerous different criteria for assessing qualitative research (e.g. Silverman, 2005). In Guba and Lincoln's article from 1982, the authors discuss how the more standard criteria known from quantitative research (or the rationalistic paradigm): internal validity, external validity, reliability and objectivity can be translated to qualitative research (or the naturalistic paradigm). They came up with four criteria: credibility, transferability, dependability and conformability, that respond to the important questions for all research, regardless of paradigm; the questions of (1) what is true, (2) what is applicable, (3) how to determine consistency and (4) how to establish neutrality (Guba & Lincoln, 1982, p. 246). These criteria are applied to the qualitative studies carried out for this thesis, before discussing the quantitative study of Paper I.

Credibility refers to the truth of my studies (Guba & Lincoln, 1982): would the informants in my qualitative studies believe in how I (and my fellow researcher) analysed and interpreted their stories? Did I interpret what was really going on while observing internal meetings and work processes? There are different means to uphold the credibility of the research. In this thesis, different studies have dealt with the question in different ways. The element of member checks (Guba & Lincoln, 1982), where the informants are given the opportunity to check with the data and its interpretations, have partly been undertaken. The MKT project (as the base for studies in Paper III and Paper IV) had a reference group where data and analyses were discussed during the research process and project period. The different organizations were also visited on more than one occasi-

on. All interviews were conducted in the informants' natural setting. In the study that Paper II is based on, the models that I developed, based on the management interviews, were discussed with one of the study's informants. All the interviews of all studies were recorded, hence the raw material exists. However, the observations were not videotaped, hence only part of the data responds to the element of referential adequacy of materials (Guba & Lincoln, 1982). Finally, for the studies of Paper III and Paper IV, triangulation was achieved. The data collection of these studies included interviews, observations and written documents. It was therefore possible to triangulate the different data sources. Furthermore, several researchers were engaged in the MKT project, which made it possible to discuss the process of analysis and the interpretations amongst ourselves. This was further strengthened through workshops where we discussed each other's papers. Paper II is however based only on interviews, hence triangulation was not possible.

Transferability refers to the studies' applicability to other settings and contexts. This is according to Shenton (2004) a criterion that some naturalistic inquirers argue is impossible to comply with. The findings from the qualitative studies are specific to a small number of individuals, thus the conclusions cannot be extended to other situations or populations. However, although transferability should be pursued with caution, it is a criterion that should not be rejected (Shenton, 2004). Following Guba and Lincoln (1982), both purposive sampling and thick description of the context are two ways of meeting this criterion. Describing the research process and the study in detail, creates a possibility to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations, and people. It is the investigator or the person who wants to make the transfer who is responsible for assessing the fit (Lincoln & Guba, 1985). In Paper II, I used a purposive sampling to be able to include organizations that would mirror the sectors within the tourism industry. In Papers III and IV, the cases were chosen based on the innovation activities and projects we knew a priori were ongoing in the organizations. The cases were also chosen to include different type of contexts, hence both the public and private service sectors were represented. In both Paper III and IV, the cases and activities, as well as the data collection processes and analyses are thoroughly described. Through purposive sampling and thick description, the arguments pointed out by Flyvbjerg (2006), in his article on misunderstandings of case studies, can be endorsed, namely that context-dependent knowledge is important, and that it is possible to generalize from a single case. However, as previously noted, transferability should be pursued with caution.

Dependability refers to reliability within the naturalistic paradigm (Guba & Lincoln, 1982). In the naturalistic paradigm, replicability, in the sense of being able to repeat a study if the circumstances are alike in another time and place, is faced with bigger problems than in the rationalist paradigm, for example due to intended emergent designs.

Hence, Guba and Lincoln (1982) connect the notion of stability to the criterion of dependability. The authors suggest overlap of methods, a kind of triangulation, which is argued to comply with credibility if the methods produce complementary results. For Paper II, only interviews were conducted. In the studies for Papers III and IV, we carried out observations and interviews. Shenton (2004) points out that an in-depth methodological description will provide sufficient insight to repeat the research process in a new study, although not with the intention to replicate the results. Guba and Lincoln (1982) address this as a dependability audit. For the audit to be conducted, the auditor (reader) must be able to trace the methodological steps and critical decisions of the research process. This includes information on the research design and implementation, the operational details of data generation and an evaluation of the project (Guba & Lincoln, 1982; Shenton, 2004). The appended papers emphasize (also due to the review process) the transparency of the data collection and data analysis, but not as thoroughly as would a dependability audit. However, I argue that as the MKT-project relied on the cooperation of several researchers, we sought to ensure that the steps and choices made throughout the research process were made explicit and that the research process, as far as possible, was predictable for all involved. The research process of Paper II relied on several participants, necessitating the transparency of that process. The interpretation process was however undertaken by myself. Lincoln and Guba (1985) point out that dependability and credibility are closely linked. Although credibility does not in any way compensate for dependability, the steps for ensuring credibility of this thesis also influence its dependability.

The final criterion, *conformability*, relates to the objectivity of the data, not of the inquirers (Guba & Lincoln, 1982). With this, Guba and Lincoln draw attention to how researchers interpret, and suggest the importance of practicing reflexivity throughout the research process. As discussed in the introduction to this chapter, I worked abductively throughout the research process. I kept track of my thoughts, impressions and ideas throughout the process of data collection at the Resort. The same field book was also used throughout discussions with fellow researchers in the process of working with Papers III and IV. When I started the data collection in the MKT project, I also went back to the planning process and my notes for the work I had already completed on the study of Paper II. Through that, I was continuously confronted with my own assumptions, and kept on questioning and developing my pre-understanding, which has been another way of dealing with the conformability of this thesis.

Before I present some final reflections on the research process, I will address the validity and reliability of the study that Paper I is based on. In this paper, the CIS-2010 data are used for analysing how internal and external competences influence service firms' ability to innovate. The questionnaire used for the CIS-survey is based on the *Oslo Ma-*

nual (OECD, 2005). The indicators that are used have been through two substantial revisions, 1997 and 2005, since the first CIS was conducted in 1992. The revisions were made, among other reasons, to secure a better way of capturing innovation activities in the service sector. In addition, changes have been made to the survey to include more of the firms' internal activities that are not specifically related to R&D. The *Oslo Manual* provides the users of CIS-data with thorough discussions of the theoretical framework, the development of indicators, and guidelines for use, samples, and statistics, to ensure internal validity. As explained above, Statistics Norway was responsible for carrying out the CIS 2010. For details concerning sampling procedures, errors and reliability, I refer to the comprehensive discussion in SSB (2013). In addition, we conducted reliability tests (e.g. Cronbach's alpha and factor analyses) specifically on our sample and selected items.

3.3.2 Final reflections

The work of a PhD student is more than anything a learning process. The choices that I have made throughout my research have in retrospect both strengths and weaknesses. Choosing multiple studies has strengthened my discussion of the overall view of my empirical data and contributed to the thesis purpose from a theoretical viewpoint. Choosing multi-methods of both qualitative and quantitative designs has improved my technical skills as a researcher. However, the same choices have prevented me from achieving deeper insights into specific cases. Furthermore, although the validity of CIS-2010 is established through the *Oslo Manual*, I do see that the choice of CIS, and the way innovation is defined in the *Manual* (OECD, 2005), represent a narrower view of service innovation than my understanding and definition of the concept in this thesis. For example, the CIS' operationalization of innovation does not include such innovations as bricolage. In spite of these shortcomings, I do illuminate the employees' influence on service innovation in Paper I, indicating the link between employees' activities and incremental innovation. However, in retrospect, I would have chosen a different angle, making it possible to define service innovation closer to the process (e.g. renewal of human behaviour, Sundbo, 2008), at the expense of a smaller sample.

Finally, as I have described previously, I have throughout the research process alternated between theory and the empirical data. This abductive process has been vital for building knowledge step by step. It has also at times given me the feeling of "if I only knew then, what I know now", in particular when writing the synopsis. Some of these thoughts are presented in the final section of this thesis: future research.

"Innovation is an evolutionary process, so it's not necessary to be radical all the time."
- Marc Jacobs

4. The empirical studies

In this chapter, I present the appended papers. In Table 2, an overview of the papers, the papers' main contribution and my role in writing them, are given. Subsequently, each paper is further elaborated. In the next chapter, the link to the thesis research question and the papers' contribution are more thoroughly discussed, together with the overall contribution of the thesis.

Paper	Title	Contribution	The authors' contributions
I	Radical versus incremental innovation: The importance of key competences in service firms.	Different competences were found to influence service firms' ability to innovate. Contributes to a synthesis approach to innovation. Confirms employee activities as important to incremental innovations.	Co-authored with PhD student Inger Elisabeth Holen. I did the main part of the writing, and contributed to all parts of the paper.
II	An exploratory study of innovation processes in tourism firms	Contributes by identifying four models/processes leading to innovation within service organizations. The models portray different couplings between managers and employees as driving forces to innovation within the organizations.	I am sole author.
III	Exploring the role of frontline employees as innovators	The contribution of this paper is two-fold. First, an in-depth understanding of frontline employees and their process of idea generation and implementation of their ideas. Second, the roles of middle managers in organizations' innovation processes.	Co-authored with Ass. Prof. Peter Magnusson. I did the main part of the writing, and contributed to all parts of the paper.
IV	Casting for service innovation: the frontline employees' roles	The study contributes knowledge about frontline employees' roles in innovation processes on the micro level by illuminating how their potential to both contribute and use their knowledge is dependent on the type and structure of the processes.	Co-authored with Ass. Prof. Peter Magnusson. I did the main part of the writing, and contributed to all parts of the paper.

Table 2. An overview of the appended papers.

4.1 Paper I

Radical versus Incremental Innovation: The Importance of Key Competences in Service Firms

Engen, M. and Holen, I.E. (2014). *Technology Innovation Management Review*, 4(4). 15–25.

Paper I examines how different drivers, internal and external, influence the propensity of firms to innovate, including both ends of the novelty continuum: radical versus incremental innovation. As described in the previous chapter, we use data from the Norwegian service sector collected in the Community Innovations Survey, 2010 (CIS) in this study, and it is the only paper that has a quantitative approach.

More specifically, the paper focuses on three types of competences: R&D activities, employee-based activities and customer-related activities. These competences reflect a broad view of drivers to innovation, and the framework that is tested thus combines R&D-based innovation (e.g. Leiponen, 2012), employee-driven innovation (e.g. Høyrup, 2012) and user-driven innovation (e.g. Sundbo & Toivonen, 2011b). All together, ten hypotheses were generated and tested. In Table 3, the hypotheses are presented, along with whether they were supported or not.

Hypotheses	**Res.** [23]
R&D based competence	
H1a: Internal R&D-based competence is positively related to firms introducing radical innovations.	S
H1b: External-R&D based competence is positively related to firms introducing radical innovations.	S
Employee-based competence	
H2a: Employee idea collaboration is positively related to firms introducing radical innovations.	NS
H2b: Employee idea collaboration is positively related to firms introducing incremental innovations.	S
H3a: Development-based knowledge is positively related to firms introducing radical innovations.	S
H3b: Development-based knowledge is positively related to firms introducing incremental innovations.	S
Customer-based competence	
H4a: Use of customer-based information is positively related to firms introducing radical innovations.	S
H4b: Use of customer-based information is positively related to firms introducing incremental innovations.	S
H5a: Customer-based co-operation is positively related to firms introducing radical innovations.	S
H5b: Customer-based co-operation is positively related to firms introducing incremental innovations.	NS

Table 3. Hypotheses generated and overall results

23 S indicating support of hypotheses, NS not supported.

A multinomial regression analysis was used to test the model, on a sample including 2,636 Norwegian service firms. Eight of the ten hypotheses were supported. The results provide evidence that different type of competences have varying influences on the ability of firms to introduce radical versus incremental innovation. R&D activities, although often described as being more relevant to innovation in manufacturing, are an important determinant of radical innovations in service firms. Employee-based competence, in activities such as idea collaboration is, on the other hand, only shown to influence incremental innovations. The second type of employee-based activities that were tested, the employees' competence building, influenced both ends of the novelty continuum. Finally, under the customer-related activities: (1) customer-related information was found to influence both radical and incremental innovation, and (2) collaboration with customers was found to effect only radical change.

As said, the study suggests that different type of competences have different effects on innovation novelty. Thus, managing the innovation process requires knowledge about how to balance the competences and exploit them differently depending on the innovation objective. The study contributes to the synthesis approach, and shows that service innovation processes rely on R&D based knowledge, and that differences between specific industries are likely to show more diversity than a simple dichotomy between "goods and services" (e.g. Drejer, 2004). Furthermore, the study provides evidence of employees engaging in service innovation processes. Employees contributing ideas are important for continuous adjustments and stepwise incremental innovations. At one point, the study confirms existing knowledge of employees as contributors to innovations. At another point, it expands our knowledge by indicating that employees primarily contribute to ideas on one side of the novelty scale. The paper, although it represents the weakest link of this thesis regarding the specifics of the research question as I discussed in Chapter 3, provides an overview that calls for more in-depth knowledge and understanding of the micro processes of frontline employees in innovation processes.

4.2 Paper II

An explorative study of innovation processes in tourism firms

Engen, M. (2012). In Rønningen, M. and Slåtten, T.: *Innovasjon og næringsutvikling i en reiselivskontekst*. (29–52). Bergen. Fagbokforlaget.[24]

The second paper asks the question of how service organizations innovate, with tourism firms as the empirical context. The paper seeks to explore how and what kind of innovations emerge in tourism firms, and furthermore, increase our understanding of

24 The paper is a chapter in a Norwegian peer-reviewed anthology, with the translated title; "Innovation and business development in a tourism context".

the innovation processes within the firms. In the paper, I employ Sundbo and Gallouj's (2000) framework of internal and external actors and trajectories as drivers to service innovation, as a lens to study how the firms innovate. The paper draws on interviews with 14 managers in different Norwegian tourism firms.

The study shows how the firms tend to innovate. They produce mostly incremental innovations that are primarily based on internal resources and ideas from management and employees. The analyses reveal four different models that represent innovation processes within the firms. The models further depict four different approaches to how frontline employees are involved in the processes. Model 1, "involvement-management", identifies frontline employees as a great asset who become involved in management-led processes. Model 2, "management-dominated" is primarily initiated, led and controlled by management, with fewer possibilities for frontline employees to play an active part in the processes. Model 3, "co-managed" is characterized by a tight coupling between managers and employees, working together in innovation processes and the daily business. Finally, Model 4, "ad hoc-model",[25] which was identified in all firms, implied ideas that were formed and implemented concurrently by frontline employees, mainly when interacting with customers.

The study also points to how external actors influence the firms' innovation processes. The informants identified customers and competitors as being the most important. The informants pointed out that competitors constitute a learning source. They also suggested that they use competitors for comparison, as an indicator of the innovations they need to make. Customer knowledge is recognized by the informants as the foundation for making continuous adaptions and development of the services. Yet, none of the firms implied that they had an active strategy towards how customers can be involved in their innovation activities, and customer-based information seem to be used more randomly than deliberately.

This paper has a management lens on innovation and innovation processes. The findings point to managers' critical role in innovation processes, and their influence on involving frontline employees in the processes.

4.3 Paper III

Exploring the role of front-line employees as innovators

Engen, M. and Magnusson, P. (2015). *The Service Industries Journal*, 35(6), (303–324).

This paper focuses on frontline employees as innovators and aims for a deeper understanding of frontline employees and their boundary-spanning role in the innovation

25 The ad hoc model is named and based on ad hoc innovations as known from Gallouj and Weinstein (1997).

processes of service organizations. The study of the innovation processes is twofold. First, we explore in particular frontline employees' processes of creativity by looking at how ideas emerge. Second, as the link between creativity and innovation is rarely connected in empirical studies (Anderson, Potočnik, & Zhou, 2014), we study how these ideas are further managed in the organizations' innovation processes. In the paper we build upon the well-established componential model by Amabile (1988), using the components of motivation, domain-relevant knowledge and creativity skill as an analytical lens for understanding the creative process of the frontline employees. Based on their role as boundary workers, working in the interface between customers and the organization, we argue that it can be suitable to distinguish between use knowledge and technology knowledge (Lüthje, 2004) when studying employees' domain-relevant knowledge.

The paper draws on an in-depth study of three units at a spa and resort hotel. A total of 22 interviews were conducted: 13 frontline employees, two back office workers, and seven managers, in addition to observations and collection of documents. The resort has three units, each with unique services and facilities, led separately by three managers. This enabled us to view the units as three contexts, making comparisons in the analyses and discussion.

The paper demonstrates how the components of knowledge, motivation and creative skill influence how ideas emerge from frontline employees. The findings in particular show how such ideas are related to the assimilation and utilization of knowledge gained in the client-supplier interface. The boundary-spanning role puts the employees in the position to absorb both use knowledge and technology knowledge, both considered necessary to innovate (von Hippel, 1994). Furthermore, the findings point to two paths for frontline employees to implement their ideas. First, a formal path where ideas are addressed to the middle (unit) manager and then either rejected or formally further developed and implemented. In this path, the unit managers play a vital role through activities we identify as idea-management. Here ideas are either rejected, or accepted, the latter implying that ideas are taken forward for further development and potentially implemented. Second, an informal path, where frontline employees get ideas or solve problems that arise by using resources they control (e.g. bricolage innovations), without management necessarily being aware of the innovation. Finally, the paper introduces the concept of "innovation management by weaving", which encompasses the roles of middle managers in the complexity of leading diverse innovation processes in service organizations. By holding the roles of facilitator, gatekeeper and translator, middle managers hold the key position for letting frontline employees play a role as innovators.

4.4 Paper IV

Casting for service innovation: the frontline employees' roles.

Engen, M. and Magnusson, P. Submitted for publication in a peer-reviewed journal.

The fourth paper focus on the roles of frontline employees in innovation processes in service organizations. Although frontline employees have been conceptually defined as essential to service innovation, empirical studies have been inconclusive in defining their importance in innovation performance. Furthermore, service innovation is not limited to just one type of development process; both bottom-up and top-down processes are identified in previous studies (e.g. Sørensen et al., 2013). This raises the question of whether different processes influence the role of frontline employees as contributors to service innovation. The paper seeks to explore this question by studying innovation processes and the involvement of frontline employees in five organizations, representing eight service units/divisions. The organizations are from different contexts: private B2B, private B2C and public sector. Data was collected through interviews, 50 in total: 26 frontline employees, 7 employees and 17 managers.

The findings show that the innovation processes vary from being typically top-down management-initiated and led, to more informal, bottom-up processes, where ideas from customers are developed together with frontline employees. The frontline employees were identified in six different roles, which defined the premises for how the employees' knowledge was utilized. In top-down processes, frontline employees were found to engage in roles of problem (or opportunity) reporters, advisors and executors. In bottom-up processes, the frontline employees were seen as problem (or opportunity) identifiers, solvers and implementers. The roles in the top-down processes depict the employees as reactive: responding to a predefined problem, idea or challenge, which confines the scope of their contributions. The roles in the bottom-up processes portray the frontline employees as more proactive, initiating ideas and taking a stance on their own work practice, hence better utilizing their knowledge.

4.5 Summing up

The different papers, as presented above, all illuminate the overall purpose of this thesis and contribute to one or more of the research questions. Table 4 illustrates how the papers are connected to the different research questions. Next, the paper's contributions and the overall contributions of the thesis are argued.

	Frontline employees as participants in service innovation processes		
Papers	RQ1 What can frontline employees contribute to service innovation?	RQ2 How can frontline employees contribute to service innovation?	RQ3 Why do frontline employees contribute to service innovation?
I	X		
II	X	X	
III	X	X	X
IV	X	X	X

Table 4. The thesis' research questions and the positioning of the papers

"We shall not cease from exploration, and the end of all our exploring will be to arrive where we started and know the place for the first time."
- T.S Eliot

5. Research contributions, implications and further research

This chapter summarizes and concludes this thesis contribution. The aim of this thesis was to contribute knowledge about frontline employees as participants in service innovation processes. Although frontline employees are defined as valuable actors in innovation processes, research focusing on the role of the employees and their activities in service innovation processes is scarce (Sundbo et al., 2015). As previously argued, further research is therefore needed to learn more about how frontline employees engage in service innovation and the potential they may represent for innovating organizations. Accordingly, this thesis seeks to contribute to the field of service innovation, in particular our understanding of frontline employees as participants in service innovation processes, through exploring the questions of (1) what frontline employees contribute to service innovations, (2) how the employees contribute to service innovation and (3) why the employees contribute to service innovation.

The contributions in this thesis are presented in three parts. The first depicts frontline employees as actors in innovation processes and the potential these employees represent for service innovation in organizations. This knowledge is primarily driven by the studies of the micro processes of the employees' innovation activities as denoted in the contributions of the four appended papers. Second, viewing the papers and their findings holistically illustrates the image of frontline employees as *participants* in service innovation processes, deepening and broadening existing research on their role in it. Employees in the role as participant is discussed based on how they practise agency and how the agency is influenced by management. Third, by focusing not only on frontline employees as contributors to service innovation, but how their contribution can be organized by the organization, this thesis contributes to the balanced perspective of innovation with care: introducing the concept of *innovation by weaving*. It places frontline employees as participants in service innovation processes, contributing novel knowledge and ideas. The concept emphasizes a practice-based approach to service innovation, thereby developing our understanding of how the dual structures of the balanced approach may interact.

In this chapter I first discuss the findings from the appended papers and their contribution. Based on this discussion, I subsequently draw the main conclusions, and discuss the overall theoretical contributions of the thesis. The managerial implications follow, and the thesis ends with suggestions for future research.

5.1 The micro processes of frontline employees in service innovation

The central research questions of this thesis, "the what, how and why", are linked to the innovation activities of the frontline employees in service organizations. These activities have in this thesis been specified through the micro processes that the employees are engaged in; first, between employees and managers, second, among the employees themselves in the workplace and finally, between employees and customers (as illustrated in Figure 1, p. 29). Before addressing these micro processes at the general theoretical level, discussing frontline employees' agency in innovation activities, I will briefly summarize and discuss the main findings from all the appending papers as one, to each of the thesis' research questions separately, considering (1) what frontline employees contribute to service innovations, (2) how they contribute, and (3) why they contribute to service innovation. In order to review the findings without making a repetition of each paper, only the main results are briefly presented in Table 5, together with the main contributions and empirical illustrations from the papers. In the section to come, the main findings and contributions are elaborated further and discussed related to previous research.

Table 5 highlights the appended papers' main points related to each of the thesis' research questions. By learning more about what frontline employees contribute, how they contribute and why, from studying the micro processes employees engage in, the papers contribute to the current research dialogue as subsequently discussed. There are no absolute dividing lines between each research question and its corresponding findings, as presented in Table 5. On the contrary, the findings together confirm and build on each other, just as the papers do. However, to be able to give an overview, each research question is discussed separately in the following.

	What can FLEs[26] contribute to service innovation?	How can FLEs contribute to service innovation?	Why do FLEs contribute to service innovation?
Main findings (# indicating number of paper)	#1: Employees contribute to incremental innovations. #2: FLEs as an important internal driving force to service innovation in three of the four identified models: involvement-management, co-managed and ad hoc innovation. #3, #4: The workplace as a learning arena for FLEs; interacting and/or observing customers and co-workers. #3: FLEs gain domain-relevant knowledge through combining; - use knowledge - technology knowledge	#2: FLEs shown to contribute in four different management-led innovation processes. The FLEs are portrayed with different opportunities to contribute ideas depending on how the managers lead the innovation processes. #2, #3, #4: FLEs as contributors to: - top-down innovation processes by invitation (or request) - bottom-up innovation processes through collaboration with management - bricolage processes by and amongst the employees #2, #3, #4; Managers as important organizers for enabling FLEs to contribute during innovation processes. #4: FLEs in different roles depending on type of innovation process: - problem and/or opportunity reporter, advisor and executor in top-down processes - problem and/or opportunity identifier, solver and implementer in bottom-up processes.	#3: FLEs contribute based on willingness: in the sense that FLEs are intrinsically motivated when innovation activities are workplace-oriented concerning their work practice – for themselves, their colleagues and the customers. #3, #4: FLEs contribute based on opportunity - by being invited - by getting access to resources
Theoretical contributions	The combination of use- and technology knowledge make FLEs apt as innovators, contributing with novel knowledge and ideas specific for the FLEs. The FLEs aptness is constrained to their work practice.	FLEs' roles in innovation processes define the scope of their contributions. Bottom-up- and bricolage processes as the structure for incorporating practice-based knowledge. Middle managers in roles as facilitators, translators and gatekeepers; innovation management by weaving.	Confirming the workplace of the frontline employees as the arena for not just knowledge creation, but also for engaging in innovation activities; being willing for themselves, colleagues and customers. Confirming the important coupling between management and employees to foster employees' contribution through employees getting access to resources.

26 Abbreviation for frontline employees (used in Table 5 and Figure 2)

	What can FLEs[26] contribute to service innovation?	How can FLEs contribute to service innovation?	Why do FLEs contribute to service innovation?
Empirical examples and quotes from the papers	#1: Incremental innovations are found to benefit from idea collaboration among employees #2: "The best ideas come from the FLEs" [Manager representing the involvement-model to innovation] #3: "We are specialists in different fields, so we come up with ideas based on our expertise". [FLE, Resort] #3: "Well, you get quite good feedback most of all from customers, that is one thing, but also from colleagues who talk to each other and toss ideas around". [FLE, Resort] #4: "It is as a representive of the staff, that I know what works. I think that's our main contribution. We know what works and how that affects the use of the new storage-elevator [the innovation project]. It's easier for me to know what can be stored in the elevator and what needs to be close to the patient". [FLE at CCS]	#2: Manager representing the involvement-model: "My experience is that the one who initiates the idea is most suited to develop and implement it'. Manager representing the management-dominant model: 'We try to take in the initiatives, but we are not so good at encouraging employees to participate" #3: The roles of managers illustrating "innovation management by weaving" at the unit level: As facilitators; "I have started up development groups in my department", [Spa manager, Resort]; As gatekeepers; "It is important to take the time to explain why we cannot develop the idea further", [Food and Beverage manager, Resort]; As translators "I do experience that when we in the management group have decided on something, I automatically assume that the information is being communicated to and within the different units. Then, when things are not followed up, I discover that the information never came through". [CEO, Resort] #4: The two quotes illustrates the difference between the role of advisor versus solver: Advisor: "The project is about how we can't any longer have storage in the rooms. This is not our decision; someone else has decided that we should have the storage elevator. So, we have been sent out to make sure that the elevator can work as well as possible. […] We do not know how the storage elevator finally will work, it is not our decision." [FLE, CCS] Solver: "We have to reason to get the best solution. We are all part of development groups. There I contribute with a lot of ideas. In the groups, we sit and work on an idea that all can agree that 'this is ok'. Of course, not everyone can think alike, as in every workplace, […], but we can compromise. So, work groups are good for ensuring an active involvement for everyone." [FLE, Resort]	#3: The role of facilitating employees' innovation activities; "I think it's the spa-unit that is in the forefront of innovation here. They do have a small board for dealing with innovation and developmental issues, especially regarding therapy. Many ideas come from there". [CEO, Resort] The employees' willingness; "I think it is like this; that I have received a response and have been shown trust by my managers and my colleagues. You get feedback, like 'yes, this works well', and that makes you dare to take the next step." [FLE, Resort] #4: "Development is not something that I sit and decide everyone is supposed to do, but something that is developed jointly. I can help to enable the process." [Spa manager, Resort] "I do not consider this innovation project as innovating work. I mean, I really enjoy being innovative; to have new ideas and to start new things. That is innovation to me; initiating something new and develop it. […] When it is based on our own personal ideas." [FLE, HHR]

Table 5. A review of the appended papers' main findings and contributions

5.1.1 What frontline employees contribute to service innovation

On the subject of frontline employees as contributors, previous research on service innovation has dealt with frontline employees as important and valuable contributors in service innovation processes (e.g. de Brentani, 2001; Sundbo, 2008). Kanter early made the argument that close customer contact is an important innovation activator (1988). Furthermore, and as discussed in the first two chapters, there are studies like Ordanini and Parasuraman (2011) that emphasize frontline employees as contributors of customer-related knowledge, and it has almost been established as a conceptual truth that frontline employees matter and contribute (e.g. de Jong & Vermeulen, 2003; Rubalcaba et al., 2012). The findings of the papers appended to this thesis deepen and broaden this literature in various ways.

First, very few studies within the service innovation literature have explored the micro processes of frontline employees' work practice. There are some exceptions like Fuglsang and Sørensen (2011) and Sundbo et al. (2015). These studies place frontline employees as important actors and contributors to service innovation, but as with the service innovation literature in general, the focus is primarily one-sided on the importance of frontline employees interacting with customers. Within the practice-based approach to innovation, studies like Price et al. (2012) explore how employees can change their work practice together with colleagues. However, where service innovation studies focus on customer-based knowledge and interaction with customers, the practice-based approach is primarily occupied with interactions inside the workplace, with and between co-workers. By applying the framework of user-based innovation, more precisely von Hippel's (1994) concepts of supply side (technology) knowledge and demand side (use) knowledge, I emphasis both sides of frontline employees' potential knowledge creation; learning from co-workers and learning from customers. The combination of use and technology knowledge is assessed to be critical to innovation (von Hippel, 2001), hence strengthens the support for frontline employees as valuable contributors to service innovation, as suggested in both Paper III and IV.

Second, in previous research, little attention has been given to the type or extent of frontline employees' contribution. With a few exceptions, like Ottenbacher, Gnoth, and Jones (2006) and Melton and Hartline (2010) whose studies question the effect of involving frontline employees in new service development processes, frontline employees are in general discussed as a critical success factor to be included in service innovation processes (de Jong & Vermeulen, 2003). The findings of the appended papers all support frontline employees as important contributors, contributing practice-based knowledge that is distinctive for them and novel to the organization. In addition, the findings suggest some nuances to that representation. Paper I defines service employees in general to be contributors to incremental innovations, rather than to radical innovati-

on. The qualitative studies of the thesis deepen this by exploring how ideas that emerge from frontline employees are used for innovation, and the type of ideas they come up with. The ideas are typically transformed into alterations of existing work processes, hence developing and renewing their own work practice. The different studies undertaken in this thesis thus contribute by defining the scope of the employees input to service innovation, hence outlining the frontline employees' potential for and limitations in contributing to service innovation.

5.1.2 How frontline employees contribute to service innovation

Regarding how frontline employees contribute, the findings from the appended papers add to current knowledge as follows. First, the studies included in this thesis have shown them as contributors to service innovation through diverse activities: top-down, bottom-up and bricolage processes. Frontline employees are seen as actors in top-down processes, typically involved in management-led processes by invitation. Also, frontline employees are understood as active contributors through bottom-up processes, where ideas from the employees' workplace are generated to be further developed and eventually implemented. These bottom-up processes are based on ideas that emerge from day-to-day problem solving, but when in need of resources outside the employees' control, require facilitation from middle managers (e.g. unit managers). The findings also suggest that when middle managers are able to facilitate them through some regular arrangement, e.g. defined development team, the employees' innovation activities increase. Finally, the frontline employees contribute through purely employee-driven (bricolage) processes, in which ideas are developed and implemented by the employees themselves, who can solve problems by using resources at hand in innovative ways. Such bricolage innovations are spread within the work practice, however rarely diffused outside it. Hence, it is possible to distinguish between practice-based innovation processes occurring only *within* the work practice (bricolage activities may often be such) from those that also include ideas that are driven *up* (bottom-up) in the organization. These findings support how frontline employees should be seen as actors in multiple types of innovation processes: (1) as actors in strategic, top-down processes (e.g. Alam & Perry, 2002; Melton & Hartline, 2010, 2013; Ordanini & Parasuraman, 2011), (2) as actors in bottom-up, practice-based processes (Fuglsang & Sørensen, 2011; Sundbo et al., 2015), and finally, (3) acting on their own initiative as innovators within their own work practice when given access to resources (e.g. Fuglsang, 2011; Fuglsang & Sørensen, 2011).

Second, with a few exceptions (e.g. Fuglsang & Sørensen, 2011; Sørensen et al., 2013), previous research examines frontline employees foremost through the lens of being an actor in one of the approaches to service innovation processes: as contributing to top-

down processes, or bottom-up and bricolage processes. As just seen, the findings show how they contribute to different types of processes that are ongoing concurrently in organizations, hence supporting the afore-mentioned studies. More importantly, to my knowledge, previous studies have not addressed how taking part in different type of innovation processes may influence the actors themselves, their tasks and contribution. In Paper II, managers indicate that they involve their employees to different degrees. In Paper IV, frontline employees are identified in different roles, depending on the structure of the innovation process they are part of. These findings contribute new knowledge about frontline employees as actors in innovation processes, and how the role employees take influences how and what they contribute to service innovation.

Third, as frontline employees are shown to play a proactive role in bricolage and bottom-up-based processes, the findings demonstrate how important these innovation processes are to incorporate practice-based knowledge in the innovation processes. In Paper III, middle managers are identified as having an important role in enabling frontline employees to contribute in bottom-up processes. The concept of "innovation management by weaving" is introduced to define middle managers in the roles of translators, facilitators and gatekeepers. Although middle managers in current research are seen as coordinators between practice-based ideas on one side and top-management initiated ideas (or processes) on the other side (Fuglsang & Sørensen, 2011; Saari et al., 2015), these findings contribute new knowledge by suggesting the complexity of the managers' innovation-related task. They have to handle not only one, but also multiple, sometimes conflicting roles, in addition to the daily business activities of the unit or organization. The findings provide a deeper understanding of how the two structures (the hierarchical and the loosely coupled) in the dual organization can be managed, hence contributing new insights to the balanced approach to innovation. The findings also bring new understanding to the practice-based approach to innovation as discussed in, e.g. Høyrup (2012) and Price et al. (2012), by emphasizing how frontline employees' agency in innovation activities is influenced by middle managers. This is elaborated further in section 5.2.

5.1.3 Why frontline employees contribute to service innovation

The appended papers' findings regarding the last research question of the thesis distinguish two factors: (1) whether the employees are willing to contribute, and (2) whether they have the opportunity to contribute. First, they are employed as ordinary workers, not necessarily to engage in innovation activities. Yet, the findings point to how frontline employees express a drive to come up with ideas. They are intrinsically motivated – in the sense that they engage in a task primarily for its own sake, because it is interesting or in some way satisfying (Zhou & Shalley, 2003) – and are seen to continuously improve

and alter their work practice, for the customers, their co-workers and themselves. The employees' motivation to contribute ideas is either fostered or hampered by processes within the workplace, among the employees themselves, and in particular between employees and their managers (e.g. middle managers, as discussed in the previous section). These findings support previous research on employee creativity: the importance of being intrinsically task motivated for idea creation (e.g. Amabile, 1988), and furthermore how the context in which employees work (e.g. support from managers and co-workers) is important for their creativity (Amabile et al., 1996; Woodman et al., 1993). Furthermore, the findings suggest not only why and how frontline employees create ideas, but how ideas are followed up by co-workers within the workplace, and also how ideas are followed up or failed to be followed up by middle managers. Hence, the findings add new knowledge to the literature on innovation by coupling the creativity phase to the innovation process (Axtell et al., 2000), as well as by providing insights about how the link between idea creation and further development might be interrupted.

The factor of opportunity is based on how the findings suggest that frontline employees become actors of innovation processes, either by being invited and/or having access to resources. Opportunities resulting from an invitation, are seen in the top-down, management-led processes, where frontline employees are requested to participate in the development of an idea, often organized as a project. On the other side, frontline employees can create their own opportunity to innovate. By having access to resources, they are in a position to be in control of the innovation processes, from idea to implementation, typically bricolage innovations. Finally, opportunities can arise from a joint process, where innovation activities are defined as part of the employees' work practice and where facilitation of bottom-up processes is placed on the work agenda by management at all levels of the organization. The fact that frontline employees act in different type of processes has been discussed previously in this chapter. However, the findings contribute by pointing to the close relation between why frontline employees may contribute and the situation in their workplace. In my studies, I find support for the premise that frontline employees' innovation activities are not just directed towards customers, but also strongly related to doing something for and together with colleagues. The co-worker factor can be seen as an important driver for coming up with ideas and engaging in innovation activities, even for employees who characterize themselves as not particularly creative. The employees' collaboration with co-workers and their drive to continuously develop their workplace, thus deepens the existing knowledge (e.g. Fuglsang & Sørensen, 2011) of why frontline employees act in practice-based innovation processes (e.g. bricolage).

Summing up, the papers appended to this thesis illuminate the micro processes that frontline employees engage in, providing pieces of an image of frontline employees and

their potential as contributors to service innovation. It is however important to discuss the depiction from more holistic perspectives. As previously noted, the findings on each research question in the appended papers overlap and build on each other, and all of them lead up to the final discussion. In the thesis, this is limited to two manifestations. First, the research questions that were previously addressed separately are discussed together at a general theoretical level. The *what*, *how* and *why* all lead to the argument of how frontline employees can practise agency and become participants in service innovation processes. The matter of becoming participants leads to the question of how organizations can support the employees' agency. I discuss this subsequently, by introducing the concept of innovation by weaving.

5.2 Frontline employees as participants in service innovation processes

Based on the previous section, it is reasonable to argue that frontline employees can play an important role in the balanced approach to service innovation, as actors in both top-down, bottom-up and bricolage processes. Through this thesis I wanted to learn more about the employees as actors, in particular how they can become participants in service innovation processes. As previously introduced in Chapter 1, I separate "participation" from "being involved", to elucidate frontline employees as active actors who are not merely subjugated to organizational innovation processes, but can construct their innovation activities. Hence, the role of frontline employees as participants is understood as related to whether they practise agency: that the employees can exert influence and make choices (Eteläpelto et al., 2013), when engaging in innovation activities. Next, I discuss conditions where frontline employees in my studies can be seen as practicing agency, introducing a model of frontline employees as participants in service innovation processes.

5.2.1 Premise for practising agency

Employees will practise agency based on their inherent characteristics and the conditions of the work place (Billett, 2012; Eteläpelto et al., 2013). In this thesis, agency is related to the employees' innovation activities. My findings show that frontline employees gain knowledge identified as apt for innovation (e.g. use knowledge and technology knowledge). Furthermore, I have demonstrated that frontline employees engage in innovation activities based on an interest and motivation – being willing – to contribute. Both of these aspects, knowledge and willingness, are related to the professional individual. Knowledge is an individual affordance and a resource for practicing agency, motivation and interest as part of the individual work-related identity (Eteläpelto et al., 2013). In addition, my studies have shown how the workplace, in particular through activities of middle managers and interactions between the employees, may hinder or

foster employees as agents (e.g. through support and facilitation), by providing the employees with an opportunity to practise agency. Summing up, frontline employees are in my findings identified as actors of innovation processes through three main aspects: (1) the employees' workplace-related knowledge and skill indicates that they have the *ability*[27] to contribute, (2) by being interested and motivated to continuously improve their workplace, the employees show *willingness* to contribute, and finally, (3) by getting access to resources or by being invited, the employees are given an *opportunity* to contribute. These are the same factors that I argue enable frontline employees' to exercise agency in innovation activities.

Figure 2 illustrates how these three aspects intertwine and how this influences frontline employees becoming participants in service innovation processes.

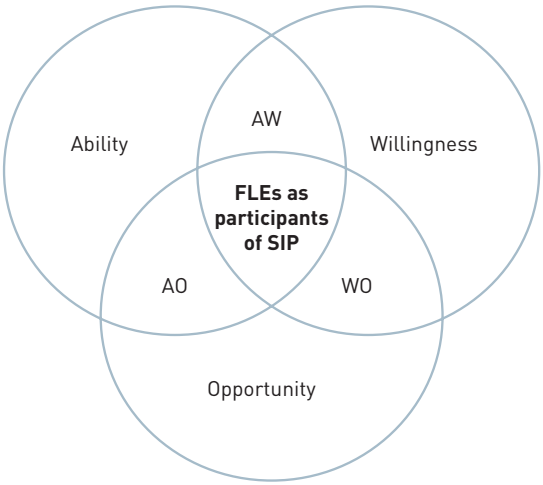

Figure 2. Frontline employees as participants in service innovation processes (SIP)

The model illustrates how all three aspects of agency – ability, willingness and opportunity –must be intertwined for frontline employees to become participants in service innovation processes. Furthermore, the model demonstrates how frontline employees are hindered from practicing agency, by three intersections. Willingness-Opportunity (WO): addresses employees without knowledge relevant for innovation, and they are therefore seen as less apt to engage in innovation activities. Ability-Opportunity (AO): indicates that not every employee working in front wants to engage in

27 Choi refers to creative ability as the skills and competencies relevant to creative performance (2004, p. 189). Here I use ability in the context of innovation ability: having the skills and competencies relevant for innovative performance.

innovation activities. Ability-Willingness (AW): shows employees who are hampered from engaging in innovation activities, for instance due to limited access to resources.

Each of the factors and the intersections in the model are presented and briefly explained in Table 6. This is followed by a discussion based on my studies of frontline employees as participants, as non-participants, and their role as participants in service innovation processes.

The aspects of …	Understood as …	Equals …
Ability	Knowledge and skills that make frontline employees apt to act in innovation processes.	Frontline employees as participants
Willingness	The frontline employees' interest and motivation to act in innovation processes.	
Opportunity	The access to resources that enables the frontline employees to act in innovation processes.	
Ability / Willingness	The frontline employees have the knowledge and willingness to act, but lack of, or limited access to resources hampers the employees' innovation activities.	Management controlled involvement
Ability / Opportunity	The frontline employees have the knowledge and access to resources, but lack of personal drive and motivation hampers the employees' innovation activities.	Employee based non-participation
Willingness / Opportunity	The frontline employees are motivated to act and have access to resources, but lack the ability relevant for innovation activities.	Unwitting employee innovation

Table 6. The aspects and intersections of frontline employees as participants in service innovation processes

5.2.2 Frontline employees as participants

As just reasoned, by being able, willing and having the opportunity, frontline employees become participants in and agents of service innovation processes. This encompasses how employees construct their innovation activities based on their knowledge and skill, constrained by whether they have access to resources, and dependent on the employees' willingness. It describes how employees practise agency, based on themselves as professional subjects, as well to conditions of the workplace. As discussed in section 2.5, becoming a participant is a concept that should be understood as different from being involved in innovation processes. Involvement is the term usually applied in the literature (e.g. de Jong & Vermeulen, 2003; Melton & Hartline, 2010; Ordanini & Parasuraman, 2011). However, being a participant in innovation implies initiation, development and adoption of innovations from and by frontline employees. It comprises the element of the employee's influence and choice regarding the work practice (Busck et al., 2010; Eteläpelto et al., 2013). Based on my studies, being involved in innovation by invitation

to top-down processes is not included in the centre of the model. Opportunity needs to result from the employees' own choice or from co-operation with management. The argument can best be supported by my empirical studies where frontline employees across type of organization and context, refer to top-down and management-led processes as "assignments": tasks, as opposed to innovation, while the latter is described as ideas and development processes related to what they – the employees – do.

The importance of influence is also illuminated through the roles of frontline employees as discussed in Paper IV. The differences between the roles, for example executor versus implementer, or problem solver versus problem advisor, are shown to be related to the lack of influence the employees perceive they have on the process, and what is to become of their ideas. Becoming participants implies a proactive role that provides the employees with influence on the innovation activities and ownership of the ideas. When innovation processes are initiated based on the employees' own ideas, about their practice, it is reasonable to argue that employees experience the possibility of influencing the idea and the activities to follow. Furthermore, it can be reasoned that influence is created and validated based on the employees' ability to innovate. The employees' knowledge of the workplace makes them apt to innovate. In addition, it is the employees' workplace that is defined by the employees themselves as the arena for their innovation activities, e.g. ideas triggered by or together with customers and/or colleagues. Customers and co-workers are also shown as important factors for why employees are willing to engage in innovation activities. However, it is important to note, that although employees in my studies are not seen practising agency in top-down, management-defined processes, this is not to say that it cannot be done. In Paper II, the model identified as "involvement-management" indicates that employees are given room to practise agency. However, the lack of an employee perspective, and the fact that interviews were conducted only with company managers, makes it impossible to demonstrate the employees acting as participants in service innovation processes.

5.2.3 Frontline employees as non-participants

The intersections in the model acknowledge that is it not for everyone to become participants in innovation processes, e.g. if they lack knowledge relevant for innovation and/or the willingness to engage in activities. As illustrated in Table 6, each of these intersections influences the employees' innovation activities. Lack of willingness implies that an employee simply does not initiate ideas or is less engaged in innovation activities that are ongoing in the work practice. Hence, the expression of *employee-based non-participation*. Paper III addresses the lack of motivation to participate. Employees point to how the element of willingness is something that may change over time. When encouragement from managers and/or feedback on employees' ideas are absent, the employees' express how they lose the desire to take initiative, here illustrated by a quote

from a frontline employee at the Resort: "It is difficult, I think; it is very difficult to influence. You may tell your ideas and point of view and nothing happens, so finally you become silent, unable or unwilling to do that anymore." According to Billett (2012), the workplace affordance comprises the invitational qualities of the workplace, for example, that employees are supported in participating. As in my studies, practicing agency and engaging in innovation are shown to be dependent on support and facilitation within the workplace.

The concept of the unwitting employee suggests that frontline employees are willing to innovate and have the opportunity through access to resources, but lack knowledge apt for innovation. As shown in Table 6, this may lead to what I have called *unwitting employee innovation*. The frontline employees in my studies are to a lesser degree identified in this intersection, as long as the ability is based on knowledge of their work practice. The workplace and the employees work processes are in the findings defined as the innovation arena of the employees. However, it would be somewhat naive to conclude that every frontline employee is able to gain knowledge apt for innovation. To support that, it is relevant to point to the concepts of "hyperprofessionalism" and "othering" as discussed by D. Sundbo (2011). The concepts imply among other things that employees, as professionals, are more concerned with upholding the existing service quality than in developing new services. The employees as professionals may view their customers as "others", and may not see the point of gathering ideas from users and so may hinder service innovation. These concepts can be understood as an attitude that can influence the employees' ability and willingness to innovate. For example, if an employee does not view customers as a source of ideas to develop the service, he or she may not gain use knowledge: a type of knowledge that in this thesis is understood as significant for the employees' innovation activities.

The studies of this thesis do not focus on issues that might hamper the employees' ability based on the individual. This can of course be relevant, as agency is influenced by the individual, his or her identity and competence (Eteläpelto et al., 2013). The concept of unwitting innovation is also interesting in light of whether or not the innovation activities undertaken by the employees create tension, both within the organization and the workplace. Does it accord with the organization's strategy? Is it always in alliance with the workplace as a unit of workers? These are questions that go beyond the scope of this thesis, and the issues are addressed more generally in the section: future research.

Finally, the model points to how having ability and willingness requires an opportunity in order to utilize the innovative capability of the employees. Without accessing resources, the employees are inhibited from engaging in innovation activities as participants. In my studies, they are still involved in innovation, but by invitation, identified in Table

6 as *management-controlled involvement*. As previously mentioned, this is not to say that frontline employees cannot practise agency in top-down innovation processes. But in my empirical studies, the employees' limited potential to influence and to follow up on their own activities has defined them as involved and contributors, although not as participants. I discuss this further in the next section.

5.2.4 The role of participant in service innovation processes

The concept of participant defines and elucidates the image of frontline employees as actors in innovation processes. Hence, it provides a content to the role frontline employees are given in previous research (e.g. Fuglsang & Sørensen, 2011; Sundbo et al., 2015; Sørensen et al., 2013). Furthermore, becoming a participant emphasizes how frontline employees perceive innovation processes as activities that originate (primarily) from themselves in their workplace, or from co-workers' initiatives, and that are based on ideas that mainly have an impact on their work practice. The concept of frontline employees as participants can therefore be said to be grounded in a practice-based, bottom-up perspective to innovation (e.g. Ellström, 2010; Nilsen & Ellström, 2012; Price et al., 2012), where organizational change is seen as continuous, evolving and incremental (Orlikowski, 1996; Weick & Quinn, 1999). However, the concept of participation symbolizes frontline employees as actors of innovation processes that have to be balanced with management. Frontline employees may to a certain point develop their work processes, as seen in, for example, bricolage innovation. These are innovations that may be enacted without the awareness and approval of managers (Fuglsang, 2010). However, middle managers will affect the workplace affordance for employees to become participants, as well as co-workers and the employees themselves (Billett, 2012). Middle managers play an important role for creating the workplace as an environment for participation in innovation activities. They need to support and facilitate frontline employees in executing their agency, through the aspects of ability, willingness and opportunity.

The concept of participant does not rule out the relevance of involving frontline employees in top-down strategic based innovation processes (e.g. Alam & Perry, 2002), although this is not included in the presented framework. It is discussed as a perspective where frontline employees are given different perquisites to act within the process. The mandate for the employees' innovation activities in top-down processes will often be predefined, whereas the practice-based processes are as previously argued closer to the employees' domain; both regarding their knowledge and domain of interest. Practice-based processes fit within the notion of continuous and incremental changes, as on-going processes alongside practice in organizations, whereas top-down processes are primarily understood as innovation activities separated from practice (Toivonen, 2010).

An important notion in this thesis and other studies of frontline employees in innovati-

on processes is how organizations are always changing at some level (Mintzberg & Westley, 1992). It is not a question of either/or, or of frontline employees contributing to top-down processes or contributing in bottom-up processes. However, the participant concept raises questions of how frontline employees and their potential contribution can be integrated into and organized in organizations' innovation processes. The balanced approach to innovation, innovation with care (Fuglsang & Sundbo, 2005), upholds innovation in interaction between top-down and bottom-up practices. The perspective functions as a framework for the understanding of innovation processes in this thesis. In the following, I discuss this premise based on how frontline employees as participants in innovation processes can be understood, introducing innovation by weaving.

5.3 Frontline employees as participants in a balanced approach to service innovation

Recollecting from Chapter 2, the balanced approach represents a dual approach to innovation. The organization is seen as a function of two change structures, a hierarchical managerial one and a loosely coupled interactive one, within which employees and managers act (Fuglsang & Sundbo, 2005). The two structures are said to interact and depend on each other. The hierarchical structure sets the strategy, the loosely coupled one offers ideas. Within this perspective, innovations as an outcome are described as incremental. The strategy as just stated, frames the innovation process, which is referred to as a "stream of incremental innovations" (Rubalcaba et al., 2012, p. 701).

When viewing innovation through the balanced approach, interpretation and reflection on innovation processes and their outcome become key words. Individuals make their personal reflections on innovative activities in interaction with other people, which again is often discussed with others; hence the group will be the unit that reflects, as the result of a collective social process (Sundbo, 2003, p. 104). In the balanced approach, changes occur based on reflections from actors in both structures, both top managers, middle managers and employees, where frontline employees are seen as particularly important idea makers (Rubalcaba et al., 2012). In this thesis, the employees' significant role as contributors to service innovation has been confirmed. As previously discussed, the findings of the papers appended to this thesis show how frontline employees bring in novel knowledge and ideas during service innovation processes. Their workplace is viewed as the primary arena for becoming idea makers, as illustrated by quotes from two frontline employees:

> It is about how we do our job. That is what I get ideas about … I do not intend to, and I do not see myself as influencing the whole resort, but foremost to be able to influence the part where I belong, so that I am satisfied with my work. [FLE, Resort]

> I really enjoy being innovative; having new ideas and starting new things. That is innovation to me: initiating something new and developing it. […] When

> it is based on our own personal ideas, like this spring, where I had the idea of initiating a new type of therapy group: promenade-groups. [FLE, HHR]

These two quotes demonstrate how the workplace defines the arena for frontline employees to become participants in service innovation processes. The empirical findings from my studies suggest that it is through the activities of everyday work life that the employees create alterations or reproduce their work processes. It is from the work practices that problems and/or opportunities arise (e.g. interacting with customers), and solutions can be developed and implemented. In top-down processes, the employees' practice is pushed more to the background, than in processes that emerge from and within the employees' practice (e.g. Toivonen & Tuominen, 2009). Thus, as discussed in the previous section, it is through the work practice that employees practise agency, becoming participants in service innovation processes.

Central in the dual approach is how the structure of top management, the strategy, interacts with the more loosely coupled structure, in which middle manager and employees act. According to Sundbo, it is the top management that will "guide the process and finally decide upon the usefulness of the innovations and what consequences can be drawn from the reflections that have been made by the employees and managers in the network structure" (2003, p. 104). However, it is the employees' reflection that continuously adapts the organization's strategy in practice, (e.g. through the work processes), based on customers, and what usually seems to work. As illustrated by a frontline employee at the Resort:

> … well, sometimes you feel like they [referring to management] decide things that may not work in the real life. You have to see how it actually works and not just decide one thing, […] you need to bring along someone who can explain how it is.

The dual organization, and how the two structures interact, are shown in some of my empirical cases (discussed in Papers III and IV). Middle managers are identified as playing an important role as translators of the strategic course of the organizations, as set by top management, hence becoming central actors coupling the two structures. When frontline employees are made aware of the existing or a new course, they can through participating in innovation activities ensure reflexivity throughout the organizations, by continuously developing and adopting innovations within their practice. The case study of Resort can provide an illustration. The organization had decided to develop a new strategic concept: "sport and wellness". The wellness concept was already embedded as a basis service concept for the resort, but the sport part would need new services (e.g. training weekends with instructors, new healthy food concepts) both in existing and new segments, that would influence all three business units. The idea originated from the management group (CEO, financial, marketing and unit managers) and was a strategically based decision. The process of developing the new concept further was left to the

three units, implying the principles of a dual approach to innovation. When the middle (unit) manager translates the strategic concept for the employees, it can be seen as a tool for their innovation-related agent actions. Practice-based ideas and renewing of work processes can thus become part of the "stream of incremental innovations" (Rubalcaba et al., 2012) of the balanced approach to innovation. Employees add to a given course, nuance and strengthen it. These practice-based innovations are processes that are not necessarily decided upon by management (Sundbo, 2002) or coordinated to meet top-down processes, as recently discussed in Saari et al. (2015).

Next, I introduce a way to integrate employee-based ideas and processes with top-down ideas and processes.

5.3.1 Balancing through innovation by weaving

The way frontline employees contribute to innovation as participants in service innovation processes, can be illustrated through the concept of *innovation by weaving*. Weaving[28] as a metaphor indicates how frontline employees create new patterns, based on the existing ones, by continuously altering their work practice. A service operation can be seen as a number of concurrent processes or practices. Each process can be symbolized as a thread. Together the threads form a weave or a pattern representing the organization's service system. In different ways – for example, interacting and observing – the frontline employees discover deficiencies or new possibilities in the service weave on a micro level. New threads need to be added or existing ones need to be changed. The threads that are woven are ideas that emerge alongside the practice from customers and/or co-workers: ideas that are implemented from the employees' own control of resources (e.g. bricolage innovation), or in co-operation with middle managers.

The metaphor of weaving elucidates how patterns, or organizations, can change slightly. Frontline employees as participants of service innovation process can be explained by the thoughts of Orlikowski: "every action taken by organization members either reproduces existing organizational properties or it alters them. Through sustained adjustments in organizing practices – however unintentional and unacknowledged – social changes can be enacted. Change is thus inherent in everyday human action" (1996, p. 66). Frontline employees can be seen to create ongoing variations of the existing pattern; in the sense that they alter and renew their work processes continuously. These are new solutions and changes enacted within the practice. The alterations can be thought of as threads

28 In Paper 3, innovation management by weaving was introduced as a concept to illustrate the three roles of middle managers; facilitators, gatekeepers and translators, and how managers through these roles hold the key for letting ideas (symbolized as threads) become part of the organization (symbolized as the existing pattern). The use of "weaving" as a metaphor is in the thesis' synopsis further elaborated from Paper 3, to illustrate how frontline employees can become participants of innovation processes in service organizations.

that are woven in to the existing design: ideas that are implemented by employees as in bricolage, and ideas co-developed with managers. Through this, ideas are realized based on what is emerging, consisting with the balanced approach to innovation.

The concept of innovation by weaving adds to the balanced approach by illuminating how practice-based innovations from frontline employees are integrated into the organization's routines, adjusting, adapting and changing the patterns of work practices of the organization. It emphasizes the importance of integrating practice-based processes to the hierarchical structure. The actors within the various structures of the organization: employees, middle managers and top managers, all play important parts, and their actions need to be coordinated and integrated.

As discussed in previous studies (Fuglsang & Sørensen, 2011; Saari et al., 2015; Sørensen et al., 2013), middle managers do have an important role in coordinating the innovation activities. For example, in a recent article by Saari et al. (2015), middle managers are discussed as coordinators; bottom-up and top-down processes may meet through their coordinating activities. My studies show that middle managers influence employees' agency, thus enabling frontline employees to become participants in innovation processes. This is illustrated in particular through middle managers' roles as facilitators, gatekeepers and translators. When they facilitate frontline employees, these are given access to resources; when they gatekeep, only ideas which fit within the existing strategy are taken further for development; when they translate existing strategy to the employees, the ideas created are more likely to be fitted into the current course of the organization, reducing the potential tension between the two structures. Hence, innovation by weaving is a way of understanding innovation processes within organizations as seamless activities. Bottom-up, practice-based innovation processes are understood as ongoing alongside the practice. This implies that middle managers and employees engage in innovation activities on an ongoing basis. The continuity of their actions is an argument for understanding top-down processes and bottom-processes as co-existing and as processes that needs to be woven together to complement and evolve the existing pattern.

Regarding the hierarchical structure of the dual organization: this thesis has not focused on how top management interprets the environment and formulates strategy, but more on activities of frontline employees within management-led, top-down innovation processes. Innovation by weaving holds, as just illustrated, a practice perspective as a fundament for understanding frontline employees as participants in service innovation processes. However, to continue the weaving metaphor, new threads (ideas) are also introduced to the weave from the top. In my studies, top management-based ideas vary from specific projects to new market-/strategic concepts. These are changes that can create both modifications and more abrupt changes to the existing work practices of the frontline employees. The frontline employees were typically involved by invitation to

these processes, which they describe as innovation by assignment, and where their roles are more those of reporters and executors, than initiators and innovators (as shown in Paper IV). It is not that the frontline employees do not contribute, but my findings do pose a challenge to how employees are to contribute in processes where their practice is pushed to the background, without limiting their scope of contributions.

Summing up, innovation by weaving illustrates how organizations continuously innovate, by weaving their services out of intertwined efforts made by employees and managers. The pattern in the weave changes ever so slightly based on frontline employees' (and managers') continuous interpretation. It follows the basic assumptions of the balanced approach to innovation, where strategy is realized based on what is emerging, as opposed to what is pre-planned and deliberated, and that the innovation process is based on interpretations of the environment and the internal resources the organization has or that can be acquired (Fuglsang & Sundbo, 2005; Sundbo, 2002). Innovation by weaving illuminates how the actors within the loosely coupled, interactive structure work and practise agency to add to the stream of incremental innovations within the service organization. It illustrates how frontline employees when becoming participants in service innovation processes are able to interpret and reflect, altering and renewing their work practice, contributing to the innovating organization. Hence, this thesis contributes to our understanding of service innovation as a social and interactive process (Fuglsang, 2008b).

5.4 Practical implications

The article by Crevani et al. (2011) calls for more knowledge about how managers of service organizations can in practice involve frontline employees in service innovation processes. The short version of my reply to these managers is to enable frontline employees to become participants in service innovation processes. The longer reply goes as follows.

First, I have shown through this thesis that frontline employees are important contributors to service innovations. They gain both use knowledge and technology knowledge, a combination that is assumed critical for innovation. What is important for managers to recognize is that frontline employees do not only contribute knowledge that is important to innovating, they contribute knowledge that is novel and hidden from managers. If the employees are omitted from innovation processes, so is the knowledge they represent. When the organization fails to incorporate the knowledge, opportunities that arise from the frontline will easily be missed.

Second, managers would benefit from learning how frontline employees contribute. I do think there is a general agreement amongst service managers that frontline em-

ployees should be involved in innovation processes. Whether one chooses to follow up on this "conceptual truth" varies. This thesis shows how employees can have different roles in innovation processes, and that the roles influence how the employees get to contribute their knowledge. The top-down processes seem to give room for more reactive actions, while the employees appear more proactive in the practice-based processes. By acknowledging these differences, the managers can be more aware of their approach towards how frontline employees are involved in management-initiated innovation processes. To illustrate, in the case of the logistics of the development store (CCS), the frontline employees identified several problems in the planned solutions. Had they been invited to the innovation project earlier, this could have been avoided. Managers need to recognize that the knowledge frontline employees represent, is not just about implementation of new ideas, but may also be the start. Bringing the employees into the top-down processes earlier might change their role from a reactive to a more proactive one.

Third, middle managers are identified as having a key role for enabling frontline employees to become participants in innovation processes. Middle managers need to be aware of their active role in nurturing practice-based processes. In this thesis, middle managers were identified in three types of roles, as facilitators, gatekeepers, and translators. Facilitation is foremost about creating arenas for frontline employees to collaborate. This strengthens the employees' creativity as well as representing a learning arena. Discussions amongst the employees are vital for sharing work experience, to create new understandings and to develop the work practice. The arenas can be both formal and informal, it is however imperative that managers understand that to participate in innovation activities, one needs access to resources – not necessarily money, but, for example, time. To be creative takes time; to toss around ideas with co-workers takes time, etc. Informal meeting arenas create one type of environment. The findings also point to the importance of formalizing team meetings or establishing development groups as a means for frontline employees to participate in service innovation.

Facilitating employee collaboration and learning is one element. Equally important is managers supporting and encouraging frontline employees to be creative and to engage in innovation activities. This thesis shows how important it is for the employees to be seen and heard. It is not about getting every idea developed and implemented, but to get feedback on how the idea is received, and what is to become of it, or not. Through a feedback process, the managers are also able to act as gatekeepers. Finally, the middle manager's role as translator of the strategic issues is central for creating a mutual direction for the different innovation processes that take place continuously in a service organization. It is neither possible nor desirable for managers to control all the processes (e.g., bricolage innovations), but by ensuring that frontline employees are aware of (relevant) strategic choices, the middle manager creates a guide for the employees' ideas.

Consequently, the gatekeeper role might also be easier to manage, as the employees have access to some tool for screening their ideas.

Fourth, middle managers are important, but so is top management. A balanced approach to innovation rests on the premise of a dual organization. The two structures are dependent on each other. Top management plays a significant role in enabling middle managers to handle the above-mentioned roles. In order for middle managers to facilitate, they also need resources, encouragement and support from their manager. Furthermore, middle managers may experience a squeeze between everyday activities, and innovation activities. They too, like frontline employees, are often employed to lead the unit's daily operations, and not necessarily hired to manage innovation activities. For service organizations that depend on employees to be innovative and act as corporate entrepreneurs, rather than depending on specialized units (e.g. an R&D department), it is important to build competences that enhance the organization's innovation capabilities (e.g. den Hertog, Wietze van der, & de Jong, 2010).

Finally, it is the top management's responsibility to facilitate frontline employees in becoming participants in service innovation processes, and to design a structure that enables a balanced approach to innovation. Innovation by weaving is about acknowledging the knowledge that is generated within organizations' practices, which employees continuously interpret and reflect, and adapt as part of their work practice.

5.5 Future research

This thesis has examined the questions of what, how and why frontline employees contribute to service innovation. Through the appended studies, the image of frontline employees as contributors to service innovation and as participants in service innovation processes has been clarified, however, there are still question to be asked and answered.

Agency, practice and innovation. In this thesis, the notion of agency has been used to illuminate and understand frontline employees' innovation activities. There are a few examples where studies of workplace learning theory and agency are applied to innovation (e.g. Billett, 2012; Price et al., 2012). Understanding the relation between agency, practice and innovation opens up an interesting angle to innovation studies, in particular on practice-based innovation. Professional agency is influenced by conditions within the workplace as well as the subject which practises agency. In this thesis, I illuminate only part of these factors. Research that explores further how the socio-cultural conditions of the employees' workplace affect their professional agency in innovation activities, would add to our understanding of how practices are renewed and ideas are developed and enacted on. Eteläpelto et al. (2013) point amongst other to power relations and work cultures. These factors would influence both the workers and the relation between

the managers and employees, and need to be empirical examined. Furthermore, in this thesis frontline employees were shown to practise agency in practice-based innovation processes. They were not identified with the same type of influence of their activities in top-down processes. More research is needed to examine how agency can be practised in a broader range of innovation processes.

The unwitting employee. Previous research on involving frontline employees in service innovation has primarily focused on employees as valuable contributors. In this thesis, the scope of the employees' contributions have been illuminated. However, through the discussion of frontline employees as participants, the factor of the unwitting employee was introduced: an employee with opportunity and willingness to innovate, who lacks knowledge apt for innovation. This thesis does not identify innovations and/or employees within this category; however, it leaves an interesting area for new studies. Research should explore the conditions under which employees become unwitting, the challenges this might cause, both for the work practice as well as the organizations, and how these challenges can be met.

Sensemaking and sensegiving by middle managers. This thesis has introduced the concept of innovation by weaving, showing how practice-based knowledge can be integrated within the balanced approach to innovation. Middle managers are identified as in a key role for the loosely coupled structure to interact with the hierarchical structure. They need to frame and support the ongoing practice-based processes. It would be useful to explore the kind of tools and mechanism middle managers can develop to stimulate and integrate employees' innovation activities as part of the organization's innovation processes, and further how management-initiated ideas and processes can become part of employees' innovation activities in their practice. Gioia and Chittipeddi (1991) model of processes for sensemaking and sensegiving in strategic change could provide an interesting lens for new studies on middle managers, their roles and actions in organizations' innovation processes.

5.6 Final comments and reflections

In a recent article by Ostrom, Parasuraman, Bowen, Patrício, and Voss (2015), in which the authors suggest future priority areas for service research, the understanding of organization and employee issues relevant to successful service is named as one out of twelve research priorities. One of the issues within this category is: *incorporating the "voice of the employee" in service innovation* (Ostrom et al., 2015, p. 135, quotation marks in the original). In my thesis, I have shown how important the voice of the frontline employees is to service innovation. Furthermore, I have demonstrated that for organizations to be able to listen to the strengths in the employees' voices, they have to acknowledge that the voices are raised from and within the employees' practice, and that they thrive best

when facilitated and woven into the organization from and within their practice. The voices are of course diverse. In my case studies, the service workers vary from fitness instructors, receptionists, nurses, and physiologists to engineers. Their work processes and organizations differ greatly. However, their contributing voices in service innovation remain the same across the employees' different work practices: representing a significant potential for innovating organizations.

I started this thesis with a personal detour, asking the question of whether I once upon a time was an innovator at a restaurant. Based on the arguments in this thesis, I will conclude with a "yes" to that question. However, we were not a part of a balanced approach. If I recollect rightly, we engaged in those innovation activities because it was fun – that was our logic. It was a collective effort, and we took pride in doing our job, for example creating surprises to our regular customers. However, our managers did not necessarily approve. The less fuzz, the better. When we tried to alter the pattern – our work processes – it never became more than some loose threads.

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Frontline employees as participants in service innovation processes - Innovation by Weaving -

This thesis aims to develop new understanding of how frontline employees are engaged, and act in service innovation processes. The overall purpose is to contribute knowledge of frontline employees as participants in service innovation processes.

This thesis argues for a balanced approach to innovation as a framework to view and discuss frontline employees as actors in bottom-up, practice-based processes and in top-down, strategic-based processes. The empirical studies, presented in four appended papers, investigate employees' innovation activities by studying the micro processes they are engaged in, in particular the interactions between employees and managers, between employees themselves, and between employees and customers.

By understanding how frontline employees practise agency and how the agency is influenced by management, this thesis contributes to the understanding of how employees become participants in service innovation. This thesis argues that agency is exercised in practice-based innovation processes, where frontline employees initiate, develop and enact new solutions. Middle managers are identified as having significant enabling roles as gatekeepers, translators and facilitators. Innovation by weaving is introduced as a metaphor to symbolize how new ideas emerging from different sources are thought of as threads woven into the existing structure in order to develop new patterns. The concept demonstrates accordingly how employee-based ideas and their innovation activities can become part of organizational innovation management through the roles of the middle managers.

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