The interplay of roles and routines
Situating, patterning, and performances in the emergency department

Virginia Rosales
To my parents, for giving me the wings to fly

“All the world’s a stage,
And all men and women merely players;
They have their exits and their entrances;
And one man in his time plays many parts,
His acts being seven ages...”
(William Shakespeare, As You Like It, Act II, Scene VII)
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Virginia
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Abstract

This thesis took its point of departure in the lack of research regarding the intricate and important relationship between roles and routines. With roles and routines providing individuals with enough discretion to accomplish work while ensuring consistency, the overall research question posed was: how do roles and routines interplay to enable flexible performances? This question was operationalized through three sub questions: (1) why are roles and routines flexible, (2) how do roles and routines interplay, and (3) what contextual aspects influence which patterns come into play? The purpose was to increase the understanding of the interplay of roles and routines in organizations.

The theoretical basis was built up in three steps. First, the foundations of roles and routines were explored separately, laying the basis for further conceptualizations. Second, overlaps of role and routine studies were explored, highlighting their contributions to current understandings. Third, through a joint discussion of the fields, commonalities between the two areas were put forth. Central to this were the ontological foundations in performances, and re-enacting the duality of structure and agency. The theoretical work resulted in a conceptual framework, which integrated roles and routines and served as the basis for unpacking and furthering an understanding of their interplay.

In order to fulfil the purpose, and in line with the view on roles and routines as patterns of action, an organizational ethnography of an emergency department at a Swedish university hospital was conducted. Due to its characteristics, this setting represented a unique opportunity to study the interplay. Primarily based on observations, a total of 25 field visits (136.5 hours), 19 interviews, and hundreds of documents, served as the empirical material, which was analysed through iterative rounds of coding. Narratives, visual mapping, and narrative networks, were analytical strategies used in progressively moving from an understanding of the context to the identification of role and routine patterns.

Furthering the developed conceptual framework, the findings showed how roles and routines interplay in, and through, performances. Depending on individual, interpersonal, and environmental aspects, scripted and unscripted patterns are situated in performances, which trigger role and routine patterning. Summarized in an integrated framework, which highlights the key findings, this thesis showed how the interplay of roles and routines provides organizations with stability and flexibility. This has implications not only for role and routine theories, but also organization theory in general. Implications, regarding the organizing of work at emergency departments, and other organizations, as well as for educators, the society and governments were also outlined.
Sammanfattning (Swedish abstract)

Denna avhandling tog sin utgångspunkt i den relativa bristen på forskning rörande samspelet mellan roller och rutiner. Mot bakgrund av att roller och rutiner simultant både möjliggör för individer att utföra arbete autonomt samtidigt som de upprätthåller kontinuitet så ställdes den övergripande frågan: hur samspelet mellan roller och rutiner för att möjliggöra flexibla ageranden? Frågan operationaliserades genom tre delfrågor: (1) varför är roller och rutiner flexibla, (2) hur samspelet mellan roller och rutiner, och (3) vilka kontextuella aspekter påverkar vilka roll- och rutinmönster som materialiseras? Syftet med avhandlingen var att öka förståelsen för samspelet mellan roller och rutiner i organisationer.


I utvecklandet av det konceptuella ramverket påvisades hur roller och rutiner samspepar i och genom handlingar. Beroende på individuella, interpersonella och miljömässiga aspekter, situeras skriptade och oskriptade handlingsmönster, vilket utlöser mönsterbildning av roller och rutiner. Sammanfattat i ett integrerat teoretiskt ramverk lyftes de viktigaste resultaten fram vilka visar på hur samspelet mellan roller och rutiner ger organisationer både stabilitet och flexibilitet. Dessa resultat har konsekvenser inte bara för teoribildning om roller och rutiner, utan också för organisationsteori i stort. Resultatens konsekvenser för arbete vid akutavdelningar och andra organisationer, samt för utbildare och samhälle presenterades slutligen.
# Key concepts

<table>
<thead>
<tr>
<th>Pattern</th>
<th>Regularity</th>
</tr>
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<tbody>
<tr>
<td><em>Scripted</em></td>
<td>Written or planned in advance, before it is read or performed</td>
</tr>
<tr>
<td><em>Unscripted</em></td>
<td>Not written or planned in advance</td>
</tr>
<tr>
<td>Scripted role patterns</td>
<td>Patterns developed following the job descriptions given by the organization</td>
</tr>
<tr>
<td>Unscripted role patterns</td>
<td>Patterns developed following the professional background, career progression and/or personal characteristics of individuals</td>
</tr>
<tr>
<td>Scripted routine patterns</td>
<td>Patterns developed following organizationally sanctioned standards</td>
</tr>
<tr>
<td>Unscripted routine patterns</td>
<td>Patterns developed following an addition, removal and/or reordering of activities and/or routine participants</td>
</tr>
</tbody>
</table>

**Situating processes**

| Personalizing                | Process of situating role patterns                                         |
| Customizing                  | Process of situating routine patterns                                     |
| Patterning processes         | Processes of co-constructing patterns                                      |
| Depersonalizing              | Process of patterning roles                                                |
| Abstracting                  | Process of patterning routines                                             |

**Performance**

| Act of doing, enactment of, patterns |

**Situation**

| Combination of circumstances at a certain moment |
1. Introduction

Scene

Various locations in the emergency department.

Time

The present.

ACT I: A trauma case

3:24 p.m. Hanging up the phone, an assistant nurse (AN) says there is a big trauma coming in, in ten minutes. The coordinator registered nurse (RN) goes around pulling together a team of nurses. He assigns them roles: “You are RN1, you are AN1, you are AN2, I’m RN2 ...” He also talks to Maria, the surgery doctor who will take the role of the trauma leader. The attending surgeon, cardiologist, anaesthesiologist and anaesthesiology nurse, arrive to the emergency department from other hospital wards. The nine people gather in the trauma room, put on aprons and post-it notes on their chests stating their names and roles. Each one in the team takes a position around the bed and introduces him or herself, starting with the trauma leader, and going around the circle.

3:39 p.m. “They are coming now”, says RN2 as he sees the ambulance nurses rushing towards the trauma room. Everyone is ready. Two ambulance nurses bring in a man, in his 60s, on a stretcher. One of them shouts out loud “Report!”, introduces himself and starts reporting the case: description of the car accident the man has been in; frontal crash against a building; parameters taken; drugs administered. RN2 takes notes. Done with the report, the ambulance nurse asks if there are any questions. No. The trauma leader starts talking to the patient. The anaesthesiology nurse checks the pressure and asks for an orthopaedic neck. RN2 puts in an IV line and get blood samples. AN1 puts ECG electrodes on

The trauma leader, Maria, shouts out loud: “Heart rate on 133, he’s stable”. She updates people constantly, gives directions on what to do, and is the only one asking questions to the patient. RN2 gives him oxygen. RN1 cuts his pants. Maria says, “ECG must be connected”. RN2 says, “We got the ECG from the ambulance.” Maria still wants the patient connected to the ECG. AN1 puts ECG electrodes on
the patient. They put pads on his chest. Five people pull him up, on the scoop stretcher and the anaesthesiology nurse puts a belt underneath his lower back. They disarm the scoop stretcher and take both parts away. They also take away his pants and fix the belt. RN1, RN2 and AN1, put his ankles together with a bandage. The doctor standing on the head of the patient, moves to the side of the bed and do the ultrasound, on one side, on the other side, and on the stomach. RN2 asks AN1 to order the blood tests and gives her a plastic cup with blood tubes inside. RN1 holds a blue armband, asks the patient if he can say his personal ID number and name. He does. She checks the armband and says “Perfect”. She puts the armband on the patient. The anaesthesiology nurse puts an injection through the IV line. The trauma leader says out loud the drug and quantity they are injecting.

**4:01 p.m.** The trauma leader tells the patient that they will put him on the side. RN2 cuts his t-shirt sleeves. The anaesthesiologist is holding the patient neck. “1, 2, 3...” Two persons on each side of the bed, put the patient on his right side. RN2 cuts the t-shirt on the back and takes it. They put one part of the yellow scoop stretcher underneath the man. “1, 2, 3...”, they put the patient again on his back. They do the same on the other side. “1, 2, 3...”, they put the other side of the scoop stretcher underneath the patient and again on his back. They also put a safety belt from the feet to the patient shoulders. There are eight people working on the patient. The cardiologist left because he was not needed. They cover the man with a bedcover. They put the orange head immobilizers back on both sides and fix them with paper tape. The anaesthesiology nurse tells the patient, “You are packed inside again”, and smiles. The attending surgeon and anaesthesiologist leave. RN1 tells the patient, “You will now go to the x-rays”, and asks if he has trouble breathing. Then she takes the mask from his nose and mouth and tells him that she can hold it for a little while.

**4:10 p.m.** The trauma leader comes back. “Are you ready?”, she asks to the nurses. “Yes”. “So, here we go”, she says. They take the patient out of the trauma room. They are taking him to x-rays and then to the intensive care unit.

(END OF ACT)

At first glance, and as their name indicates, emergency departments are the medical facilities destined to deal with emergencies; acute patients that may come in at any point in time without previous notice. As illustrated in Act I, everyone seems to know what to do, how to do it and when. In a snapshot, emergency departments are all about strong professional roles and carefully-designed routines. Roles provide the structure needed to work with fluid personnel, whereas routines help to coordinate interdependent tasks among role occupants. With lives at stake, one would thus assume that roles are clearly delineated and
organizational routines are followed at face value in order to ensure patient safety. In fact, this is the typical stereotype that people have of emergency departments and this is how they are portrayed in most TV shows nowadays. However, when taking a closer look, this is rarely the case in everyday practice. This longitudinal study goes against the common stereotype to show how working in an emergency department is about a lot of other things besides dealing with emergencies where clear roles and routines are needed. When following the operations of an emergency department over time, it is clear that a large number of patient cases are not emergencies and cases such as the one presented in Act I are the exception rather than the rule. This means that staff members seldomly work simultaneously on a patient, role boundaries are blurry and routines are loosely defined, which allow for flexible performances. This is not surprising when considering the uncertainty surrounding these organizations, which clearly requires flexibility to adapt to the situation. Nonetheless, how these adaptations translate into flexibly performing roles and routines, while simultaneously upholding stability, has not been addressed. In essence, the research question underlying this thesis is:

How do roles and routines interplay to enable flexible performances?

This research question clearly needs further elaboration. Looking at the problem from a theoretical point of view, the literatures on roles and routines have followed different paths, largely disregarding the importance of understanding these two phenomena in concert. Considering that roles and routines are clearly intertwined in practice, providing organizations with structure while allowing for flexibility, this theoretical disconnect is surprising, to say the least. Yet, both literatures provide valuable insights into the flexible performances of roles and routines, which lay the foundation for this study.

First, taking a look at role theories, these are rooted in sociological and psychological traditions and have long contributed to understanding human behavior in social settings. Taking roles as patterns of behavior that are characteristic of an individual (Biddle, 1986), roles can be said to be formed by dualities of structure and agency (Callero, 1994; Giddens, 1984). On the one hand, the structure refers to patterns of behavior that are expected from an individual enacting a role (Baker & Faulkner, 1991). For example, when going to an appointment, most people would expect the doctor, independently of who the individual is, to give them a solution, i.e. to be able to diagnose the patient and suggest an appropriate treatment plan, given the presented symptoms. On the
other hand, agency allows individuals discretion to improvise their role enactments (Powers, 1981). Going back to the doctor's example, despite expecting the enactment of certain patterns of behavior (e.g. diagnosis, treatment), we all know that every doctor is different. Some are friendlier than others, some are less talkative, some are younger and lack experience but may be more motivated than older doctors. Considering roles as dualities of structure and agency therefore means that roles both constrain and enable performances (Handel, 1979). Building on this understanding of roles, a few organization studies have provided evidence that support the idea that roles are patterns of action, which are not prescriptive and can be negotiated in situ through performances (e.g. Barley, 1986, 1990; Bechky, 2006; Mantere, 2008).

Second, the routine dynamics perspective, rooted in organization theory, provides a similar conceptualization of organizational routines. Being “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (Feldman & Pentland, 2003, p. 95), routines are said to embody structure and agency (cf. Giddens, 1984). The structure, or ostensive aspect, refers to the routine patterns, and the agency, or performative aspect, refers to the enactments (Feldman & Pentland, 2003; Pentland & Feldman, 2005). To illustrate, in Act I, the nine people involved in the trauma case held common understandings of how routines should unfold, i.e. ostensive aspects, which enabled the coordination of activities among them, evidenced by the smooth performance of tasks, i.e. performative aspect. If the routine patterns held by the various individuals in the trauma room would not have been shared to certain extent, which is not that unusual in organizations, staff members could have enacted their parts in the routines differently, probably creating conflicts in the coordination of tasks. Even when holding shared understandings of how tasks should be accomplished (structure, ostensive aspect), people could have chosen to do otherwise (agency, performative aspect). However, as evidenced in Act I, their performances were in line with shared understandings of what to do. Considering routines as dualities of structure and agency, a vast amount of studies have contributed to contemporary understandings of routines in organizations as enablers of both stability and change (Becker, 2004; Feldman & Pentland, 2003; Pentland, Hrem, & Hillison, 2011).

Despite having grown into different research fields, which has resulted in a clear theoretical disconnect, scholars in both camps have been doing the same, i.e. studying patterns of action. Notwithstanding their strong coexistence in practice, only a few scholars have gone a step further and acknowledged connections between roles and routines. To illustrate, routine studies have highlighted that, because individuals have different roles in organizations, they view and therefore enact routines differently (e.g. Cacciatori, 2012; Turner & Rindova, 2012; Zbaracki & Bergen, 2010). While this is a relevant observation, however, studies
in either field emphasize one phenomenon to the detriment of the other. For example, in routine studies, roles are rarely explored in detail but instead treated as job descriptions, normative in character (Barley & Kunda, 2001). Thus, while there are outstanding similarities in the ideas exposed in both fields, such as the striking resemblance between the conceptualizations of roles and routines as dualities of structure and agency, scholars within both fields have largely overlooked the potential and relevance of understanding their interplay theoretically and practically.

Both in theory and practice, roles and routines aid individuals in flexibly performing work and successfully achieving organizational goals, by giving them enough discretion to exercise agency, while providing structure. Considering the central importance of roles and routines in organizations, thus, the dearth of research regarding their interplay is surprising. In particular, looking at both literatures, a few shortcomings become evident.

First, as already noted, while some scholars have hinted at the existence of connections between roles and routines, studies in each field stress one of the two phenomena, therefore failing to account for the existence of multiple role and routine patterns simultaneously. Second, although it has been acknowledged, separately, that different role and routine patterns may exist (e.g. Barley, 1990; Turner & Rindova, 2012; Zbaracki & Bergen, 2010), little is known about how these patterns are enacted in concert. This limits the development of knowledge regarding how these patterns are developed (Danner-Schröder & Geiger, 2016), the effects of having multiple patterns (Pentland & Feldman, 2008a), and the differences and/or similarities between routine patterns held by individuals in different roles (Turner & Rindova, 2012). Third, scholars have noted that the influence of context on how work is accomplished in organizations is easily ignored (Bechky, 2006; Johns, 2006). For instance, many studies take the existence of familiarity for granted. Having experience working together, i.e. familiarity, is said to help individuals perform roles and routines better, as people can anticipate each other’s actions and act accordingly (Okhuysen & Bechky, 2009). However, organizations such as the emergency department are increasingly relying on fluid personnel, which means that co-workers do not always know each other (Bechky, 2006; Valentine & Edmondson, 2015). This is particularly relevant when organizations are also faced with other contextual contingencies that require enacting informal and emergent patterns, which due to their nature are easily overlooked (Okhuysen & Bechky, 2009). The understanding of how roles and routines are performed in such organizations is rather scarce.

1 These will be reviewed in the next chapter.
In order to address the outlined gaps, I set out to answer the following three sub questions:

- Why are roles and routines flexible?
- How do roles and routines interplay?
- What contextual aspects influence which patterns come into play?

Each of these sub questions aims at bridging the gaps in current understandings of the interplay of roles and routines. Further, taken together, these sub questions provide an answer to the main research question posed earlier.

As already pointed out, how roles and routines interplay to enable flexible performances has not been theoretically addressed. Still, as illustrated in Act I, roles and routines are essential to, and have to work in order to uphold, organizations. In order to allow for exploring the research questions, therefore, the empirical setting chosen had to make this interplay not only visible but also evidence its criticality for the operations of the organization. Further, the theoretical gaps highlighted before served as additional criteria in selecting the case. Building on the idea that roles and routines are deeply intertwined, coming together in performances, an emergency department was deemed a suitable setting to undertake this study. Generally speaking, emergency departments are characterized by strongly defined roles, in terms of professions, and strictly formulated routines (Valentine & Edmondson, 2015). Nonetheless, even when personnel are not supposed to deviate from routines for reasons of safety, operating under conditions of environmental uncertainty and time constrains (Argote, 1982) requires adapting in order to deal with unexpected events (Weick & Sutcliffe, 2001) as the situation unfolds (Bechky & Okhuysen, 2011; Danner-Schröder & Geiger, 2016; Faraj & Xiao, 2006). Improvising, or “freelancing”, thus, may take place more often than expected, and may even mean going against established procedures (Bigley & Roberts, 2001). Consequently, roles and routines may not always be followed at face value, which coupled with the need for reliable performance, increases the relevance of studying such environments (Faraj & Xiao, 2006).

The empirical setting to this study, an emergency department at a Swedish university hospital, provided a case that made all these challenges explicit because of its particularities. Being a university hospital, a lot of the staff working there consists of medical and nursing students, new grad doctors doing their internships to get their license, licensed doctors undertaking their specialty training, specialist doctors, registered and assistant nurses, among others. This meant that individuals in a wide variety of roles could be observed performing the same routines. Further, being training an important organizational goal means
that the emergency department counts with staff members with varying levels of experience, educational background and skills. Nonetheless, the emergency department works with a deindividualized role structure, which means that roles are set and people are expected to fill in these roles, in spite of individual differences. Not considering individual differences, a deindividualized role structure therefore means that no matter who performs a certain role, the expected role patterns are the same for everyone. Individual differences, nonetheless, make for diverse team compositions and influence the development of role and routine patterns, which in turn shape the ways in which interdependent tasks are accomplished. This is intensified by two other factors. First, there are two working modes (day and night) in the emergency department, which imply very different ways of organizing work. Second, there is a mix of permanent and temporary (rotating-through) staff and staff members’ shifts change every day. This means that individuals rarely know whom they will be working with until they get to work. Furthermore, it means working with people with whom one may or may not share a history of prior interaction and/or organizational goals, and therefore familiarity cannot be taken for granted. Apart from differences in individuals and their relations, the number of incoming patients at any time, their symptoms and acuity, cannot be predicted, which increase the uncertainty under which individuals work.

These characteristics of emergency departments are said to make the coordination of work difficult (Valentine & Edmondson, 2015). Even when the emergency department relies on a deindividualized role structure and organizational routines in coordinating tasks, differences in levels of experience, familiarity, and patients, among others, make organizing in this setting a challenging and uncertain endeavour. Under these circumstances, it is evident that how roles and routines are accomplished plays a critical role in ensuring successful outcomes. Indeed, despite these particular features, which may seem disparate and messy to an outsider, staff members at the emergency department do perform roles and routines in a fairly consistent manner most of the time. Nonetheless, while this empirical puzzle points at the importance of the interplay of roles and routines in understanding how people accomplish work in flexible ways while ensuring stability, this issue has not been theoretically addressed.

In essence, taking roles and routines as patterns of actions, which provide structure but also allow individuals to exercise their agency in performances, this thesis explores how both roles and routines enable flexible performances through their interplay. Following the research questions posed earlier, therefore, the overall purpose of this study is,
Outline of the thesis

This dissertation is structured around nine chapters. Chapter 2 introduces the reader to the theoretical background underpinning this thesis. Considering roles and routines as patterns of action, a review of the two fields as well as contemporary understandings of the connections between the two phenomena are presented. After highlighting the existing gaps regarding their interplay, chapter 3 presents the research design, including the methodological choices made in undertaking this research endeavour. Chapter 4 introduces the reader to the Swedish healthcare system and the emergency department, which constitutes the empirical setting of this study. The chapter includes a description of the staffing and the journey that patients follow, setting the basis for the rest of the thesis. Chapters 5 and 6 introduce the different role and routine patterns that staff members enact in jointly performing roles and routines. Chapter 7 looks at the specifics of situated performances, highlighting the role of individual, interpersonal and environmental aspects in the selection and development of patterns. In chapter 8, the findings of this study are discussed in relation to existent literature, showing how this thesis builds on and extends previous research as well as the implications for practice. Chapter 9 recapitulates the study and puts forth its theoretical and practical contributions, limitations and suggestions for further research.
2. Theoretical background

Laying the theoretical foundations of the study, this chapter is structured around three main sections. First, the literatures on roles and routines are explored separately to highlight the history behind these two areas and their importance for organizations. Second, the two areas are explored further by reviewing studies that have touched upon both roles and routines in organizations and how these have contributed to current understandings. Third, similarities in the development of the fields are put forth to emphasize the common grounds that the literatures share and on which this study builds. Taking into consideration the contributions made this far, a discussion on what has been missing is presented, arguing for the relevance of unpacking roles and routines in furthering the understanding of their interplay. In essence, the last section clarifies the theoretical gap that sets the starting point of this study and its importance. A theoretical framework bringing together roles and routines closes the chapter and will serve as the guide for the rest of the dissertation.

2.1. Roles and routines in organizations

Roles and routines are important means that organizations for example employ in coordinating and accomplishing work (Okhuysen & Bechky, 2009). Having followed different paths, the next two subsections explore each of the literatures separately. In the first subsection, a review of roles is presented, which is structured around three main areas. First, I argue for the relevance of roles in organizations. Second, while roles are present in every organization, the origins of role theory trace back to sociological and psychological traditions, outside organization theory. I will bring two out of the five predominant perspectives in the history of roles into my study, which lay the basis for my view of roles. Third, based on my conceptualization of roles, I present an account of organization studies that show what roles do to, and in, organizations.

In the second subsection, a review of routines is presented. Following a similar structure, the importance and role of routines in organizations, as well as a review of the two main streams in the field, are discussed. Contrary to role theories, the two main streams within the routines field build on organizational economics and organization theory. Further, while the main five streams in role theory have developed in parallel, the two streams in the routines literature have been established at different points in time. On the one hand, the capabilities stream, which is the most traditional perspective on routines, dates back to foundational work on organizations. The routine dynamics stream, on the other hand, was developed much later as a reaction to the former. Therefore, the discussions around perspectives on roles and routines will take different forms. When it
comes to roles, the streams are discussed in a concurrent manner, as my intention is to combine two traditional streams within role theories to build my conceptualization of roles. With respect to routines, the streams are discussed chronologically, as the more contemporary perspective on routines, which is the one I adhere to, already combines elements from the traditional capabilities stream into its conceptualization of routines. Positioning the study in its theoretical background, thus, these two subsections serve to establish my take on roles and routines as patterns of action.

2.1.1. Roles in organizations
Roles are patterns of behavior that are characteristic of an individual and which may be shared among people occupying a same social position (Biddle, 1986). Studies in a variety of settings, such as film production projects (Bechky, 2006), medical trauma centres (Faraj & Xiao, 2006; Klein, Ziegert, Knight, & Xiao, 2006), emergency departments (Valentine & Edmondson, 2015) and professional service organizations (Mantere, 2008), provide extensive evidence of how organizations are built around role systems (Barley & Kunda, 2001; Katz & Kahn, 1966, 1978). Roles specify authority and responsibility, which helps organizations to accomplish work through the coordination of tasks among individuals (Bechky, 2006). By setting boundaries and establishing relationships, roles enable the development of common perspectives, monitoring and updating work, and substituting for others (Okhuysen & Bechky, 2009). First, because roles are relational (Barley, 1990), they enable information sharing and thus the creation of shared understandings about work (Bechky, 2006). Second, by defining responsibilities, roles enable to monitor how work is progressing and therefore keep interdependent parties updated and hold them accountable (Okhuysen & Bechky, 2009). Knowing what each role entails and developing shared understandings about it, allows individuals to substitute for each other (Bechky, 2006; Okhuysen & Bechky, 2009).

Despite being of central importance to organizations, however, role theories grew out of sociological and psychological traditions, outside organization theory, which have helped advanced an understanding of how people work in organizations. Therefore, before going into a more detailed discussion of roles in organizations, a brief account on these perspectives is due.

Sociological role theories provide unique insight into human behaviour in social settings. Two perspectives, namely structuralism and symbolic interactionism, are particularly relevant to understand roles in organizations. Because structuralism emphasizes social structures, and symbolic interactionism highlights the role of agency, these two perspectives can be deemed complementary in developing a holistic understanding of roles, which is in line
with my view of roles. The other three perspectives, namely cognitive, functional and organizational role theories, are disregarded because of their underlying assumptions. First, cognitive role theory, despite focusing on the individual, tends to ignore the embedded character of roles and individual interaction (Biddle, 1986), which is not coherent with the approach adopted in this thesis. Second, functionalism deems roles as a set of prescribed behaviors that are associated to an individual’s social position in a stable system (Hilbert, 1981), which ignores that social systems are not necessarily stable and roles do not always correspond to social positions (Biddle, 1986). Third, while organizational role theory should be of interest to this study due to its focus on organizations, the treatment of individuals is limited to norm followers, as roles are considered to grow out of normative expectations (Biddle, 1986). These two latter perspectives, similar to the capabilities view espoused by some organizational scholars, imply considering individuals as mindless actors, which is far from the assumptions underlying this thesis. Disregarding these three perspectives, I adopt a different conceptualization of roles drawing upon the two remaining views: structuralism and symbolic interactionism.

On one hand, structuralism takes roles as determining behaviour: people act according to expectations that society sets on their roles (Powers, 1981). In this stream of research, a role is defined “as a bundle of norms and expectations - the behaviours expected from and anticipated by one who occupies a position (or status) in a social structure” (Baker & Faulkner, 1991, p. 280). The focal point of structuralism is social structures, therefore marginalizing individuals (Biddle, 1986; Giddens, 1984) and emphasizing role imposition (Powers, 1981), i.e. roles are constrained and determined by norms and prescriptions. As such, individuals are like actors in a theatre play where the surrounding structure constrains their performances through scripts, the director, fellow actors and audience (Biddle & Thomas, 1966). Following this conception of roles, actors have little or no room for improvising their parts in the play. In general, this is very much the approach to roles that organization theorists have adopted, treating roles as normative and equating them to job descriptions (Barley & Kunda, 2001). However, while this might be useful when normative expectations are coherent, such a perspective fails to explain how individuals face competing expectations, despite structuralists recognizing these exist (Biddle, 1986; Handel, 1979).

On the other hand, symbolic interactionism, rooted in Mead’s (1934) work, puts forth the importance of agency in the making of roles (Biddle, 1986; Hilbert, 1981), emphasizing social systems as flexible instead of stable, in opposition to structuralists (Handel, 1979). Role improvisation, “the extent to which the

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2 See Biddle (1986) for a thorough review on the five main perspectives on roles, namely structural, symbolic interactionist, cognitive, functional, and organizational, role theories.
organization and meaning of roles are invented by the people immediately involved in a relationship" (Powers, 1981, p. 289), is thus the predominant focus of interactionists (Biddle, 1986). This means that, despite acknowledging the existence of structural constraints, interactions remain the main focus of study (Biddle, 1986; Handel, 1979). Going back to the theatrical metaphor, scholars sympathizing with symbolic interactionism focus, not on the script itself, but on how actors interpret and enact their parts in a play and the effects that this has on both actors and audience (Biddle, 1986). Turner, one of the main advocates of this perspective, defines role as “a collection of patterns of behaviour which are thought to constitute a meaningful unit and deemed appropriate to a person occupying a particular status in society (e.g., doctor or father), occupying an informally defined position in interpersonal relations (e.g., leader or compromiser), or identified with a particular value in society (e.g., honest man or patriot).” (Turner, 1956, p. 316) This definition acknowledges the relational character of agency (Dionysiou & Tsoukas, 2013) which implies the existence of complementarities between symbolic interactionism and structuralism.

While these perspectives are thought of as opposing positions in role theory (cf. Baker & Faulkner, 1991; Callero, 1994; Handel, 1979; Hilbert, 1981), they both have useful elements that can further the understanding of roles in organizations. Structuralism, on the one hand, provides the analytical tools to explore how role expectations constrain agency. Symbolic interactionism, on the other, allows to study agency through a focus on role enactments and how these shape role expectations. While each perspective alone fails to account for the relationship between role expectations and enactments (Biddle, 1986), taking into account the existent complementarities3, one can adopt a negotiated-order perspective (Barley, 1990; Bechky, 2006) through a combination of both. By doing so, roles are seen as consisting of dualities of structure and agency, which are mutually constituted (Callero, 1994; Giddens, 1984). Hence, combining the structuralist and symbolic interactionist perspectives, roles can be considered as dynamic systems formed by role patterns and performances. Figure 1 illustrates this conceptualization of roles.

![Figure 1. Role dynamics](image)

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3 See Handel (1979) for a discussion on this.
Roles embody structure and agency, which interact with each other resulting in the internal dynamics of roles. On one hand, the structure refers to the expectations that the person occupying a role has of him or herself and also the expectations that others have on that role. For example, in a study of professional service firms, Mantere (2008) shows that top managers have four role expectations on middle managers, namely to implement strategies, facilitate adaptability, synthesize information, and champion ideas. These expectations are role patterns, which can result from a variety of sources, such as past experiences, norms or prescriptions (Biddle & Thomas, 1966). On the other hand, agency is materialized through performances. These are the enactments of roles, i.e. the situated actions that a person takes in performing his or her role, which can meet or not meet the related expectations or role patterns. To illustrate, in her study of two hospitals, Heaphy (2013) shows how differences in the role expectations held by patients, families and staff members create breaches, as role performances by one group conflict with the expectations held by others.

Going back to the theatrical metaphor, the performance of roles does follow a script but is also improvised as the play unfolds. This means that individuals play a great part in the enactment of roles, which leads to flexible performances, rather than only normative enactments of expectations that determine human behaviour. Still, role performances are constrained by the role patterns: “a role has a cognitive dimension (Callero 1991) [...] which guides action directly and indirectly. A role, however, has also an “actual” existence in that it is observable as it is enacted [...] in particular encounters” (Callero, 1994, p. 234). Structure and agency, affect each other by creating and recreating themselves, i.e. while the role patterns can guide the performances, the latter can change or stabilize the role patterns. Returning to my definition of roles presented in the beginning of this section, I therefore argue that roles are patterns of action, which may be expected from and by someone occupying certain position but which are also invented by the individual to certain extent. With this conceptualization of roles in mind, I turn back to roles in organizations.

As already introduced, organization theorists have shown the ubiquity of roles in organizations, acknowledging their importance in a variety of processes such as high-reliability organizing (Bigley & Roberts, 2001), strategizing (Mantere, 2008), identity work (Järventie-Thesleff & Tienari, 2016; Pratt, Rockmann, & Kaufmann, 2006), and sensemaking (Maitlis, 2005; Maitlis & Christianson, 2014). However, being their main focuses on other areas, most organization studies that touch upon roles take them as given, emphasizing stability (Barley & Kunda, 2001), and thus black boxing the internal dynamics depicted in Figure 1. By black boxing I mean treating a role or any other phenomenon as an established entity, disregarding its internal properties and focusing only in its inputs and outputs (Harman, 2009). Nonetheless, a few organization scholars have
considered the conceptualization of roles as dualities of structure and agency, making notable contributions to the understanding of role dynamics in organizational settings. Table 1 summarizes these studies, which are explored below. It is worth to note that this review of studies is not intended to be exhaustive, but to provide evidence for the importance of studying the internal dynamics of roles in organizations.

Table 1. Studies of roles in organizations

<table>
<thead>
<tr>
<th>Author/s</th>
<th>Research question</th>
<th>Context</th>
<th>Method</th>
<th>Key findings</th>
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<tbody>
<tr>
<td>Barley (1986)</td>
<td>How does technology shape institutional patterns?</td>
<td>Two radiology departments</td>
<td>Ethnography: observation, documents, interviews</td>
<td>As new technologies modified roles and patterns of interaction, technologists took over activities that had earlier been responsibility of radiologists.</td>
</tr>
<tr>
<td>Barley (1990)</td>
<td>How does technology shape organizational structure?</td>
<td>Two radiology departments</td>
<td>Ethnography: observation, documents, Sociometric questionnaires</td>
<td>New technologies changed the roles of radiologists and technologists and their role relations. As new technologies required the development of new skills and performance of new activities, each of these roles branched out and new roles emerged.</td>
</tr>
<tr>
<td>Morgeson et al. (2005)</td>
<td>When do individuals choose to broaden their roles?</td>
<td>US-based MNC</td>
<td>Survey of 871 administrative employees</td>
<td>Individuals take on extra role behaviours when they are given the opportunity and have the capability to do it. Job and individual characteristics influence role breadth.</td>
</tr>
<tr>
<td>Bechky (2006)</td>
<td>How do temporary organizations coordinate work?</td>
<td>Four film projects</td>
<td>Ethnography: observation, interviews, documents</td>
<td>Two structural features of the context influence how role expectations and enactments interplay. Three practices are used in communicating role expectations through interactions, which recreate role structures.</td>
</tr>
<tr>
<td>Mantere (2008)</td>
<td>How do role expectations influence middle manager agency?</td>
<td>12 European professional service organizations</td>
<td>Case studies: interviews, documents</td>
<td>Eight conditions enable middle managers' agency in fulfilling the role expectations that top managers have on them. The lack of these conditions, in turn, constrain agency.</td>
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Going into the details of these studies, Barley (1986, 1990) shows how the introduction of new technologies can change roles and the relations between
organizational members. First, he shows that with the old technologies organizational roles were the same for every professional falling in any of two occupational groups. However, the new technologies required performing new activities and the acquisition of new skills as part of these two work roles. New technologies therefore required new performances, which in turn shaped the development of new role patterns, triggering changes in the role structures (see Figure 1, p. 12). Second, as not everyone developed the necessary skills to operate the new technologies, the original roles bifurcated into various roles. As new role patterns were developed, younger professionals, being more knowledgeable on the new technologies, became experts in these, while older organizational members were relegated to the use of traditional technology, creating a division within the original roles. Third, changes in the tasks and skills needed in the roles, meant changes in how these role incumbents related to others, even triggering role reversals, as professionals in one role, traditionally seen as less competent than individuals in the other role, took over activities belonging to the latter role. Barley’s ethnography shows that as new role patterns are developed and enacted, they modify existing roles and even create new ones.

Assuming that people enact the same role differently, Morgeson, Delaney-Klinger and Hemingway (2005) show that individuals take on extra role behaviours, i.e. they broaden their roles, when they are given the opportunity (e.g. job autonomy) and have the capability (e.g. cognitive ability and job-related skills). The higher the job autonomy, cognitive ability and job-related skills, the more one will broaden a role, and the better one will perform in the job. The studies by Barley (1986, 1990) also illustrate these results. Younger organizational members developed the necessary skills to operate new technologies, as they had the capability, and therefore could take on activities that were not originally part of the traditional roles. Further, they were not only given the opportunity but were encouraged to do so. On the contrary, older professionals did not broaden their roles, for two reasons. First, due to the autonomy granted by their roles, they had the opportunity to decide whether or not they wanted to get involved with the new technologies. Second, because they did not have the capability needed to operate the new technologies and probably were not interested in developing the required skills, they chose to confine themselves to operate the traditional technologies. This means that, although the role pattern associated to a job may originally be the same for all role incumbents, job and individual characteristics will influence how the role performances unfold, shaping in turn the role patterns.

Bechky (2006) shows how temporary organizations rely on role structures in accomplishing work, and how individuals negotiate role patterns through the enactment of roles. The structural context in which role patterns and performances interplay, influences the latter through career structure and the nature of projects. The structure of career progression means individuals learn
expectations on various roles by enacting them and interacting with others, as it is very common for early-career crew members to take on different roles before settling into one. In this way, career structure reinforces existing role systems in the industry. The social pressures guide role performances, also reinforcing role structures and promoting role conformity. Within this context, and through different practices, namely thanking, admonishing and joking, crew members enact and communicate role expectations, which are both given by, and influence, enduring role structures.

Looking at the relationship between role patterns and performances, Mantere (2008) shows how role expectations from top managers both enable and constrain middle managers’ agency. Taking four generic activities as the role patterns associated to middle managers, eight conditions (narration, contextualization, resource allocation, respect, trust, responsiveness, inclusion and refereeing) are said to enable middle managers to have an influence on their role performances. Because roles are relational (Barley, 1990), these conditions are in turn role expectations that middle managers have on their top managers. When these conditions are perceived as missing by middle managers, they will not take the risk and instead “stick to one’s habitual practices” (Mantere, 2008, p. 306) in performing their roles to fulfil top management’s expectations. Overall, recognizing middle managers as knowledgeable agents, Mantere (2008) provides evidence on the relationship between role patterns and performances illustrated in Figure 1 (p. 12).

All in all, these studies support the idea that roles are patterns of action, which can be negotiated in situ through role performances (Barley & Kunda, 2001; Bechky, 2006), an understanding of roles which I adhere to in this study. First, the previous studies show that role patterns are multiple and individuals play a big part in how a role is enacted, becoming active crafters of their own roles (Morgeson et al., 2005). Second, differences among workers performing one role may change the shared understandings about what the role entails, an even trigger the development of new roles based on these individual differences. Third, new role patterns may also emerge due to external factors, such as the introduction of new technology (Barley, 1986, 1990). Fourth, as roles are relational, and thus connect people through social networks, changes in roles are likely to alter the patterns of interaction among role incumbents (Barley, 1990; Bechky, 2006). Fifth, despite allowing flexible performances, these studies also provide evidence of the idea that roles are not all about improvisation but provide a structure in organizations, which further supports the conceptualization of roles adopted in this study.

In light of the arguments put forth and taking into consideration that individuals do not perform their roles in isolation but in relation to others with whom they
work interdependently, this conceptualization of roles holds promise in furthering the contemporary understanding of organizational routines. Before exploring the implications of adopting such an approach though, and having introduced roles in organizations, let’s first turn to the role of routines in organizations.

2.1.2. Routines in organizations

Similar to roles, organizational routines are at the core of how work in organizations is accomplished (Cyert & March, 1963; March & Simon, 1958; Nelson & Winter, 1982; Simon, 1947). Routines, defined in this study as the “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (Feldman & Pentland, 2003, p. 95), have increasingly become a focus of attention for organization theorists due to its pervasiveness in organizational life. Budgeting (Feldman, 2003), pricing (Zbaracki & Bergen, 2010), bidding (Cacciatori, 2012), and merchandising (Sonenshein, 2016) are but a few examples of routines that individuals enact in performing organizational tasks. Routines enable coordination, economize on cognitive resources, reduce uncertainty, store knowledge and provide organizations with stability (Becker, 2004). In addition to this, routines afford change (Feldman & Pentland, 2003; Pentland et al., 2011). Organizing interdependent work among individuals, routines also support task completion, hand-off work, bringing groups together and creating a common perspective (Okhuysen & Bechky, 2009). Because routines are patterns of interdependent actions, they make the accomplishment of work activities visible. As routines are accomplished, they help coordinate the flow of work between groups in organizations. Connecting interdependent parties in the accomplishment of work activities, routines enable groups to come together and develop shared understandings about tasks (Feldman & Rafaeli, 2002; Okhuysen & Bechky, 2009).

Contrary to role theory where the different perspectives developed in parallel, as noted earlier, the two main streams studying organizational routines initiated at different points in time, even though they co-exist today. Also, historically, routines have received more attention than roles within organization theory. Due to this, in what follows, I review the history of routines a bit more extensively and in a chronological manner, starting from its origins and looking at how research has evolved over time.

Although not shaped as a field per se until a few decades ago, some scholars have attributed the origins of the routine concept to the Carnegie School (e.g. Parmigiani & Howard-Grenville, 2011; Salvato & Rerup, 2011), while others associate it to Nelson and Winter’s (1982) *An Evolutionary Theory of Economic Change* (e.g. Felin & Foss, 2009; Gavetti, Levinthal, & Ocasio, 2007). This
discrepancy can be mainly attributed to the fact that the latter scholars consider that “the routines literature is heavily collectivist in nature” (Felin & Foss, 2009, p. 163), which departs largely from the individualist focus of the Carnegie School (Gavetti et al., 2007). Despite this disagreement, it is widely accepted that the Carnegie School (Cyert & March, 1963; March & Simon, 1958; Simon, 1947) has laid the foundations of much later work in organization theories (Gavetti et al., 2007; Parmigiani & Howard-Grenville, 2011), including the development of the routines field. These early studies have particularly referred to individual habits and standardized practices (Simon, 1947), performance programs (March & Simon, 1958), and standard operating procedures (Cyert & March, 1963), notions that have been later likened to organizational routines. However, while one of the fundamental underpinnings of the Carnegie School has been the idea of bounded rationality (Gavetti et al., 2007) and, thus, the importance of individual cognition, Nelson and Winter’s (1982) introduction of the notion of individual skills, did not follow this interest on the individual but rather served as an analogy to organizational routines (Felin & Foss, 2009). This departure from the original foundations of the Carnegie School is crucial to understand the two main perspectives developed in the routines field, which not only arose from different literature streams (Becker, 2004; Parmigiani & Howard-Grenville, 2011), but also have studied routines at different levels of observation (Becker, Lazaric, Nelson, & Winter, 2005).

Nelson and Winter’s (1982) work, rooted in evolutionary economics, is regarded as the most influential piece in the routines literature (Becker, 2004; Felin & Foss, 2009; Parmigiani & Howard-Grenville, 2011) and has fostered one of the predominant streams in the field: the capabilities perspective (Feldman & Pentland, 2008; Parmigiani & Howard-Grenville, 2011). In their work, they define a skill as “a capability for a smooth sequence of coordinated behaviour that is ordinarily effective relative to its objectives, given the context in which it normally occurs” (Nelson & Winter, 1982, p. 73), which they then transfer to routines, i.e. they refer to organizational routines as the counterpart to individual skills (Abell, Felin, & Foss, 2008; Felin & Foss, 2009; Parmigiani & Howard-Grenville, 2011). Because the main focus is on capabilities\(^4\), which are considered to be highly dependent on the routines that a firm has (Teece, Pisano, & Shuen, 1997), scholars in this tradition take routines as the fundamental unit of analysis (Felin & Foss, 2010; Gavetti et al., 2007) to study their impact on organizational performance\(^5\) (Parmigiani & Howard-Grenville, 2011), as routines themselves are seen as sources of performance (Cohen & Bacdayan, 1994). Studies from the

\(^4\) A capability can be defined as “a high-level routine (or collection of routines) that, together with its implementing input flows, confers upon an organization’s management a set of decision options for producing significant outputs of a particular type” (Winter, 2000, p. 983; 2003, p. 991).

\(^5\) The overall consensus is that organizational capabilities provide firms with competitive advantage (Collis, 1994; Teece et al., 1997).
capabilities perspective have been useful in analysing inputs and outputs of routines as unities (Feldman & Pentland, 2008; Parmigiani & Howard-Grenville, 2011), which has helped to advance knowledge regarding the stability afforded by routines (Ashforth & Fried, 1988; Becker, 2004; Cohen & Bacdayan, 1994). Nonetheless, taking routines as the building blocks of capabilities, supposes that they mainly function as black boxes (Pentland & Feldman, 2005; Feldman & Pentland, 2008) through which capabilities are operationalized at lower levels (Felin & Foss, 2010). Viewing routines as wholes (e.g. Zollo & Winter, 2002), this largely presumes that individuals act as expected, therefore performing routines to the letter (Parmigiani & Howard-Grenville, 2011). Going back to the theatrical metaphor, this resembles the structuralist perspective on roles, where actors’ parts are constrained by the scripts, which they blindly follow in performing the play over and over again, in exactly the same way.

The capabilities perspective, although contributing extensively to the routines field, did not do justice to the internal dynamics of routines. Emphasizing organizational stability promotes an inertial view on routines, which is only one side of the coin. This was challenged by, and triggered the emergence of, the routine dynamics perspective (Feldman & Pentland, 2008; Parmigiani & Howard-Grenville, 2011; Pentland & Feldman, 2005), rooted in organization theory. Scholars in this practice-based stream began to open up the black box, showing that change, in particular endogenous change, is also enabled by routines (Feldman, 2000; Feldman & Pentland, 2003; Pentland et al., 2011). Putting their eye on the individual as responsible for routines, proponents of this perspective see routines as dynamic and changing due to the influence of human behavior (Feldman & Pentland, 2003; Howard-Grenville, 2005; Parmigiani & Howard-Grenville, 2011). The fact that people enact routines makes them dynamic rather than inertial. By doing this, this stream of research offers a new perspective where routines are seen as effortful accomplishments (Pentland & Rueter, 1994).

During the past couple of decades, thus, routines research has shifted to acknowledge the performativity of routines, following a practice turn in the social sciences (Schatzki, Knorr Cetina & von Savigny, 2001). In this prospering stream of research, routines have been conceptualized as generative systems formed by ostensive and performative aspects (Feldman & Pentland, 2003; Pentland & Feldman, 2005). Building on Giddens’ (1984) structuration theory, and other social theorists such as Bourdieu (Parmigiani & Howard-Grenville, 2011), routines are said to consist of a duality of structure and agency, which are mutually constitutive (cf. Giddens, 1984). While the ostensive aspect, i.e. structure, refers to “the abstract, generalized idea of the routine, or the routine in principle”, the performative, i.e. agency, points at the “specific actions, by specific people, in specific places and times [...] the routine in practice” (Feldman &
Pentland, 2003, p. 101). Figure 2 illustrates my adaptation of this conceptualization of routines, which is the one adopted in this study. The performances, given by the situated actions that individuals take, represent the agential aspect of routines. The routine patterns, similar to the ostensive aspect, refer to the structure of routines.

![Figure 2. Routine dynamics](image)

By proposing a new theory that takes, not only structure but also, agency into account, the work of Feldman and Pentland (2003, 2008; Pentland & Feldman, 2005, 2007, 2008a) has made important contributions to the understanding of the dynamics of organizational routines. In particular, the conceptualization of routines as dualities of structure and agency has been one of the most influential works in the field, as it has closed the gap between routines as behavioural and cognitive regularities (Becker, 2004; Salvato & Rerup, 2011). Further refinements included Feldman and Pentland’s acknowledgment that “ostensive aspects [...] are not simply ‘shared understandings’”; they “are distributed and partial [...] multiple [...] inconsistent or conflicting.” (2008, p. 303) This means that multiple routine patterns can exist without the need of being concurring or agreeing. Still, the idea that routines embody a duality of ostensive and performative aspects has become widely accepted, and the foundation of many studies that followed (Parmigiani & Howard-Grenville, 2011).

Having paved the way for numerous subsequent studies, the contributions made within the routine dynamics perspective are plentiful. While I do not intend to discount these contributions, it would be impossible to review them all. Therefore, in what follows, I will go through some of the key studies that have helped to build up this conceptualization of routines, in order to provide a brief account of this understanding of routines in organizations. These studies are summarized in Table 2.
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<th>Author/s</th>
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<th>Context</th>
<th>Method</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pentland &amp; Rueter</td>
<td>How can nonroutine work display regularity?</td>
<td>Customer service centre of a software vendor</td>
<td>Case study: observation, archival sample of 335 calls</td>
<td>Routines are regular patterns of action that both constrain and enable agency. Routines define sets of possibilities among which reflective individuals can choose. Thus, performances of the same routine pattern may exhibit constrained variety.</td>
</tr>
<tr>
<td>Feldman (2000)</td>
<td>Why and how do routines change?</td>
<td>University’s housing department</td>
<td>Ethnography: interviews, observation, documents</td>
<td>Individuals change routines when actions (1) do not produce the intended outcomes, (2) produce unintended outcomes, or produce outcomes that (3) open up new possibilities or (4) fall short of ideals. Each of these types of outcome results in a change response. In (1) and (2), the response is to repair the routine; in (3), expand; in (4), strive.</td>
</tr>
<tr>
<td>Feldman &amp; Rafaeli (2002)</td>
<td>How do routines enable stability and change?</td>
<td>Conceptual paper</td>
<td></td>
<td>Connections between individuals in a routine enable the development of shared understandings. The latter informs the actions that sustain the routine pattern while allowing for contextual adaptations.</td>
</tr>
<tr>
<td>Feldman (2003)</td>
<td>Why do routines not change?</td>
<td>University’s housing department</td>
<td>Ethnography: observation, interviews, documents</td>
<td>Held understandings of how the organization operates and actions that individuals take in performing specific routines, influence each other. If intended changes are not in line with understandings, change will not happen.</td>
</tr>
<tr>
<td>Feldman &amp; Pentland</td>
<td>Why are routines a source of change and stability?</td>
<td>Conceptual paper</td>
<td></td>
<td>Routines are formed by ostensive (structure) and performative (agency) aspects, which interact with each other, enabling change and stability.</td>
</tr>
<tr>
<td>Pentland &amp; Feldman</td>
<td>How can routines be studied as units of analysis?</td>
<td>Conceptual paper</td>
<td></td>
<td>Three approaches are suggested: (1) studying the routine as a black box, (2) studying the separate parts (ostensive, performative, artefacts), (3) studying the relationships between parts.</td>
</tr>
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</table>
A study that boosted the emergence of this stream of research was that by Pentland and Rueter (1994), who introduced grammatical structures as an analogy to routines. The organizational routine is a language formed by performances (sentences) that can be broken down into subroutines (syntactic constituent) and these into moves (words). Considering routines as grammars acknowledges the fact that routines are not necessarily replicated in the same way every single time, but that they can present variations. As long as the variations in patterns of action comply with the grammatical model, Pentland and Rueter (1994) argue, it can be said that we are talking of a routine. This means that organizational processes that at the outlook could look as non-routine work could also be represented by routine patterns. In this way, the authors conciliate competing perspectives by “acknowledging that routinized behaviour is constrained and enabled by the cognitive structures of individual [...] the physical and social structures of the organization [...] and the individual effort and agency that gives rise to the particular patterns we observe” (Pentland & Rueter, 1994, p. 489).

Feldman (2000), same as Pentland and Rueter (1994), considers routines to be unchanging in general terms, but changing when zooming into the routine, i.e. the grammar or structure of the routine may remain the same through the different performances but the way in which the moves or subroutines are accomplished can vary (cf. Pentland & Rueter, 1994). Feldman (2000) further extends the work by Pentland and Rueter (1994) arguing that grammars can change, which represents an important contribution regarding endogenous change. Either individuals see new possibilities and expand the routine, or they become frustrated with its outcomes and therefore try to repair it or strive to make it better (Feldman, 2000). Until then, change had only been studied as external to routines. For example, a change in the organizational context or the introduction of new technology made necessary a change of routines. In contrast to this, Feldman (2000) takes the routine as a source of endogenous change itself and argues that routines present internal dynamics that include both, behavioural and cognitive aspects. Ideas, actions and outcomes interact to produce what we know as a routine. In this way, she highlights the role of individuals in enacting routines and argues that whatever their intention is, individuals do change the routine.

Feldman and Rafaeli (2002) further advanced the understanding of routine dynamics by introducing the concept of connections. Organizational members and the relationships established among them, enable the development of shared understandings regarding what should be done and why, through verbal and non-verbal communication. Routines operate at two levels: what understandings, at a micro level, and why understandings, at a macro level. In this way, routines enable participants to understand the broader context in which the organization
is, and the environment in which routines are performed, helping individuals to understand power relations and organizational identity. Furthermore, these two levels interact with each other enabling and constraining themselves. Differences in these levels result in diverse appreciations of routines. If one studies the routine at its micro level, adaptation will be more observable than if studying it at a macro level, where the routine seems more stable. Therefore, connections, created through or by routines, promote both, organizational stability and adaptability.

Feldman (2003) continued to develop this line of reasoning by showing a routine that did not change despite the explicit intention of the supervisors to change it. This failure to change suggests that performances are mindful rather than mindless, which are affected not only by the specific routine being undertaken but also by the way in which the organization operates as a whole, thus including also other routines and performances. As performances are tightly related to held understandings about how the organization operates, if the intended change in a routine goes against these understandings, it is likely that the subordinates will not adhere to it and change will not occur. Conversely, change is likely to take place if it is consistent with the understandings that people have about the organization. Similar to Feldman and Rafaeli (2002), this study shows that the relationship between performances and understandings helps to explain stability and change in organizational routines.

In their first joint paper, Feldman and Pentland (2003) argue that organizational routines can provide organizations with flexibility and change as routines are characterized by a duality of structure and agency (cf. Giddens, 1984). Based on the existing literature and empirical evidence, they propose a theory adding up agency to the traditional, inertial perspective on routines. Regarding structure, routines can be said to be functional, to reduce conflict, and to be the product of actions that take place as a result of an enabling structure. However, Feldman and Pentland (2003) argue that prevailing theories have not considered the fact that people perform routines and consequently there is a need of considering individual agency. This is reinforced by empirical evidence that shows how organizational routines are a source of change and variability. Considering the relationship between these two aspects, Feldman and Pentland (2003) propose that agency creates and recreates the structure while the latter enables and constrains performances. Using Latour’s (1986) vocabulary, they denote structure as the ostensive aspect, which is “the abstract, generalized idea of the routine, or the routine in principle”, and agency as the performative or the “specific actions, by specific people, in specific places and times […] the routine in practice” (Feldman & Pentland, 2003, p. 101). On one hand, actors use the ostensive aspect as a way of guiding their behaviours, accounting for actions taken and referring to activity patterns. On the other hand, the performative side
can be considered to create, maintain and modify the ostensive. Repeating and recognizing action patterns create the ostensive aspect, which can either be maintained or changed by performing the routine, as people can choose to deviate from the structure.

In their second article, Pentland and Feldman (2005) propose three approaches to the study of routines as units of analysis: to consider them as black boxes; to study the parts that form a routine, separately; and to study the connection between these parts and how they change. The idea of routines as generative systems (Figure 2, p. 20) is further developed and extended to the role of artefacts as attached elements to routines. Routines are internally formed by an interrelation of understandings (ostensive) and performances (performative), which at the same time can be related to external artefacts. Performances are characterized by improvisation, while the abstract schema of a routine can be likened to a script. Artefacts are considered as physical manifestations of the routines, which do not determine the performative nor are the ostensive aspects. On the performative side, artefacts may be considered as resources for action and on the ostensive side, as indicators of it. Pentland and Feldman (2005) argue that studying routines as black boxes is the most common approach, which is useful if the focus is on the routine inputs and outputs (Feldman & Pentland, 2008). However, to understand the routine dynamics, this approach is not the most appropriate as it does not allow to study the internal operations. Thus, apart from the black-box approach, Pentland and Feldman (2005) suggest two other approaches to unpacking routines and studying the constitutive parts: either one can single out and study the performative, ostensive or artefacts individually, or study the relationships and/or divergence between them, i.e. performances and understandings, performances and artefacts, and understandings and artefacts. From these three approaches, in this thesis I focus on the relationship between the ostensive and performative aspects of routines.

All in all, these studies show that agency, as much as structure, is an integral part of routines. This implies that routines are flexible (Howard-Grenville, 2005), that they are not only formed by a set of alternatives that individuals can choose from when enacting them (Pentland & Rueter, 1994), but people can change the existing alternatives that form a routine by, for example, expanding, repairing or striving to make routines better (Feldman, 2000).

The routine dynamics perspective (Feldman & Pentland, 2008; Parmigiani & Howard-Grenville, 2011), which I in this thesis adhere to, therefore portrays routines as a source of potential change in organizations (Pentland & Feldman, 2005). Triggering a vast amount of studies, which continue to extend the understanding regarding routine internal dynamics, this perspective has fostered an expansion in the application of routine ideas with the consequent recognition
of areas that deserve more attention. In particular, since routines started to be viewed as effortful accomplishments (Pentland & Rueter, 1994), an interest on what routine participants do when performing these patterns of action has arisen and continues to grow. Research has shown that, due to the situatedness of actions, organizational routines may or may not be enacted as intended (Parmigiani & Howard-Grenville, 2011). Sequential (Pentland, 2003a, 2003b) and performance variety (Danner-Schröder & Geiger, 2016) are for example two ways to explain how routines are enacted differently each time, which contributes to both stability and change (Feldman & Pentland, 2003; Pentland & Feldman, 2005; Pentland et al., 2011). A few studies have also shed light on the relational aspect of organizational routines and taught us about connections (Feldman & Rafaeli, 2002), the recreation of dual ostensive patterns (Turner & Rindova, 2012), and the role of interaction in recreating routines (Dionysiou & Tsoukas, 2013).

Focusing on the actions taken by individuals has been argued to “hold the key to increasing our understanding of the macro-dynamics of routines over time: formation, inertia, endogenous change, and learning.” (Pentland, Feldman, Becker, & Liu, 2012, p. 1485) In the past few years, this increased focus on actions has led to conceptualize routines as “a recursive cycle of performative aspects (specific performances in specific times and places) and ostensive aspects (enacted patterns)” (Feldman, Pentland, D’Adderio, & Lazaric, 2016, p. 506). This means moving towards a more detailed study of the processes involved in creating performative and ostensive aspects, recently labelled as performing and patterning (Feldman, 2016). Theorizing routines as cycles of performing and patterning allows to focus on the actions that constitute the flexible performances needed to adapt to a changing context.

The reviewed literatures certainly provide valuable insights into the flexible performances of roles and routines. Let’s now take a look at the relative few studies that have surfaced the relationship between the two areas.

2.2. Surfacing the relationship between roles and routines

The previous sections provide extensive evidence to support the relevance of studying roles and routines in organizations. Despite the existence of various perspectives in each field, there is a common understanding that roles and routines are critical aspects of every organization.

As already shown, both in theory and practice, roles and routines aid individuals in flexibly performing work while providing structure. Role-based structures are commonly developed to ensure a smooth functioning of organizations by establishing who does what, especially when fluid personnel is a key
organizational feature (Bechky, 2006; Valentine & Edmondson, 2015). Organizational routines, patterns of interdependent actions, also help to coordinate work by enabling accountability, predictability, and common understandings (Okhuysen & Bechky, 2009). A crucial difference between the two though, is that they require different levels of familiarity. Role structures may allow individuals to fulfil work tasks without knowing each other (Bechky, 2006; Valentine & Edmondson, 2015). Routines instead require knowing the other (Feldman & Rafaeli, 2002), or well-functioning communication (Jacobsson, 2011a), at least to some extent, in order to be able to anticipate others’ actions and coordinate interdependent work. Despite the organizational challenges brought about in simultaneously performing roles and routines, they have seldom been studied together in their respective fields.

Nonetheless, a few studies have surfaced the relationship between the two. In what follows, I go through some of these studies to highlight what we know about the relationship between roles and routines. The review below is structured around three perspectives, namely roles, routines, and coordination. First, I discuss the very scarce attempts to connect roles and routines from a role perspective. Second, I look at studies from the routines literature, which, building on the routine dynamics perspective, have gone a few steps further in acknowledging a connection with roles. Third, I go into coordination studies, which, taking both as means through which organizations accomplish work, have treated roles and routines in a more balanced manner, therefore coming even further in the search for a joint understanding. These studies are summarized in Appendix 1.

Probably because role theory originated outside organization theory, organization studies departing from the role tradition, which point at the relationship between roles and routines, are still rare. A study that does so is the one by Dierdorff and Morgeson (2007). Looking at consensus in role expectations, they find that the extent to which role patterns are shared among role incumbents depends on the level of interdependence, autonomy and routinization. In line with the capabilities perspective, they take routines as fixed and suggest that performing routines with others increases the level of consensus regarding what is expected from each role. This is in line with other studies that have suggested that familiarity is key to successfully performing routines (e.g. Feldman & Rafaeli, 2002; Valentine & Edmondson, 2015). However, Dierdorff and Morgeson (2007) argue that interdependence, taken as a different contextual factor, does decrease the level of consensus regarding role tasks. This is at odds with the routine dynamics perspective where interdependence is a key characteristic of organizational routines, as it establishes connections between individuals. Overall, this study shows that context influences held role patterns and how individuals enact their roles.
In the routines literature, scholars have looked at roles in studying routines as truces (Zbaracki & Bergen, 2010), the balancing of consistency and change in routine performance (Turner & Rindova, 2012), the development of new routines (Cacciatori, 2012), and routine selection for change (Nigam, Huising, & Golden, 2016), to name a few. These studies show that because individuals perform different organizational roles, they perceive routines differently.

Zbaracki and Bergen (2010) found that when major adaptations in price-adjustment routines were required, conflicts between marketing and sales roles arose. As the two groups held different understandings of the routine, significant changes required a negotiation of their ostensive aspects in order to perform the routine. Turner and Rindova (2012) also show how individuals in different roles develop distinct ostensive patterns of the same routine. Through the use of artefacts and the connections formed among crew members, employees developed two patterns, which enabled them to perform routines flexibly while keeping consistency. Customers instead, having limited connections with organizational members, developed only one pattern, expecting consistency in routine performance. In her study of the development of a new bidding routine, Cacciatori (2012) furthers the idea that individuals in different roles hold different understandings of routines. She shows that the introduction of a new artefact, which functioned as a boundary object between different roles, created conflicts as the artefact was developed from the cost consultants’ point of view, which differed from other occupational roles’ understandings of the routine. However, when bundled with other artefacts relevant to all roles, the resulting system led to a partial adoption of the intended changes in the routine. This study shows how occupation-specific artefacts have the potential to create role conflicts, which can be ameliorated by bundling artefacts in systems that pattern all roles’ behaviours. Nigam et al. (2016) studied the influence of organizational roles on the selection of routines for change in response to exogenous triggers. Similar to the previous studies, they find that roles influence individuals’ understandings of routines. Taking a step further, they argue that which routines are chosen for change depend on three role-related features, namely authority, goals and interpretive frames. As roles define what routines individuals perform as part of their jobs, they also do influence who has the authority to make changes and which routines people may or may not want to change, based on their goals and interpretive frames.

Other routine studies have emphasized the influence of individual characteristics, in specific roles, on routine performances. Turner and Fern (2012), for example, look at individuals’ experience in performing routines, which takes into account the “actors’ familiarity with their tasks, their context, and other participants performing the routine” (Turner & Fern, 2012, p. 1410). They show that experience stabilizes the routine, because people develop shared understandings
about the routine, while also enabling them to adapt to changes in the context when necessary. Looking at how a chain of boutiques achieve familiar novelty, i.e. maintaining consistency throughout stores while differentiating them to some extent, Sonenshein (2016) shows how individuals engage in processes of personalizing and depersonalizing routines. Artefacts, for example, serve as guides to ensure consistency across stores, therefore depersonalizing the routine. Nonetheless, they leave enough room for employees to enact routines creatively, fostering novelty and the personalizing of the routine. Auxiliary routines, such as recruitment, also enable familiar novelty through the hiring of individuals who can perform the role creatively (personalizing) while respecting the guidelines (depersonalizing). These studies point at the relevance of individual characteristics, such as personality and experiences, as people in the same roles perform routines differently.

All in all, these studies show that because individuals perform different roles, their understandings of what an organizational routine entails, and thus how it should be performed, may differ. In addition to this, they also evidence that individual characteristics have an influence on routine performances and promote the development of multiple routine patterns. Therefore, they support the idea that roles and routines are somehow interrelated. Nonetheless, the assumption that people think and act differently just because of differences in individual characteristics (e.g. Sonenshein, 2016; Turner & Fern, 2012), and because they have distinct organizational roles (e.g. Cacciatori, 2012; Zbaracki & Bergen, 2010), is a bit simplistic and does not go further into explaining why this happens.

To the best of my knowledge, the only notable exception that has made such an attempt is the contribution by Dionysiou and Tsoukas (2013). Taking a symbolic interactionist perspective to roles, they develop a theoretical framework to explain how individuals come to form ostensive and performative patterns through role taking (Mead, 1934). Focusing on the relational aspect of agency, they argue that taking the roles of others, i.e. viewing themselves from those positions, enable individuals to develop mutual expectations about one’s and others’ roles. This in turn allows individuals to align their actions in the joint performances of routines, as they can anticipate the other’s behavior, and develop shared understandings. As long as the latter are recreated, individuals’ actions will be interlocked into patterns, as people can anticipate each other’s actions. While this theoretical model is useful in understanding the influence of roles on routine performances and patterns, its underlying assumptions may not necessarily hold empirically. Dionysiou and Tsoukas, disregarding contextual influences, albeit intentionally, assume “an ideal-typical case of a new organizational setting, with only a few rules or artifacts exerting influence on the initial interaction of participants; [...] a small number of participants interacting
in conditions of copresence, who have had no history of prior interaction with each other; [...] participants in the joint activity are working toward a common goal through coordinating their individual lines of action." (2013, p. 189) Being a conceptual contribution, they do not specify how individuals come to align their actions and develop shared understandings in real time to ensure flexible but also consistent routine performances (LeBaron, Christianson, Garrett, & Han, 2016). Nonetheless, it provides a useful starting point to explore the relationship between roles and routines.

Despite acknowledging their interplay, empirical studies in the two literatures emphasize either roles or routines, putting most weight on one side of the scale. Tipping the balance to one side, the emphasis on one phenomenon is to the detriment of the other. For instance, with the exception of Dionysiou and Tsoukas (2013), in the few routine studies that suggest there is a relationship between roles and routines, roles are rarely the main focus of study. Instead, these studies open up routines and take roles for granted to a large extent, not exploring the internal dynamics that go into performing them in concert. In fact, as Barley and Kunda (2001) have pointed out, organization theorists tend to treat roles from a structuralist perspective where roles are seen as a set of prescribed behaviours that are associated to an individual’s social position in a stable system (Hilbert, 1981), which ignores that social systems are not necessarily stable and roles do not always correspond to social positions (Biddle, 1986). Conversely, role studies focus on the internal dynamics of roles, i.e. expectations and actions, but black box routines. Although scholars in both fields have moved towards a more practice-based approach to the study of each of these phenomena, they are still not unpacking both simultaneously.

Looking beyond the literatures on roles and routines, the relationship between the two has been approached in a more balanced manner from a coordination perspective. Organizations are increasingly required to accomplish work in fast-changing environments, which poses multiple coordination challenges (Faraj & Xiao, 2006; Valentine & Edmondson, 2015). In tackling some of these challenges, scholars in this field acknowledge roles and routines as complementary means for coordination, which aid organizational work, and therefore treat them at the same level.

As this literature has moved towards a practice perspective, coordination is now viewed as “a temporally unfolding and contextualized process of input regulation and interaction articulation to realize a collective performance” (Faraj & Xiao, 2006, p. 1157). Building on this definition, Okhuysen and Bechky (2009) show how roles and routines are two important means for coordination, as they create accountability, predictability, and common understandings. On one hand, roles structure the relationships between people and, as such, enable monitoring and
updating work progress, aiding accountability. Roles also enable substitution. As they structure responsibilities, people know who is responsible for what and can therefore step in others’ roles if necessary. Finally, roles enable information sharing, which facilitates the development of common understandings of work. Routines, on the other hand, provide maps for task completion. As they are patterns of interdependent tasks, routines aid individuals in observing work progress. Routines thus establish how work is to move from one individual or group to another. They also bring people together through task interdependency and help to create shared understandings.

Empirical studies on roles and routines as means for coordination also provide evidence for the importance of exploring their interplay. Edmondson, Bohmer and Pisano (2001) found that successful implementation of a new technology depended on both changing role relationships and routines. While roles changed from being sharply delineated to having blurry boundaries, routines moved from requiring top-down communication to face-to-face team work. Implementation success relied upon the ability of team members to embrace the required changes and adapt the enactment of roles and routines. Faraj and Xiao (2006) identify two sets of coordination practices in ensuring successful outcomes. On one hand, expertise practices, such as relying on routines and role structures, enable coordination under normal circumstances. On the other hand, when deviations from the normal occur, role boundaries are blurred and dialogic practices, which are improvised situated responses, are enacted instead. Emphasizing the contextual nature of work, environmental uncertainty and the need to adapt require the enactment of both formal and emergent coordination practices to ensure successful outcomes. Bechky and Okhuysen (2011) investigate how organizations deal with unexpected events. Because crew members share task knowledge and expectations on work flow, they handle surprises through three practices. First, role shifting, which implies temporally taking someone else’s role or substituting the other in some activities. Second, reorganizing routines, by changing goals and therefore adjusting through the performance of a different routine. Third, reordering work, by altering the sequence of activities. These studies show that, although roles and routines are formal means of coordination, their enactments are situated, which require individuals to adapt them following contextual changes.

Valentine and Edmondson (2015) take a step further in studying the relationship between roles and routines. Role-based structures are one way of dealing with coordination issues by enabling organizations to work with fluid personnel, as roles can be performed by anyone counting with the expertise needed to fulfil them (Bechky, 2006; Faraj & Xiao, 2006; Valentine & Edmondson, 2015). This makes roles deindividuated: “rather than personal traits, competencies, or history, [roles] shape and define interpersonal relationships.” (Klein et al., 2006,
At the same time, organizations have been moving towards team-based work, i.e. “work that requires multiple specialties to work together” (Valentine & Edmondson, 2015, p. 405). The latter seems to be at odds with role-based work, as it requires individuals to know each other in order to accomplish interdependent tasks. Thus, while performing “repetitive, recognizable patterns of interdependent actions” (Feldman & Pentland, 2003, p. 95) normally presupposes familiarity among staff members (Feldman & Rafaeli, 2002), role structures are meant to counteract the lack of familiarity by enabling unknown individuals to accomplish organizational work. Exploring this paradox, Valentine and Edmondson (2015) suggest that team scaffolds, i.e. “mesolevel structures that bound a set of roles and give them collective responsibility” (p. 408), are what enables fluid personnel to counteract the lack of familiarity, and coordinate work in role-based temporary teams. This study emphasizes not only the complementary of roles and routines in achieving coordination, but also the challenges brought about in enacting them in concert.

This literature has helped to advance an understanding of coordination as an emergent process (Okhuysen & Bechky, 2009). Being interested in understanding how interdependent activities are performed collectively by individuals, scholars within this field take roles and routines as complementary in achieving organizational coordination. In contrast to role and routine scholars, thus, the two phenomena are treated in a similar fashion. However, while it is acknowledged that roles and routines provide organizations with structures or templates for coordination, the details that go into these effortful accomplishments are scarce. Although understandable, as the focus of this literature is on the coordination process, emphasizing their complementarity in achieving organizational coordination, this literature has not specifically addressed the details of the interplay. Adopting such an approach, the coordination literature has instead looked at what roles and routines do to organizations, i.e. the coordination outcomes that these two means achieve in organizations.

Taking them as means, and consequently entities to certain extent, has left unattended the internal dynamics of both roles and routines, and “the “how” behind the mechanisms” (Okhuysen & Bechky, 2009, p. 482). Furthermore, despite acknowledging the adaptability of roles and routines, scholars in this field mostly regard adaptability as a consequence of external changes affecting the status quo, such as the introduction of new technology (e.g. Edmondson et al., 2001), surprises (Bechky & Okhuysen, 2011) and problematic patient trajectories (Faraj & Xiao, 2006). This means that, in explaining change, coordination scholars do not look at roles and routines from within, as sources of endogenous change. Instead, they largely treat roles and routines as formal means of coordination, which may change due to external circumstances, as they need to
be adapted to implement the new status quo. Further, even when scholars in this field acknowledge both the formal and emergent sides of coordination, as Okhuysen and Bechky (2009) emphasize, they still largely assume that people working together know each other, therefore taking familiarity for granted (Bechky, 2006).

Taking everything into consideration, the previous review evidences the need to explore the interplay between roles and routines if we are to further advance the understanding of how organizations accomplish work. In the sections that follow, I discuss how such an endeavour can be undertaken, building on the substantial contributions made this far and moving a step further in bridging the role and routine fields.

2.3. Towards unpacking roles and routines

The previous sections have set the theoretical framework on which this thesis builds. First, exploring separately the literatures on roles and routines, I put forth contemporary understandings of these two phenomena, which build on historical research traditions. Looking at roles and routines in organizations from more dynamic perspectives (see Figure 1, p. 12, and Figure 2, p. 20), previous research has shown the rich potential that such approaches hold in furthering the understanding of how roles and routines, separately, help organizations to accomplish work. Second, considering the importance of roles and routines in organizing work, I looked at what has been done this far in terms of their relationship. Although several scholars have acknowledged and surfaced connections between the two, current understandings of how they interplay are still underdeveloped.

In what follows, I build on this knowledge to develop a more nuanced theoretical framework that brings together roles and routines to help further what we know about their interplay. I start by reflecting on the development of the literatures on roles and routines, and put forth arguments that may explain why these two have remained separate. Thereafter, I discuss what is missing in contemporary studies and how to move beyond differences in the fields in order to bridge existing gaps.

2.3.1. Reflecting on the development

With roles and routines clearly being of central importance in performing work and successfully achieving organizational goals, the scarcity of research regarding their interplay is surprising to say the least. One reason for this theoretical disconnect may be the internal struggles in each of these fields. Following seemingly diverging assumptions, as already presented, different streams of research have emerged within the fields. On one hand, building on sociology and
social psychology, perspectives on roles differ on the use of the concept and what it entails, e.g. whether expectations are norms, beliefs or preferences (Biddle, 1986; Biddle & Thomas, 1966). Structuralists advocate for the idea of roles as imposed patterns, while interactionists, push forward the notion that roles are improvised to a large extent (Powers, 1981). On the other hand, building on organizational economics and organization theory, theories on routines have studied routines at different levels, focusing on answering distinct questions (Parmigiani & Howard-Grenville, 2011). Followers of the capabilities stream tend to treat them as entities, which have no life of their own and are basically performed as imposed. Scholars sympathizing with the routine dynamics perspective instead view routines as being recreated anew each time, as “some amount of improvisation is inherent in the execution of routines.” (Pentland & Feldman, 2008b, p. 249).

Taking into consideration these internal disagreements, it makes sense that scholars within each field have focused on narrowing their differences first. In this respect, role and routine scholars have made advancements towards reconciling perspectives. In the role camp, scholars have agreed that both role improvisation and role imposition, while being distinct processes, can nonetheless coexist (Callero, 1994; Handel, 1979; Powers, 1981), therefore acknowledging the dual nature of roles. In the routines field, the move towards the routine dynamics perspective also acknowledges both the repetitive nature of routines and the influence of agency in routine variety (Feldman & Pentland, 2008; Parmigiani & Howard-Grenville, 2011). Having been initiated in both fields, this reconciliation of perspectives is paving the way towards a common understanding of both phenomena.

Another argument for this theoretical disconnect could be the division of industrial sociology into organization theory and work and occupations that took place in the 1960s (Barley & Kunda, 2001). Following this split, organization theorists specialized in the structures of organizations, paying special attention to performance and strategy, being the capabilities perspective clearly in line with this. Occupational sociologists focused instead on studying situated work practices. (Barley & Kunda, 2001) This split was characterized by the use of different methodologies as well. To illustrate, in the study of routines, the capabilities perspective has mainly been characterized by conceptual work, while research in the routine dynamics perspective has been mostly empirical (Becker, 2004; Pentland & Rueter, 1994). Due to this separation, the two fields developed distinct theoretical programmes, disregarding to a large extent the benefits that integrating their work could bring about in regards to work patterns (Barley & Kunda, 2001).
Based on the previous, it seems logical that streams within these fields, resting on different philosophical assumptions, and consequently the two fields themselves, have remained separate. However, when comparing perspectives between the two fields, there are striking similarities in the ideas exposed by scholars in both camps. Looking at the treatment of roles and routines given by scholars, Powers' (1981) account on the improvisation and imposition of roles as distinct processes parallels the discussion about routines as practices versus routines as entities (Parmigiani & Howard-Grenville, 2011). Thus, comparing perspectives between fields, the structuralist and capabilities streams share assumptions in terms of the extent to which roles and routines are taken as given. Interactionists and routine dynamics scholars treat roles and routines, respectively, as flexible rather than inertial.

Although in a different field, coordination researchers have also pointed towards this reconciliation in perspectives. Despite the existence of various traditions in both fields, roles and routines are no longer seen as largely dependent on the interaction between specified and formally designed structures and processes (Faraj & Xiao, 2006; Okhuysen & Bechky, 2009). Scholars have moved from a traditional organizational design perspective to a practice-based approach. This shift in perspective has allowed scholars to focus on the way in which tasks are accomplished and therefore grasp the influence of human behavior in the coordination process (Jacobsson, 2011a; 2011b). Also, it takes into consideration the environmental changes that occur in the fast-paced contexts where organizations are immerse nowadays and, thus, recognizes the need for adaptation and flexibility in the accomplishment of activities (Faraj & Xiao, 2006; Okhuysen & Bechky, 2009).

Considering all previously discussed, both roles and routines can be said to be formed by structure and agency. In fact, while there has been an important disconnect between fields, the literatures on roles and routines have been doing almost the same: studying patterns of actions. Both phenomena, considered as patterns of action, embody structure but are also co-constructed through performances. In what follows, I summarize my arguments, identifying existing gaps and how this thesis will address them, in studying the interplay of roles and routines.

2.3.2. Moving beyond differences, bridging the gap
Acknowledging the need of organizations to adapt according to the eventualities faced in accomplishing work, the literatures on roles and routines provide evidence to support the understanding that, both in theory and practice, roles and routines aid individuals in flexibly performing work while providing structure. Furthermore, despite the important theoretical disconnect between the two
fields, looking at how they play out in practice, roles and routines are deeply entangled.

Both roles and routines are patterns of action on which organizations rely to get their work done. Routines are interdependent patterns of action that coordinate activities among various individuals in different roles. When performing routines, these individuals are also enacting role patterns, which correspond to their roles in the organization. In fact, routine activities are also role activities. Thus, both phenomena interplay in upholding work in organizations. While routines serve to buffer roles, roles help maintain routines.

Several scholars have made calls for studies on what people do in organizations in order to advance an understanding of contemporary organizing (Barley & Kunda, 2001; Bechky, 2011; Feldman & Orlikowski, 2011). In this thesis, I argue that bringing together the two streams of research holds the potential to substantially increase the understanding of how roles and routines interplay to enable flexibility while also aiding stability. As much of the work in organizations is accomplished through roles and routines, understanding how these two phenomena interplay is critical to developing a more nuanced picture of organizations. Despite this, having followed parallel paths, and as mentioned in the introduction, these two bodies of research have largely neglected the implications of studying the two phenomena together. Thus, there is a dearth of research regarding the interplay of roles and routines and how this enables individuals to flexibly perform work.

The few studies that have touched upon both, indicate the importance of understanding how roles and routines interplay. While hinting at this, however, a few shortcomings are evident. In what follows, I identify these shortcomings and specify how, building on and extending previous research, this thesis will address them.

First and foremost, studies on either field emphasize one phenomenon over the other. Routines studies, despite acknowledging that roles influence the existence of multiple routine patterns, tend to black box roles. Roles studies, while noting that routines help coordinate work among various roles in organizations, black box routines. Coordination studies, while treating roles and routines similarly, tend to black box both. Black boxing a phenomenon may be beneficial in getting researchers where they want. Nonetheless, because either or both phenomena tend to be taken for granted, it is easy to neglect the existence of diverse patterns, which is critical to understand how work is accomplished in organizations (Turner & Rindova, 2012). To deal with this limitation, in this thesis, I will unpack both roles and routines and treat them at the same level. As it has extensively been argued, in order to understand the dynamics that go into performing and
patterning roles and routines, it is necessary to open up these two phenomena simultaneously and investigate their interplay.

Second, even when the multiplicity of patterns may be acknowledged in the separate fields, the understanding of the enactment of these patterns in concert is still scarce, which in turn limits the knowledge regarding patterning processes (Danner-Schröder & Geiger, 2016). In this regard, scholars have emphasized the need for studies on the effects of having multiple routine patterns (Pentland & Feldman, 2008a). Turner and Rindova (2012) in particular have called for studies that compare routine patterns across different roles in order to understand why they converge and/or diverge. There is still a lack of an integrative understanding of how roles and routines interplay, which is very much needed in order to advance knowledge on, first, how they influence each other, and second, their joint role in organizations. To address this shortcoming, apart from unpacking their internal dynamics, this study will look into multiple roles and routines. This will allow me to explore the multiplicity of both role and routine patterns, and how and why they converge or diverge in flexible performances.

Third, the influence of context on organizational behavior is commonly overlooked (Bechky, 2006; Johns, 2006). Previous studies largely assume familiarity as key in successfully performing roles and routines. Knowing each other based on experience working together leads to better coordination of work, as one can trust the ability of others to perform their work competently and anticipate each other’s actions (Okhuysen & Bechky, 2009). However, turnover is common in many organizations, which some view as a challenge to coordination because of the consequent lack of familiarity among staff members (see Okhuysen & Bechky, 2009). This is particularly relevant when it comes to the informal and emergent patterns enacted in dealing with unplanned contingencies, which because of their nature tend to be ignored (Okhuysen & Bechky, 2009). Further, organizations increasingly work with fluid personnel, which does not always allow for the development of familiarity among staff members (Bechky, 2006; Valentine & Edmondson, 2015). The understanding of how roles and routines are accomplished in such organizations is rather limited. I will address these shortcomings by doing the following. Because work practices happen in a particular context (Barley & Kunda, 2001; Johns, 2006), focusing on the situated actions, and thus considering the context in which these patterns are enacted, I will look at all patterns, independently of if they are formal or informal. This will allow to look at how work is accomplished through roles and routines in a more emergent manner, which is how things are really done. Moreover, while it is widely accepted that familiarity facilitates work, by enabling people to anticipate others’ actions, how this is done when familiarity is not always present remains a lacuna. Therefore, I will go beyond familiarity and look at how work is achieved among people who may not always be familiar with each other (Bechky,
2006). Independently of the degree of familiarity among individuals, they still need to accommodate their actions in order to accomplish interdependent tasks through roles and routines.

In a schematic way, summarizing how roles and routines have been studied in their respective fields, Figure 3 provides a conceptual framework, which integrates my understanding of the two and which will guide me in addressing the shortcomings identified. In order to uncover the interplay, it is imperative to treat roles and routines equally and study the dynamics that go into performing both of them in concert. Considering that phenomena are relational and mutually constitutive (Feldman & Orlikowski, 2011), roles and routines can be viewed as patterns, which when enacted constitute actions. Role and routine patterns are multiple, shared and also individually held by people. These patterns of action provide the structure needed to organize work in organizations. In performing roles and routines, individuals draw on both, role and routine, patterns. Thus, roles and routines come together in performances. Performances are the enactment of patterns, which take place through situated actions enabling flexibility.

![Figure 3. Conceptual framework](image)

Taking situated actions as the starting point of inquiry allows bringing roles and routines together. Moreover, taking roles and routines as consequential activity, which come into existence through practice, the focus shifts from roles and routines as entities to seeing them as ongoing patterns and enactments (cf. Feldman, 2016), as represented in Figure 3. Taking this figure as my guiding framework, I will explore each part of it in order to explain how roles and routines interplay to enable flexible performances. In doing so, I will open up roles and routines, look at the patterns on each side of the framework and their joint performance in the middle, and the processes⁶ through which the *performing* and *patterning* (Feldman, 2016) of roles and routines take place. By doing so, this study will help to theoretically explain and empirically illustrate how roles and routines interplay.

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⁶ These processes are represented by the arrows in the figure, which have been left unlabelled intentionally, as these are part of the dynamics that I want to uncover in my study.
Having laid the theoretical foundations underpinning this study, the next chapter explores the methodological considerations involved in undertaking this research endeavour of studying patterns of action.
3. Methodological considerations

In this chapter, I discuss the methodological choices made in this study. In the first section, I describe the research process that I followed in doing an ethnography of organizational work. In the second section, I discuss how I went about gathering my empirical material. As in any other ethnographic study, the process of gaining access to the empirical setting was an issue that deserved attention. Thus, I discuss how access to the emergency department studied was negotiated. I then provide details about how I gathered my empirical material through the use of observations, interviews, and documents. Not speaking the native language, I also discuss how I dealt with the language barrier in gathering my material. In the third section, I move to describe the process of analysing my empirical material, which resulted in the findings presented in this study. After this, ethical issues that had to be considered in studying a healthcare organization are presented. Finally, a discussion on the strategies used in ensuring the credibility of the study is provided in the last section, closing the chapter.

As discussed in the introduction, the purpose of this study is to increase the understanding of the interplay of roles and routines in organizations. In order to fulfil this, I look at roles and routines as patterns of action, and conceptualize them as dualities of structure and agency. Given my purpose and approach to roles and routines, and following calls for research that brings work back in to understand organizing (Barley & Kunda, 2001; Bechky, 2011; Feldman & Orlikowski, 2011) has meant placing activities at the core.

From the beginning of this study, I have been interested in observing what people do, how they do it and why, when performing roles and routines. Thus, for a long period of time, the main method I used was observations. While this is extensively used in ethnographic research (Hammersley & Atkinson, 2007; Spradley, 1980), scholars from the routines field also advocate for the use of the observational method specially when it comes to studying routines in practice (Feldman & Orlikowski, 2011). In line with the latter, and to understand an organizational phenomenon such as routines, it was important to look at the interactions among the individuals enacting them. Moreover, role theorists have also noted that this is the most suitable way to study the behaviours displayed by the individual (Biddle, 1979). Definitely, observations were the only alternative that could provide me with insights about the enactment of roles and routines by staff members, and their interactions in the emergency department. This is why I have been inclined to do an ethnography and relied on rich observational data. While I have also conducted interviews and gathered plenty of documents, I believe that the observations have been key to much of the work presented in this study. Before looking into the methods though, I summarize the process that I followed.
3.1. An iterative process

The research process that I followed during my doctoral studies was, if anything, iterative. I started with a broad research question and a rough plan of what I needed to do, methodologically speaking, in order to answer it. The data collection spanned roughly four years (2012 to 2016) of my PhD and was intertwined with analysis, moving back and forth between theory and data in an iterative process (Dubois & Gadde, 2002; Easton, 2010; Orton, 1997). This process can be seen as going through different phases as my focus has shifted. It reflects “the inevitable twists and turns that occur as an ethnographic project progresses.” (Van Maanen, 2011, p. 231) I divided it in six phases based on rounds of data collection and analysis, reading of literature, and outcomes. Each phase is summarized in Table 3.

Table 3: The iterative process

<table>
<thead>
<tr>
<th>Phases</th>
<th>Empirical work</th>
<th>Theoretical focus</th>
<th>Analytical work</th>
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<tr>
<td><strong>Phase 1</strong>&lt;br&gt;1-12 months</td>
<td>Interviews (5) Documents Meeting with director of Emergency healthcare Choice of empirical setting</td>
<td>Studies on emergency rooms Coordination literature Role and routine theories</td>
<td>Development of research idea and research proposal Description of the emergency department’s context and the Swedish healthcare system Literature review</td>
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<tr>
<td><strong>Phase 2</strong>&lt;br&gt;12-24 months</td>
<td>Observations (14) Interviews (4) Documents Workshop with management</td>
<td>Giddens’ structuration theory Roles and routines as dualities Coopetition literature</td>
<td>Process mapping Coopetitive practices Triage routine: ostensive and performative aspects Role adaptation/switching</td>
</tr>
<tr>
<td><strong>Phase 3</strong>&lt;br&gt;24-37 months</td>
<td>Observations (11) Interview (1) Workshop with staff and research team</td>
<td>Routine dynamics Sociomateriality Practice theories</td>
<td>Mid-seminar Definition of units of observation and analysis Patient tracking routine, artefact introduction</td>
</tr>
<tr>
<td><strong>Phase 4</strong>&lt;br&gt;37-42 months</td>
<td>Documents</td>
<td>Practice theories Shift work and the deindividualized role structure</td>
<td>Descriptions of roles and patient-related routines Co-construction of adapted role expectations Shrinking and expanding routines</td>
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<td><strong>Phase 5</strong>&lt;br&gt;42-54 months</td>
<td>Interviews (9) Documents</td>
<td>Role theories</td>
<td>Identification of sets of role expectations and coping behaviours in performing routines</td>
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<td><strong>Phase 6</strong>&lt;br&gt;54-62 months</td>
<td>Roles and routines as practices Shift to patterning and performing</td>
<td>Internal seminar Role and routine patterns come together in performances</td>
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3.1.1. Phase 1: Discovering the puzzle
I started my PhD reading up on emergency rooms. Being part of a larger research project (www.tripleed.com) which focused on the study of extreme environments, I was particularly interested in emergency departments as an empirical setting. I had spent a few weeks reading on decision-making, coordination, leadership and artefacts, when I stumbled across the article by Feldman and Pentland (2003). While I had noticed that many studies in emergency rooms differentiated between formal and informal characteristics, the ostensive/performative duality seemed to squarely summarize all categorizations. I read more and more on routines, getting to know the concept and what scholars had done in the area.

A couple of weeks later one of my supervisors recommended the paper by Bechky (2006), which motivated my interest in studying the relationship between roles and routines. Two things stroke me about these phenomena. First, the idea that both could be seen as dualities of structure and agency. Second, considering routines are “repetitive, recognizable patterns of interdependent actions, carried out by multiple actors” (Feldman & Pentland, 2003, p. 95) and that these actors also enact roles when performing routine activities meant that roles and routines came together in performances. Despite this overlap, roles and routines had mostly been studied separately. This raised a first theoretical question. Empirically, studying emergency departments posed an additional challenge. Understanding roles and routines as ongoing accomplishments which could take different forms each time performed, was counterintuitive to me. Were not emergency departments supposed to have clear routines and roles followed at face value in order to perform reliably?

Apart from this, other reasons supported my choice of the empirical setting. For a long time, healthcare organizations have provided researchers with “a ready-made laboratory in which to examine the combination of independent professionals with organizations” (Stelling & Bucher, 1972, p. 431). An emergency department thus represented an appropriate context where to study roles and routines as these were expected to be more visible compared to other settings. However, as in any other study, I was dependent on gaining access to a setting (Hammersley & Atkinson, 2007). Due to their connections to universities, emergency departments at university hospitals would provide easiness of access to researchers, and therefore, these were targeted when requesting access. Furthermore, one of the main objectives of teaching hospitals is the training of students, residents and other staff. Thus, studying an emergency department at a university hospital represented an advantage, as I expected to find a wider variety of roles and routines than in general hospitals.

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7 A description of the setting is given in the next chapter.
Even if the research design was modified throughout my PhD process, during this phase some crucial decisions were made. Due to the scarcity of research combining roles and routines, my study had to be explorative (Robson, 2002). I started collecting documents, mainly from the internet, and conducted three interviews with medical doctors\(^8\) to gain some contextual understanding of emergency departments and the Swedish healthcare system. It also helped to define the methods needed to solve my puzzle, as I realized that in order to understand how roles and routines came together in practice, apart from conducting interviews, I would have to observe them as performed. To do this, I needed to immerse myself in an emergency department and spend considerable time observing how people worked and talking to them. Taking all this into account is that I decided to focus on one organization and, if possible, conduct an ethnography.

3.1.2. Phase 2: Immersing myself in the field
Initially, I expected roles and routines to be neatly structured, as it was all about dealing with patients, in many cases life/death situations. I thought that people would physically come together to treat patients. However, having the interviewees talk about doing the job on their own, leaving messages on post-it notes and hoping that the others would read them, indicated the opposite. In fact, people would only work simultaneously on patients that were critical because they required fast interventions, as illustrated in Act I in the introduction. Thus, when I went to the field I did not know what I would be facing. Basically, all what was left from my initial understanding of roles and routines were the ideas of ostensive/performative, and expectations/actions, respectively. I kept reading on role and routine theories while collecting and analysing my material. Having identified a series of themes, I started to delve into these, writing up memos, and trying to make sense of what was happening.

3.1.3. Phase 3: Routine dynamics
Based on the feedback provided in my mid-term seminar, I had to make several decisions that I had been avoiding until then. First, I decided to drop a change project that I was planning to follow in the emergency department, as after a couple of years it was still uncertain if it would be implemented. This meant that I would focus instead on the daily activities in the emergency department. Second, I had to decide which routines to study. Until here, I had been trying to cover all of them, as I was not sure about which were the most relevant. Third, even if I felt that practice theories were appropriate, I had not been able to provide convincing arguments for using these as my overarching lens. Fourth, while I had been looking at routines’ ostensive and performative aspects, I was questioned

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\(^8\) Details on the empirical material collected are provided later.
about how I was studying role expectations, which were largely missing in my text. This made me realize that, being too focused on routine dynamics, I had unconsciously black boxed roles.

3.1.4. Phase 4: Looking at my fish (roles)
Having put all my focus on the routines at the emergency department was preventing me from seeing the connection with roles. Thus, I started to look at the roles and saw that there were plenty of roles apart from the professional ones that I had been focusing on until then. I also decided to focus on the patient-related routines, i.e. all routines involved in the process followed by the patient. First, these routines had been clearly identified by the staff members when describing the patient process and, second, I was able to observe them as performed and see the sequence from the beginning to the end: arrival, triage, diagnosis, treatment, and discharge. Having defined which routines I would focus on, it was much easier to identify all organizational roles. It was also this decision which helped me to see the dynamics of roles within and across routines.

3.1.5. Phase 5: I need interviews!
Although I was still gathering documents, during this phase I mainly focused on conducting interviews. As I had started to see different patterns in the ways in which people performed roles and routines, I wanted to get insights into how they thought about these. Even when observations helped, as people would tell me things and I would get answers whenever I would ask a question, I had some specific issues in mind that I wanted to know more about.

In analysing my material, I went back to the role literature. I read more about role expectations, how role socialization influences the development of these, and ways of coping when role conflict occurs. Moving back and forth between the literature and my data, I identified four coping behaviours that staff members used in dealing with the multiplicity of expectations and keeping routines in track. I spent the rest of the year developing these ideas, preparing the manuscript for my internal seminar.

3.1.6. Phase 6: Putting the puzzle together
The analyses of my empirical material had resulted in a preliminary framework that helped me explain in theoretical terms what was happening in the emergency department. Being able to theorize the role and routine dynamics, I could also see these applying to other empirical settings.

My internal seminar was the starting point to rethink my material. While earlier in my PhD studies I had been too focused on routines, now I was putting too much
emphasis on roles. I was missing the larger picture. Following the feedback received at the seminar, I went back to the routines literature and looked into a more recent conceptualization of routines as “performing and patterning” (Feldman, 2016) and the idea of ostensive aspects as “enacted patterns” (Feldman et al., 2016). Looking at ostensive aspects and role expectations as “enacted patterns” put both roles and routines at the same level, something that I had been trying to do, unsuccessfully, until then. Moreover, while acknowledging the distinction between role and routine patterns, each performance brought them together. This was the answer to the question that had been motivating my study from the very beginning.

Going back to old literature and also reading more recent studies suggested by my discussants helped me to more clearly position my study in the literature. I rewrote my introduction and literature review. Having understood that both role expectations and routine ostensive aspects were indeed “enacted patterns” which were drawn upon in each performance, I reworked my empirical chapters. I decided to focus on a few routines, to be able to provide richer pictures of the dynamics. Having reworked all these chapters gave me a good basis to develop my final framework and theorize my findings. This was key to understanding what my contributions were and how I was extending previous research.

Having briefly revisited the “fieldwork, headwork, and textwork” (Van Maanen, 2011, p. 218) done throughout my studies, I now turn to discussing in more detail the methods used in collecting my material.

### 3.2. Gathering my empirical material

As already described, my research process unfolded in various stages, which allowed for collecting and analysing my empirical material progressively. In what follows, I discuss the process of negotiating access to the emergency department, the methods used in collecting my material, and the considerations made in dealing with the language barrier.

#### 3.2.1. Negotiating access

It is often argued that access is one of the most time-consuming and frustrating challenges a researcher has to face, especially when it comes to ethnographic research (Hammersley & Atkinson, 2007). To my fortune, the initial access to the empirical setting of this study, the emergency department at a university hospital, was granted very much in an easy way. This was negotiated directly with the director of emergency healthcare of the county and one of my supervisors was responsible for the establishment of the contact. This happened in December 2012 through a first e-mail, which served as an introduction to the research project that I was part of.
The director was informed about the focus of the project on extreme environments and the particular settings being studied at that time: mountaineering and emergency care. It was also mentioned that, until that point, the project had been focusing mainly on climbing expeditions, although a study in a university hospital in the USA was about to get started. Other information given included that the project would last four years and that researchers from Sweden, Finland, the UK and USA were involved, but the base was in Umeå, Sweden. Furthermore, the director was informed about our interest in increasing our focus on emergency care and about my recently hiring as a doctoral student whose thesis would focus on the roles and routines in emergency care. In addition to this, it was explained that the overall project was qualitative in nature and that the aim was to understand everyday decision-making in these extreme environments. This was the motivation for requesting approval to mainly conduct interviews with doctors, nurses and other staff members, and also, if possible, do observations of their daily work, during spring 2013.

40 minutes after sending the e-mail, there was already a reply saying that they were interested, and that we could have a meeting when my supervisor was back in Sweden. In February 2013, my supervisor had a first informal meeting with the director of emergency healthcare. A week after, a second meeting took place where the director, my supervisor, a project manager and I were present. Then, I got the chance to explain the purpose of my research and my interest in studying roles and routines. Moreover, the data collection methods and expected outcomes of the study were discussed. I got to know how the emergency department was working at that time and about a project to change the department processes, which was in its planning phase. The meeting went well, as they were interested in my research topic, and we decided that I could follow the implementation of the project. Once access was granted, a first interview with the project manager responsible for the change process was held.

Even though access was obtained easily through a “gatekeeper”, a continuous negotiation was needed with him and the research participants (Hammersley & Atkinson, 2007). As Chambliss puts it: “official access does not equal real access” (1996, p. 191, emphasis in original). For example, in March 2013 there was a workshop with the heads of the emergency department and other departments staffing doctors during daytime, in which I was not allowed to participate. Despite having gotten the approval from the “big boss”, it was quite challenging to ensure continuity in the data collection process. After requesting a study visit, the director of emergency healthcare put me in contact with the head of the nurses in the emergency department, from whom I got two visits where I shadowed registered nurses. Later I realized that there was another head of the emergency department, responsible for the emergency physicians. The daytime doctors were
staffed by heads of different departments in the hospital. Thus, in order to get to shadow them I would have to go through their bosses.

In the beginning I focused on nurses, as I already had a foot in with them. Thus, two weeks after my first visits, I contacted the head of the nurses to ask for more visits. I told her that the two nurses that I had shadowed were fine with having me around more times. My intention was to get permission to arrange visits with them directly, in order to avoid having to go through the head of the department each time. She replied two weeks later and said that she had talked to both nurses and her boss, and that everyone was fine with me going back to the emergency department. However, she wrote: “What I need from you is that you sign a paper where you promise not to tell anyone what you see or hear here in our department. It is in Swedish so I hope that is ok. How much Swedish do you know?” [email communication] She also asked how I wanted to plan my visits. I took the chance and asked if I could go once a week for half shifts. I also asked for the email addresses of the nurses in order to be able to arrange my visits directly with them. She replied positively, sent me the confidentiality form (see Appendix 2) and the email addresses. She told me to sign the agreement and give it to her the next time I would visit the emergency department.

Having been granted access and passed the gatekeepers, it was up to me and the staff members to establish good relationships to secure more visits. After a few emails, I got the personal email addresses and phone numbers from the two registered nurses that I had shadowed. Through emails, the nurses gave me access to their schedules and the freedom to choose when to come to visit. I even got scrubs whenever I was around. The people that I was shadowing thought that wearing the same clothes as them would help me blend in. In this way, “the patients and other staff members know that you are working and do not think that you are some random person walking around!” one of the nurses wrote [email communication].

Having spent a few shifts in the emergency department, I felt that people had started to trust me. Especially because one of the nurses that I was shadowing believed that having an outsider come and see how they worked would be beneficial to the organization. This nurse, as well as other staff members, conveyed this message to me in repeated occasions: “I believe that the job you are doing is really important; there isn’t so much research done in the ER.” [Email communication] This was something I tried to hold on to when asking for more visits. Some doctors approached me, interested in what I was doing. One of the nights in the emergency department, an emergency physician asked me if I would

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9 A discussion on the language barrier is provided later in this chapter.
also be looking at other professions as she thought that I was only getting a partial view by shadowing nurses. Joking she said: “I don’t think in the same way [nurse’s name] does” [field notes]. This is when I made use of what Chambliss (1996) calls “side-in access”: getting access informally through individuals at lower levels instead of going for formal access from a manager. This was in fact how I got access to shadow emergency physicians and other nurses.

Some other staff members were reluctant to being shadowed. A few times I was asked if I was taking times, studying performance. Thus, it was extremely important that I was clear about my purpose and the fact that I was not measuring efficiency or anything related. Some seemed to be very interested in my study and gave me their email addresses. However, when contacting them, they did not answer or they answered but never provided me with a date to meet them. Some I shadowed only once, and some others I observed for the whole duration of the data collection process. Still, I always had to be active in sending emails in order to secure further visits. I also kept in touch via email with the director of emergency healthcare, the project manager, and others who were not necessarily working in the emergency department but who took care of managerial issues. There were a few meetings and interviews with each of them. Even if the project was not materialized until 2016, these individuals provided me with valuable information about the daily operations in the emergency department.

Besides this, in May 2015 we organized a workshop where we invited the staff members. There, I presented some preliminary findings regarding the triage routine, which was only performed by nurses. An emergency physician then asked about the other routines where doctors were involved. I took the chance and said that I had not gotten access to shadow doctors, which resulted in her inviting me to follow her. Getting this “side-in access” (Chambliss, 1996) was an advantage compared to having someone receive me because their boss had asked for it.

Being in the emergency department and talking to staff members about my study made it easier to ask people if I could look at the activities that they performed at work. However, when it came to daytime doctors, who were staffed by other departments, I had to contact the heads of those departments in order to get access. This was the most difficult to get because daytime doctors were working in the emergency department for relatively short periods of time, completing some part of their education, so the turnover was quite high. Furthermore, these doctors belonged to those other departments, and they did not consider themselves as part of the emergency department, even if they were working there.

Another obstacle in getting access was that there were known conflicts between the departments staffing the temporary personnel, and the emergency department, which employed the permanent staff, i.e. nurses and emergency
physicians. This meant that temporary staff members were not very interested in participating in a study regarding roles and routines in the emergency department. Still, I got access to interview doctors in phase 5, through their managers. And, inevitably, when shadowing nurses, I got to see their interactions with doctors, and vice versa. I was always introduced to these doctors and they were informed about what I was doing. So even though I did not follow everyone in the emergency department, which would have been impossible due to the staff turnover, I did observe how people in the different roles were interacting and collaborating in performing routines.

Having presented the process of negotiating access to the emergency department, I now turn to describe the methods I used in gathering my empirical material, namely, observations, interviews and documents.

3.2.2. Observations
As already mentioned, doing an ethnographic study, I relied on the use of observations and spent extensive hours shadowing nurses and doctors in their daily activities. This included spending coffee, lunch and dinner, breaks with the staff members. I spent a total of 136.5 hours during my 25 field visits to the emergency department (see Table 4 for a summary). Besides my visits, the observations also involved a two-hour meeting with a project manager and the director of emergency healthcare of the county (February 2013), a two-hour workshop with heads of departments and the management of the emergency department (August 2013), and a four-hour workshop with staff members and the research team (May 2015).

Detailed field notes were taken during the observations and ethnographic interviews (Spradley, 1979, 1980). I always tried to sit down and write the notes in my computer right after I got back from my visits. The sooner I would transcribe them, the better. It is shocking how many details one can forget when time passes by (Hammersley & Atkinson, 2007). Although my notes were always very detailed, there was so much more coming back to my memory when I sat down and wrote them up right after having been to the emergency department.

Shadowing people, I initially thought that individuals were my units of observation. Thus, I started considering all staff working at the emergency department as potential units of observation. However, after a few visits I realized that it was not the individual that I was looking at but the different activities he or she was performing in enacting particular roles and organizational routines.
It was not until that point that I realized I could start skipping some information in order to focus on more important issues. For example, missing the name of a drug, or a particular test was not as relevant as observing the actual action, i.e. the administration of the drug or the running of a test. After all, I was looking for
patterns of behaviour, i.e. the activities that people performed over and over again in doing their job. As Hammersley and Atkinson (2007, p. 145) put it, “as analytical ideas develop and change, what is ‘significant’ and what must be included in the fieldnotes change.” In this way, I started to improve my note taking and could choose what to observe more properly, instead of trying to catch all what was happening.

I did observations for around two years. Being in the field aided me in gaining an understanding about different patterns that were enacted when performing roles and routines. Observing these patterns as enacted by different individuals would not have been possible without doing field visits. Observations thus were the only way I had to access these data.

However, when analysing these patterns, I realized that the differences between performances responded to various reasons. While I could sometimes ask and get explanations for why they were doing things differently on the spot, sometimes this was not possible, or it depended on who was doing the job. This can be described as ethnographic interviews, which refer to the informal conversations I would engage in with different individuals while doing my observations (Spradley, 1980). Ethnographic interviews were basically included in my field notes and happened while I was in the emergency department doing observations. Then I would start talking to people, or, out of curiosity, someone would come and ask me what I was doing, starting a conversation around my research. I always tried to talk to other people when I got the chance and ask them about their roles in the organization. These ethnographic interviews took the form of “friendly conversations” and were informal (Spradley, 1979, 1980).

In order to get a deeper understanding of why performances varied is that I decided to conduct more traditional interviews. I realized that I had to talk to people, as it was not enough with observing what they were doing. Such interviews would give people the space to discuss things, instead of having to explain it in the run between patients. This realization came late in the process, as my data analysis progressed. This is why, during the first years, the main data collection method was observations and getting to the end a bunch of interviews took place.

### 3.2.3. Interviews

Apart from doing observations and ethnographic interviews as described, I also conducted unstructured and semi-structured interviews (Saunders et al., 2009). These interviews basically differed on the existence of an interview guide. This means that while unstructured interviews were more flexible in terms of discussion topics and scope, semi-structured interviews were more focused on
particular issues that I was interested in. Table 5 presents a summary of the interviews conducted, including role of the interviewee, date, duration and type of interview.\textsuperscript{10} In total, 19 interviews were conducted, 10 of which were unstructured and nine structured, for a total of 25.35 hours.

Table 5. Interviews

<table>
<thead>
<tr>
<th>Phase</th>
<th>N°</th>
<th>Interviewee role</th>
<th>Duration</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Interview 1 (I1)</td>
<td>MD1</td>
<td>1 h 30 min</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Interview 2 (I2)</td>
<td>MD2</td>
<td>1 h 15 min</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Interview 3 (I3)</td>
<td>MD3, MD4</td>
<td>1 h 30 min</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Interview 4 (I4)</td>
<td>PM</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Interview 5 (I5)</td>
<td>PM</td>
<td>40 min</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>Interview 6 (I6)</td>
<td>MD5</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Interview 7 (I7)</td>
<td>PM</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Interview 8 (I8)</td>
<td>MD5</td>
<td>45 min</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Interview 9 (I9)</td>
<td>PM</td>
<td>1 h 20 min</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>Interview 10 (I10)</td>
<td>PM</td>
<td>1 h 15 min</td>
</tr>
<tr>
<td>5</td>
<td>11</td>
<td>Interview 11 (I11)</td>
<td>STY3</td>
<td>2 h</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Interview 12 (I12)</td>
<td>EmPh</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>Interview 13 (I13)</td>
<td>RN1</td>
<td>1 h 15 min</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Interview 14 (I14)</td>
<td>ST</td>
<td>1 h 15 min</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Interview 15 (I15)</td>
<td>RN2</td>
<td>1 h 30 min</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>Interview 16 (I16)</td>
<td>AN1</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Interview 17 (I17)</td>
<td>STY1</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>Interview 18 (I18)</td>
<td>STY3-2</td>
<td>1 h</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>Interview 19 (I19)</td>
<td>AN2</td>
<td>1 h</td>
</tr>
</tbody>
</table>

MD: Medical Doctor; PM: Project Manager; STYx: ST doctor, year x; EmPh: Emergency Physician; RN: Registered Nurse; ST: Specialist doctor; AN: Assistant Nurse

Unstructured interviews took place in the beginning, before starting the observational period, and throughout the first half of the data collection process. Although some of these were initially planned as semi-structured interviews and an interview guide was developed, when conducting them, they took the form of unstructured interviews due to my lack of knowledge about the topics discussed. This was the case for example during my first interviews with medical doctors (I1, I2, and I3, in Table 5). While I had been reading on emergency departments and writing down questions regarding how work was organized, I did not know much about it in practice. Thus, when interviewing these doctors, I explained that I was interested in studying work practices and asked about their experiences working

\textsuperscript{10} Note that ethnographic interviews are not included in this table as they took place during my field visits and therefore were included in my field notes.
in the emergency department. I would ask follow-up questions whenever I thought something was particularly interesting but, for the most, these interviews gave me an initial understanding of how work was done there from these doctors’ perspectives.

One medical doctor was interviewed twice (I6 and I8, in Table 5) in attempts to gain approval for shadowing doctors staffed by other departments than the emergency department. I also conducted several unstructured interviews with the project manager (I4, I5, I7, I9, and I10, in Table 5). While the change project was not implemented until 2016, these interviews were very informative regarding work practices. As the main objective behind the project was to change these practices and introduce a new role during daytime, most of the work done during the project planning was focused on the different roles and routines, daytime and nighttime, and the impacts of pursuing such a change. This gave me a good overview of the functioning of the emergency department as a whole, from a managerial perspective.

The last nine interviews (I11 to I19 in Table 5) were semi-structured and were conducted in a relatively short time span. This was an active decision. After making sense of the empirical material collected through my field visits, I realized that I could partially answer my research question, as I was still missing information that could not be accessed through observations. While the observations showed what was happening in terms of enacted patterns, I still could not fully see why people were developing and enacting different role and routine patterns. In order to understand this, I needed to talk to them. Having identified that the patterns differed between professional roles, I decided to interview doctors, registered and assistant nurses.

As I had a somewhat clear idea of what I wanted to know more about, I prepared an interview guide in English, which I also translated to Spanish (see Appendices 3 and 4), as, just like me, some of the staff members had Spanish as their mother tongue. All the interview questions were developed based on the experience that I gained through my visits to the emergency department. The main objective with these interviews was to figure out why people enacted different patterns. I could already tell from the observations why people chose one pattern over others in certain situations, for example based on the level of experience. But I did not have the whole picture. Thus, questions such as “Could you give me an example of a situation when you had to work with someone you didn’t know?” (question 15 in Appendix 3) were asked. When possible, interviews were recorded to then be transcribed within the next 48 hours. Some interviewees chose public places for the meetings or wanted to have an informal meeting, thus it was not appropriate to record the conversations.
Overall, interviews were used to gain insights into individuals’ perceptions and understandings about roles and routines through their recounting. While the activities involved in enacting roles and routines were accessed through observations, the related expectations were mostly tacit. Interviews provided an opportunity for inquiring and accessing these data.

### 3.2.4. Documents

The last type of empirical material used were documents (see Table 6 for a summary of the types of documents gathered). These were collected from the very beginning and included a wide variety of files such as personal, organizational, public and visual documents (Bryman & Bell, 2011). Personal documents included mainly e-mails exchanged with the research participants as well as some reflections that I wrote after I accidentally had to visit the emergency department as a patient. Organizational documents comprised organizational charts, internal reports, project plans, timelines, diagrams, flowcharts, forms, and a large number of files used in daily work. Public documents were mainly collected through the web and included blog posts, brochures, PowerPoint presentations, reports, laws and regulations. Finally, visual documents including videos and photographs were also gathered. All these provided additional information about the emergency department and its context.

#### Table 6. Documents

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of documents</th>
<th>Page count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal</td>
<td>266</td>
<td>n/a</td>
</tr>
<tr>
<td>Organizational</td>
<td>11</td>
<td>462</td>
</tr>
<tr>
<td>Public</td>
<td>17</td>
<td>189</td>
</tr>
<tr>
<td>Visual</td>
<td>5</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Documents were used throughout the whole process, in different ways. Public documents such as regulations helped in understanding the Swedish healthcare system. All documents related to the project served in developing a contextual description of the emergency department, including work shifts and staffing. Other organizational documents, such as the “Emergency department’s treatment guidelines”, help in describing some of the roles and routines. For example, these guidelines clearly stated the main activities involved in discharging a patient. Comparing this description to the observations of the routine, there were almost no differences. In cases such as the triage routine or the role of section nurses, while the guidelines listed the activities to perform, the observations yielded a much more detailed and dynamic description of the routine and roles. Thus, in cases like these, documents provided an overview
while other material was useful in filling in the gaps, which also enabled triangulation.

In summary, documents and interviews with managers helped in developing a detailed understanding of the emergency department’s context, and the “formal” roles and routines. Observations were key in identifying other informal patterns that people enacted daily in the emergency department. While during the interviews staff members pointed out that how work was done depended on who one was and who one was working with, it would have been impossible to grasp the details of these enacted patterns without following them in the field. Interviews outside of the field helped in complementing this information. While in the field I could for example see differences between a junior and a senior nurse, interviews helped to delve into how staff members thought about interacting with individuals in other roles and performing interdependent tasks. In short, all this empirical material served in moving from a general understanding of the context to identifying specific role and routine patterns and their situated performances (for a summary of the empirical material gathered see Table 7).

Table 7. Summary of empirical material

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Field visits</td>
<td>25 visits</td>
<td>136.5 hours</td>
</tr>
<tr>
<td>- Field notes</td>
<td>n/a</td>
<td>190 pages</td>
</tr>
<tr>
<td>- Meetings/workshops</td>
<td>3</td>
<td>8 hours</td>
</tr>
<tr>
<td>Interviews</td>
<td>19</td>
<td>25.35 hours</td>
</tr>
<tr>
<td>Documents</td>
<td>28 (5 visual+266 emails)</td>
<td>651 pages (n/a)</td>
</tr>
</tbody>
</table>

3.2.5. A note on the language barrier

When presenting my work throughout my doctoral studies, I got questions about the language barrier. Although before I started to gather my empirical material I thought that language would be an issue, it really was not. Still, I believe it is worth to discuss it.

When I started doing observations, I had been studying Swedish for about seven months. Although I could understand some, not speaking the language in the beginning proved to be advantageous. As I could not follow everything people

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11 As it will be shown in the empirical chapters, the “formal” patterns responded to a “this is how it’s supposed to be done” understanding. These were written in guidelines and other documents and known by all staff members (more details in chapter 5). However, this study shows that there were other “informal” patterns that also formed part of the shared understandings that people had of roles and routines (chapter 6).
were talking about, my focus was on the actions. I observed all what they were doing and writing it down. During my first visits I also asked a lot of questions. As I did not know anything about the emergency department, I asked people to explain what they were doing. After a few times there, I started to get a feeling for what the routines were, and who was doing what. As time passed by, it ended up being much easier than I expected. I had never been into medicine, so, even if I would have been a native speaker, I would not have been able to understand all the medical terms from the very beginning.

Apart from this, Swedes do speak very good English, as they have it as their second language from early on in school. As the emergency department was located in a university town, there were lots of foreigners who also made use of the healthcare services. Thus, staff members in the emergency department were exposed to English. In addition to this, all the staff members that I shadowed knew from the start that I did not speak Swedish and accepted having me around on that basis. It turned out that some of them were even happy to get to practice English with me. Also, some of them would go to work abroad, in English, for periods of time. They would even read literature in English during their university studies and have lectures in English. Thus, they knew most medical terms in English.

I also shadowed and interviewed foreigners working in the emergency department. In the beginning of the interviews, I made clear that they could speak Swedish if they felt more comfortable with it or if they did not know how to explain something in English. They would use terms in Swedish every now and then; terms that I had learnt during my visits to the emergency department, so that was not a problem. Some foreigners felt more comfortable with English than Swedish, being none of these their mother tongue. Some others had Spanish as their first language, and being this my mother tongue, we held the interviews in Spanish. This is an advantage compared to having a translator, as being the researcher also the translator provides additional opportunities to understand “cross cultural meanings and interpretations” (Temple & Young, 2004, p. 168).

Although it is recommended the use of translators or interpreters when doing cross-language qualitative research (Squires, 2008, 2009), it has also been acknowledged that this can make things more difficult when it responds to the researcher’s lack of knowledge regarding the local language (Kapborg & Berterö, 2002). In my case, I believe that having an interpreter would have made the situation uncomfortable for staff members. Having built a relationship with most of them throughout my time in the emergency department, they felt comfortable talking to me about the work environment. I believe that talking about relationships with co-workers is something that requires trusting the interviewer. And they did trust me on that matter. I think that having another person in the
room could have negatively influenced the information provided by the interviewees.

It is also known that meaning can be lost in translation if conceptual equivalence is not reached and thus affect the empirical material gathered (Squires, 2008, 2009). Others have pointed out the problems of having a third person voicing the research participants’ experiences, and from the translator’s own perspective (Temple, 2002). Not being familiar with the research area, translators may also weaken the study (Larkin, Dierckx de Casterlé, & Schotsmans, 2007). This is in line with my take on research: while positivists may regard translators as mere “neutral transmitters of messages” (Temple, 2002, p. 845), I believe that knowledge is socially created. Thus, researchers, translators, and research participants, all have influence on the data gathered (Temple & Young, 2004). In this sense, I believe that having staff members do the translations themselves (from mother tongue to second language or from third to second languages) was a better way to go about gathering my material.

While the empirical material gathered was in three different languages (English, Spanish and Swedish), all analyses were done in English, and the material was translated when relevant for the study. In the empirical chapters that follow, I wrote “[own translation]” to show that the cited source was originally in another language. It is also worth noting that, independently of the language used, staff members brought up very similar issues when discussing their and others’ roles, and routines performed in the emergency department. Furthermore, all research participants spoke English as a second language or had Spanish as their mother tongue. The same did I. Thus, contrary to the language issues raised in the literature, which are mainly focused on the researcher and participant not speaking the same language, staff members and I did speak common languages.

To summarize, although not speaking the native language could be regarded as a disadvantage, I believe that having the research participants talk in a foreign language may have been more advantageous than having a translator or interpreter doing it. This because it is the same individual who has to describe his or her experience as a staff member, instead of an outsider trying to interpret and translate that individual’s experience into a second language. Nonetheless, I am aware that some information may have been missed in the participants’, and my own, translations. Still, while the language barrier between the research participants and I could be considered a limitation of this study, it also represented an opportunity, especially in observing patterns of action.
3.3. Interpreting my empirical material

As many have highlighted, analysing qualitative data is far from being a straightforward process. For me, it took so many turns that it is difficult to put down a start and an end. Even though in the following I will identify periods of time which were fully dedicated to analysing my empirical material, as the iterative process described showed, a lot of the analytical work went on throughout the process.

As already described, interviews and field notes from observations were transcribed within 48 hours following collection in order to allow for reflection and to process any additional notes taken. Documents were processed as gathered. As my research process took a start in theories of roles and routines, these phenomena were in the back of my head when collecting and analysing my material. In the beginning, the analytical process translated into describing roles and routines, trying to identify the theoretical concepts identified in the literature. For example, when I started coding the material, I began by identifying the actions that made up each role and routine (performative aspect). However, while these descriptions were in line with existing research and crucial for me to understand the context, they were not revealing anything interesting. It felt like I was merely applying the theories to my data (Feldman, 1995) and worrying about how my data fitted in the theories. It was not until I dropped the theories and focused on what the data was telling me that I started to find other patterns that were indeed thought-provoking. In what follows, I summarize the long analytical process I went through in my doctoral studies.

3.3.1. Understanding the context

While the analysis took place throughout the whole research process, it was not until October 2013, after my first visits to the emergency department, that I formally started conducting preliminary analyses. These consisted of manually coding my first field notes. Having transcribed my handwritten notes to word-processing files, I formatted these, double-spaced, and created a column next to the text labelled preliminary codes. I read through the text, separating it into short paragraphs following changes in topic (Saldaña, 2009). Once the text was formatted, I read it again, this time, coding the material. I went through the text line-by-line identifying roles, routines, activities, conflicts, rooms, among others; anything that was written in the text. Thus, these were descriptive codes in the sense that they summarized the main idea behind the excerpt coded (Saldaña, 2009). For example, the excerpt: “Nurses can work in any specialty during daytime so if they are not busy in their section, they can go and help out others”, was coded as “Generalist nurses”. This descriptive code was used to identify data that referred to the nurses’ ability to work across specialties. As I did more field
visits and conducted more interviews, I transcribed them and followed the same procedure: reading through the material and coding it, descriptively.

While at this point in time I did not have a clear picture of all roles and routines, I started describing the simplest routines, such as the triage, which was repeated at a high frequency and limited in time and space (cf. Becker & Zirpoli, 2008). Having coded my empirical material, I extracted the pieces of data that related to the routine and used a narrative strategy (Langley, 1999) to describe the routine in detail. Doing this, I noticed that I was missing bits and pieces. As I was analysing my material while still in the field, in this case and whenever I had an idea that felt worth pursuing, I took the chance to discuss it with people in the emergency department. Once I got the chance to observe the triage routine for a whole shift, I followed the same analytical procedure as with my other material. I read through and coded my field notes, identifying start, end, activities, and roles involved, in the routine. I listed all the activities performed for each observed repetition of the routine (see Appendix 5 for an illustration). Thereafter, I identified the roles involved in each activity.

Having a certain number of observations on each routine helped me to compare performances, and although there was always some variation between performances, I could see that certain activities were repeated each time the routine was enacted. Moving back and forth between data and theory, I saw that this was in line, for example, with the idea of routines as grammatical models (Pentland & Rueter, 1994). Going back to the data and delving into the performances is how I identified that the differences responded, at least partially, to the acuity of the patient, patient diagnose, and availability of resources. These contextual factors would make people engage in role adaptation and/or role switching in order to ensure that the routine was fulfilled. As I collected more material, I analysed the other routines in the emergency department.

In parallel to coding my data in word-processing files, I used an Excel sheet where I collected excerpts from the empirical material that referred to similar codes or shared some characteristic, and brought these codes together under categories (Saldaña, 2009). Once categories were established, I tried to see how these were connected to role and routine concepts. Following this procedure, I started to create clusters of data (Feldman, 1995), which helped to organize my material, and provided a basis to start interpreting the practices in the emergency department. Categorizing codes was the starting point to identify patterns (Saldaña, 2009). Some of these initial categories, although not intended to be definitive at that stage, were present along the study, later evolving into the findings presented in the following chapters.
Being in the field while developing my analytical ideas made me more aware about what to observe when visiting the emergency department. Between my visits I would write down questions or comments, that I wanted clarifications on, for the next time I visited or conducted interviews. However, these ideas would not take shape until I put them on paper. Indeed, a lot of the analysis happened through my writing. When writing about my codes and categories, many of my ideas made sense; they sounded logical. But I also questioned lots of arguments that I had developed when coding.

I manually coded interview transcripts, field notes, and documents until May 2015. This process resulted in various outcomes. First, a preliminary mapping of the processes that patients and staff members followed when moving in and out of the emergency department, including a sketch of the layout, was developed. Second, the analysis of documents resulted in a description of the context of the emergency department and the Swedish healthcare system. Third, I started to break down the general process into organizational routines and analyse them. Fourth, the categories that had emerged from the empirical material were used in writing up memos, some of which were developed into conference papers, testing out ideas.

While coding my empirical material helped me to see that there was something going on in the emergency department, I could not figure out what this was until later analyses. This far, I had basically been interpreting and describing “how the members [of the emergency department] understood particular phenomena.” (Feldman, 1995, p. 2) The more material I gathered, the more complicated it became to go through it manually, and make sense of data, codes, categories, and relationships. This is when I decided to start using NVivo, a software for analysing qualitative data.

3.3.2. Focusing on patterns
As much as new material aided in clarifying doubts, like in the case of developing a thorough understanding of the routines, it also added complexity as the coding process was never-ending. Having worked in cycles of manually coding my data, gathering new material, transcribing and coding it, and gathering again, it had been hard for me to make sense of my analyses. In order to get some distance and hopefully perspective is why, in the fall 2015, I left to Montreal to work on my data analysis.

Due to the large amount of empirical material I had gathered, I started using NVivo. Training-wise, I participated in two workshops (May 2014 and February 2016), had one session on the software in a qualitative methods course, watched tutorials online, and read through the NVivo user’s manual. It took me a few
weeks to get used to, and feel comfortable with, the software. However, once I had learnt the basics, it was a very useful tool. I used the software to code my material, which resulted in three rounds of coding. The first round was very descriptive and helped mainly in structuring my data. In the second round, while continuing to describe much of what was happening in the emergency department, I also started to cluster the data-driven codes under more abstract categories. This was similar to what I had been doing when manually coding my material. The third round of coding started late fall 2015 and continued for over a year. It was in this round that I clearly identified the role and routine patterns in the emergency department. I will now discuss each of these rounds of data analysis in more detail.

3.3.2.1. Describing roles and routines
Once I had uploaded all the empirical material collected that far, I started with a descriptive coding, identifying roles and routines. I created the following series of nodes (name for codes, in the software) based on the roles and routines that I had identified during my visits to the emergency department:

<table>
<thead>
<tr>
<th>Roles</th>
<th>Routines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>Triage</td>
</tr>
<tr>
<td>Registered Nurse (RN)</td>
<td>Patient tracking</td>
</tr>
<tr>
<td>Assistant Nurse (AN)</td>
<td>Treatment</td>
</tr>
<tr>
<td>Patient</td>
<td>Discharge</td>
</tr>
<tr>
<td></td>
<td>Reporting</td>
</tr>
</tbody>
</table>

I started coding my field notes into these nodes. Reading through the text, line by line, I marked portions of the text, which referred to any of the created nodes, coding these. Soon after, I realized that parts of my empirical material did not fit into these nodes so I started creating new nodes such as: staff and shifts, waiting time, resources, break, artefact, and conflict. For example, I created a new routine node, “arrival”, to collect all data related to new incoming patients. In this way, I progressively added nodes to collect data that did not fit into the nodes that I had initially created. Thus, the list of codes became longer and longer. An illustration of how I started to expand the initial list is shown below:

<table>
<thead>
<tr>
<th>Roles</th>
<th>Routines</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>Triage</td>
<td>Staff and shifts</td>
</tr>
<tr>
<td>Registered Nurse (RN)</td>
<td>Patient tracking</td>
<td>Waiting time</td>
</tr>
<tr>
<td>Assistant Nurse (AN)</td>
<td>Treatment</td>
<td>Resources</td>
</tr>
<tr>
<td>Patient</td>
<td>Discharge</td>
<td>Break</td>
</tr>
<tr>
<td>Coordinator Nurse</td>
<td>Reporting</td>
<td>Artifact</td>
</tr>
<tr>
<td>Resource Nurse</td>
<td>Arrival</td>
<td>Conflict</td>
</tr>
<tr>
<td></td>
<td>Interphase</td>
<td>Hierarchy</td>
</tr>
<tr>
<td></td>
<td>Trauma</td>
<td>Random</td>
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</tbody>
</table>
While coding my material, I kept track of the process through the writing of memos. These served as a “sort of internal dialogue, or thinking aloud, that is the essence of reflexive ethnography.” (Hammersley & Atkinson, 2007, p. 151) Not only did these memos help me to keep track of what I was doing and develop analytical ideas, but also were the main discussion material used with my supervisors. I wrote different memos in parallel. For example, I had a “coding” memo, where I described different steps taken throughout my coding process; a “nodes” memo, where I described any new code created or thoughts regarding existing codes; and an “analysis” memo, where I wrote reflections and developed analytical ideas that came up through the coding process.

This first round of electronic coding resulted in a clear description of roles and routines. In terms of roles, while in the beginning I thought that I would be looking at the professional roles (i.e. medical doctor, registered nurse, and assistant nurse), the empirical material showed that there were many more organizational roles involved, such as section doctors and nurses (medicine, surgery, orthopaedics), coordinator nurses, and emergency physicians. Thus, the empirical material was coded accordingly. Regarding routines, while I could roughly see the start and end of each routine identified by the staff members, at this point I had identified most of the activities falling within each routine, and coded the material accordingly.

Apart from these descriptions, the first round of electronic coding resulted in a bunch of other codes that started to indicate that something was happening in the emergency department. One node that was particularly interesting was what I called “interphase”. When coding, I realized that there were some activities that did not fall into the routines that I had initially identified. Instead, these activities were performed between routines. These were recurrent activities in the emergency department, activities that would be performed over and over again, some for each new patient. They would not contribute to the purpose of a routine per se but they were needed to ensure the continuation of the routines. Thus, I started coding all activities that linked one routine with the next one within this “interphase” node. Later, I realized that some of these activities were sometimes included in the previous or next routines, as the individuals involved in those routines would enact the activities following or preceding the corresponding routine. This triggered a new coding round focused on routine dynamics.

3.3.2.2. Routine dynamics
I started a new round of electronic coding, working on the idea that routines may shrink or expand depending on the available or present roles. To illustrate, the triage routine was expanded during nighttime to include activities before and

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12 This is presented in detail in the empirical chapters.
after the triage itself. Those additional activities were done by other roles during daytime: right before the triage routine started, secretaries would register the patient (at night, it was the triage nurses who did the registration); after the triage routine was completed, patient reporting to the section was done by a section nurse (while, at night, it was the triage nurse who reported the patient).

To help my analytical process at this stage, I used a visual mapping strategy (Langley, 1999). This helped in representing the organizational routines, the interphases between them, and the dynamics that I was starting to uncover in my empirical material (see Figures 4 and 5 for illustrations).

While in the previous round I had coded activities falling between routines under the “interphase” node, this second round consisted of coding the empirical material following the dynamics created around these interphases. For example, I identified different types of expansion. A routine could be expanded in content, i.e. by adding more activities, as illustrated in Figure 5.

In addition to visual mapping, a narrative strategy (Langley, 1999) was used in writing up memos describing these dynamics. As I mentioned before, a lot of my analysis happened through my writing. Thus, these memos were helpful in trying out ideas that came up when coding my empirical material. Memos were also useful in bringing me back on track. To illustrate, while during this round I found that the identified dynamics were needed to ensure stability in the routine network, I also realized that I was shifting my focus away from the internal dynamics of routines. In order to get back on track, I used different types of visual
aids, such as tables. I also used narrative networks: an analytical tool that helps to represent routines in a dynamic fashion (Pentland & Feldman, 2007).

Narrative networks incorporate people, artefacts and activities, through a focus on actions, which enables a holistic representation of the routine (Pentland & Feldman, 2007). As an illustration, Figure 6 shows the narrative network of the discharge routine. On the left column, the routine activities are listed, including the individuals and artefacts involved. On the right column, the sequence of activities is presented. Note that the same network displays alternative versions of the same routine. For example, sometimes the sequence goes A-B-C-D, and some other times it goes A-C-B-D. The doctor may inform the nurse about the decision to admit the patient to a ward first, and then search for a bed in a ward, or vice versa. This narrative was created aggregating the points of view of the various roles involved, and the artefact that describes the routine.

<table>
<thead>
<tr>
<th>Narrative fragments</th>
<th>Narrative network</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. The doctor decides the patient should be admitted</td>
<td>A → C</td>
</tr>
<tr>
<td>B. The doctor informs the decision to the responsible nurse/s</td>
<td>B</td>
</tr>
<tr>
<td>C. The doctor searches for an appropriate ward in the computer</td>
<td>G</td>
</tr>
<tr>
<td>D. The doctor prescribes any eventual actions on the triage sheet</td>
<td>F</td>
</tr>
<tr>
<td>E. The nurse performs the actions and reports in the triage sheet</td>
<td>E</td>
</tr>
<tr>
<td>F. The nurse prepares the patient and reports on triage sheet</td>
<td>H</td>
</tr>
<tr>
<td>G. The doctor reports the patient to receiving department</td>
<td>I</td>
</tr>
<tr>
<td>H. The nurse scans triage sheet into patient journal</td>
<td>J</td>
</tr>
<tr>
<td>I. The nurse prepares the patient papers</td>
<td>K</td>
</tr>
<tr>
<td>J. The nurse informs the patient about admission</td>
<td>L</td>
</tr>
<tr>
<td>K. The nurse calls patient transport</td>
<td></td>
</tr>
<tr>
<td>L. Patient transport collects the patient</td>
<td></td>
</tr>
</tbody>
</table>

*Figure 6. Narrative network of the discharge routine*

Narrative networks helped me to visualize and compare alternative performances of the same routine, considering the roles involved. However, although I was including roles in my analyses, I was still very much focused on the organizational
routines. Routines had been my focal point from the very beginning, which meant that during the rounds of manual coding and the first two electronic coding rounds more weight was put on routines than on roles. It was not until late fall 2015 that I had my “aha” moment and realized that, until then, I had been black-boxing roles. While I had been looking at the internal dynamics of routines, I had been overlooking the dynamics within roles. This marked the start of my last round of electronic coding.

3.3.2.3. Role and routine patterns
After finally having my “aha” moment, I went back to my data and started to focus on roles. While I had already identified professional and organizational roles, leaving routines aside for a little while helped me to see other role patterns that had always been there but I was just not seeing. While some studies had highlighted that deindividualized role structures are key to keeping up the functioning of organizations such as emergency departments (Bechky, 2006; Klein et al., 2006; Valentine & Edmondson, 2015), the people that I was studying highlighted that who filled a role did matter. Apart from this, people acknowledged that power dynamics within the role structure influenced the way work was done in the emergency department. This was paradoxical to me. How did people in the emergency department enact a complex role- and routine-based structure while having to deal with a multiplicity of individuals who brought in their personal touch?

I started to pay attention to these issues and coded my material once again. I wrote memos developing new ideas and trying to make sense of what all this meant. I found different aspects that came into play in every performance such as experience, authority, and power. This meant that individuals developed multiple understandings in relation to whom they worked with. In this way, I started to find role patterns, some of which were given by the organization, and some that had emerged among the staff members. As questions came up during this round of coding, I began to realize that I did not have all the answers. Therefore, I coded the material drawing on my reading of role theories. As I mentioned before, it was at this stage that I shifted my attention towards roles in order to figure out what roles were doing to routines. Thus, I coded the material looking for different enactments of roles, and in doing so, the reasons for these variations became evident. Apart from memo writing, I used visual aids, mainly in the form of tables, in structuring my analytical ideas. This resulted in a preliminary framework that brought together role expectations, enactments and routine performances.

I then went back to the routines literature, and focused my reading on the ideas of routine patterning and performing (Feldman, 2016) and enacted patterns (Feldman et al., 2016). Looking at my findings again, these ideas gave me the
vocabulary I had been looking for to describe what I was seeing in my data. I went back to my empirical material and worked through it identifying role and routine patterns. What I had previously identified as role expectations were role patterns. What I had identified as coping behaviours, were different ways of performing a routine, i.e. a routine’s enacted patterns. Both role and routine patterns came together in each performance. Moving back and forth between theory and data is how I refined and reached the findings presented in this study.

I started describing my analytical process by saying that it was not a straightforward process. My intention with providing a detailed description of it was to let the reader experience a bit of what happened throughout. Besides this, and even if it looks like a “messy” process which took unexpected turns more than once, I believe that every step contributed to the final outcome.

The product of my analytical process is presented in the empirical chapters that follow. The text has been organized thematically, rather than chronologically, and the themes used can be said to be a mix between emic and etic categories (Hammersley & Atkinson, 2007). While the empirical material heavily influenced the constructs used in the findings, due to the abductive nature of my research process, it is difficult to strictly tell what was data- and what was theory-driven. Before moving to the empirical chapters, I discuss the ethical considerations taken in doing this study, and also the ways in which I worked towards ensuring its credibility.

3.4. Ethical considerations

Regarding ethical considerations, due to the fact that the study took place in a medical setting, approval for conducting the research had to be discussed. As already mentioned, I signed a confidentiality agreement, which was the same form that all new employees had to sign when starting to work in the emergency department. Once signed, I handed it to the head of the nurses the next time I was there doing observations. Following this agreement is that I decided to not provide the name and location of the hospital in this study.

Staff members were informed about my study so that they knew who I was and what I was doing in the emergency department during my visits. I also explained the purpose of my study to every person I was shadowing and promised anonymity. In order to ensure this, pseudonyms have been given to staff members, patients and managers. Following the confidentiality agreement, I am not allowed to disclose any information regarding a patient’s health condition or other personal circumstances such as social and financial conditions. This is why,

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13 The details about these role and routine patterns, and performances are provided in the findings.
apart from masking names in my findings, I do not provide any personal details or other sensitive information that could be traced back to individuals. The employees’ roles have not been masked, as these are not unique to single individuals and do not threaten the confidentiality agreement.

Regarding patients, whenever I would follow staff members into patient rooms, the doctor or nurse that I was shadowing would introduce herself or himself, and then introduce me as a student, say that I was looking at how she or he worked and ask if it was okay that I stayed in the room. All patients accepted having me in the room. Being a university hospital, it was very common that students followed others around so this might be why patients were so open about it. In any case, I was looking at the interactions and activities that took place when examining and diagnosing patients, as I was interested in the routines performed and the activities that fell into each role. Knowing this, staff members were aware that I was not interested in the patients themselves, which did not raise any concerns regarding confidentiality or ethics.

Regarding interviews, all of these took place after obtaining the individuals’ informed consent. Before the interview started, I gave the participant information regarding the research purpose, the research team, an overview of the topics that would be covered during the interview, and the approximate duration of it (Lewis, 2003).

### 3.5. Credibility of this study

The aim with assessing the credibility of a study is to ensure that its findings are accurate and consistent with the observed reality (Lincoln & Guba, 1985). There are several alternatives when it comes to evaluating qualitative research (e.g. Lincoln & Guba, 1985; Johnson et al., 2006). Creswell and Miller (2000) propose a series of strategies, which differ in terms of philosophical stances and the lens adopted by the researcher. Throughout my research process, and in line with my beliefs, I used a few of these strategies in order to ensure this study’s credibility. These strategies, namely disconfirming evidence, prolonged engagement in the field, and thick, rich description (Creswell & Miller, 2000), were deemed suitable for evaluating my research, and are discussed in what follows.

One strategy used was triangulation or disconfirming evidence (Creswell & Miller, 2000). Using multiple collection methods and comparing the empirical material gathered, enabled triangulation (Hammersley & Atkinson, 2007; Sanday, 1979; Silverman, 2014) and strengthened the credibility of the findings presented in this study. Sometimes, documents and interviews helped filling in blanks in field notes or showed similar patterns. However, this was not always the case. Following Hammersley and Atkinson’s (2007, p. 184) recommendation,
I tried to avoid “adopt[ing] a naively ‘optimistic’ view that the aggregation of data from different sources will unproblematically add up to produce a more accurate or complete picture.” Thus, whenever, for example, documents and observations showed different patterns, I followed it up. In fact, it was these discrepancies between data from different sources that enabled the identification of the different patterns presented in the findings of this study.

Spending a prolonged period of time in the field was another strategy used to increase the credibility of this study (Creswell & Miller, 2000). Being involved with the emergency department’s staff members for over four years not only helped to develop trust with them, which in turn made them feel more comfortable about sharing information with me, but also helped me to gain a deep understanding of the emergency department. As previously described, analysing my empirical material while still in the field represented a huge advantage, as I could gather additional data if needed to support my findings or if something was not clear enough. I would not have reached the findings presented in this thesis if I would not have spent such a long period of time in contact with the empirical setting.

The third strategy used in ensuring credibility was to provide thick, rich descriptions (Creswell & Miller, 2000) of the emergency department, the roles of staff members and organizational routines. In doing this, I tried “to provide as much detail as possible” (Creswell & Miller, 2000, p. 129) by using large amounts of my empirical material in supporting the findings so that the reader can get as close as possible to the situations described (Silverman, 2014). I also used direct quotes from the empirical material whenever suitable in order to make the accounts vivid. All the empirical material presented in this study is marked according to the method used in gathering it, i.e. [field notes], [interview], [document].

I also tried to describe the research process that I followed in as much detail as possible. In order to show that this study was methodologically rigorous, I detailed the methods used in gathering my material and how these helped in accessing different material needed to answer my research question. I also tried to provide detailed descriptions of the analytical processes I went through. The process of moving between theories and data meant that the same empirical material was analysed in different occasions, iteratively, which served to progressively reach the findings of this study.

The preliminary findings were shared with the people studied in various occasions. For example, the research proposal, written after the first round of data collection, was sent out to the director of emergency healthcare, the project manager, and a few staff members. Another such occasion was the workshop held
during phase 3, where staff members from the emergency department were present, and where I presented some of my findings regarding the triage routine. The interviews in phase 5 also served in validating findings, as I discussed these with the interviewees. All these represented opportunities for respondent validation (Silverman, 2014).

It is my hope that these rich and detailed descriptions convey transparency in how I moved from the “raw” empirical material to the findings presented in the following chapters.
4. An overview of the emergency department

This is the first out of four empirical chapters, which present and discuss the findings of this study. The aim of this chapter is to provide an overview of the emergency department by describing the context, staffing, and work done on a daily basis. The accounts presented in this chapter draw on interviews, documents, and field notes from my visits. The chapter starts out situating the emergency department, empirical setting of this study, in its context. Then, a detailed account on the staffing of the department is provided. A description of the patient journey, i.e. the general process that a patient follows during the stay in the emergency department, closes the chapter laying the foundation for the chapters that follow.

4.1. The context

Sweden counts with a three-layered government: the national; the regional, which consists of twenty counties; and the local government, which comprises 290 municipalities. Each of the regional counties is formed by various governmental entities, such as the County Administrative Board and the County Council. While the former is mainly responsible for the administration of the county, the latter is responsible for different services among which healthcare is the most important, taking around 90 per cent of the work. In terms of healthcare system, Sweden is divided into six regions: Southern, South eastern, West Swedish, Stockholm, Uppsala/Örebro, and Northern. Each of these regions counts with university, also called regional, hospitals that are closely related to medical higher education institutions.

The emergency department under study belongs to the only university, and therefore regional, hospital of one of the six healthcare regions. The region itself is home to around 880,000 people. The county where the hospital is located has a population of over 250,000 inhabitants and three general hospitals, including the university hospital. General hospitals are theoretically prepared to treat all patients, but they do not necessarily count with all medical specialties. Regional or university hospitals, instead, count with higher levels of expertise and advanced technology. Therefore, this university hospital is responsible for all the region population when it comes to complicated cases that cannot be treated in general hospitals. The hospital employs around 5,700 people, provides training to healthcare professionals, and is a research hub. Emergency healthcare falls under the responsibility of the County Council, which manages the different units involved in this area, including ambulance wards, healthcare centres and clinics, and emergency departments.
The emergency department, case of this study, receives around 35,000 visits each year. It counts with two ways of working, one during daytime (between 7 a.m. and 9 p.m.) and another one during nighttime (between 9 p.m. and 7 a.m.), which I here call divisionalized and centralized modes of organizing, respectively. During daytime, the emergency department is divided into three main sections, following hospital departments based on medical specialties: internal medicine, orthopaedics, and surgery. Each of these sections only treats patients that, after having been triaged, fall within their specialty. The triage is the initial assessment of the patient who, according to his or her acuity, is given a priority colour. The scale ranges from blue (which is the lowest priority that can be given to a patient) through green, yellow, and orange, to red (which are patients assigned the highest priority). During daytime, triaged patients are divided into the three sections, which usually results in uneven workloads: internal medicine receives the largest number of patients, followed by surgery and then orthopaedics. Following these specialties, three different hospital departments (internal medicine, surgery and orthopaedics) are responsible for staffing daytime doctors in the emergency department. These doctors are neither employed by nor permanent staff of the emergency department. All of them work in the department for short periods of time mostly during their internships or specialty training. This means that daytime doctors are usually not specialists. The emergency department, in turn, employs registered and assistant nurses, which means that they are permanent staff members. During daytime, doctors and nurses are staffed in teams following the three sections. Each of the teams consists of one registered nurse, one assistant nurse, and one or two doctors.

During nighttime, the way of working moves from the divisionalized to a centralized mode. Night shifts are staffed with emergency physicians, which contrary to daytime doctors, are specialists in emergency medicine or are in their final stages of their specialty training. Emergency physicians, same as registered and assistant nurses, are employed by the emergency department, which means they are also permanent staff. The centralized mode implies that the daytime sections do not apply during night shifts. Instead, emergency physicians take care of all patients coming to the emergency department, independently of their symptoms. Thus, after having been triaged, patients follow one queue instead of being divided into three parallel lines, as it happens in the divisionalized mode. Staff members still work in teams during nighttime, and each patient is assigned one doctor, one registered nurse and one assistant nurse. The difference, compared to daytime, is that these teams can vary for each patient, which means that the triad doctor-registered nurse-assistant nurse may change for every

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14 Except for children under one year old, gynaecology and psychiatry patients. While these patients may come into the hospital through the emergency department, especially during nighttime, as this is the only access point to the hospital, other wards are still responsible for them, both during daytime and nighttime.
patient, while usually during daytime the same team works together throughout a whole shift. Moreover, during nighttime, patients are for the most evenly divided among staff members.

Counting with two working modes and a mix of temporary and permanent staff members working around the clock, the staffing at the emergency department is done by four hospital departments, which makes shift work in this emergency department a bit peculiar. Let’s now take a look at this.

4.2. Work shifts and staffing

Personnel move in and out according to their schedules, and can be assigned to different work shifts in the emergency department. Most shifts have certain overlap where staff members from one shift hand over the remaining patients to staff from the following shift. The reporting of patients normally happens between nurses and between doctors from contiguous shifts.

4.2.1. Registered and assistant nurses

Registered and assistant nurses have a six-week schedule that includes seven night shifts. They are usually staffed in one of three daily shifts: the morning shift, which starts at 6:45 a.m. and goes until 4:30 p.m., the evening shift, which goes between 11:30 a.m. and 9:15 p.m., and the night shift, which goes from 9 p.m. to 7 a.m. This means that there are two shifts covering the daytime mode between 7 a.m. and 9 p.m., and one shift covering the nighttime mode between 9 p.m. and 7 a.m.

Apart from these three shifts, there are two extra shifts filled by the so-called resource nurses. These are roles that are meant to provide extra support to the sections which they are assigned to, i.e. either internal medicine, surgery and/or orthopaedics. One of these shifts is done by a registered nurse, who works for internal medicine from 4 p.m. to 12 a.m., as this is the section with the highest patient load during daytime. The other shift is done by an assistant nurse, who works for both surgery and orthopaedics between 4:15 and 9:15 p.m.

Finally, some nurses may be assigned short shifts in order to fill up their monthly hours. A registered nurse explained that they are supposed to work 38,25 hours a week so if one works for example four nine-hour shifts a week then there are still 2,25 hours that the nurse should cover at some point. This is where the short

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15 The only exception in this regard are secretaries, as they do not work directly with patients, except for the registration of patients at arrival. While they were observed during my field visits, my decision to focus on patient-related routines meant excluding them from this study. This because, despite the importance of their roles in terms of administrative work, they barely interacted with doctors and nurses and they were not directly involved in the routines studied.
shifts come in, which usually mean working in the orthopaedics section, as this is the quietest one. To illustrate, a certain day a registered nurse was doing a shift in orthopaedics from 7 a.m. to 1:40 p.m., and the assistant nurse in the same section was starting at 7:45 a.m. and working until 3 p.m. Two more nurses were starting the evening shift at 11:30 a.m. [Field notes] Thus, the morning shift for the orthopaedics section was not staffed from 6:45 a.m. till 4:30 p.m. as usual, but instead was staffed with nurses working overlapping short shifts.

At the time of the study there were also one assistant and two registered nurses that worked only nighttime and their shifts were scheduled on a 3-3 basis. This means that they work three days (night shifts) in a row and then get three days off. In general, they work nine out of 14 days and after two working weeks they get a week off. This is because during the two working weeks they work between 50 and 60 hours instead of working 40 hours per week. Nonetheless, getting a week off is a benefit that only applies to staff working nighttime on a permanent basis. [Field notes]

Figure 7 gives an overview of the number of staffed registered (RN) and assistant (AN) nurses around the clock. All in all, nurses are staffed as follows: five registered nurses and four assistant nurses in the morning shift, six plus six in the evening shift, and four plus four at nighttime.

![Figure 7. Nursing staff per hour (Monday to Sunday)](image)

Table 8 provides the staffing details according to shifts, sections, and teams. While the details of all the roles performed by staff members will be provided in the following chapters, it is worth to note here that, apart from the three sections (i.e. internal medicine, surgery and orthopaedics) and resource team, nurses can be staffed in the coordinator or the triage teams. Doctors instead work either daytime or nighttime, and are always assigned the same role: internal medicine, orthopaedics, surgery, or emergency medicine. Let’s now look at their staffing.
Table 8. Staffing of nurses

<table>
<thead>
<tr>
<th>Section/team</th>
<th>Morning</th>
<th>Evening</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinator</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
</tr>
<tr>
<td>Triage</td>
<td>1 RN</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
</tr>
<tr>
<td>Resource</td>
<td>1 RN* + 1 AN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal medicine</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
</tr>
<tr>
<td>Surgery</td>
<td>1 RN + 1 AN</td>
<td>1 RN + 1 AN</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5 RNs + 4 ANs</td>
<td>6 RNs + 6 ANs</td>
<td>4 RNs + 4 ANs</td>
</tr>
</tbody>
</table>

Note: Staff is doubled between 11:30 a.m. and 4:30 p.m. (morning and evening shifts overlap). *The resource RN shift is partly overlapping with the evening and night shifts.

4.2.2. Daytime doctors

When it comes to doctors, during daytime, they are not staffed by the emergency department but by three other hospital departments, namely, internal medicine, surgery and orthopaedics. Mondays to Fridays, the internal medicine department sends five doctors to cover the morning and evening shifts. These are staffed as follows: two doctors work from 8 a.m. to 5 p.m., and a third doctor from 12 to 9 p.m. A fourth doctor takes on a short shift between 5 and 9 p.m., after having done a shift in the wards between 8 a.m. and 5 p.m. The fifth doctor works with the remaining section patients between 9 and 11 p.m. From 11 p.m. until 8 a.m. the following day, this doctor is responsible for the patients in the wards and is also on call for emergency physicians doing the night shift in the emergency department. This means that if emergency physicians need any help with a patient during the night, they can call this doctor. During weekends, the internal medicine department has three doctors working in the emergency department. One works between 9 a.m. and 7 p.m., the second doctor starts at 11 a.m. and works until 7 p.m., and the third one starts at 6 p.m. and works until 10 p.m. in the emergency department, being on call afterwards till 8 a.m. the following morning. During weekdays, the surgery department sends three doctors. The first one works from 8 a.m. to 5 p.m. The second doctor does a shift between 12 p.m. and 9 p.m. The third doctor, same as with the internal medicine section, does an extra shift between 5 and 9 p.m., after having worked the regular shift (8 a.m. to 5 p.m.) in the ward. During weekends there is only one surgery doctor at the emergency department, working a 12-hour shift from 9 a.m. to 9 p.m. The orthopaedics department staffs three doctors during weekdays. Two of them work from 7:45 a.m. to 4:30 p.m., and the third doctor works between 4:30 and 11 p.m. During weekends, there is one orthopaedics doctor working from 1 to 11 p.m.

Figures 8 and 9 show the staffing of daytime doctors during weekdays and weekends, respectively. As shown in Figure 8, while surgery doctors end their
shift at 9 p.m. during weekdays (see orange bar in Figure 8), orthopaedics and internal medicine doctors work until 11 p.m. (grey and blue bars in the figure). Still, the two latter do not take any new patients after 10 p.m. This means that, between 10 and 11 p.m., internal medicine and orthopaedics doctors work on patient discharge; as they cannot leave the emergency department until they are done with all their patients.

As shown in Figures 8 and 9, daytime doctors cover different shifts between 8 or 9 a.m. and 11 p.m. During nighttime, emergency physicians do their shifts between 9 p.m. and 8 a.m. the following morning, covering the remaining hours. Let’s now take a look at their staffing.

4.2.3. Nighttime doctors
The emergency department is responsible for staffing its own doctors, i.e. emergency physicians, during nighttime. Figure 10 shows the staffing of emergency physicians for the whole week. There are three emergency physicians working in two shifts, Monday to Sundays: one doctor starts at 8:45 p.m. and
works until 7 a.m. This doctor takes care of surgery patients from 9 p.m. onwards. Contrary to the other two sections, surgery doctors may hand over patients to the emergency physician when their shift is over at 9 p.m. This emergency physician is also responsible for all other patients arriving to the emergency department after 9 p.m. that do not belong to the orthopaedics or internal medicine sections, as these sections are still responsible for incoming patients until 10 p.m. At 10 p.m., two more emergency physicians come in and work until 8 a.m. the following morning. After 10 p.m., emergency physicians are responsible for all patients coming to the emergency department. When it comes to their work schedule, emergency physicians work seven shifts a month: they work four and three nights in two consecutive weeks, and, after that, they get two weeks off.

Table 9 provides an overview of the staffing, divided by shift and roles. Overall, doctors are staffed either daytime or nighttime, and during daytime they are always staffed in the same section, following the hospital department to which they belong. Registered and assistant nurses do rotational shift work instead, except for three nurses working nights on a permanent basis. This means that, on a particular day, nurses can be assigned to any of the three daytime sections (internal medicine, surgery, orthopaedics), the nighttime shift, the triage, the coordinator (SAM), or the resource teams. However, when receiving their six-week schedules, nurses can only see the shifts that they will be working in, i.e. morning, evening or night. This means that nurses do not know, and this applies to all doctors as well, whom they will be working with until they get to the emergency department. This rotational shift work requires nurses not only to adapt to different working modes according to their schedule, but also to working with different people, as daytime doctors are often rotating as well. It also requires from doctors to adapt to working with different nurses. Furthermore, while doctors always fill the same roles, nurses are required to take on different roles.

The triage and coordinator teams are part of the regular shifts (morning, evening, and night) and will be further explored later.
ones. The implications of these dynamics will be explored in the following chapters, but, before doing so, a general description of the process that patients follow while in the emergency department is due.

Table 9. Staffing overview

<table>
<thead>
<tr>
<th>Staff</th>
<th>Morning</th>
<th>Evening</th>
<th>Night</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurses</td>
<td>5 (1 triage, SAM, med, surg, ort)</td>
<td>6 (same as morning, +1 med 16-00)</td>
<td>4 (1 triage, 1 SAM, 2 emergency)</td>
</tr>
<tr>
<td>Assistant nurses</td>
<td>4 (1 SAM, med, surg, ort)</td>
<td>6 (same as morning, +1 triage, 1 resource 16-21:15 surg, ort)</td>
<td>4 (1 triage, 3 emergency)</td>
</tr>
<tr>
<td>Daytime doctors</td>
<td>6 (2 med, 2 ort, 2 surg)</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Nighttime doctors</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>18</td>
<td>11</td>
</tr>
</tbody>
</table>

4.3. The patient journey

The main process that a patient follows can be broken down into five core routines: arrival, triage, diagnosis, treatment, and discharge. Parallel to this, there is a lateral routine, patient tracking, which starts and ends with the main process. Figure 11 depicts the journey followed by a regular patient.17

![Figure 11. Main process and lateral routine](image)

Patients can arrive to the emergency department in three ways (see Figure 12 for a layout that I sketched during my field visits): (1) through the main entrance, where they arrive on their own or with some relative/friend, or (2) with the police; or through the ambulance parking, where they are brought either by (2) the police or (3) an ambulance. By regular, thus, I mean a patient that arrives to the

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17 This section illustrates in general terms what happens to a patient while in the emergency department. Depicting the journey of a regular patient was a decision made based on staff members’ descriptions of the overall process, as well as evidence from organizational documents. This could be said to provide a representative picture of the process undergone by the vast majority of patients.
emergency department by his or her own means, or accompanied by someone, and through the main entrance (see (1) in Figure 12). Moreover, a regular patient is someone who does not require any urgent intervention by the staff, i.e. he or she does not present a deadly condition. All these conditions have to be met in order for the patient to follow this regular process.

Figure 12. Emergency department layout
The process, depicted in Figure 11, starts with the patient entering the emergency department and engaging in the arrival routine. When the patient walks through the entrance door, he or she meets a reception area (see Figure 12). A ticket dispenser signals the newcomer to take a number and sit down in the first waiting room until his or her number is called out in the screen. Once it is the turn, the patient walks to the reception where he or she meets the secretary. There are two secretaries working in the reception every day from 8 a.m. to 9 p.m. If there is no queue, the patient may go directly to the reception or the secretary may open the window and call the patient. The secretary then asks what the reason for the visit is (for example, pain chest or stomach ache), and the patient describes the situation. The secretary also asks questions regarding personal information, such as personal ID number, and confirms details such as home address and phone number, registering all these details in the computer system. Once all the information is complete, the secretary asks the patient to take a sit and wait until he or she is called into the triage room. The secretary prints out the patient registration and hands it to the triage nurse.

After the patient has been registered, he or she will be triaged, diagnosed, and treated (the curved arrows 1 to 4 in Figure 11 show the sequence of routines). This means that a first assessment of the patient will be done by a registered nurse, who will then assign the patient to a section, during daytime and depending on the symptoms presented, or to the emergency team, at night. Once triaged, a team of one doctor, one registered nurse, and one assistant nurse, will work with the patient in diagnosing and treating him or her according to the symptoms presented.18

Once the patient has been stabilized and nothing else can be done in the emergency department, the discharge routine will be performed. The doctor must decide if the patient is to be admitted to a hospital ward or go home, and inform this decision to the registered and assistant nurses responsible for the patient. The doctor must also report all what has happened with the patient in the emergency department by dictating the case, checking the patient’s medicine list, adding the patient to the hospital’s patient list, and writing the patient journal, among other administrative tasks. If the patient is admitted to a hospital ward, the doctor is also responsible for developing a care plan for the patient, covering the following 24 hours of stay.

The registered and assistant nurses responsible for the patient also have to perform a series of activities in the discharge routine. These activities vary depending on if the patient is admitted to a hospital ward or going home. If the patient is to be admitted to the hospital, the registered or assistant nurse has to

18 More details on these three routines will follow.
print out the discharge papers together with a series of codes, prepare a blue armband with the patient barcode, and call patient transport to come and fetch the patient, among other activities. When patients are triaged orange or red, the registered nurse must also accompany the patient to the respective ward. Once the patient leaves the emergency department, he or she has to be crossed out of the patient list.

Besides the main process, there is a lateral routine that occurs in parallel to the patient journey, and which stretches throughout the whole patient stay. While this routine may not involve the patient as a participant, it has to do with the routines in the main process. This is denoted by arrows a to i in Figure 11 (see p. 76). To illustrate, arrow a marks the start of the patient tracking routine, which coincides with the registration of the patient in the system, activity that is performed in the arrival routine. The product of this activity is then fed into the triage routine (arrow b), which, once completed, results in the reporting of the patient in the paper ledgers (arrow c), and so on. Once the patient is discharged and leaves the emergency department, the patient is deleted from the paper ledgers (arrow i), ending in this way the patient tracking routine. This lateral routine is constituted by interconnected activities that link people and activities across the five core routines in such a way that it constitutes a routine. These activities are needed to sustain the main process but they do not necessarily contribute in a direct manner to the purposes of the core routines that conform the main process. Providing the links that keep up the continuation of routines, the patient tracking routine thus contributes to administrative and coordination purposes.

The aim with this first empirical chapter was to provide the reader with a general understanding of the case of this study. In doing so, the emergency department was situated in its context, and a detailed account of the staffing was provided, as well as a description of the journey that a regular patient follows during his or her stay at the department. Providing an overview of its context, the people involved, and the processes that take place on a daily basis, this chapter has therefore introduced the emergency department. This introduction was necessary to lay the foundation for the next three empirical chapters, which will delve into the dynamics of the interplay between roles and routines. More specifically, chapter 5 will examine the scripted role and routine patterns that the emergency department assigns to its staff members. Afterwards, chapter 6 will delve into the unscripted role and routine patterns, i.e. those patterns that are developed by the individuals working in the emergency department. The aim of the next two chapters, therefore, is to uncover the various patterns that come into play in jointly performing roles and routines. In chapter 7, the focus will turn to the specifics of the performances, in order to explore the processes involved in
performing the scripted and unscripted, role and routine, patterns identified in chapters 5 and 6.
5. Scripted patterns

The previous chapter introduced the emergency department, and showed how individuals are staffed around the clock following the emergency department’s two working modes. In this chapter, I will look into what I call scripted patterns, i.e. the role and routine patterns that the organization has set in place in order to ensure the functioning of the emergency department. A scripted pattern is something that is written or planned in advance, before it is read or performed. As such, scripted patterns provide an outline for how things are to be done, and serve as guidelines for role and routine performance. In the emergency department, these patterns are mainly written in guidelines and other documentation.

The term scripted is similar to what Danner-Schröder and Geiger (2016) call “stable patterns”, which they define as “patterns that are perceived to follow a standard” (p. 634). The terms scripted and stable, are similar in that the scripted patterns observed in this study follow standards. Nonetheless, these scripted patterns are also flexible. Over time, this flexibility has allowed for the emergence of other patterns, called unscripted in this study and explored in the next chapter, because, although informally acknowledged, they are not formally sanctioned or imposed by the organization. Being unscripted does not necessarily mean that these patterns are continuously changing as “[o]nce improvised, these patterns can become stable.” (Powers, 1981, p. 295) Therefore, all patterns in this study, be they scripted or unscripted, can be considered stable if we think of stability as something that persists over time instead of something that follows a standard as per Danner-Schröder and Geiger’s (2016) definition. Therefore, my choice of terminology.

Act II provides the starting point to this chapter through an illustration of various scripted role and routine patterns enacted by staff members in the emergency department. It presents a fictive case, drawing on various situations that actually took place in the emergency department, but on different patients. This compilation of events aims at providing a holistic picture of the process that a patient goes through, from arrival until discharge, and the role and routine patterns that are at play in the patient care. Thereafter, the scripted patterns will be discussed. The scripted role patterns, i.e. all roles given to staff members in the emergency department, are introduced first, followed by the scripted routine patterns, i.e. those routine patterns that individuals are expected to perform in their daily work. Providing the common thread to the chapter, Act II will be referred to throughout the text.
Scene

Various locations in the emergency department.

Time

The present.

ACT II: A typical patient

8:05 a.m. A 70-year-old man arrives to the emergency department with his wife. There are a few people sitting in the waiting room. He gets a number from the dispenser and takes a sit. A few minutes later, the secretary calls his number. They go up to the reception. The secretary asks for his personal ID number and types it into the system. Then, she asks what the reason for his visit is. The man explains that he has been feeling a bit of pain in his chest during the night. As he had a stroke some years ago, he thought it would be good to get it checked out this morning. The secretary confirms the patient address and telephone number. Once all the registration information is in place, she tells them to wait in the sitting area until they are called into the triage.

8:10 a.m. The triage registered nurse is done with a patient. He talks to the secretary and she tells him about the chest pain patient. She has printed the patient registration form and hands it to the registered nurse. The nurse goes through the other patients in the waiting room and all of them seem to be less critical than the man, so he re-prioritizes and calls the man in. The triage registered nurse is alone. He says, “there was supposed to be a resource nurse in the morning, helping out with the triage, but an assistant nurse in surgery didn’t show up, maybe she was sick or something. So, the resource nurse is helping out in the surgery section.”

The man and his wife walk into the triage room. The nurse introduces himself and asks the patient what has happened. The man tells him a story since the chest pain started until now. The nurse asks for his personal ID number and types it into the system. He asks the patient for his medical history, following some routine questions: Are you allergic to any medicine? Any other allergies? Do you have any transmittable blood disease (e.g. HIV, hepatitis)? Have you been taken care of in a hospital outside this county council or in a foreign country? Have you vomited or had diarrhoea? Once the nurse is done with the interview questions, he tells the patient that he will check the vital signs: blood pressure, oxygen level in blood, heart rate, temperature, and respiratory rate. He does so, and writes the results in the patient form. The nurse also asks the patient to rate the pain on a scale from zero to ten. The patient says “6”. The nurse tells him that a doctor will
see him, and asks him to wait in the sitting area until someone calls him in. The patient leaves to waiting room 2. The parameters look normal and the pain is moderate so the patient is triaged yellow and assigned to the internal medicine section.

8:25 a.m. Done with the patient, the nurse prints out the patient papers, goes to the reception, and puts them in the internal medicine mailbox. He pushes the section beep alarm and says: “It’s a yellow patient so I don’t need to report him directly”. There is a couple of nurses in the internal medicine office. The assistant nurse sees the red light beeping on the top corner of the office, which signals that there is a triage form in the reception waiting to be picked up. She goes out to the reception and gets the papers. Next, she checks the observation room. There are a couple of beds available. She goes out to waiting room 2 and calls out the patient name. She introduces herself, walks the patient to the observation room, bed 4, and places the ECG electrodes on the patient’s body.

8:40 a.m. Back in the office, the assistant nurse writes the patient details into the ECG screen. She fills in the arrival time, priority, patient name/ID number, her name as responsible assistant nurse, and room number, in the patient list, starting the patient tracking routine. She informs her registered nurse that they got a chest-pain patient in S4. The registered nurse grabs a trolley from the corridor and walks into the patient room to take blood samples from the patient. She introduces herself and tells the man that she will take some blood samples. She puts in an IV line and checks the patient with a stethoscope.

9:00 a.m. Out of the observation room with the trolley, the registered nurse leaves it in the corridor. She goes to the medicine office and writes the samples that have been taken in the patient triage form, and then in the patient list. She is holding the blood tubes. Next, she goes to a computer in the corridor outside of the observation room. She orders the blood tests, prints the codes, tags the tubes, and sticks one to the triage form. She grabs a big yellow box, puts the tubes inside, and into a big container. She sends the tubes to the central lab through the internal transportation system. Then, she goes to the office and writes the tests taken in the patient list.

Meanwhile, one of the internal medicine doctors has been to the nurses’ office and signed up for the patient on the patient list. While she is reading through the patient’s medical history in the office, the assistant nurse, who has printed out the ECG, brings it to her. After the doctor is done with her reading, she checks the ECG. Then she goes to meet the patient. The doctor introduces herself and asks the patient how he is feeling. He says he has pain. She tells him that he will get some medication but first she will listen to his lungs. She takes the stethoscope. The doctor says that she will be back shortly. Back in her office, she thinks it could
be pneumonia and decides to give the patient certain drug and see if it improves. She goes to talk to the registered nurse. The registered nurse reports the patient to the doctor, says that she thinks it could be pneumonia and suggests giving the patient a painkiller to relieve the pain. The doctor agrees and writes down the medication and dose on a form; she signs it. Now, the registered nurse is authorized to administer the drugs. She goes to the patient. The doctor goes back to the office.

**9:30 a.m.** The doctor goes back to S4. The registered nurse is in there, checking on the patient. The doctor listens to the man’s lungs with a stethoscope to see if there has been any improvement. She tells the old man that his lungs sound a bit better now after the medicine. Back in her office, she says that she does not think there has been much improvement so she decides to wait for the blood test results.

**10:15 a.m.** The registered nurse comes to the office and gives the doctor the test results from the old man. The doctor checks the results. She is not sure that this is pneumonia. She searches a medicine website. Then, she reads through a small book that she keeps in one of her pockets. After some searching, the doctor decides to do one more test on the patient and asks the registered nurse for it. The registered nurse goes and draws blood from the patient again, and sends the tube to the lab.

**12:05 p.m.** The results are back. The assistant nurse takes them to the doctor. The doctor checks them and nothing out of normal came up. She decides to discharge the patient from the emergency department and send him to a ward. She makes a call. She reports the patient, starting off with the personal details. Then, she reports his medical history and the reasons for his visit today. She also informs the test results and the treatment given in the emergency department. They accept the man in the ward. She hangs up, goes to the registered nurse and tells her that the patient is admitted to the medicine ward up in the hospital. The registered nurse starts the discharge routine. She prints out an ECG from the patient. Meanwhile, the doctor goes to the patient to inform that he will be admitted to a ward for observation. She goes back to the office and dictates the patient into the system. The registered nurse brings her the last ECG.

**12:20 p.m.** The registered nurse prints out the patient codes and prepares a blue armband. She goes to S4, puts the armband on the patient and uncouples the ECG electrodes. Back to the office, she calls patient transport and tells them that they got a patient going up to the medicine ward. She hangs up, walks out to the emergency department’s entrance to get a wheelchair and goes back to the patient room. She helps the old man sit on the wheelchair and takes him out to the corridor telling him that someone in a red shirt will come to pick him up and take
him to the ward. Back to the office, she grabs a circulation envelope and puts the triage form, patient codes and another paper inside, and gives it to the man in the corridor. The guy from patient transport comes to get the patient. The nurse says goodbye and goes back to the office. She writes the discharge time on the patient list and crosses out the patient row.

(END OF ACT)

Act II describes one of the alternative, although typical, paths that a patient can go through during a stay in the emergency department. As illustrated, the patient journey unfolds quite smoothly. Several scripted role and routine patterns are enacted. First, regarding role patterns, apart from the patient, a few other people take direct part throughout the patient journey: the secretary; the triage registered nurse; the internal medicine doctor; the internal medicine registered nurse; and the internal medicine assistant nurse. Second, the individuals enacting these role patterns also enact scripted routine patterns. In Act II, the performances of the arrival, triage, diagnosis, treatment, patient-tracking, and discharge routines, are illustrated. Following scripted role patterns, whole routines and/or routine activities are divided among staff members. Let’s now explore these patterns in detail.

5.1. Scripted role patterns

Being organized in two working modes, work at the emergency department relies on the performance of a number of organizational routines which require the enactment of several scripted role patterns, and individuals are staffed accordingly. These patterns follow the job descriptions provided by the emergency department, and are therefore similar to what we know as organizational roles. However, contrary to the assumptions made by organizational role theorists, the role patterns sanctioned by the emergency department, despite being planned in advance, are flexible and individuals can deviate from them to certain extent.

Drawing on social psychology, organizational role theorists such as Katz and Kahn (1966, 1978) consider organizations as built by role systems. Within this tradition, organizational roles are defined as “standardized patterns of behaviour required of all persons playing a part in a given functional relationship, regardless of personal wishes or interpersonal obligations irrelevant to the functional relationship” (Katz & Kahn, 1966, p. 37; emphasis added). This definition clearly shows the treatment given to individuals, who are reduced to

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19 As it will be explained later, other people (such as on-call doctors and lab staff) are also involved in the patient process, although indirectly, i.e. they do not necessarily meet the patient (unless a physical intervention is required).
norm compliant. Katz and Kahn (1966) argue that roles, norms and values, are the basic components of social systems. While, in line with the previous definition, a role is considered behavioural in nature, the sets of behaviours that constitute a role are prescribed and constrained by the prevailing norms, which are rooted in values (Katz & Kahn, 1966). Organizational role theory thus, despite focusing on organizations and its members, reduces individuals to norm followers, as roles are considered to grow out of normative expectations (Biddle, 1986). This means that individuals' behaviours are determined by the role, and people behave according to expected, a view that I do not share.

I differentiate my understanding from that of organizational role theorists because, although I do believe that, depending on the circumstances, individuals may act as expected, this is only one side of the coin. I call this side, *scripted* role patterns, instead of organizational roles. As it will be shown in the next chapters, scripted role patterns are but one set of patterns enacted by individuals in accomplishing work. *Act II* introduced some of these scripted patterns. In terms of doctors, apart from the internal medicine doctor, there are three other scripted role patterns: emergency physicians, orthopaedics, and surgery doctors. When it comes to nurses, there are seven scripted role patterns for registered nurses and seven for assistant nurses: coordinator (or SAM), triage, resource, emergency, internal medicine, orthopaedics, and surgery registered/assistant nurses.\(^20\)

Figure 13 shows the various scripted role patterns that staff members can perform in the emergency department, grouped in teams, as per the staffing. For example, as illustrated in *Act II*, the internal medicine section requires the enactment of three scripted role patterns: the internal medicine doctor, the internal medicine registered nurse (RN) and the internal medicine assistant nurse (AN). Thus, staff members in internal medicine are assigned role patterns for treating patients in that category.

Following job descriptions, these role patterns are vested with accountability and responsibility. In order to be assigned a scripted role pattern, staff members must meet the educational demands, i.e. the educational background of the individual allows him or her to enact certain role patterns. This means that some role patterns are exclusive to doctors and some to nurses. For example, doctors have been trained to diagnose patients; registered and assistant nurses have not.

\(^{20}\) Following the choice of organizational routines, the secretary role is left out as secretaries are only involved in the arrival routine, which is not presented in this study. Secretaries do not count with the educational background required to deliver patient care. This is why they cannot take on any other scripted role. The secretary role is mainly administrative and the only contact that secretaries have with patients is in the arrival routine: between 8 a.m. and 9 p.m. secretaries are expected to register patients into the system.
Therefore, nurses are not supposed to take on the doctors’ roles and vice versa. Moreover, contrary to assistant nurses, registered nurses are allowed to administer drugs. Thus, the triage role, for example, must always be enacted by a registered nurse. Distinct role patterns are thus assigned to staff members depending on their education. Let’s now explore these.

Figure 13. Scripted role patterns at the emergency department

5.1.1. Doctors
The general term doctor is used in most documents when describing their responsibilities. Overall, all doctors are expected to know how to deal with patients, at least medically speaking; they should be able to diagnose them, based on the symptoms presented, and decide upon an appropriate treatment plan. Thus, the scripted role patterns depart from the assumption that medical school has provided all doctors with a knowledge base regarding their roles.

Doctors working in the emergency department can be assigned one out of four scripted role patterns: internal medicine, orthopaedics, surgery, or emergency. The first three correspond to the role patterns enacted during daytime in the sections. Each of these scripted patterns requires that doctors take patients falling in the corresponding specialties, being these internal medicine, surgery and orthopaedics. Therefore, the activities falling into each of these role patterns are distinct. The lab tests and/or examinations that a patient will go through during the diagnosis routine as well as the treatment required thereafter, will depend on the patient category. This means that the role pattern enacted by a surgery doctor will differ, for example, from the one enacted by an orthopaedics or an internal medicine doctor. The scripted role pattern that follows the emergency specialty is also distinct, and requires that doctors enacting it take most patients
independently of their symptoms. Having to work with a wider spectrum of patients, emergency doctors need a broader knowledge base regarding patient symptoms, diagnoses, drugs, and treatment plans, among others, which is provided by the broader training that they undergo.

While it is not feasible to detail here all the alternative forms that each of these scripted role patterns may take depending on each patient, it is possible to identify an overall pattern for the various doctor’s roles. Independently of the patient category, all doctors have the same responsibilities. Each scripted pattern requires that doctors perform their part in the organizational routines related to patient care, namely diagnosis, treatment and discharge, following the specialty that they are assigned to.

Once a patient has been triaged and taken into a room, the doctor is notified about the patient. Before seeing a patient, as illustrated in Act II, the doctor usually reads the medical history, unless he or she does not have the time to do so, as in the case of trauma patients. Doctors do this because it makes it easier for them to get an initial idea of the patient. Patients may have previously presented certain conditions, which may be key to understanding the symptoms that they present now. Once they have gone through the medical records, doctors are prepared to meet the patient. When the doctor meets the patient, he or she asks questions related to what has been read in the medical records; the doctor tries to get the story from the patient’s point of view because sometimes the stories differ. Some other times, the patient may not be able to talk to the doctor and, thus, it is good to have read the medical history.

Done with the interview, the doctor examines the patient. As illustrated in Act II, this examination may only entail listening to a patient’s heart and lungs if the symptom presented is chest pain. Based on the interview and physical examination, the doctor may decide which blood work or imaging (depending on the patient category, and therefore on the scripted pattern being enacted) he or she wants from the patient.21 When it comes to internal medicine and surgery patients, however, often times it is the nurses who decide this and take the blood samples even before the doctor knows about the new patient. Other times, doctors have not even started their shifts when the patient arrives. Most of the times, nurses do this because it takes around two hours to get the results back from the lab and, thus, the sooner they send the samples, the shorter the patient stay at the

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21 As emergency physicians take all patients irrespective of sections, the distinction between activities is relevant in relation to the scripted role patterns assigned to section doctors. It should be assumed, thus, that the scripted pattern assigned to emergency physicians include all these activities.
emergency department will be. It is not clear whose responsibility this is, and staff members did not know if this was defined anywhere either.\textsuperscript{22}

Once the interview, physical examination, and test results are done, doctors can, most of the time, get a pretty good idea of what it is all about and diagnose the patient. Otherwise the doctor may talk to colleagues or, as illustrated in Act II, ask nurses for additional tests or examinations because the diagnosis is not so clear. An emergency physician highlighted the difference between working in the emergency department and hospital wards: “in the [emergency department] you work a lot with symptoms, we don’t work so much with diagnoses. [...] In the wards [...] they work with the diagnosis.” [Emergency physician, interview] In fact, most of the time spent by a patient in the emergency department goes into the process of defining a diagnosis, or as the doctor said, working with the patient’s symptoms.

Once the diagnosis, or at least a preliminary diagnosis, has been determined, the doctor has to decide what to do next with the patient, in terms of treatment and discharge. Sometimes, no urgent treatment is needed and, therefore, doctors have to choose between sending the patient home and having him or her stay in the hospital. If that decision is not straightforward, the doctor may need additional information such as doing an x-ray. Otherwise, once the doctor has decided on the patient destination, he or she will start the discharge routine. Chest pain patients, as the one in Act II, are usually admitted to a hospital ward for observation purposes. When the patient is going to be admitted to a ward, the doctor has to perform some administrative tasks. In Act II we see that, once the decision is made, the doctor has to choose an appropriate ward according to the patient category, call them up, and ask for approval for sending the patient there, by reporting the case. Giving the ward an overview of the patient’s medical history, reasons for visiting the emergency department, and test results, the emergency department’s doctor provides the staff at the ward with arguments for why that is an appropriate place where to send the patient. Before the patient can leave the emergency department and once a hospital ward has accepted to receive him or her, the doctor should check the patient’s medicine list, fill in various systems, and dictate the case. In this way, staff members in the receiving ward know who the patient is and what has been done in the emergency department. In addition to this, the doctor is responsible for informing the responsible nurses and the patient about the decision to send the patient home or admit him to a ward.

Considering that doctors are expected to treat patients falling in their respective specialties, the four scripted role patterns are distinctive. A chest pain patient,

\textsuperscript{22} I will get back to this issue in the following chapters.
like the one in *Act II*, falls under the responsibilities assigned to the internal medicine doctor, and there is no doubt about that. Of course, this is clear-cut as long as the patient can be appropriately assessed and assigned to the corresponding section. However, this is not necessarily always the case. Sometimes, patients presenting multiple symptoms would arrive to the emergency department and conflicts would arise, as illustrated in the following case:

2:45 p.m. The registered nurse (RN) comes back to the office. He is on the phone. He writes something down on a paper. The assistant nurse and surgery doctor enter the office. The doctor leaves. Three minutes later the RN hangs up and says it was the ambulance. They have a man that fell from two meters high, hit his arm, and has some bruises. They discuss who should take him, as it can be orthopaedics, if he has a broken arm, or surgery. He goes into the surgery doctors’ office to talk to the doctor. According to the RN, now the discussion starts because no section wants to take a patient if it is not its responsibility for sure. This means extra work. The man will arrive any minute with the ambulance.

2:56 p.m. Back from the surgery doctors’ office, the RN says that the orthopaedic section did not want to take the patient.

3:30 p.m. A beep and all signs show “AMB INTAKE 1 SURGERY”. The evening RN will take the ambulance because it is 3:30 p.m. and the morning RN should take his lunch break until 4:15 p.m.

4:17 p.m. Back from the lunch break. The patient that fell and hurt his arm is finally in orthopaedics, as he has a broken arm. The patient was first admitted to the surgery section; they checked him, and they sent him over to the other section. The morning RN takes now the patient form to the orthopaedics office. [Field notes]

As stated earlier, doctors “have medical education behind them, so they know all about the symptoms” [double specialist, interview]. This means that any doctor, regardless of the scripted role pattern that he or she is enacting, should be able to treat any patient coming to the emergency department. Therefore, this kind of conflicts between doctors is not so much about their competencies. They have all been to medical school after all. The conflicts are more about defending the scripted role patterns that doctors are assigned, following their own specialty; the one that they are getting trained in. The appropriate behaviour would be to take the patient, even if not sure that he or she falls under one’s scripted role pattern, and this is actually what nurses expect from doctors following professional conduct. Nonetheless, internal medicine, surgery, and orthopaedics doctors, following the role patterns assigned to them, seem to only be concerned about treating their own patients. As a senior specialist put it:
“I love making small stitches [referring to the scripted role pattern assigned to surgery doctors] but that’s not my main work, and I believe that I should focus on hearts, kidneys and stomachs [internal medicine’s areas].” [Double specialist, interview]

Although not every patient presenting multiple symptoms would result in a conflict between doctors, it could be the case that the wrong doctor took a patient, and examined him or her, just to realize that there were other symptoms that made the patient fall into another doctor’s role pattern. Then, a referral letter would be sent from the first to the second doctor and the patient journey would start all over. During nighttime, there are no divisions in terms of sections but, instead, one group of emergency doctors taking all patients, no matter their initial symptoms. This means that the scripted role pattern assigned to nighttime doctors or emergency physicians is more encompassing compared to the scripted role patterns assigned to internal medicine, surgery, and orthopaedics doctors. Emergency physicians are considered part of the big family together with nurses. As such, during nighttime there is a stronger team spirit compared to daytime, and collaboration among emergency physicians is common: “at nighttime we work much tighter, so everything is more straightforward”, an emergency physician highlighted [field notes].

Overall, despite eventual conflicts between doctors when it comes to patients presenting multiple symptoms, four distinct scripted role patterns are assigned to doctors: internal medicine, surgery, orthopaedics and emergency. Registered and assistant nurses are also assigned various scripted role patterns, to which now we turn.

5.1.2. Nurses

Compared to doctors, the scripted role patterns assigned to registered and assistant nurses are less distinct when it comes to educational background, as their training overlap to a larger extent. Therefore, the seven role patterns assigned to registered and to assistant nurses are quite similar. The main differences, regarding the content of these scripted role patterns, are based on the specifics of the training undertaken by the two groups of nurses.

Following the emergency department’s working modes, during daytime, registered and assistant nurses are assigned three role patterns, namely internal medicine, surgery and orthopaedics, and during nighttime, they are assigned the emergency role pattern. These four scripted role patterns are very similar. The main difference, as in the case of doctors, regards the patients that nurses see and

23 Despite not all being full specialists, nighttime doctors were generally labelled as emergency physicians.
this will influence the activities to perform thereafter. For example, while blood samples are taken from most internal medicine and surgery patients, most orthopaedic patients do not require any blood work. The emergency role patterns require that nurses take all patients, independently of their symptoms. Responsibilities falling into the internal medicine, surgery, and orthopaedics role patterns assigned to registered and assistant nurses are, according to the treatment guidelines, defined under the routine “primary care of patients at sections”. These, which are also applicable to the emergency role patterns assigned to nurses, include:

- Monitoring of vital parameters according to RETTS [triage protocol].
- Process measures according to RETTS [triage protocol].
- Help the patient with appropriate clothing and shoes. This is to make it comfortable for the patient and to facilitate the doctor’s examination.
- Use the VAS scale and assess pain relief.
- Document when the patient last ate. Evaluate if fasting is necessary. Is drip needed?
- Can relatives or patient arrange something edible if the waiting time becomes long? Otherwise, offer refreshments to the patient. Encourage family members to take a coffee break.
- If the patient is incontinent, verify that the diaper is clean and dry. Offer the patient help to get to the toilet.
- Responsible nurse checks the patient’s drug list, when it accompanies the patient to the emergency department. Should the patient have any medications during their stay in the emergency department? Consult with the physician in charge before any medications are given.
- Ensure that the bed alarm is at hand and the patient knows how to use it.
- Ensure that the patient is comfortable. Help the patient to change resting position at regular intervals to prevent pressure sores.
- Provide information about which section the patient belongs to.
- Inform the patient about what is planned (samples, x-rays, waiting time, etc.).

- Remember that old, just like children, have little resources and thus soon become tired. Old people become quickly dehydrated. Give fluid and minimize the waiting time.

- Be aware of patients who do not have relatives with them. For example, by leaving the door open.

- Inform assigned section patients in the waiting room, if the waiting time will be long.

On discharge, section nurses\(^{24}\) should:

- Remove PVK's and ID-bands.

- Check with the doctor in charge that the treating notice, for example suture removal or diversion, is written.

- Ensure that staff at home or caretakers are informed at discharge: their phone numbers are often in the nursing sheet “Important Notice” that accompanies the patient to the emergency department.

- If the patient needs visits of caretakers in the evening/night, see the telephone list in the medicine office.

- Discuss with the doctor in charge if the patient should be contacted by phone or in writing to inform the results of investigations made. [Excerpt from the emergency department's treatment guidelines, p. 21]

As it can be seen from this excerpt, no distinction is made regarding assistant and registered nurses, which explains why most nurses working in couples may perform the same activities except for administering drugs. Internal medicine, surgery, orthopaedics, and emergency nurses are also responsible for plenty of other activities. If working in the morning or night shifts, nurses have to clean out the patient rooms, check the equipment, and check that nothing is missing in the trauma rooms. In the evening, as it is the busiest shift, nurses:

“...do some restocking as well but mostly minor things. You don’t clean out whole rooms if you don’t have to, because the patient has been contagious [for example], and of course you do the routine cleaning after each patient, like, for the trolley and some of the equipment you’ve used for one patient, but you don’t

\(^{24}\) The term section is used to refer to any of the daytime divisions, namely, internal medicine, orthopaedics and/or surgery.
do the big cleaning duties. That's usually in the late-night shift or early morning that you do it.” [Registered nurse, interview]

In addition to this, depending on the triage priority colour and the symptoms identified, a number of activities should be performed. As illustrated in Act II under the diagnosis routine, an assistant or registered nurse will draw blood from patients and send it to the lab for testing. Which tests will be done depends on the patient. Assistant and registered nurses will also put in IV lines, and put electrodes on chest pain patients to check the ECG. Registered nurses will give IV fluids, as assistant nurses are not authorized to do this because of the drug administration restriction. Registered nurses will also give painkillers or other medication. Overall, nurses are supposed to ensure that the patient has as comfortable a stay as possible.

The overlapping educational backgrounds equip registered and assistant nurses with skills that are applicable throughout patient categories. While it is possible for registered nurses to become specialists, most of them would leave the emergency department when completing their specialist training unless this was in emergency medicine. Not needing to be specialists, registered and assistant nurses can perform all scripted role patterns assigned to them. Therefore, they can help out other sections if they are not busy with their own section’s patients, and, of course, minding the differences in duties given their professions. To illustrate, before leaving to her coffee break, a surgery registered nurse handed in a 101-year-old lady to the second registered nurse and explained that the patient had been assigned to the internal medicine section but as this was so loaded, they, at the surgery section, were helping them out. The registered nurse later explained that doctors do not take patients from other sections during daytime but that nurses can help out if needed [field notes]. Thus, contrary to doctors who are assigned the same scripted role pattern every work shift, nurses can be assigned any of the four role patterns mentioned earlier.

Registered and assistant nurses can also be assigned other three scripted role patterns, namely, resource, triage and coordinator. As mentioned in the previous chapter, every day, two nurses are assigned the resource role patterns: one is assigned to an assistant nurse who is required to work for the orthopaedics and surgery sections from 4:15 to 9:15 p.m. The other resource role pattern is assigned to a registered nurse who works for the internal medicine section between 4 and 12 p.m. Resource nurses are extra staff working for the daytime sections. In terms of patients, their responsibilities are the same as those under the section nurses. In case there is a trauma patient coming in, the section nurses take responsibility for him or her and the resource nurse stays in the section taking care of the other patients. Apart from this, they have also other duties. As an assistant nurse explained, the emergency department is one of the few hospital departments
counting with an electrocardiograph. Thus, if staff in a hospital ward has to take an ECG from a patient, then the resource nurse is supposed to transport the electrocardiograph to the ward.

Certain scripted role patterns are only assigned to registered nurses, as they may require drug administration. Such an exception is the triage role. As illustrated in Act II, the triage nurse is the very first to meet the patient. As such, he or she is the first individual to assess the patient condition following the triage routine. In Act II, there is only one registered nurse enacting the triage role pattern, but it may be the case that an assistant nurse is helping out. As the triage registered nurse in Act II mentioned, “there was supposed to be a resource nurse in the morning, helping out with the triage, but an assistant nurse in surgery didn’t show up, maybe she was sick or something. So, the resource nurse is helping out in the surgery section.” When working in pairs, the assistant nurse is responsible for taking the patient’s vital signs and documenting them in the patient form. The registered nurse is in charge of:

- Asking for presentation of an ID document and checking the patient’s ID.
- Assigning patients to the appropriate specialty [internal medicine, surgery or orthopaedics] regardless of the current load on the sections.
- Filling in the triage part of the patient form and the pink registration form.
- Reporting patients to the section teams. [Excerpt from the emergency department’s treatment guidelines, p. 33]

In addition to this, triage nurses have other responsibilities, such as: cleaning the triage room; filling materials at the end of each shift; doing lab controls in the triage and lab rooms every morning; and emptying the electrocardiograph placed in the triage room at the end of each shift. Even though from 11:30 a.m. to 7 a.m. the next day there are one registered and one assistant nurses, the triage is always the responsibility of the registered nurse. Between 7 and 11:30 a.m. there is only one registered nurse triaging patients, because of the drug administration restriction.

Apart from the educational background that set registered nurses as responsible for the triage, one needs to be trained in this role in order to be appointed. Triage nurses should have a certain level of experience to be assigned this role pattern. Being able to detect the need for a re-prioritization of patients, as illustrated in Act II, is a skill gained through experience, as one needs to know patient
categories and criticality of symptoms presented. Thus, new nurses would not perform the triage role at the very beginning but have to spend some shifts with more experienced nurses in order to learn how to perform the role and the routines involved.

The seventh scripted role pattern that registered and assistant nurses can be assigned, is the coordinator role. While, theoretically, any nurse could be assigned this role following their educational background, in practice, this role pattern, similar to the triage, is assigned to nurses with certain level of experience in the emergency department. According to staff members, having worked at the emergency department for some time is critical in gaining a broad knowledge base about the department, routines, and types of patients. Thus, the coordinator role pattern is assigned to nurses with certain experience in the emergency department:

“Some people that have worked longer have the possibility to be SAM-nurse [coordinator nurse] and some people have been introduced to the triage system so they sit out in the triage; but the nurses that have worked for a shorter period of time, they can only work either in medicine, surgery or the orthopaedies sections.” [Registered nurse, interview]

The coordinator team consists of one registered nurse and one assistant nurse, and these roles are staffed around the clock. Nurses assigned the coordinator (SAM) role patterns should have certain experience level, because they have to be able to keep an overview of the department. What counts as experienced, though, is a matter of available resources. While in the beginning of the study nurses were regarded as experienced after having worked in the emergency department for three years or longer, later on nurses with one and a half years of experience were asked to enact the SAM role patterns. As a registered nurse explained, the requirement should be a minimum of three years of experience, but a lot of people were quitting because they got better-paid jobs and, therefore, the emergency department did not have enough staff to cover all roles. [Field notes] The high turnover of staff had left the emergency department with very few experienced nurses. In 2015, the turnover rate of nurses “was about 25 per cent” [Registered nurse, interview].

According to the Emergency care management system, coordinator nurses are to assess, provide support for the operations, and control work if needed. They should have an overview of the work situation in order to assist and prioritize actions whenever is necessary. The role should be respected and supported by all the surrounding personnel. The names of the coordinator nurses working each shift should be clearly stated in the schedule and they should wear the sign SAM in their vests. Overall, coordinator nurses are responsible for:
- Making an assessment of the work situation and the resources of the department.
- Coordinating, organizing, and planning work.
- Redistributing staff and duties as needed.
- Delegating tasks to the appropriate person in the group.
- Retaining personnel when high workload.
- Calling in extra staff or substitutes as needed.
- Dialoguing with consultants and section doctors about the work situation.
- Encouraging joint reflection after reporting over at shift change.
- Reporting to incoming SAM nurses.
- In the manager’s absence, leading the daily management. [Excerpt from Emergency care management system 2015, p. 9]

In summary:

“The coordinator nurse is a function where you are supposed to be a more senior member of the staff. Usually, you should have worked more than two years here at the department or you should have worked in another department for a long time so you know the hospital, you know the routines and you have seen quite a lot of patients because you are working partly with... managing the flow of patients through the department, [moving] staff between sections [...] and you can also go in and do some patient care yourself [...] if you get a more critical patient coming in with the ambulance service, you are usually the one that coordinates the team that comes in: who should be called, which nurses should take it, do we need more equipment, do we order some blood? To help the leading doctor with those things as well [...] if a nurse is sick, you need to call in a new one. [...] you also help with finding bed placement for the patients that need to get admitted.” [Registered nurse, interview]

As illustrated, doctors, registered and assistant nurses, are assigned scripted role patterns following the emergency department’s working modes. The educational background of individuals is the entry requirement to be assigned appropriate role patterns.
Having described the various scripted role patterns that staff members perform in the emergency department, the next section introduces some of the scripted routine patterns that are enacted around the patient.

5.2. Scripted routine patterns

Hereafter, the scripted patterns of some of the organizational routines in the emergency department are presented. These scripted routine patterns are those developed following organizationally sanctioned standards, such as the emergency department’s treatment guidelines, and other organizational documents. The overview that follows is, of course, not exhaustive. There are so many routines in the emergency department and the hospital that it would be impossible to go through all of them in one single study. Although other routines were also studied, for the purpose of this thesis, three patient-related routines are in focus, namely, triage, diagnosis and treatment.

Various reasons motivated the choice of routines. First, these were identified by staff members as key routines when talking about the process that patients follow since their arrival at the emergency department until they are discharged. Second, these routines were repeated over and over again, and were at the core of the emergency department’s way of working. Third, the three routines required the enactment of a variety of scripted role patterns, and different roles were more or less salient in each of them. To illustrate, while the patient was a key participant in all three routines, the roles of the triage registered and assistant nurses were salient in the triage routine; the four doctor’s role patterns were prominent in the diagnosis routine; and the doctor’s plus most of the nurses’ role patterns played sort of equal parts in the treatment routine. Fourth, all three routines were accessible through observations, as they mainly involved interactions among people. While the other patient-related routines also involved certain interaction between staff members, most of the routine activities were about interactions between an individual and a multiplicity of computer systems (e.g. arrival and discharge routines), or other artefacts (e.g. patient tracking routine). Although I consider this an area for further research, because the focus of this dissertation is on exploring the patterning and performing of roles and routines it seemed relevant to study routines were these processes were more explicit. Finally, the three routines differed on the level of complexity, which influenced the corresponding scripted patterns, as it will be shown shortly.

In what follows, each of the three routines is explored in detail. Excerpts from field notes and interviews provide the starting points to each section by illustrating the scripted routine patterns assigned to staff members. Following this, each scripted routine pattern is spelled out, activity by activity, through a general description.
5.2.1. Triage routine
This section delves into the details of the triage routine scripted pattern. To illustrate this, two excerpts from my field notes provide the kickstart:

Field notes, Wednesday, 7:45 a.m. A beeping sound and the signs all over the emergency department show: “Entrance”. Viktor, a registered nurse, goes out to the reception area; he is the triage nurse this morning. A 35-year-old man comes in with his partner. He says that he came back from work about an hour ago (he is still wearing his work clothes), and felt pain in his lower back, on the right side. Viktor walks them into the triage room (there are no secretaries in the reception yet). The man sits on the bed. Viktor starts striking the man’s back in different places and asks if it hurts. The man says it does, when Viktor gets closer to the right side. Viktor asks him to lie down and palpates his stomach asking if it hurts. He measures the blood pressure, oxygen saturation and temperature of the patient. He sits by the computer, asks the patient for his personal ID number, and enters it into the system. He then asks the routine questions: “Any previous diseases? Do you take any medicine?” The answers are no. “Did you have any problems with peeing?” “Yes”. The man says that he tried to, but he couldn’t. Viktor asks if he had any pain last night. The man says no; he was fine last night, he could pee normally. It all started this morning. Peter says he will give him a glass so he leaves a urine sample for analysis, only if he can pee. “And if I can’t?” the patient asks. “Then we will check your blood and see if there is any pee in it” Viktor answers. The nurse adds that a surgery doctor will meet him, tells him about the toilet where to leave the urine sample and then to wait in the second waiting room until someone calls him in. The patient leaves. Viktor closes the door to the triage room. He prints out the patient form from the system, and another sheet for patient medicine. He then walks to the surgery office with the papers, gives it to the section nurses and reports the patient.

Field notes, Monday, 10:09 p.m. Ready to take a new patient, the registered nurse goes out to the reception office and pushes a button calling the next patient in. He opens the triage room door and a man comes in. The registered nurse asks him what has happened and the man starts telling his story. The assistant nurse is not here. The registered nurse asks the patient for his personal ID number. He enters it into the system and says the name of the patient out loud. The patient confirms. The registered nurse then prints the registration form, the patient form and a white paper where the assistant nurse puts in the results of the checks. The registered nurse starts checking the patient. Ten minutes later the assistant nurse comes back, and asks the registered nurse if he has taken any parameters yet. He replies that he has only taken the temperature. The assistant nurse checks the patient blood pressure. She writes the results in the white form. The registered nurse asks some questions to the patient and fills in the registration form. Then, he tells the patient that they will take some blood samples and that he also has to leave a urine sample. He gives him a plastic glass and tells him where the toilet is. The patient leaves. The registered nurse goes with the patient form to the nurses’ office. There are four nurses there. He reports the patient.
Next to the reception office is the triage room (see Figure 12, p. 77 in chapter 4), where there is one registered nurse between 7:00 and 11:30 a.m. and a triage team from 11:30 to 7:00 a.m. the following morning. The team consists of one assistant nurse, who does most of the work on the patient, and one registered nurse, who does the talk with the patient, asking questions, registering everything in the computer, and informing the patient about future steps. When there is only a registered nurse, as Act II and the first excerpt above shows, he or she does all the routine activities. Independently of the shift, and therefore no matter if there is one registered nurse or a team performing the routine, there is a scripted pattern to the triage routine (see Figure 14), which staff members enact. This pattern is not only written in organizational documents, such as the emergency department’s treatment guidelines, but is also the main description provided by registered and assistant nurses when talking about what the triage routine entails. This scripted pattern is the one that nurses learn when starting to work in the emergency department, as per the book, i.e. the emergency department’s treatment guidelines, and the one that nurses teach to new colleagues. Moreover, as the excerpts above show, this pattern seemed to be enacted in a fairly consistent fashion during my field visits.

Figure 14 shows the activities part of the triage routine, as per the scripted pattern. The activities are interdependent and follow a sequence, starting the routine with activity 1 and ending with activity 8 (the arrows in the figure indicate the sequence of activities). The only exceptions in this sequence, which may happen in enacting the scripted pattern and which are dependent on the roles involved (not on the routine pattern per se), are activities 5a and 5b. When having a triage team in the room, these activities take place in parallel: the registered nurse performs activity 5a, and the assistant nurse, activity 5b. Otherwise the physical examination (activity 5b) may come after or before activity 5a (denoted by the dashed double-arrow in Figure 14), as exemplified in the excerpts above.

![Figure 14. Triage routine: scripted pattern](image)

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25 I will get back to this, and the consequences of not considering who is performing the routine, in the next chapter.
Enacting the scripted pattern means that the triage should take between five and ten minutes and include different checks on the patient, such as vital signs and oxygen saturation. In the case of a regular patient, the triage routine starts with the registered nurse calling the patient into the triage room (activity 1 in Figure 14). Once the patient is in the room (activity 2), the registered nurse introduces him or herself and asks the patient what has happened (activity 3). The patient tells a story (activity 4). Thereafter, the registered nurse asks some routine questions, which usually revolve around the patient’s medical history, as illustrated in Act II (“Are you allergic to any medicine? Any other allergies? Do you have any transmittable blood disease (e.g. HIV, hepatitis)? Have you been taken care of in a hospital outside this county council or in a foreign country? Have you vomited or had diarrhoea?”). Following these questions, the registered nurse fills in a registration form and the first part of the patient form, which will be the main document used throughout the patient stay in the emergency department (activity 5a). This first part of the form includes: personal information, medical history, checks made, prioritization, and specialty (surgery, orthopaedics, or internal medicine) to which the patient is assigned (only during daytime). Meanwhile, the assistant nurse checks the patient vital parameters, which includes “blood pressure, oxygen level in blood, heart rate, temperature, and respiratory rate” (see Act II), writes the results in a form, and hands it to the registered nurse (activity 5b). If there is no assistant nurse these activities are performed by the same registered nurse.

This evaluation results in the prioritization of the patient according to a colour scale following the severity of illness: red (the patient presents a deficiency in vital parameters and should be seen by a doctor immediately), orange (the patient should be seen by a doctor within 20 minutes), yellow (the patient should meet a doctor within one hour), green (normally the doctor would see the patient within two hours, but it can take up to four hours), and blue (the lowest priority, rarely used, means that the patient can be expected to wait for long hours depending on the number of patients with higher priority colours). In Act II, “the parameters look[ed] normal and the pain [was] moderate so the patient [was] triaged yellow and assigned to the internal medicine section.” Once the evaluation is completed, the registered nurse informs the patient about further steps (activity 6), and he or she leaves the triage room by another door that leads to a second waiting room (activity 7) (see the layout in Figure 12, p. 77). There, the patient waits until

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Ambulance patients are triaged in the ambulance (except for children and psychiatric patients) and in some urgent cases the triage results are sent beforehand to the emergency department. Usually, the ambulance staff will decide to which specialty the patient should be admitted to. If the police bring in the patient, the triage is done in the emergency department by a registered nurse. In all cases, this assessment results in a patient form that follows the patient throughout the stay.

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someone comes and calls him or her, usually an assistant nurse, starting the following organizational routine.

The triage routine ends with the registered nurse printing out the patient form, taking the papers and verbally reporting the patient to the nurses inside, during nighttime, or, as illustrated in Act II, with the registered nurse leaving the papers in a mailbox in the reception and pushing the section’s beeping alarm, during daytime, so that a section nurse comes and picks them up. Both activities are followed by the registration of the patient in the ledger, which includes patient name and personal ID number, and triage colour (activity 8). Thereafter, it is time for the diagnosis routine.

5.2.2. Diagnosis routine
In the following, the diagnosis routine is explored. Excerpts from two interviews provide illustrations of the scripted routine pattern, from the perspectives of a registered nurse and a ST doctor, respectively.

**Interview, registered nurse:** “What lab work you do depends on the patient. You take different ones on chest pain and stomach pain, of course. And on the stomach pain patients you should give them an IV line, you should give them some IV fluids, and you take them into a room. They might be able to lie down. The chest pain patient, you take them in, you draw some blood, send it to the lab, put in an IV line, you can give them some pain medication or some nitroglycerine to relieve the chest pain, you hook them up to a monitor to check the ECG… in the triage handbook there is also suggestions on what to do with the patient. Like “take these blood samples, put in an IV line, give IV fluids, measure ECG”, and stuff like that. So, depending on what the triage nurse selected, stomach pain, chest pain, headache, in the triage handbook there are things that you should do with the patient, like a support… if you don’t know what to do, check the manual or the handbook and then you can see, what you should do with this patient.”

**Interview, ST doctor:** “You print out the data […] we usually read a bit about past history in our system before we get to meet the patient. It saves time. You know that this patient is multi sick and he has a lot of problems, he is not gonna go home. You get this feeling, just reading his past history. You go there, “hello, hello”, you talk a bit with the patient… clinical examination is… I would say it’s like two parts. Taking history is one part, clinical… the physical examination, lungs, heart, you know, different systems. And then investigations, it’s like laboratory tests, or x-rays or other kinds of imaging modalities. And then you make a primary judgment, or primary diagnosis. That’s how it works.”

Once the patient has been triaged and reported to the section or nighttime nurses, a registered nurse takes responsibility for the patient and writes down his or her name in the patient list. The assignment of patients is usually random. During
daytime, whoever is free in the section should go and fetch the patient papers from the reception, taking responsibility for the patient. During nighttime, whoever is in the office at the time that the triage nurse comes in to report the patient will most likely take responsibility for him or her. Each patient should be assigned one registered and one assistant nurse.

Figure 15 shows the sequence of activities involved in the diagnosis routine, as per the scripted pattern. Note that this is a general pattern. As the nurse in the first quote above explains, there are scripted patterns for different patient categories depending on the symptoms that they present. This means that the organizational routine can generate various patterns of action (cf. Pentland & Feldman, 2008b) and, thus, the activities in Figure 15 will be adapted according to each patient. For example, as the first quote illustrates, the tests and examinations done under activity 2 will be different depending on the patient. Still, activity 2 is performed on all patients independently of what it entails. Therefore, it is possible to identify one general scripted pattern for the diagnosis routine.

![Figure 15. Diagnosis routine: scripted pattern](image)

When the diagnosis routine starts, the patient has already been registered in the patient ledger in the nurses’ office. One of the responsible nurses checks the room availability before bringing the patient in, starting activity 1 (see Figure 15). In Act II, it is the internal medicine assistant nurse who goes and checks the availability of beds in the observation room. Either of the nurses, usually the assistant nurse though, goes out to the second waiting room, introduces him or herself to the patient, and brings him or her in, straight to one of the rooms. There are different types of rooms depending on the case. If it is a critical patient, orange or red in the prioritization scale, he or she will usually be put into one of the two trauma rooms that the department counts with. Otherwise, the emergency department counts with several examination rooms and treatment rooms where most patients, i.e. all triaged green and yellow, are put into when they are brought in. There is also an observation room with four beds, where patients suffering from chest pain are usually put in, as in there they can be connected to an ECG to be monitored, as was the case of the patient in Act II. The patient is, in this way, admitted into the department, which means that the patient enters the emergency department as such, excluding reception area and waiting rooms.
Once the patient is in the room, in the case of medicine and surgery patients, either responsible nurse takes lab samples, following the doctor’s order (activity 2 in Figure 15), as explained by the registered nurse in the first introductory quote, and also as illustrated in Act II. In the case of orthopaedics patients, this activity usually involves some sort of imaging, such as x-rays. This is usually the very first step, as doctors need to have certain test results before diagnosing the patient. Once the blood samples are taken, the nurse orders the analyses in the computer, prints a series of codes that contain all the patient information and tags the test tubes. Then, the nurse sends these tubes to the main laboratory in the hospital through an internal transportation system. Once this is done, it is all about waiting for the results.

Meanwhile, a doctor has signed up taking responsibility for the patient, and he or she may start preparing for the encounter (activity 3). As the doctor in the second introductory quote explains, they usually read up the patient medical history in order to get an idea of the patient medical condition. Once acquainted with the patient medical history, the doctor goes to the patient and starts with the clinical examination (activity 4). In Act II, the internal medicine doctor had read up the patient’s medical history and checked the first ECG before meeting the patient. Being a chest pain patient, the physical examination involved listening to his heart and lungs with a stethoscope to get an idea of the severity of the symptoms. The registered nurse usually goes into the patient room to check on him or her and administer, for example, painkillers, if the patient needs them (activity 5). To illustrate, if the patient has been triaged yellow, as in Act II, every one hour he or she should be checked up to see how everything is going.

Apart from these activities, it seems that nothing else can be done until the doctor receives the test results and decides on the patient diagnosis. Once the test results arrive, which usually takes around two hours, the doctor has more information to decide on a diagnosis (activity 6). If the information is still not enough, the doctor can order more tests to be done on the patient (activity 7). This is the case in Act II where the doctor is not sure if it is pneumonia or not and after doing some research online and in a book, she decides to do one more test on the patient. Once the doctor has set a diagnosis he or she feels confident about, this is reported to the patient and responsible nurses (activity 8), and the treatment routine can start.

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27 Although, theoretically, assistant nurses should take samples, in practice it is up to the couple of nurses working together to decide how to divide up the work.
5.2.3. Treatment routine
Following the patient diagnosis, the treatment routine will be initiated if needed. Below, excerpts from interviews and field notes are used in illustrating different ways in which this routine may unfold.

Interview, ST doctor: “Then I finish, I have decided, I think this is the right diagnosis. Then, I tell it to the nurses, “I think the patient has pneumonia” and I tell it to the patient. And then I call a ward and try to get a bed for this patient, and a lot of time just goes into sitting on the phone and trying to find a bed.”

As this quote, and also Act II, shows, once the patient has been diagnosed, he may be discharged directly. Some patients may not require any urgent intervention apart from some drug administration and, thus, the treatment routine may be reduced to one activity or may not be performed at all. However, other patients do require interventions. A patient with a broken arm will most likely need a cast. A patient with an open wound may need stitches. Thus, the treatment routine will look different depending on the patient diagnosis and it is up to the doctor to decide what to do after having diagnosed the patient. A few examples illustrate this:

Field notes, Friday night. After checking the x-rays and corroborating that there is nothing broken, the doctor goes to room 35. The patient is in the toilet so the doctor goes in front into the plaster room and gets some thick, blue bandage. She checks the instructions on how to put it, which are printed on the box. Back to the patient room, she tells him that the x-rays look okay. She puts the bandage around the patient's shoulder and holding his arm. She says that he should take paracetamol, 1 gram, and that she will prescribe a stronger pill but that he should only take it if the paracetamol is not enough. “Now go and rest”, she says. “Goodbye”. The patient leaves.

Field notes, Tuesday night. We enter room 8. The patient says that he cut his finger with a saw when working at home. The doctor pulls the bed up and tells him to put his hand on a metal table by the bed. She starts checking his finger. It's bleeding a lot. She cleans it and says that she will have to sew it because the wound is too big to leave it open. She opens a door that connects to a sterilized room and gets a suture kit. She cleans his finger again. Then she opens a cabinet and gets some small glass jar (I guess it’s anaesthesia). She sucks out the liquid with a syringe. Back to the patient, she sits down and injects it on both sides of the finger (she leaves a bit on the syringe). She explains something about the nerves. She tries to sew him but he cries out that it hurts too much. She asks if he can feel the needle. Yes. She puts extra anaesthesia on the tip of the finger and then starts sewing while talking to him. Now he doesn't feel the needle. When she is done, she puts some protection around the finger and says that he should contact the primary healthcare centre for a check-up on Friday; that’s in three days. Then she tells him to keep the protection on for nine days.
As illustrated, and similar to the diagnosis routine, there are scripted patterns to the treatment routine, which vary depending on the patient diagnosis. Thus, the treatment routine will be performed differently on an orthopaedics patient compared to a surgery or medicine patient or even other orthopaedics patients. Still, this does not mean that there is no scripted pattern but that there are many when it comes to treating patients. Due to the existence of multiple scripted patterns, no figure illustrating the treatment routine activities is provided. Once the diagnosis has been determined, doctors can use different sources in deciding the treatment plan and therefore how to perform the routine. One of the doctors explained:

“Before I started working [in the emergency department], I checked out a handbook of medicine that had a section on emergency cases, like one page for every emergency. [...] The first couple of weeks [...] I used to go there with that handbook in fact. I had it in one of my pockets. [...] Then we have a couple of Swedish websites also: “internetmedicin” and stuff most of the colleagues check, for drug administration, you know, doses and stuff and [...] a pharmacopeia book, the Swedish version.” [ST doctor, interview]

Once the patient has been treated, the doctor has to take the decision of what to do with the patient next, starting the discharge routine. As illustrated in Act II, this may mean having the patient admitted to one of the hospital wards, or otherwise the patient is sent home.

The three routines presented have scripted patterns. Depending on the complexity of the routine, the scripted pattern is more or less flexible. In the case of the triage routine, this pattern is virtually always enacted as it is. In the case of the diagnosis routine, there is more variation, as patients present different symptoms and, therefore, alternative patterns can be enacted depending on the situation. Yet, all these patterns can be englobed by the scripted pattern shown in Figure 15. The treatment routine, contrary to the other two, consists of several scripted patterns based on the different diagnoses that patients can be attributed. Despite this variability among routines, the empirical material supports the existence of patterns, which are formally sanctioned by the organization through documents. Same as with the role patterns explored earlier, thus, the emergency department provides staff members with scripts needed for performing organizational routines.

5.3. Summarizing the scripted patterns

This chapter introduced the reader to the scripted role and routine patterns that staff members enact in the emergency department. Scripted patterns are those given or sanctioned by the organization. As such, these patterns provide an
Outline for how things are to be done and serve as guidelines for role and routine performance. Table 10 summarizes the scripted patterns.

Table 10. Scripted patterns

<table>
<thead>
<tr>
<th>Scripted patterns</th>
<th>Role patterns</th>
<th>Routine patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Patterns developed following the job descriptions given by the organization</td>
<td>Patterns developed following organizationally sanctioned standards documented in routine guidelines</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Accountability</td>
<td>Accountability</td>
</tr>
<tr>
<td></td>
<td>Responsibility</td>
<td>Responsibility</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>Surgery doctor, triage registered nurse, resource assistant nurse</td>
<td>Triage routine, diagnosis routine, treatment routine</td>
</tr>
</tbody>
</table>

Scripted role patterns are those created based on the job descriptions set by the emergency department. Four of these patterns are assigned to doctors, namely, surgery, orthopaedics, internal medicine, and emergency doctors. Seven scripted role patterns are assigned to registered nurses, and other seven to assistant nurses: surgery, orthopaedics, internal medicine, emergency, triage, resource, and coordinator. Each role pattern is vested with accountability and responsibility, and the educational background of the individual serves as the main entry requirement to the various scripted role patterns.

Scripted routine patterns are the patterns developed on the basis of organizational documents, such as the emergency department’s treatment guidelines, and which rely on the existence of scripted role patterns. This means that, being responsible for the activities falling within a certain scripted role pattern, individuals enacting it are also held accountable for the corresponding activities falling in the associated routine patterns. There exist scripted patterns for each of the routines enacted in the emergency department, such as the triage, diagnosis, and treatment routines.

Having recapped the scripted role and routine patterns assigned to staff members in the emergency department, the next chapter will dig into the unscripted patterns, i.e. patterns which have not been formally sanctioned by the organization. Although the emergency department assigns scripted role and routine patterns to staff members, the empirical material showed that these were not always enough to keep up the normal functioning of the organization. In order to deal with contingencies, unscripted role and routine patterns, emerged
through improvisation\textsuperscript{28} by the individuals responsible for enacting the scripted patterns.

\textsuperscript{28} Improvisation is here defined as “the extent to which the organization and meaning of roles [and routines] are invented by the people immediately involved in a relationship.” (Powers, 1981, p. 289)
6. Unscripted patterns

The previous chapter explored the scripted patterns that the emergency department assigns to staff members. Scripted patterns are necessary to organize, and serve as outlines for accomplishing, work. However, they do not always suffice. This chapter delves into what I call unscripted role and routine patterns, those patterns enacted by the staff members whenever the scripted ones are not enough or cannot be enacted as planned.

The term unscripted denotes that these patterns have not been written or planned in advance, i.e. they do not follow a prepared script. This does not mean that these patterns are not acknowledged by the organization. In fact, not only staff members but also managers recognize their existence. The key difference between the scripted and unscripted patterns is, as the terms suggest, that the former are formally sanctioned by the organization through written documentation, and therefore expected to be followed, and the latter are not. Unscripted patterns are developed by staff members and not written down. Still, the scripted patterns given by the emergency department, being guidelines for work, are used as templates to create the unscripted patterns.

As discussed in the previous chapter, being unscripted does not mean that the patterns are not stable. Unscripted patterns may arise out of improvisation, in attempts to find alternative ways to accomplish work, but continue to be performed therefore becoming patterns. Thus, per definition, all scripted and unscripted patterns are stable, even if to varying degrees, as patterns per se imply regularity. Despite not being written down from the beginning, unscripted patterns, or parts of them, can become scripted over time.

Act III introduces the chapter by illustrating a real case where unscripted role and routine patterns are at play. It provides an example of a patient case where the scripted role and routine patterns assigned by the emergency department are not sufficient to get the job done. Therefore, various unscripted patterns are enacted in accomplishing work. Thereafter, the unscripted role and routine patterns are explored in detail. Three sets of role patterns, namely, professional, career stage and individual, are discussed. This is followed by a description of the stretched, shrunk and shuffled routine patterns. Similar to Act II in the previous chapter, Act III provides the common thread to this chapter and will be therefore referred to throughout the text.

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29 All names are fictitious and used only with the purpose of illustrating.
Scene

Various locations in the emergency department.

Time

The present.

ACT III: Mysterious nosebleed

9:35 p.m. The triage registered nurse comes into the office and asks Camilla, the emergency physician, if a patient with nosebleed is for the emergency or internal medicine doctors when it’s before 10 p.m. She is pregnant, week 38. “I’ll take it. I love nosebleeds!” Camilla replies. The nurse gives her the patient codes and leaves. Camilla signs up for the patient in the software system, prints out the triage form, and goes to patient room 7 in the surgery corridor. Anna, the pregnant woman is lying on a stretcher. The doctor introduces herself and asks the patient what has happened. Anna recalls the moment when she started bleeding. Camilla asks if it has happened before to what Anna replies negatively. “Is it your first kid?” the doctor asks. Anna says it is her fourth and that she is in week 38. “You are almost there,” Camilla says.

She puts on gloves and apron and starts preparing materials and tools on a moving table. Meanwhile, she tells Anna that it is not uncommon to bleed when pregnant and explains: “What I will do now is that I will search for the source of the bleeding. Does it feel okay?” Anna says yes. Camilla puts on a head light lamp and starts checking inside the nose with a tool. It bleeds. A lot. The doctor continues. Anna spits blood on a plastic bag. She asks for paper to clean her nose. I get it. She asks for water. I give her a glass. Camilla continues. When she is done, she puts cotton inside the nose and, on top, a nose pin that she made with two wooden tongue depressors and tape. Camilla tells Anna that her nose is really stuck. Anna says that it has been like that for the last two or three weeks. The doctor says that she will get some nose spray and that Anna should stay awake but rest now for a little while. “I’ll be back,” Camilla says and leaves the room.

10:05 p.m. Back to the office, Camilla says that this case is really strange. There are two emergency doctors now in the office, apart from the internal medicine doctor. Camilla tells them about the patient: room 7, she is pregnant, week 38. She has something blocking her nose. She explains that she cannot go through with the tool. She says that she must think about what to do “because it’s very tricky.” She goes to the observation room, gets two wooden tongue depressors and tape. Back in the office, she demonstrates to the two emergency doctors how she made the pin. She says she learnt it from “Doctors of New York, or something
like that. It gives a perfect constant pressure to stop the bleeding”. She sits by her computer and tells me that she will sign off some patients while she thinks about what to do with the pregnant woman because it is a difficult case. She goes through patients that other doctors have seen before and reads the transcribed dictations. She signs them off. Why her? “Because I'm the senior doctor this week”, she says. The triage registered nurse comes and asks Camilla if she is good at eyes. She tells her about a patient they have now in the triage room. Camilla tells her what to do and the nurse leaves.

10:30 p.m. Camilla goes back to the computer, opens up the pregnant woman’s journal and makes a call. She explains the case. She is asking for advice. “I see the polyp”; “it doesn't flow backwards”. She says that she does not know how to treat this. After a few minutes she hangs up, and says that she was talking to the on-call otolaryngologist, who is up in the hospital. Camilla says that the doctor has never heard of something like this so she does not know how to solve it either. The otolaryngologist will call her senior and get back to Camilla. Meanwhile, Camilla orders new parameters and blood tests through the system. A few minutes later, the otolaryngologist calls back and says that neither her nor her senior know what to do so she is coming down to meet the patient. Camilla says that she will write a short referral to them.

A newly-grad doctor working the night shift tells Camilla that she needs help with the eye examination device. Camilla says, “Give me five minutes. Or two. I need to write a short referral.” The emergency registered nurse responsible for the pregnant lady comes into the doctors’ office with a small paper with some test results. Camilla asks him about something else. He replies that he has not taken that yet but he says that he can do it now. Camilla tells the nurse that this is not a regular bleeding so they do not know what to do. She adds that she has called the on-call specialist. Just so the nurse knows. He leaves.

10:55 p.m. “I've written a referral to the on-call otolaryngologist, so they take over the patient. I'm done with it, so I move on”, she tells me. Maria, another emergency doctor, comes back to the office and asks Camilla if she will have the bleeding nose patient admitted to a ward because she has a patient to admit and the orthopaedics ward is full. Camilla says, “Otorhinolaryngology is coming in”, meaning that she is referring the patient. A few minutes later, the on-call otolaryngologist comes into the emergency department, meets Camilla in the corridor and asks her if she is whom she has been talking to before. Yes. She looks really young. Camilla gives her the referral and says that it will be interesting to hear what she thinks about the patient.

“Now I have to help the other doctor”, Camilla tells me. Back to the office, she tells the doctor that they can go to her patient now. We go to the “eye room” in
the surgery corridor. The patient is a 54-year-old woman. She is there with her daughter. Camilla checks her left eye with the eye examination device. While doing it, she explains step-by-step what she is doing to the junior doctor. It takes a while. In the end, Camilla tells the patient that she has some irritation so she should continue taking the drops that she got from the healthcare centre and go tomorrow to an eye specialist. We leave and go to room 7. The on-call otolaryngologist is checking the pregnant woman’s nose. Camilla asks her about it. She says that she does not know what it is. Camilla tells the patient that they have to think about it to know what to do.

11:40 p.m. After meeting two more patients, Camilla goes back to the office, opens the pregnant lady’s journal and dictates the case. The registered nurse comes in and asks her for the patient codes, room 7. She gives the paper to him and he leaves.

(END OF ACT)

Act III illustrates one of the many ways a patient journey can unfold in the emergency department. However, contrary to Act II where everything seemed to run smooth, Act III shows how sometimes the scripted role and routine patterns explored in the previous chapter are not enough to get work done.

The nosebleed patient was challenging for several staff members. Starting with the triage routine, the triage registered nurse doubted which specialty the patient should be assigned to. A nosebleed could fall either in the medicine or surgery patient categories, which made this an in-between case. Following the scripted role pattern assigned to her, the nurse should have decided on her own where to assign the patient. However, in order to clear any doubts, the triage nurse decided to consult with a doctor, who should know patient categories better. Although this small decision may seem trivial to an observer, going behind the scenes one can see how the triage nurse drew upon unscripted role and routine patterns in fulfilling the triage routine. While she could have asked the internal medicine doctor for an opinion, the nurse decided to turn to the emergency doctor who, first of all, had been working in the emergency department for decades and, second, was known for being knowledgeable and above all supportive. This seemingly mundane reaction can be explained by the existence of professional, career-stage, and individual role patterns, which together with the enactment of unscripted routine patterns supported the accomplishment of the triage routine.

In what follows, each of the unscripted patterns enacted in the emergency department is explored. I will break down and delve into the details behind Act III in supporting the arguments made throughout the chapter.
6.1. Unscripted role patterns

As presented in the previous chapter, doctors, registered and assistant nurses, are assigned certain scripted role patterns following the emergency department’s way of organizing. Independently of who the individual is, the same role patterns may be assigned to all assistant nurses, for example. Still, individuals enacting the same role pattern are different in respect to the career stages they are in, their levels of familiarity, and how they are socialized into their profession. Due to this, scripted patterns are not always enough or appropriate. In order to accommodate this diversity, staff members develop unscripted role patterns. These, although not formally specified by the management, are of central importance to the ways people interact and get the job done.

Staff members differentiate between professionals, individuals, and groups of individuals, performing any specific scripted role pattern. For example, doctors would not only talk about internal medicine nurses in general, but they would clearly distinguish between registered and assistant nurses enacting the internal medicine role patterns, and also speak of them as junior or senior depending on their level of experience. Staff members would also talk about certain individuals that excelled in performing their scripted role patterns and others that did not, using adjectives that denoted skills or personal attributes. This way of talking about themselves and others, led me to identify three sets of unscripted role patterns, which were ascribed to and by individuals working in the emergency department: professional, career-stage and individual role patterns. While the scripted role patterns were formalized, following documented role descriptions, professional, career-stage and individual role patterns were not.

*Act III* illustrates how the four sets of role patterns came into play in triaging and diagnosing the nosebleed patient. For example, the triage registered nurse drew on professional role patterns when asking a doctor for clarification in terms of patient categories, and career-stage role patterns when turning to the emergency doctor who was more senior than the internal medicine doctor. She also drew on individual role patterns when picking the doctor based on the emergency physician’s experience at the emergency department. Finally, the triage registered nurse enacted the scripted role pattern in fulfilling the triage routine. In general, whenever staff members faced situations that they could not solve directly, individuals combined and/or switched between these role patterns in trying to find ways that helped them uphold work. Scripted and unscripted role patterns played out differently depending on the situation and individuals involved. As the following quote illustrates, the four sets coexisted in practice. Talking about surgery doctors, a specialist clearly depicted how diverse role patterns were blended together:
“It’s not that the interactions between people depend on the roles they take [scripted], but on the people [individual]. Things go differently if you have a surgeon [career stage] who is a clear leader and take initiatives [individual] that if you have a new inexperienced [career stage] doctor [professional] who doesn’t know how to proceed [individual]. Then the responsibilities start to overlap and you take others’ roles [scripted]. It’s all about saving the patient.” [Specialist, interview]

That a performance could be completely different based on who was enacting the scripted role, and therefore routine, patterns, was crystal-clear to staff members. Thus, while in principle the scripted role patterns were the same for everyone, having different individuals enacting them required adapting. Unscripted role patterns provided the support needed to adapt and act according to the situation at hand. In what follows the three sets of unscripted role patterns, namely professional, career stage, and individual, are described.

### 6.1.1. Professional role patterns

Professional role patterns seem to be clear-cut in the emergency department: either you are an assistant nurse, a registered nurse, or a doctor. As it was already mentioned, the educational background of the individual sets the entry requirement necessary to be assigned a scripted role pattern. Thus, at first glance, professional role patterns look like they are scripted. However, they are mostly unscripted. Let’s first start with the scripted side of these patterns.

In order to receive the title of assistant nurse, one should have either completed a three-year nursing program in high school, or the corresponding training in an institution of adult education, polytechnic or distance learning. To become a registered nurse, one must study at a university or college. The program lasts three years (180 credits in the European Credit Transfer and Accumulation System - ECTS) and grants the nursing degree. During this education, nursing students do an internship, or clinical training, where they may work in different hospital wards. They may also work as assistant nurses during their education. After finishing the nursing program, registered nurses can continue to specialize in different areas, being emergency nursing one of these. The specialty training takes an additional year and after completing this master degree the student becomes a specialist nurse. Doctors must have taken the medical program, which in Sweden lasts five and a half years (330 ECTS) and leads to the medical degree.

All individuals falling in the same professional group are assumed to share a common knowledge base and are treated as equals when it comes to the scripted role pattern that they are expected to perform in the emergency department. As one senior doctor argued when talking about recent graduates:
“They have medical education behind them so they know all about the symptoms and they have been at the [emergency department] as students before. So, they are introduced. It’s not like putting a doctor that doesn’t know anything in the [emergency department]. It’s a six-year education and during these six years they have been at the [emergency department] in intervals.” [Double specialist, interview]

Scripted role patterns are thus linked to the professional degree that a staff member holds. Having spent a number of years at school means that staff members hold at least basic knowledge about how to perform the scripted role patterns assigned to them and they are expected to fulfil this. As many doctors highlighted, medical school trains students to think in a certain manner. Therefore, even when they could lack practical experience, doctors are supposed to know how to proceed. The same is expected of registered and assistant nurses. All of them have spent a certain amount of time doing internships during their studies, and this is supposed to have provided them with the practical knowledge needed to work.

This means that professional roles are partly scripted, as the educational background determines who can take which scripted role pattern. All three professions are needed in treating patients, and different role patterns are assigned to doctors, registered, and assistant nurses. However, even though it is clear that individuals’ professional background is the entry requirement to specific scripted roles, this is only the tip of the iceberg. Professional role patterns are for the most unscripted. There is a lot more to a professional role that is not considered in the scripted role patterns given by the emergency department. Socializing into a profession is an individual experience, which results in different appreciations of the self and others as professionals, which triggers the development of professional role patterns.

While professional socialization could be argued to start at school (Hall, 2005), the socializing process continues in the workplace and is different for each individual, fostering the development of professional role patterns. Usually, staff members would introduce newcomers to the emergency department and “teach” them how to do their job, which basically meant providing newcomers with the basics regarding how to perform the roles that they were assigned. The introductions were different for nurses and doctors. While nurses would have a four-week introduction, there was not such a program for doctors. One reason for this may stem from differences in the educational programs that doctors and nurses go through. As Hall put it, “physicians traditionally learn independently in a highly competitive academic milieu. Nurses learn early in their career to work as a team, collectively working out problems and efficiently exchanging information across shifts to insure appropriate continuity of care for their
patients.” (Hall, 2005, p. 190) Be it through a formal or informal introduction, staff members would undergo a learning process in order to become socialized.

While doctors did not count with a formal introductory program, registered and assistant nurses had a three-week introduction that with the years was extended to four weeks to also include training in CPR, trauma, and simulations, apart from the onsite training and two-day educational sessions with lectures. During those weeks, each nurse would follow another nurse while working in the emergency department. As a registered nurse explained:

“When you are a new nurse you usually work [your] shifts with another registered nurse that helps you out, tells you [about] routines, how to treat patients and stuff like that. But it could be a bit different depending on what kind of person is giving you the introduction. If you have a very experienced nurse that finds it fun to do introductions, then you get a better one than if you have a new one that doesn’t really know how to do the work [her/himself]. [...] We’ve had nurses working here less than six months that have a new one to do part of their introduction training, because we are so few nurses, and quite a high rotation rate.” [Registered nurse, interview]

Socializing into a role was a very personal experience and thus contributed to the development of professional role patterns about the self and others. As this quote illustrates, not all introductions were the same, as whom the responsible nurse was mattered in how the process unfolded. As there was no control over the introductions, sometimes nurses would have a shorter one. An assistant nurse said she got a three-week introduction when it should have been four weeks, and she did not know what the reason for that was.

As a general rule, assistant and registered nurses should go through the three sections and the triage before finishing their introduction. During the first days, newcomers would shadow the responsible nurse, looking at how he or she worked. This means that new nurses did not engage in performing any activity themselves for the first few days. The responsible nurse would explain the activities performed and, after four or five days, new nurses would start doing the activities on their own. During the final introductory week, the new nurse was supposed to do everything on her or his own. There was a folder where all the activities that a newcomer was supposed to learn during the introductory weeks were listed. This usually worked as a checklist, which both nurses involved could go through in order to make sure that everything had been covered, i.e. all the activities required had been performed by the new nurse. In this way, new nurses would be hopefully fully socialized into their roles.
How the introduction unfolded depended also on the situation. An assistant nurse said that she could not believe she was still working in the emergency department after her first day at work, and recounted:

“The first day [...] I was working from 11:30 to 9. It was a Monday, and Mondays in the [emergency department], well, there are patients all over, all over. I came and there were a lot of patients. The first thing I saw was patients in the corridors throwing up; there were cops in the corridors [...] and I said “What’s going on?” And staff members would tell me, “No, no, but it’s Monday, it’s Monday.” [Laughs] “This is normal on Mondays. The woman who was responsible for my introduction had a lot of patients. She was in surgery [section] and all the patients were vomiting, and the police were in surgery, so yes, it was really busy, so she showed me [software system’s name] a bit fast and told me “when it’s green, then it’s a test you have to take”. So, I was alone all night long and I knew how to take samples because I’ve worked in a healthcare centre for a year and a half. So, I would check up my patients [in the system] and when there was something green coming up, I had to take a [sample]. Then I would do that, because I knew how to take samples. I told her [...] “So, when the doctor asks me for something, I will do it, because I’ve taken samples for a lot of years, and I’ll see you tomorrow and we can talk about this. [Laughs]” [Assistant nurse, interview, own translation]

As this example shows, introducing newcomers to the emergency department was important but the highest priority was always the patient. Thus, when high workloads, all resources were devoted to patient care. However, who the new nurse was also influenced the introduction. In the previous example, the assistant nurse was new to the emergency department but had seven years of work experience, spent in a healthcare centre and two hospital wards. Thus, she was confident enough and trusted her abilities to do her job, even on her first day in a new workplace. While she was socializing into a new work environment, and thus new scripted roles, she was carrying from before her own professional role patterns. As she argued, “when you are new in the emergency department, you have to be like “I can do this, let me do this”. You can’t be shy and just sit on a chair.” [Assistant nurse, interview, own translation] Nevertheless, not everyone was the same and this influenced how the introductory days unfolded and, consequently, the role patterns developed. An experienced registered nurse also highlighted this:

“[It’s] very different depending on who I am, the one that is doing the introduction, but it’s also depending on the new nurse. [...] if the nurse is coming here with [...] ten years of job experience from another emergency department, you don’t have to tell them how to put in an IV line or how to treat the patient. You need to tell them, “These are the routines here”. But if you have new grad nurses doing their first five days on a job, then you have to follow them everywhere to help them take blood samples, help them put in IV lines and tell
them everything. So, it really depends on what kind of nurse is starting and what kind of nurse you are as an introductory [...] some people really like to have control and some people can tell someone: “Can you go away, do that, come back and tell me?” Sometimes you can tell them: “Do you want to describe for me how you are going to do this?” and then they can go in, do it, come back out and report, “This is how it went.” [Registered nurse, interview]

Throughout the socialization process, newcomers would learn the organizational routines and staff members would learn how to work with the newcomers in order to enable coordination. Overall, as a new ST doctor explained, “the emergency department works in a standardized way even though there are new staff because of the way that new doctors learn from senior doctors and new nurses from older nurses.” [ST doctor, email communication] However, being introduced to a new workplace meant much more than just learning how to perform a role. When comparing her internship and the ongoing ST, done at different hospitals, a third-year ST doctor explained:

“the difficult part was that this is a university hospital with all these different experts. It was quite different for me, so that was the biggest thing to learn and then it’s like with every new job you have to learn new routines and who to call when you have this problem and here we do it this way and in other places we do it in other ways. So, we started a project of improving our ways of introducing our new doctors when they come, to get this transition a bit easier but you can never be fully introduced, you need to work to learn and make mistakes and learn from them.” [ST doctor, interview]

Despite the education providing staff members with theoretical knowledge regarding their professions, as many of them highlighted, the scarcity of practical skills needed for work life was evident. The lack of self-management training related to seeing a patient die and stress was another key issue highlighted by many. Thus, socializing into their roles, by learning how to perform the scripted patterns in the emergency department, enabled the development of professional role patterns. Learning how to perform their roles and organizational routines in concert with others provided staff members with an understanding of their status, or the unspoken hierarchical structure, and professional conduct, i.e. what is appropriate to do and not to do as a professional.

**Status**

Even when professional role patterns are not formally acknowledged by the emergency department, differences regarding status and professional conduct exist, which influence how work gets done.

Professional roles in the emergency department follow an “unspoken professional hierarchy” (Mangan, Miller, & Ward, 2015, p. 71) or line of authority, which
although not formally stated, as there is no organizational chart of the emergency department, is respected to a large extent. In general terms, doctors are at the top when it comes to medical decisions, followed by registered nurses, and these by assistant nurses. Thus, doctors tell nurses what they want them to do with the patients and nurses respect this: “usually when the doctor has seen the patient then all the treatment should go through her or him so you don’t do anything that interferes with their plan.” [Registered nurse, interview]

Being all three distinct professions, the activities falling under each group are defined. For example, information about medical decisions is to be given to patients by the doctor and not the nurses. To illustrate, once, a boy came in with the ambulance to the orthopaedics section. Thinking he had a dislocation, they put a plaster on his forearm as soon as he got to the emergency department. After doing an x-ray, the registered nurse realized that the patient had a fracture and thus they needed to re-do the plaster in order to immobilize the boy’s elbow. The registered nurse printed out the x-ray and tried to find the doctor without success, so he went to the room and informed the patient and mom about the fracture. However, he did not say that they would have to re-do the plaster. Instead, he waited until he could talk to the doctor and said: “Now we have to wait for [doctor’s name], the orthopaedics doctor, to tell the patient that we have to re-do the plaster.” [Field notes]

Regarding nurses, as already mentioned, the main difference between the two professional groups in terms of hierarchy is that assistant nurses are not allowed to administer drugs while registered nurses are. As an assistant nurse explained:

“The only thing I don’t do that the registered nurse does is to give medicine. That’s the only [difference…] [Registered nurses] take samples, everything as I do. The things I do, they also do.” [Assistant nurse, interview]

Registered nurses can administer certain drugs without asking the doctor, even though they have to report it, but there are other drugs that they are not allowed to administer without the doctor’s signature. Therefore, even if a nurse knows that he or she is supposed to give certain medication to a patient, he or she has to first talk to the doctor and have him or her write an order and sign it before doing it. This and other situations clearly showed the existence of a line of authority which provided different status to individuals following professional role patterns and which was to be respected. However, there were cases when orders would not

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30 No staff member asked about it could explain the lack of an organizational chart. From what I could see, two possible reasons emerged: first, there was a mix of permanent and temporary staff, the latter employed by departments other than the emergency department, thus not being considered employees of the emergency department. Second, even if there was a hierarchy regarding medical decisions, there was no joint boss of the emergency department. There was one senior doctor responsible for emergency physicians and one nurse managing the nurses.
be followed, as professional role patterns were also associated to professional conduct, to which now we turn.

**Professional conduct**

Professional conduct is guided by professional values and implies that individuals are responsible and accountable for their actions following professional role patterns. As already mentioned, doctors sort of rule over registered nurses and these over assistant nurses. Nonetheless, registered and assistant nurses would not blindly follow orders. If they thought that something was not the right thing to do, they would usually engage in discussions and argue for not doing it. This, while partly stemming from professional values, is also a consequence of taking responsibility for their actions and avoiding being blamed for medical errors. Even if the doctor has a higher authority in terms of medical decisions, nurses are accountable for what they do:

> [While doctors are] responsible for the patient’s medical treatment [...] as a registered nurse you are also responsible for how the patient is getting home, removing IV lines, [...]. So, it’s a divided responsibility. [...] If I as a nurse did the wrong triage assessment, it’s my responsibility. So, it’s quite divided because both of us have a license to be a professional [care provider]. [Registered nurse, interview]

Thus, professional patterns are also reinforced by what is considered appropriate behaviour, or professional conduct. Besides this, it is staff members’ responsibility to treat patients in a proper manner and this is stated in the treatment guidelines, under a note in the triage routine description:

**Treatment and safety**

*All patients should be treated kindly and respectfully.*

*Do not forget the safety aspect!*

[Excerpt from the emergency department’s treatment guidelines, p. 32]

While this is considered professional conduct, one of the registered nurses explained that patients could file a complaint to the Swedish National Board of Health and Welfare if mistreated in the emergency department [field notes].

People have a strong sense of responsibility and professional values, which pushes them to avoid making errors in the patient care. To illustrate, right after drawing blood from patients, nurses would go straight to the computer, holding all tubes, and order blood tests, print patient codes and tag the blood tubes immediately. This was a pattern observed repeatedly. The main reason for this,
as one of the nurses explained, is that they cannot leave the tubes without tagging because otherwise there is a risk of mixing them with those of other patients; and it would be a big mistake to give patients the wrong blood, in case of surgery for example. Also, if registered nurses would administer drugs incorrectly they would “get the blame for the mistake”, even when following an order signed by a doctor. Thus, nurses know that they are accountable for their actions. This usually raised staff members’ awareness, and sometimes served as a double-check mechanism. However, this would not always be without problems. The following situation exemplifies the challenge:

“[The doctor] wanted to treat the patient with wrong medication. Luckily, one of our nurses said: “no, I’m not going to do it”. And the doctor said: “well, I’m the doctor, I’m in charge. You should do this.” And she said no again. And I guess she could do it because she had some experience in this and you know, “this is wrong, we can’t do it.” But it takes quite a lot to say no... I mean, he is a specialist doctor but in general medicine [...] So if the nurse wouldn’t have been so experienced, it might have been a new nurse or didn’t dare to say no, the patient would have had the wrong medication.” [Registered nurse, interview]

As this quote shows, the status provided by professional patterns had great weight. Being the doctor a specialist, and being also the one supposed to decide what medicine to administer, the registered nurse was faced with strong resistance. Nonetheless, adhering to her professional pattern pushed her to act according to what she believed was good professional conduct and reject doing something that she knew was not right. While this was a challenge, as the registered nurse highlighted, other factors such as level of experience or personal attributes could have made the situation even more problematic. These and other factors enabled the development of other unscripted role patterns, which are explored below.

6.1.2. Career-stage role patterns
Individuals develop role patterns based on the career stage people are in. These patterns are more specific than the professional ones, as they are related to particular groups within a profession, which are at different points in their career paths. A career-stage role pattern is based on the skills that an individual has developed in doing the job, which is provided by the work experience that he or she holds.

When multiple stages exist in a career ladder, individuals develop different role patterns following each career stage. In the case of doctors, individuals enacting the scripted role patterns can be specialists, doing their specialty training (ST doctor), or their internship (AT doctor). In Sweden, after finishing medical school, graduates are required to complete an internship (AT), which lasts...
between 18 and 21 months. Therefore, AT doctors are graduates who have a medical degree but lack the license to practice medicine. The AT internship is meant to complement the basic medical education with practical experience. During this time, doctors must fulfil certain minimum requirements, which include: spending nine months in internal medicine and surgery, three months in psychiatry, and six months in general medicine. This means that AT doctors come to the emergency department through different departments, which are responsible for staffing them. For example, if an AT doctor is doing his or her internship time in internal medicine, then he or she would work in the emergency department as an internal medicine doctor, in line with the existing sections in the department. The internship ends with an examination, which, upon successful completion, grants doctors the license to practice medicine.

Once the internship is done, doctors can choose to do a specialty training (ST). The ST takes around five years and doctors become specialists after this. Doctors doing their ST also work in the emergency department as part of their training. Contrary to the AT doctor, an ST doctor does not rotate through different departments but does his or her whole training in one specialty.\(^{31}\) ST doctors working in the emergency department are commonly doing their training in internal medicine, surgery, orthopaedics or emergency medicine. Regarding specialists working in the emergency department, the so-called emergency physicians, most of them are specialists in emergency medicine or general medicine. Thus, different role patterns are associated to these three career stages.

In the case of registered and assistant nurses, not counting with different career stages as doctors, it is very common to categorize them in terms of junior and senior nurses.

Although the management does not formally consider career-stage role patterns, they influence how work is done in the emergency department, as different career stages grant varying levels of autonomy and power to individuals.

*Autonomy*

Being in a certain career stage means that an individual will display certain level of autonomy at work. Autonomy is the ability to perform a role independently, i.e. not having to turn to someone else for help. Junior staff members were not considered to be autonomous enough to be left completely alone in the emergency department and this was noted in the staffing system, as explained by an ST doctor:

\(^{31}\) In opposition to AT doctors, ST doctors have a “home department”. They may rotate through other departments but which are closely related to the specialty they are doing their training on.
“I know most of [the doctors working in the emergency department]. If I don’t know them, there’s always like a little star next to their name. A little star: inexperienced. [...] So, you know what you are dealing with. [...] Especially if they are gonna work evening or nights. Yes, they put a star. So, the more senior on-call resident, who’s sitting up or doing something in the wards, knows he has a junior colleague, that’s not experienced. They put a star so he can’t go home. He works till 11; he sleeps in the hospital somewhere. Because if it’s a cardiac arrest or a serious critical case, he knows the junior won’t be able to do anything. So, he has to show up physically also. [...] When I first worked here [...] I was registered as a doctor and I’d worked many years but still I was new to [this] university hospital. They also put a star on me; for the first one and a half years. They wanted always someone, especially evenings and nights, sleeping at the hospital and not just me...” [ST doctor, interview]

As already mentioned, following their career stage, doctors are categorized in AT doctors, ST doctors, and specialists. AT doctors are under the supervision of ST or specialist doctors and their internship consists of both education and medical work, which leads to the medical license and the right to start the ST training. AT doctors are widely regarded as inexperienced and not able to fully fulfil the scripted role patterns that they are assigned:

“[During daytime,] the primary doctors on call are usually very inexperienced... either junior or AT doctors [...] they are still during the final part of their training, before they become [licensed physicians] ... what this means is that they have limited knowledge in emergency care, in leading teams, and taking care of critically ill patients, because they are inexperienced. And also, since they are there [in the emergency department] for a limited period of time [...], usually a couple of weeks [...] they also lack knowledge about routines, they don’t know the staff, and they don’t know the facilities very well. So that’s quite difficult for them, it’s actually a very difficult task for them.” [Project manager, interview]

Note the emphasis on the inexperience of doctors enacting the internal medicine, orthopaedics, and surgery role patterns. Lacking practical experience is a disadvantage for others in terms of the professional role patterns associated to this group of individuals. Not knowing the emergency department is a disadvantage in terms of the scripted role patterns that they are expected to perform. The lack of experience prevents those in the roles to perform autonomously. A junior assistant nurse, talking about the differences between internal medicine, orthopaedics and surgery doctors, on one side, and emergency physicians, on the other, recounted a situation that shows how the doctors’ level of autonomy translates into practice:

“At night we have a doctor [emergency physician] who is fantastic. We had a 24-year-old woman in the triage that had a cold and came to the emergency department. When we are a bit like “oh! What should we do with her?” in the
triage room, the emergency physicians always come and see the patient there in triage, and that is very, very good because it speeds up everything. [So, this emergency physician] asked the patient “can you breathe?” “Yes”, she said. “Okay, are you in pain?” “No” “Why are you here?” “Ah, because I got a cold.” “Okay, do you think you’re gonna die?” “No.” “Okay, then you go back home. Bye!” [The assistant nurse laughs and continues.] five minutes and she was back home. If that happens during daytime, then you have to take the patient to a room, the doctors have to take tests and call their senior to ask, “Oh, she has a cold, what should I do?” [The doctor] has to call a lot of times, and a 24-year-old woman who only has a cold can be in the emergency department for ten hours without any problem, and that’s not right. No. So it’s a huge, huge difference.” [Assistant nurse, interview, own translation]

This example illustrates the main differences between junior and senior staff members. Being junior is usually equalled to being inexperienced, at an early career stage, and thus lacking autonomy to do one’s job and successfully perform one’s role. The same holds for junior assistant and registered nurses:

“...if [the nurse] has a lot of experience, she knows the routines, she knows when the patient doesn’t feel well, she knows the treatment, so you have a colleague. It’s another thing if you come as an inexperienced nurse. You have to learn because there are so many new things to do.” [Double specialist, interview]

Everyone agrees on that inexperienced people “have to learn”, and that the emergency department is the best place where to do it. Still, and mostly, AT doctors are regarded as juniors or rookies. As a registered nurse put it, “they are not specialists in emergency medicine and they are not specialists in internal medicine either. They are not specialists in anything. They do a decent job but...” [Registered nurse, field notes] This inability to fulfil professional and scripted role patterns means that career-stage patterns are developed. AT doctors, and to certain extent ST doctors as well, are considered to be under training, which basically is true. However, this consideration means that they are not seen as full doctors, neither able to deal with whatever challenge might come up. An emergency physician made this clear: “when you have AT doctors you have to look after them.” [Emergency physician, field notes] Staff members would be especially careful, and sometimes critical, when working with inexperienced people. During one of my visits, while cleaning his desk, an emergency physician complained to another emergency doctor about the juniors that had been working the previous shift: “They eat and dirty the desks!” “They are too young for this job”. The other doctor agreed and grabbed a mug with coffee stains that someone had left on her desk. She took it to the break room and said that she was not their mother to have to be cleaning after them. [Field notes]
Acknowledging this limitation, career-stage role patterns aid in adapting to the situation at hand. When it comes to experienced nurses working with inexperienced doctors, they would for example double check orders if suspecting there was something wrong. Thus, others know that the expectations on someone at a junior level cannot be the same that those associated to a senior doctor or nurse. The same applies to themselves. Even if scripted role patterns do not take into account the level of autonomy, junior doctors and nurses know that they are not at the same level as senior colleagues and believe that they cannot be expected to perform the scripted role patterns as them, simply because they do not count with the same experience. This is challenging for new doctors and nurses. As many acknowledged, there is a huge gap between theory and practice. Especially, many doctors and nurses in their mid-career point agreed on the little practical experience that they had when starting to work, and commented on how challenging the first time they met a patient after graduating was. Talking about the first days at work, a third-year ST doctor recalled:

“It’s just like you’ve learnt how to swim theoretically and then there’s the sea and they drop you off and you get to learn to swim.” [ST doctor, interview]

An AT doctor commenting on the lack of practical experience said that as a doctor in the emergency department you almost never know what to do when you get a patient. “There is a lot of asking around” and even gambling, trying things you are not sure will work. For him, the clue is to not let the patient die but besides that, he argued, nothing is established. While he agreed that there are lots of algorithms you can refer to, he also stressed the fact that you need to find them [interview notes]. Thus, despite having internships during their education, these seem to only give a glimpse of what it means to work as a professional. Talking about her internship, a registered nurse recounted:

“I think that during my three months [of internship] I learnt almost as much as during my three years at university. It kind of felt like that ‘cause I think that’s where you can feel like you fail as a new nurse, ‘cause you are supposed to be able to take blood samples. It’s such a black and white perspective. I get the blood; I can feel that I did a good job. But if I don’t get the blood, in the beginning you kind of feel like you are failing or if you are gonna put the IV line in and you get it in the right position, you feel like you did a good job, but if it’s tricky, you feel like you fail. […] A nurse should be able to do this but I can’t. So, it’s a black and white perspective ‘cause you are supposed to know a lot of things about different diseases and everything but that comes along during the way. It’s so abstract and so much, you don’t know what you are not knowing. But you know if you don’t get blood; that is like a fail.” [Registered nurse, interview]

Note the “black and white” metaphor: either one is a professional or not, depending on the ability to perform one’s professional and scripted role patterns.
Drawing blood from a patient or putting an IV line, are skills that nurses are expected to have, because they are supposed to have developed them during their education. Not being able to do it means not living up to the professional expectations and thus comes through as a failure to perform the professional pattern. Still, as the nurse notes, that knowledge “comes along during the way”. The ability to perform the scripted role patterns assigned to one comes with experience. Thus, career-stage role patterns provide the support needed in the transition from being a junior to a senior staff member.

In terms of experienced or senior staff, people know that they can trust them in a sense. Trusting the experience level of others because of their career stage means believing that they are autonomous and know how to do their job, without any need to double-check stuff.

**Power**
Existing power dynamics were also acknowledged as influencing the way work is done in the emergency department. The same as with autonomy, the career-stage role patterns associated to individuals communicate certain power or the lack thereof in doing stuff or getting things done. Several doctors and people in managerial positions brought up this issue, even without being specifically asked about it.

Having certain work experience, especially in the emergency department, is synonym to advancing in one’s career, moving from junior to senior, and this seems to give power to the individuals displaying this autonomy. As nurses and emergency physicians are part of the emergency department’s permanent staff, usually most of them surpass internal medicine, orthopaedics, and surgery doctors in this respect. Thus, even when doctors are above nurses in terms of medical authority, following the professional role patterns, it was evident that experienced nurses had power over them, even if informally. This is in line with previous research where nurses were found to have significant power over residents (see Klein et al., 2006). A registered nurse talking about this explained that nurses are the ones working in the emergency department all the time and thus know how the department works, while doctors, during daytime, are coming in for short periods of times, sometimes even when they are still studying, so they have no experience about emergency care [Field notes]. One of the interviewed doctors reported the same and explained that, while doctors working in the emergency department are usually inexperienced and are there for a relatively short time, nurses are kind of fixed in the department:

“[…] so, they get a lot of experience on how work is done there. Then, some experienced nurses feel they have more power than doctors because they know how to do it and it becomes conflicting. This usually doesn’t happen with
inexperienced nurses who have not been in the [emergency department] long enough.” [ST doctor, interview]

An interesting point here is the doctor’s perception that nurses who feel more power than doctors create conflicts. This was a shared perception among internal medicine, orthopaedics, and surgery doctors, who considered that many times nurses did not respect the line of authority therefore creating conflicts in terms of professional role patterns. A very much-cited example was nurses ordering blood tests without waiting for the doctor’s decision. While this is under the doctors’ responsibilities and falls within their scripted role patterns, most times, nurses would do the job before the doctors have even met the patient. As a specialist in internal medicine put it:

“they [nurses] are not allowed to decide which blood tests should be done. But informally they do so. Sometimes there will be discussions, but most often they take that decision; they just say: “Is it okay that I take this?” and the doctor answers, “yes, yes, yes”. But they are not allowed to decide which blood exams or examinations should be done, no.” [Double specialist, interview]

This was problematic for junior doctors who felt that they did not have control over their scripted role patterns in this respect. A first year ST doctor reported that she did not really know who was responsible for deciding which blood tests should be done. Still, she felt that nurses deciding without consulting her was complicating her job:

“the first thing I do when I get to the emergency department is to check how many patients I have. Do these patients have their blood work done or do I have to decide? [...] usually I would like to decide, but sometimes the patient has been there like three hours before I get there and then I haven't gotten the chance to decide. So then I just look at the blood results [...] but I really want to decide which blood samples should be taken because when I finally see the patient then I look at the blood works and maybe try to think of a diagnosis [...] And maybe when I talk to the patient I think “well, this must be inflammatory” and I want another blood sample and I say specifically to the nurse, “I would like this blood sample too” and maybe this sample takes like two hours to get an answer from the laboratory so then the patient has to wait two more hours because I can't decide what to do with him or her before I have it. So that's why I think that doctors should decide what blood samples to take.” [ST doctor, interview]

This does not seem to be a problem for senior doctors working at the emergency department. On the contrary, both emergency physicians and nurses regard this as an advantage. Even if not strictly respecting the scripted role patterns, from their point of view, it saves a lot of time, as it usually takes around two hours to get the test results back from the central laboratory. This means that if the doctor needs to see the results in order to diagnose the patient, the sooner they get the
results back, the better. This is possible because, having sufficient experience with patients, nurses can easily anticipate which blood tests would be required by the doctor. The fact that doctors need or want additional samples before diagnosing a patient is usually associated to a lack of experience. Senior doctors and nurses talked about how sometimes doctors did not even need to see the test results before diagnosing the patient and thus could discharge him or her faster.

Another issue influencing staff members exerting power is a departmental goal, which states that no patients should stay in the emergency department for more than four hours, between patient arrival and departure. Therefore, it is in the interest of permanent staff to reduce waiting times whenever possible, and nurses have the power to do so by getting things done faster. This is accepted and even encouraged because nurses as well as emergency physicians, being permanent staff, know each other better than daytime doctors, who are usually under training, completing temporary assignments. Permanent staff also know the organization: routines, roles, facilities, and the way things get done in the emergency department. As mentioned before, during nights, all staff belongs to the same emergency team and the relationship between nurses and emergency doctors, even if different in terms of authority, seems to be much more equal compared to daytime. It was evident that, during nighttime, staff members knew each other and had experience working together, which made everything run smoother than during daytime. This familiarity gave nurses and emergency doctors certain homogeneity as a group compared to section doctors.

Autonomy and power came along the way. The more one worked in the emergency department, the more autonomous one became, the more powerful as well.

6.1.3. Individual role patterns
Individual role patterns are yet more specific than the scripted, professional, and career-stage ones, as these are individualized. Even when staff members would be working in bounded role sets, doctor-registered nurse-assistant nurse, and have a collective responsibility (saving the patient) (Valentine & Edmondson, 2015), other features would also come into play. Based on familiarity, i.e. experience working in the emergency department and with each other, and personal attributes32, people would develop individual role patterns about themselves and the others.

32 “Personal attributes” is used here as a general term encompassing any skill, characteristic, or personality trait associated to an individual, which is largely intrinsic to the person. This is distinguished from individual preferences, which may change depending on the work conditions, environment, and staff members involved.
According to permanent staff members, experience in the emergency department and working with each other is a must in order to be able to successfully perform one’s role. Depending on the individual’s level of familiarity with the department and the staff, therefore, individual role patterns will be developed around that person. For example, a senior emergency physician is seen as “a top dog; she is the boss of all doctors” [Registered nurse, field notes]. Even if the second statement is not true, as this doctor is not the boss, staff members look up to this individual because this is a knowledgeable doctor, has extensive experience working in the emergency department, and thus knows the staff and how to do the job. On the contrary, as already mentioned, internal medicine, orthopaedics, and surgery doctors are in the emergency department for relatively short periods of time, which prevents them from becoming familiar with the department and makes it tough for permanent staff members to work with them. Thus, even when an individual could act in line with scripted, professional and career-stage role patterns, if he or she is new to the emergency department it is expected that things might not run smoothly.

However, this is not always the case. Personal attributes are another important aspect, as even if enacting the same scripted, professional, and career-stage role patterns, two individuals can generate completely different individual role patterns depending on their skills and characteristics. Some junior doctors, despite lacking familiarity, are outstanding in their job, which distinguishes them from their peers. Therefore, personal attributes can set individuals out of the standard and thus influence the individual role patterns developed around them. An ST doctor, talking about nurses’ personal attributes, highlighted:

“Some [nurses] are nice, some are really well-raised. We have an assistant nurse, when I’m talking to someone she waits. Poor woman... like five minutes sometimes. She doesn’t interrupt us. And I feel very sorry for her. But I tell her: “you are really well raised by your parents.” Others, at the same time, “Oh, I’m sorry, I’m sorry. We have this blablablabla.” They just wanna throw their words out of their mouths and get it done and then go and [drink coffee] [laughs]. So yeah, it’s in that way.” [ST doctor, interview]

As this quote shows, personal attributes are not always positive and can have a negative influence on how other staff members see an individual and, in turn, what others expect from him or her in performing a role. To illustrate, one staff member, despite having considerable work experience in the emergency department, would be seen as someone who “loves to talk but doesn’t work much” [Registered nurse, field notes]. A doctor highlighted how personal characteristics could create conflicts between roles:
“The roles are defined but whom you are working with plays an important part in the daily operations. If you have a bossy nurse that is telling you ‘step back, I need to run these tests’ and try to take control of the situation, it is very likely that things won’t run smoothly.” [ST doctor, interview]

A further example illustrates this point. In some occasion, an assistant nurse was very upset because he had to do quality checks on certain equipment. When asked what his corresponding registered nurse was doing, the assistant nurse angrily replied: “Nothing!” Throughout that day, others commented on the same registered nurse not wanting to work [Field notes]. Thus, being lazy or idle is not well seen. In general, even when there are no patients, or the load is low, everyone tries to look busy. There is always something to do in the emergency department. As the calmest periods are usually early in the morning and late in the night, nurses have additional tasks during those shifts. In particular, the heavy cleaning duties are to be performed during the morning and night shifts.

Familiarity and personal attributes enable staff members to develop individual role patterns and provide trustworthiness.

**Trustworthiness**

Familiarity and personal attributes provide trustworthiness, i.e. individuals are relied on or not, based on the individual role patterns developed around them.

Generally speaking, having work experience in the emergency department translates into trusting the individual, not only in terms of ability to accomplish work but also trusting the individual as such. As it was explained earlier, permanent staff members would develop closer work relationships between them than with internal medicine, orthopaedics, and surgery doctors. The closer the relationship is, the more one can predict someone else’s behaviour, and the more one knows how others will perform their roles. Thus, expectations among permanent staff members are in a sense more certain than expectations on temporary staff. Familiarity, therefore, matters in the evaluation that people makes of others.

Personal attributes also provide trustworthiness. As it was illustrated earlier, daring to say no for example is seen as a *good* attribute, especially when this means confronting authority, as in the case of nurses facing a conflict with doctors. Being good at doing something is usually highly appreciated by everyone and influences the unscripted role patterns on that individual. A third-year ST doctor talked about the best assistant nurse who they “always call when it’s difficult to get blood samples [...] She is the best. She can take blood from anyone” [ST doctor, interview]. This was even recounted by the same assistant nurse, whom I randomly ended up interviewing some weeks later without
knowing that she was the best assistant nurse that the doctor had been talking about:

“[…] if there was a patient who was extremely difficult to take blood samples from, they would call me because I like taking blood samples and it always works for me so I have no problem [doing it]. […] They would give me the most difficult patients and I would say: “Oh! No!” And I would do this: I talk to my patients and tell them what I’m doing so they forget that they are going to feel pain. Then, I tell them: “Look, take a deep breath and I’ll “tut” [she makes a sound showing how she would nail the needle]. “Done”, I say, “I’m done” and they [other nurses] are dumbfounded, as “How could she draw blood and I couldn’t?” Why? Because I talk to them, so I beat around the bush as I say [laughs] and it works.” [Assistant nurse, interview, own translation]

These quotes show that, independently of the scripted, professional and career-stage role patterns associated to an individual, who the person is, in terms of familiarity in the emergency department and personal attributes, also matter for how the job gets done. Most staff members acknowledged that they had preferences regarding their co-workers. For example, an emergency physician starting the night shift talked about the “dream team” when finding out who the other doctors working that shift were. Then she explained that she was working with all experienced doctors with whom she had previously worked, and thus trusted in terms of their experience and skills. [Emergency physician, field notes]

In general, everyone preferred to work with experienced personnel, both doctors and nurses. Not knowing the co-worker, and if this was an inexperienced individual, presented an issue for most people. A third-year ST doctor said,

“If I’m on an on-call shift, me and the inexperienced doctor, I know he is gonna take less patients than usual. […] If it’s like ten patients, I know I’m gonna take seven and he’s gonna take three. It’s gonna be more pressure on me, mentally and physically. [Besides] he is gonna ask me about [his patients]. And that’s also demanding, a lot mentally demanding. Like, I get to meet five cases and he tells me about another three cases. Like I met eight patients now. You get my point.” [ST doctor, interview]

Providing trustworthiness, individual role patterns were yet another way of dealing with work at the emergency department and which influenced how staff members did their job. Talking about the triage, a registered nurse explained:

“Some registered nurses don’t want them [assistant nurses] to interfere with their talk with the patient and some say, “well, if you want to, you can have the talk, I can take the vital signs and fill in questions as well.” […] How you do the work in the room, that’s up to you in the team.” [Registered nurse, interview]
In essence, the existence of individual role patterns influences the way in which other role patterns are enacted, as they shape how individuals view themselves and others.

Overall, three sets of unscripted role patterns were developed and enacted by staff members in aiding work at the emergency department. Table 11 provides a summary of these. Professional role patterns are those developed following the education and socialization undergone by the individuals, and which provide them with status and professional conduct. Career-stage patterns are based on the phase of career development an individual is at, and these influence the level of autonomy and power associated to staff members. Individual role patterns are developed around the individual following how familiar he or she is with the emergency department and staff members. These patterns, being individualized, provide trustworthiness regarding one’s abilities and/or skills to get work done. These, together with the scripted role patterns, influenced the development of unscripted routine patterns, which will be explored next.

Table 11. Unscripted role patterns

<table>
<thead>
<tr>
<th>Unscripted role patterns</th>
<th>Professional</th>
<th>Career stage</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Pattern developed based on the educational background of individuals</td>
<td>Pattern developed following the career progression of individuals</td>
<td>Pattern developed based on the familiarity and personal attributes of individuals</td>
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<tr>
<td><strong>Outcome</strong></td>
<td>Status Professional conduct</td>
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<td><strong>Examples</strong></td>
<td>Doctor, registered nurse, assistant nurse</td>
<td>AT doctor, junior registered nurse, senior assistant nurse</td>
<td>The top dog, the lazy doctor, the best assistant nurse</td>
</tr>
</tbody>
</table>

6.2. Unscripted routine patterns

The coexistence of multiple role patterns means that particular dynamics take place in the emergency department. If everything would run smoothly, as illustrated in *Act II* in the previous chapter, staff members would basically draw on both scripted role and routine patterns. However, if the situation would pose a challenge therefore triggering a deviation, individuals would enact unscripted patterns, which had not been formally planned by the emergency department. *Act III* illustrates how, apart from scripted and unscripted role patterns, staff members enacted alternative versions of the scripted routine pattern (*stretched*,...
shrunk and shuffled patterns) due to differences in individual characteristics, career stage, and educational background, among others.33

Let’s take the enactment of the triage routine as an example. As described in the previous chapter, the scripted pattern to the triage routine involves the patient and one registered nurse who can be accompanied by an assistant nurse depending on the work shift and staff availability. Thus, all activities falling within the scripted routine pattern are to be enacted by the registered nurse, who is assigned the scripted triage role pattern, in collaboration with the patient. Following the scripted role pattern, the triage registered nurse in Act III could have decided where to assign the patient herself. In fact, there were two options, either internal medicine, where a doctor takes patient until 10 p.m., or emergency, where there is one emergency physician starting at 8:45 p.m. [following the doctors’ scripted role patterns]. However, the triage registered nurse enacted a stretched routine pattern, which means that she added activities to the triage routine that were not originally part of the scripted pattern. Not sure about which specialty the patient should be assigned to [activity falling under her scripted role pattern], she asked one of the doctors, who should know patient categories better [drawing on professional role patterns]. Although the internal medicine doctor was also around, the triage registered nurse turned to the most senior doctor [based on the career-stage role patterns], an emergency physician who had long work experience in the emergency department and therefore was familiar with the staff members and who had reputation for being a good colleague [individual role pattern].

The triage registered nurse in Act III enacted an unscripted routine pattern by drawing on a combination of scripted and unscripted role patterns. Going back to the theatrical metaphor, staff members perform routines and coordinate work following their fellow actors’ performances, i.e. they interpret and enact the play along with the others. Thus, individuals do not perform routines in the same way nor every individual enacts exactly the same pattern each time. Staff members draw on specific unscripted routine patterns in upholding work depending on the situation at hand. These routine patterns are responses that staff members have developed in addition to the scripted routine patterns established by the organization, as the latter are not enough to cope with all scenarios encountered in the emergency department. While aiding overall routine performance, unscripted routine patterns influence the unfolding of organizational routines.

33 While the unscripted role patterns are different to the scripted ones, unscripted routine patterns can be said to be variations of the scripted ones. The unscripted routine patterns are thus alternative ways of enacting the same scripted routine pattern.
In what follows, three sets of unscripted routine patterns are explored, namely stretched, shrunk and shuffled routine patterns.

6.2.1. Stretched routine patterns
A set of alternative routine patterns enacted by staff members is the stretched routine patterns. As illustrated in Act III with the triage and diagnosis routines, these are patterns developed following an addition of activities to a routine, which are not originally part of the scripted pattern, causing a routine expansion. Every routine has stretched patterns. Whenever staff members face a situation where they cannot continue to enact the scripted role and/or routine patterns assigned to them, they can perform a stretched version of the routine in order to uphold work. Stretched routine patterns can take different forms. Stretching a routine can mean for example seeking advice informally or formally, giving advice uninvited, or self-learning, among others. As expressed by the doctor in the following quote, seeking advice informally usually takes place when staff members help each other out in performing organizational routines:

“[…] as we do it in the ER we [doctors and nurses] are more like colleagues that help each other.” [Emergency physician, interview]

Translated into practice, seeking advice informally means that another staff member, be this a participant in the routine enacted or not, takes part of it through physical or verbal activity. This intervention can happen within or across role boundaries. In Act III, the emergency doctor sought advice informally when, after examining the patient without success, she went back to the office and tried to make sense of the patient case by talking to her colleagues. The doctor enacted a stretched pattern, hoping that the other two emergency doctors could help her figure out what the problem was and therefore complete the diagnosis routine. In this case, the intervention happened among individuals belonging to a same professional group and specialty, i.e. emergency doctors. Cross-boundary interventions34, instead, take place when an individual belonging to one professional group or specialty crosses the boundary to take a role in another group. For example, the triage routine involves patient, registered nurse and assistant nurse, but no doctors. Still, as illustrated in Act III, the triage registered nurse, responsible for the routine, could seek advice from doctors:

“[…] the decision that she [triage nurse] makes is the decision that everyone else works towards in the beginning. But she can also go to the doctor and ask, “This

34 The term “cross-boundary intervention” is taken from Faraj and Xiao (2006), who refers to it as a practice that “occurs when the safety of a patient is compromised, or is about to be compromised, by the actions of a team member.” (Faraj & Xiao, 2006, p. 1165) While they take any intervention to be “cross-boundary”, I differentiate between interventions within and across boundaries, the boundaries being professional- and specialty-related.
is what I have. What should I do? What do you think?” ‘Cause they have a longer... they have a higher education and it’s really good to ask them for advice also. So that way you can maybe get the patient in the right place from the beginning.” [Registered nurse, interview]

In this case, the registered nurse points at the role of professional role patterns in picking a stretched pattern to recreate routines. Despite their level of experience, doctors are generally regarded well educated and knowledgeable. This is made clear when the nurse notes that asking the doctor, when not sure about the specialty that the patient should go to, can be helpful in “get[ting] the patient in the right place from the beginning.” This statement also acknowledges a difference in professional role patterns. Although specific scripted, career-stage, and individual role patterns are developed around the triage registered nurse, in terms of profession, a nurse is not expected to master patient categories, while doctors are. As doctors do specialize in their careers, they must know what a surgery patient looks like compared to an internal medicine or an orthopaedics patient. Therefore, while it is preferable that a nurse knows how to categorize patients, and this is one of the reasons why only experienced nurses are assigned the triage role pattern, professional role patterns on doctors assume that they do know.

The following quote provides one more example of a cross-boundary intervention, showing how a registered nurse takes the doctor’s role in parts of the diagnosis and treatment routines by providing advice informally:

“Thursday [...] we took in a patient, she had trouble breathing. [...] I was the nurse working in the [internal medicine] section, listened to her lungs and heard that she was obstructed; she had a wheezing sound. And yeah, I know, well, I would like to give her some inhalation, but I’m not allowed to do it on my own so you need to find the doctor and he comes in... he also listens [to her lungs] and then he asks: “what do you think you should do?” [The RN laughs]. So, then he, as an inexperienced doctor, was I mean seeking advice from me to what to treat the patient for or with. And now I was quite sure... I mean, I wanted to do this and he agreed so we could together work the patient. I mean that’s a... it’s a good way for him to handle that he is inexperienced, to ask me, we are a team, we can work together. But I mean the decision is his and he was the one responsible for the patient. So, if I would have said something completely wrong, I hope that he would have recognized and said: “No, that’s not a good idea.” But, I don’t know.” [Registered nurse, interview]

This quote shows how stretching a routine can be done verbally and/or physically. Regarding the former, the registered nurse tells the doctor the diagnosis he suspects and the treatment he thinks is right to follow. While the doctor could have continued to stretch the routine pattern by using other strategies in order to
repair the routine and produce the intended outcomes (cf. Feldman, 2000), he accepted the nurse’s suggestion and asked him to implement his plan. Thus, even when the responsible for these two routines was the doctor, informally, the registered nurse was deciding on both routine outcomes, i.e. diagnosis and treatment plan.

Regarding physical interventions, and although the stretched routine patterns are verbally materialized in the previous example, it is worth noting that the registered nurse did check the patient, which means that he also physically took the role of the doctor in the routines. Even before meeting the doctor and despite this being out of his scripted role pattern, the registered nurse already had a tentative idea of what was wrong with the patient (diagnosis) and what should be done to stabilize her (treatment). Nonetheless, as the nurse emphasizes, due to the status and professional conduct, provided by professional role patterns, it was the doctor the one to decide what to do with the patient and the nurse respected that. Only when the doctor sought advice and asked the nurse “what do you think you should do?” he triggered the enactment of the stretched routine pattern, transferring the decision making to the nurse even when he was the one to take responsibility for it. In this case, the nurse chose to take the doctor’s role and highlighted the positive side of the doctor asking for help in order to deal with his lack of experience.

In this situation, certain sets of role patterns (e.g. career stage) were more salient than others (such as the professional ones), and stretched routine patterns were drawn upon in enacting two routines. However, the emergency physician dealing with the nosebleed patient in Act III was not an inexperienced doctor. In that case, the patient triggered the enactment of stretched routine patterns, as it was not a common case. Thus, not only the individuals but also other factors could trigger the enactment of unscripted patterns (I will come back to this in the next chapter).

Going back to Act III, as none of the other doctors could give Camilla a satisfactory answer when seeking advice informally, and she could not come up with an answer either, she moved to stretch the routine further and sought advice formally by using the on-call system. As soon as she was done signing off patients, she called the specialist, hoping an otolaryngologist would know better about this type of patient. She explained the case but the otolaryngologist did not know what to do and decided to call her senior on call. As neither of them knew how to deal with the patient, the on-call doctor decided to go down to the emergency department and meet the patient. By referring the case to the on-call doctor, Camilla was done with the patient, as the otolaryngologist would take over.
Having an on-call system was a good support for staff members, particularly in the case of children who, independently of their age, were considered difficult to deal with. It was common to call in specialists from other departments when working with such patients:

“And we work with children but they are really hard to get a line in some times; they can move really tricky... and that way we can call to the children ward and be like “Hi, can you come and help us? We need an IV or... we need blood tests”. And it’s like we call, “I don’t know what to do”, so they have the special... it’s their expertise.” [Registered nurse, interview]

The enactment of stretched routine patterns is usually triggered by a self-assessment, e.g. “I am not quite sure about how to proceed”, and/or an assessment of a peer, e.g. “I trust his/her experience so I ask for advice”. In the previous examples, it was the individuals responsible for the specific routine activities who stretched the routines. Nonetheless, self and peer assessments could also be done by a colleague, especially when a staff member did not trust a colleague’s judgment and triggered the enactment of stretched routine patterns by giving advice uninvited, for example. This could create conflicts between staff members, especially when done across professional boundaries, as this quote shows:

“[…] we had the doctor coming down, and you have a fast track for stroke patients. You need to give them thrombolysis to remove a blood clot in the brain […] the doctor that was sent down, he was just rotating […] as a general practitioner, now working a couple of weeks at the medical ward to get that piece of experience and they were sending him down as the responsible doctor for this. He didn’t know about the fast track, he didn’t know how it was working, he didn’t know how to write the formal computer tomography referral, and he wanted to treat the patient with wrong medication. And luckily one of our nurses […] said: “No, I’m not going to do it”. And the doctor said: “Well, I’m the doctor, I’m in charge. You should do this.” And she said no again. And I guess she could do it because she had some experience in this and you know, “This is wrong, we can’t do it.” But it takes quite a lot to say no to... I mean he is a specialist doctor but in general medicine, in like GP. And then the nurse talked to the neuro doctor and she also came and helped her in the assessment and told them: “Well, we should do this.” So, if the nurse wouldn’t have been so experienced it might have been a new nurse or didn’t dare to say no, the patient would have had the wrong medication. So, it’s quite important that you have an experienced team so you can help each other, because if one is really inexperienced the teamwork could lag behind a bit. It doesn’t get as effective as it should be. And it’s not only experience in treating patients or how many years you’ve been working as a doctor or a nurse, it should be how many years you have been working at this department as well, because we have to know routines, how to do stuff, the
As this quote shows, giving advice uninvited could be not welcomed by others. In this case, both the doctor’s and the nurse’s reactions seem to be closely related to the various role patterns. On one side, the doctor was not a specialist but doing his specialty training. Not knowing the emergency department’s routines means that it may have been the first, or one of the first times, he was taking a patient in the emergency department, which elucidates his lack of experience. However, he knew that he was the one in charge, i.e. he was sticking to his scripted role pattern and also to the professional one. On the other side, the nurse was experienced and, in this case, this meant that she knew things that the doctor should have known and thus could react to the doctor’s request. By reacting, the nurse did not stick to her scripted role pattern, i.e. she did not blindly follow the doctor’s request. Instead, following professional conduct, the nurse refused to follow orders according to professional status. As the doctor did not accept her resistance, the nurse decided to stretch the routine by calling in a specialist and ask for a second opinion. Stretched routine patterns can thus be initiated by any of the parties involved in a routine.

Finally, another way of enacting a stretched routine pattern is through self-learning. This means that individuals, instead of asking someone else for help, try to, on their own, develop an understanding for the situation they are immersed in to reach the routine outcome in a successful way. Self-learning thus is triggered by a positive self-assessment, i.e. the staff member trusting him or herself takes the initiative to alone ensure routine continuity by developing the knowledge needed to overcome an obstacle. In practice, self-learning is, for the most, a combination of thinking critically and following signs and/or using guiding artefacts. As an emergency physician explained, if a doctor does not know what a patient suffers from, there are still ways to individually find a solution and get the patient out. In these uncertain situations, according to him:

“That’s where the education comes in. [...] if I don’t know what the patient suffers from [...] we [doctors] are educated to work in a way to find what the patient suffers from and the more ill he is, the faster you have to be. And of course, if you come and you can’t breathe perhaps a good thought is to suspect something is wrong with your lungs, pulmonary. And then you have to look for those problems, somehow in a fast way and if you don’t find any obvious there you go to the circulation. And if you don’t find any obvious there perhaps you go to another place and... you know? You do a fast examination and you know what to look for and you know what signs... and the more experienced you are, the more signs you have seen, the more patients you have seen. Working as a doctor [...] the more load, the more patients you meet, the more experienced you are. It’s not like that the more books you read, the more experienced you are. It’s a
combination. You need to read books but you also need to meet patients. You need to see all the different signs that the patient has and that is directed to a cause... a similar cause. Because they always present different symptoms and you have to see these all, because I can't tell you them all. And that's the difference between experienced and non-experienced. Having seen all these signs, having seen all these patients. It's easy to read about... the things we learn also is... if you have a gall bladder stone, you have pain on the right arch. Okay, that's where the liver is. That's what we learn in medical school. And sometimes you have, referred pain on the shoulder and the pain goes right way to your back. Okay, that's what you learn. That's a gall bladder. The problem is [...] only 80, 90 per cent of the patients have these signs. There's a 10, 20 per cent patients that have a gall bladder stone disease and just don't present those symptoms. They are different. And those 20 per cent you don't read about. You have to learn about. Of course, you can read about these exceptions too but you have to see it.”

[Emergency physician, interview]

This thorough description of how a doctor may proceed when not knowing what a patient suffers from is a clear example of sign-search through critical thinking. While for experienced doctors linking signs to a diagnosis may be straightforward most of the times, junior doctors, not having seen them all, are most likely to deliberately engage in a self-learning process stretching the routine. As this emergency physician highlights, it is not about how many books you have read during your education as much as how many patients, and thus signs, you have seen. The latter is related to the speed one needs to work at depending on patient acuity. This velocity in dealing with a patient, as this specialist highlights, comes with experience. This means that most people acknowledge that junior staff members have to learn the job and that, being a university hospital, training is a central part in competence development. The emergency department in particular is considered an educational centre:

“The ER has been and will always be the most important place to learn about patients and diseases for all doctors and students. So that’s where you meet the patients that are ill, for the first time. That’s an education place. That’s why we have a lot of junior doctors running that education, to get experience.”

[Emergency physician, interview]

“I think the training is the most important. To see a lot of patients and you have to make decisions. Being a doctor is to make decisions and learning which person is sick or which person is not sick or not that sick. When I teach or hold lectures I say “you have to decide in or out, sick or not sick, and then you have to decide what to do”. So, you have to make decisions and being a young doctor [the emergency department] is a perfect place to make decisions [...] it’s the best place to learn.”

[Specialist, interview]
Self-learning serves as a way of individually dealing with a challenging situation. Even when drawing on previously acquired knowledge and guiding artefacts, the individual responsible for the routine actively engages in critical thinking in trying to figure out how to overcome the obstacle to recreate the routine and achieve its outcome.

As all the previous examples show, routines are most commonly partially stretched. This means that staff members seek or give advice for parts of a routine. For example, in the case of children, the nurse talked about asking for help in putting an IV line or drawing blood, activities that are part of the treatment and diagnosis routine respectively. The previous examples also show how stretched routine patterns are enacted when trusting, or not, one’s or a peer’s abilities. Independently of the forms that stretched routine patterns take, performing this type of unscripted patterns provide individuals with the ability to overcome obstacles. Stretching routines, by seeking advice informally or formally, giving advice uninvited, and/or self-learning, helps staff members solve problems and achieve the routine outcomes. Performing stretched patterns means that organizational routines are expanded in terms of time, space, number of participants, and even costs. Nonetheless, sometimes, this set of unscripted patterns is not needed, and routines can even be shrunk. It is these shrunk routine patterns to which we turn now.

6.2.2. Shrinked routine patterns
A second set of unscripted routine patterns, which individuals draw upon in performing work, is the shrunk routine patterns. Contrary to stretched patterns, shrinked patterns are those developed based on shorter performances of a routine, where activities are skipped therefore contracting or shrinking the routine. For example, in Act III, the emergency doctor enacted a shrunk version of the discharge routine. The patient was not being sent home nor to a hospital ward, assumed destinations in the scripted routine pattern, but referred to a doctor outside of the emergency department. Thus, the writing of a referral letter as well as dictating the case in the patient’s journal was enough to discharge the patient from the emergency department.

A typical situation referred to when talking about this set of patterns is the shrinkage of the diagnosis routine. More specifically, doctors who set a diagnosis without waiting for the test results. One night, a 70-year-old lady suffering from breast pain comes in with her husband. Reading her journal in preparation for the meeting, the emergency doctor notes that the patient is old, has diabetes, and dementia, among others. “She has many problems”, the doctor says. Having read the journal, the doctor goes and meets the patient. The registered nurse is taking blood samples from her. After checking the patient, the doctor tells the husband
that she would put the lady in a ward because she has diabetes and is a woman, so if the problem is with the heart, it is not good to send her back home. The man agrees. Back in the office, the doctor grabs the phone and calls a ward to find a bed for the lady. She reports the patient and gets a bed. She starts filling in the lady’s journal. After a few more patients and breaks filling the journal, she tells me, “Now I have to decide what medicine to give her.” I ask if she is still in the emergency department to what the doctor replies, “No, she is gone”, showing me the patient list. When I ask if she did not have to wait for the blood test results, because that is what I thought she had told the husband, she explained: “No, because that wasn't going to change my decision [of having the patient stay in the hospital].” By doing this, the doctor enacted a shrunk pattern of the diagnosis routine, as she finalized the routine without waiting for the test results, analysing them and deciding on a diagnosis. Besides, she also shrank the treatment routine. Even though the doctor was still responsible for the treatment plan, she performed a shrunk routine pattern by skipping the administration of medicine and pushing this activity to the ward instead: “Now I’ve decided what medicine she should have in the ward; how many grams of insulin, etc.”

Let’s take another example to illustrate shrunk routine patterns. An emergency physician signs up for a patient, opens the journal, and looking at the date of birth says, “he is young. [...] He’s never been here.” There is nothing to read about. We go to one of the trauma rooms. It is almost 4 a.m. The patient is lying on a stretcher and his friend sitting by his side. The doctor introduces herself and asks what has happened. The guy says that he drank and smoked cannabis. He felt that he could not breathe. The doctor asks if it was not spice (a synthetic drug). “Do you take any other drugs?”, the doctor asks, to what the patient replies negative. “How often do you smoke?”, the doctor continues. The patient says he does not know. “Once a week?”, the doctor asks. “No. Maybe I’ve done it three times in my whole life”, the patient says. The emergency physician checks the patient’s lungs with the stethoscope and asks him what he does apart from partying and smoking. He states where he works. They continue talking and the doctor tells him that this reaction shows that his body does not want that inside; and asks where he was. The patient replies “at a friend’s place”, to what the doctor says, “what a bad friend that is if he has hashish to smoke at home.” The doctor adds that there is nothing to do and tells him to just go home and sleep. Out of the room, the doctor tells the registered nurse responsible for the patient that he is going home. Back to the office, the doctor dictates the case. In this case, three routines, i.e. diagnosis, treatment, and discharge, were shrunk. In meeting the patient, the doctor realized that this was not a patient to treat in the emergency department and decided to send him home after performing a shrunk diagnosis routine, no treatment behind the recommendation to “go home and sleep”, and a shrunk discharge routine.
An ST doctor pointed out the advantage of working with more senior staff members in certain occasions, as this enables the enactment of shrunk routine patterns, which makes work smoother:

“You work [...] with 30 plus, or 40 plus, or 50 plus nurses, with grey hair, they know what they are doing. [...] You feel the flow is much easier [...] Sometimes they even give you a diagnosis, the senior nurses. Like they see a man coming in: “Ahh, he has a kidney stone”. You seriously open the door, it’s the same they’ve described to you...” [ST doctor, interview]

The previous examples show how, even when staff members could enact the scripted routine patterns and go step-by-step, many decide to shrink routines when they know that it is unnecessary to follow through all the activities. In some cases, it is the individual aspect that triggers the enactment of a shrunk pattern; counting with enough experience for example could help avoid enacting the scripted pattern and speed up the whole process by enacting a shrunk routine pattern instead. In some others, it is the patient or a colleague who triggers the enactment of this kind of patterns. The examples also show how one routine can be shrunk by skipping more or less activities or how a bunch of routines can be shrunk all together. While shrunk routine patterns can take different forms, they all seem to be enacted when trusting one’s or a peer’s judgement and they help individuals to save time by skipping the performance of unnecessary or irrelevant activities according to the situation at hand. There is another set of unscripted patterns, which also enables time saving. These are the shuffled routine patterns, which we explore next.

### 6.2.3. Shuffled routine patterns

The shuffled routine patterns constitute the third set of unscripted routine patterns. These are patterns developed following alternative performances of a routine which are based on performing the same routine activities but in a different order, similar to the concept of sequential variety (Pentland, 2003b, 2003a), or by individuals enacting different role patterns than those assigned. Both alternatives can be illustrated with the diagnosis routine:

“they [nurses] take, by proxy or by... it's like automatically now, they take blood tests directly to save time because they usually do help in making a judgment some times.” [ST doctor, interview]

This is a well-cited example of staff members enacting a shuffled routine pattern. According to the diagnosis routine scripted pattern, nurses are responsible for taking lab samples in the case of internal medicine and surgery patients or

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35 The aspects influencing the performance will be explored in the next chapter.
sending them for some sort of imaging if falling in orthopaedics. So, this activity is in fact their responsibility. However, as the ST doctor in the previous quote points out, nurses do this directly now, meaning that they do so without waiting for the doctor’s request. As it has already been explained, it is the doctor’s responsibility to decide which blood work or tests to do on the patient. Having decided, the doctor should inform the responsible nurse about it. Nurses are not allowed to make this decision themselves but they do. This has become such a common practice that, even if some doctors dislike it, it is accepted that nurses do it.

Another example illustrates how activities within a routine can be shuffled:

“...sometimes, even though you have a lot of yellow patients in the orthopaedics section, [...] you have a yellow patient like really, really far down [in the patient list] that hasn’t done the x-ray. [Then] I can ask the doctor: “Do you want me to take him into room 8? You can make a quick examination and send the x-ray referral” [...] so he can do the x-ray because I know that they are gonna need it to evaluate the person. So, instead of the patient waiting for four hours to get the first examination and then wait to go to the x-ray, I can make a small adjustment so that they can go to the x-ray and then come down and wait for the result and the result will be done. If you have a lot of patients you want to make it as smooth as possible for every patient as a whole group instead of just the best for this one patient.” [Registered nurse, interview]

In this case, the registered nurse explains how, in enacting the orthopaedics registered nurse role, she can make a small adjustment, by rearranging the diagnosis routine activities and sending the patient to the x-rays as soon as possible in order to avoid unnecessary waiting time. She further explained that doctors “go through the patients top to bottom, one by one” while she as a nurse tries to keep an overall perspective of all the patients in her section. Making these small adjustments, thus, she is enacting shuffled routine patterns.

Apart from rearranging the order of activities within a routine, shuffled routine patterns may entail changing who is performing the scripted role and routine patterns. A senior specialist, recounting an experience from his time as an AT doctor, illustrates this:

“During AT I made some surgery. I stood on the one side and the experienced nurse stood on the other side. And I made this small operation and she, actually it was her that was operating. So, she said “mmmh, mmmm, mmmh, mmmmm” [he makes sounds as positive, negative, positive, negative, meaning that the nurse was “approving/disapproving” what he was doing on the patient.] “Do you think it looks good now?” [He asked]. “Yes”, she said. Okay, very good. So, it’s teamwork.” [Specialist, interview]
This quote shows how, even though it was the AT doctor the one responsible for operating the patient as part of the treatment routine, it was the registered nurse who was guiding him by telling him how to perform the routine.

Apart from activities, whole routines can be shuffled and move earlier or later in the regular sequence of routines, i.e. arrival, triage, diagnosis, treatment, and discharge. Whenever patients arrived through the ambulance parking (see (2) and (3) in Figure 12, p. 77), the triage routine would be moved around in the sequence. When the ambulance comes in with a very critical patient and if it has not already been done in the ambulance, the triage routine is performed later as the priority is to not let the patient die. If the patient is brought in by the police, the triage has to be done in the emergency department by a registered nurse, but the patient does not go through the triage room. In general, if patients have not been triaged before, they will be brought into the emergency department, placed in a room and the diagnosis routine will start right away. Then the triage may happen in parallel and sometimes even after the patient has been diagnosed, becoming the routine sort of a formality.

Let’s illustrate this point. One evening shadowing a resource registered nurse, he grabs a triage form from the office desk and walks to room 13 in the surgery corridor. He tells me that he has to triage a patient that was referred from the healthcare centre in a small village. The patient had been in the emergency department for a little while. She came in with a referral letter and was brought in by a taxi on a stretcher. This is also why the taxi arrived through the ambulance parking. As the patient has not been triaged yet (of course, a taxi driver cannot triage the patient), the resource registered nurse does it. He grabs a trolley and goes into the patient room to take her vital signs. In this case, the routine was shuffled in two ways. First, the whole routine was moved in the sequence of routines, as the diagnosis routine had already been started. Second, the triage routine was not performed by the triage registered nurse. Instead, a resource registered nurse enacted the triage registered nurse role pattern and the triage routine pattern.

Situations like this were commonplace. In the example of the old lady suffering of breast pain, in the previous section, the emergency doctor discharged the patient first and then planned the treatment routine. On another occasion, I was shadowing an internal medicine registered nurse. The nurse comes out of the observation room with the triage form, goes to the office and checks on the triage priority colors in a binder and the ECG screen. I ask why he is doing that, as I do not know that he is performing the triage routine until then, and he says that they have called from reception saying that the patient had chest pain so they took him in directly to the observation room and do the triage inside. Again, similar to the previous example, the whole routine was shuffled as well as the individuals
enacting the triage role and routine patterns. In this case, it was the internal medicine registered nurse who enacted the triage registered nurse role pattern and the triage routine pattern.

These examples show how, similar to shrunk routine patterns, shuffled routine patterns enable staff members to save time. By moving activities or whole routines around, individuals can avoid unnecessary waiting time both for the patient and the staff. The enactment of shuffled routine patterns may be triggered by the individual, as in the case of the orthopaedics registered nurse moving the x-rays activity earlier in the diagnosis routine. It may also be triggered by the patient condition, as illustrated with the triage routine. Although the triage is supposed to come before the diagnosis and treatment routines, as it is the routine that results in the first diagnosis of the patient, depending on the patient acuity, the routine can be shuffled by moving it within the network of routines. Enacting shuffled routine patterns can also be prompted by the interaction between the individuals involved in a routine, as illustrated by the operation done by the AT doctor in collaboration with the registered nurse. In general, shuffled routine patterns may involve a rearrangement of activities or individuals performing roles within a routine, or a reordering of whole routines in the general sequence.

Overall, three sets of unscripted routine patterns were identified. Table 12 summarizes them. Stretched routine patterns are those developed by adding activities to the routine scripted pattern. Shrunk routine patterns are those that follow a contraction of the routine scripted pattern, by skipping activities. Shuffled routine patterns are created through the rearrangement of the sequence of activities or the roles performed in enacting the routine. In summary, following their scripted patterns, all routines are meant to end up in an outcome after certain decisions have been taken and activities performed. The arrival routine ends with the patient registration in the system; the triage, with patient prioritization (and section assignment during daytime); the diagnosis, with the diagnosis definition; the treatment, with the implementation of an appropriate care plan; and the discharge, with the patient leaving the emergency department. If a routine outcome is not achieved, the following routine in the care process cannot start. Thus, staff members need to make sure that each routine outcome is achieved somehow. If the responsible for the routine does not know how to reach the outcome, or how to overcome the eventualities that come about during the process, stretched routine patterns help solve the problems and move forward. If the individuals know that the process can be speeded up, shrunk and shuffled routine patterns help to save time. Thus, besides the existence of scripted patterns, unscripted routine patterns serve as tools that people can draw on when facing challenges or opportunities.
Table 12. Unscripted routine patterns

<table>
<thead>
<tr>
<th>Unscripted routine patterns</th>
<th>Stretched</th>
<th>Shrunk</th>
<th>Shuffled</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definition</strong></td>
<td>Patterns developed following an addition of activities to a routine, which were not originally planned</td>
<td>Patterns developed based on “shorter” performances of a routine when activities are skipped</td>
<td>Patterns developed following alternative performances of a routine which are based on performing the same routine activities but in a different order or by different roles</td>
</tr>
<tr>
<td><strong>Outcome</strong></td>
<td>Problem solving</td>
<td>Time saving</td>
<td>Time saving</td>
</tr>
<tr>
<td><strong>Examples</strong></td>
<td>Routine expansion: seek advice formally/informally, give advice uninvited, self-learning</td>
<td>Routine contraction: diagnosing without test results</td>
<td>Routine rearrangement: administering medicine (treatment) before diagnosis is set</td>
</tr>
</tbody>
</table>

6.3. Summarizing the unscripted patterns

This chapter explored the unscripted role and routine patterns that individuals enact daily in the emergency department. These patterns are those developed by the staff members and which are not written down, i.e. the patterns have emerged out of improvisation and are not formally sanctioned by the organization. Tables 11 and 12 summarized the unscripted role patterns and the unscripted routine patterns, respectively.

Three sets of unscripted role patterns (professional, career stage, and individual) and three sets of unscripted routine patterns (stretched, shrunk, and shuffled) were identified and discussed. In short, professional role patterns follow the educational background of individuals; career-stage role patterns, the progression of individuals in their career development; and individual role patterns, the skills and other personal characteristics associated to an individual. Stretched routine patterns follow an addition of activities to a routine; shrunk routine patterns, a reduction of activities; and shuffled routine patterns, a reordering of the activities and/or individuals involved. These unscripted, role and routine patterns, together with existent scripted patterns, aid staff members in upholding work on a daily basis.

Having explored the scripted and unscripted patterns, the next chapter focuses on the performances of roles and routines. In doing so, the chapter will go through the scene where the performance takes place, the situating processes used in placing role and routine patterns in the scene, and the patterning processes employed in further developing role and routine patterns.
7. Performing roles and routines

The previous two chapters presented the scripted and unscripted patterns of roles and routines in the emergency department. Staff members are assigned various scripted role patterns, which are linked to different scripted routine patterns. For example, if one is assigned the triage registered nurse role pattern, one will have to enact the triage routine pattern. Scripted patterns are necessary to coordinate work in the emergency department and provide guidelines for performance. Nonetheless, these are not always sufficient and staff members develop unscripted role and routine patterns, which they draw upon whenever necessary to accomplish work.

Building on this, this chapter explores the dynamics that take place in enacting scripted and unscripted, role and routine patterns. The chapter starts by disassembling the scene, taken here as the situation where the performance takes place, to delve into its constituting elements, namely actors, interactions, and stage set. Thereafter, two sets of processes, enacted by staff members in the emergency department in relation to role and routine patterns, are identified. On one hand, situating processes are the ways in which individuals place role and routine patterns into defined relations. On the other hand, patterning processes are the ways in which individuals co-construct role and routine patterns following their enactment. Through the situating processes, staff members bring role and routine patterns into defined relations. Through the patterning processes, staff members develop, maintain and/or change role and routine patterns. Before exploring these situating and patterning processes, let’s take a look at the scene.

7.1. Situated performance

As it has been shown throughout the empirical chapters, the enactment of roles and routines is never done in the same way. Scripted patterns are meant to more or less work in every situation. Nevertheless, because every situation is different to certain extent, there is no one-size-fits-all type of pattern. Unscripted role and routine patterns enable individuals to uphold work whenever threats are encountered, or speed it up when presented with opportunities. How a performance unfolds will therefore depend on the scene in which it occurs. The latter is the focus in what follows.

The performances of roles and routines are situated. Following the theatrical metaphor, in a theatre play the situation would be given by the scene, including the actors, their interactions, and the stage set with the scenery, props, and costumes. By situation, therefore, I mean the combination of circumstances at a
certain moment, including actors (individual aspect), interactions (interpersonal aspect), and stage set (environmental aspect). To illustrate, being inexperienced one may need to reach out to others for help (individual aspect), or, as shown in Act III, the patient may present symptoms that one has no experience of (environmental aspect), or the colleague that one is working with may be lazy and therefore one needs to push him or her to get the job done (interpersonal aspect), or all three together. The combination of circumstances is what makes each performance unique.

The situation, thus, influences the performance in one way or another and individuals adapt accordingly. Depending on the scene, staff members situate certain role and routine patterns in performing work, which will then feed back into the patterning processes triggering the creation, modification or maintenance of patterns. In order to understand the processes employed by individuals in situating and patterning roles and routines, we first need to disassemble the scene and look at its constituting elements. These elements, namely actors (individual), their interactions (interpersonal), and stage set (environmental), will influence which patterns are drawn upon in to, and how these patterns are co-constructed through, the performances of roles and routines.

7.1.1. Actors (individual aspect)
As it has been extensively argued, who the person enacting the role and routine patterns is has an influence on how the performance will unfold. Individuals differ in their educational background, level of experience, and skills, among others. This is why staff members develop unscripted patterns. The uniqueness of each person means that performances will differ from one another.

Based on individual differences, some people may choose to always ask a colleague for help when lacking experience for example, while some others may find a solution on their own by reading up on the issue or searching for information even if more time consuming. Which way one chooses to enact roles and routines can be a matter of personality, individual preferences, or skills. As this ST doctor points out, the choice can also be dependent on how much one relies on one’s abilities:

“First one month, two months, daytime, I was asking. Then I stopped. Otherwise you are not gonna be a really good physician if you continue doing this. And many colleagues are doing that. I’m not saying about the A&E doctors [i.e. emergency physicians], they take their own decisions alone. But other juniors or even almost specialists, they call and they just check, double check. I think we are in a situation where you have to take a decision. And I think I’m capable of doing that.” [ST doctor, interview]
This quote illustrates how this ST doctor believes that he is capable of taking his own decisions and therefore prefers to stick to the scripted role and routine patterns assigned to him instead of asking for help. He also criticizes other doctors in his same career stage that still rely on others, drawing on unscripted patterns when performing their roles and routines. Regarding himself, the ST doctor seems to trust that his educational background, experience and personal attributes grant him the capacity to individually judge a situation and decide accordingly.

Which role and routine patterns one enacts is, therefore, influenced by the individual. As a registered nurse explained, “sometimes [junior docs] want all the answers before they take the decision to let the patient stay.” This was backed up by a senior doctor who said that “having two young ST [doctors] an evening down in [the emergency department] and you are in-house, you will be called every 15 minutes. They want to discuss all patients...”. Still, some individuals believe that it is good to rely on others or clear all doubts out before making a decision despite the level of experience:

“If you don’t know here, you have to ask. No one knows how to do everything.”
[Coordinator registered nurse, field notes]

While the previous quotes refer more to the enactment of stretched routine patterns, and other unscripted role patterns, enacting a shrunk routine pattern by skipping activities is also dependent on the individual. For example, as already mentioned, blood test results take around two hours to be ready, representing a bottleneck in the diagnosis routine. While, most of the times, junior doctors have to wait and see the results in order to diagnose a patient, counting with enough experience or trusting their judgement, other doctors sometimes do without them. This means that they do not consider necessary to see the test results to make a decision regarding a patient’s diagnosis and therefore they can skip it. As a senior emergency physician pointed out, “If it’s not gonna change my decision, there’s no point in waiting for results.” Thus, sometimes doctors would decide that the patient should be admitted even without knowing what the test results looked like.

Overall, the above shows that depending on who the individual is, the performance of roles and routines will differ. But this is not the only aspect influencing the performance. The interactions with the other individuals involved will certainly shape the scene.
7.1.2. Interactions (interpersonal aspect)
Apart from individuals, the interactions between them also matter to the performance of roles and routines. The combination of experienced and inexperienced staff members may result in the experienced one stepping into the inexperienced one’s role:

“[…] sometimes you have to tell more inexperienced doctors, to kind of maybe guide them a little bit. Even though it’s not our job but to make everything go a little quicker.” [Registered nurse, interview]

Or the experienced one may not dare to take over and instead stick to the scripted patterns. Or the inexperienced individual may ask the experienced one for help, or bring in an outsider to help out. The interpersonal aspect, thus, may take multiple forms, as interactions among individuals are complex and unique. Bringing back the theatrical metaphor, individuals adapt their behaviour following their fellow actors’ performances. Talking about the triage team, a registered nurse made clear how the team composition influences the performance:

“it’s quite depending on what registered nurse and what assistant nurse [are working] and how you work together in the team. It’s quite different. […] if you have a very senior assistant nurse, they might be better than the registered nurse to do these assessments so they can be more likely to help you out with more questions and stuff like that. But if you have a very junior assistant nurse then they might not have the possibility to find those questions as well. But also, the teamwork between the assistant nurse and the registered nurse; some registered nurses don’t want [assistant nurses] to interfere with their talk with the patient and some say, “well, if you want to, you can have the talk, I can take the vital signs and fill in questions as well.”” [Registered nurse, interview]

Depending on who one is, who the colleague is, and how they relate to each other, roles and routines will be performed differently. From the previous quote, same as expressed by the ST doctor in the previous section, it is clear that individuals, in terms of not only their experience level but also their skills, individual preferences, and even personality, will have a say in how teamwork unfolds. Different people will interact differently and this will therefore influence which role and routine patterns are enacted in a particular situation. To illustrate further, some staff members prefer to work with people that they know:

“I always feel a bit calmer when I go to my shift there [the emergency department] and I see that today I’m working with people I know because then they know me and I know what they know and I rely on their judgment and their capabilities and if there’s a new person it’s uncertain what they know and what they will do and their judgment so of course it’s a question of patient safety.” [ST doctor, interview]
For some, knowing each other means that everything will run smoother or at least make the job easier than working with people one is not familiar with. The triage nurse in *Act III* in the previous chapter asked for help from a doctor that she trusted could help her move forward. Because familiarity provides individuals with certainty in terms of expected interactions, people can rely on each other even if unscripted patterns may need to be drawn upon in performing roles and routines:

“It feels like everything is going a lot smoother if you work with more experienced people. If you have an experienced doctor, they can often handle more patients at a time than an inexperienced doctor. And if they go in they do a quick assessment of the patient, they come out, they tell me “if you try to give them this medication and you follow these kinds of signs, and I check in later”, then I can go in, I can start the treatment, I can try to get an improvement on the patient while the doctor is handling other patients. And then they're coming back and ask, “how is it going?” and they trust me because we’ve been working together and they trust the nurses’ opinions. And if we have an inexperienced doctor, they might go in, they take a very long assessment, they come out, they have to call their senior colleague that’s usually just on phone, have to call them, talk to them and then come back and tell me “you should do this”. So that’s... I mean it takes a longer time.” [Registered nurse, interview]

It seems that certain interactions promote the enactment of scripted role and routine patterns, while others just make work more troublesome. As this registered nurse puts it, working with an experienced doctor helps stick to the scripted patterns because roles and routines are performed more or less as expected and each one does what should be done without interfering in others’ roles. Thus, there is no need to draw on unscripted patterns and step into each other’s roles because individuals trust one another and they let each other do their job. The puzzle pieces fit together. Nonetheless, it is a different story when the puzzle pieces do not come together, as the second example in the previous quote illustrates. Some find it even problematic to work with people that they do not know:

“[it] can be a big problem if they [doctors] are not used to working in the [emergency department], they don’t know what we [nurses] are able to do or what we can do, and what we normally do do.” [Registered nurse, interview]

Knowing each other means having experience working together and therefore knowing how work in the emergency department is done. It also means that everyone knows what each scripted role entails and what part every individual plays in a routine. However, this does not mean that working with someone one does not know should always be problematic. In fact, some staff members do not
think that knowing the other is important as long as the interaction facilitates getting the job done:

“Some like to work with the same face, they get friendlier with each other, they can ask different things. For me, it doesn’t play a big role. Sometimes you meet a nurse for the first time, she is more structured in her work, she knows what she is doing. You like her, like the way she works, directly. Even if I don’t get to see her again. The other comes in and talks, left and right, and even if you’ve met her many times.” [ST doctor, interview]

Interactions influence how a performance will come about. It seems that, independently of individual preferences when it comes to working with the same face or not, everyone agrees that the interpersonal aspect either facilitates or complicates the enactment of certain role and routine patterns. Scripted role and routine patterns are the ones to be fulfilled despite the existence of unscripted patterns. Therefore, even if others and oneself know that due to, for example, the career stage one is in, one lacks certain competence, the scripted role pattern has to be performed. Otherwise, the routines will not be completed and this can have serious consequences, particularly for the patient. The interpersonal aspect, thus, influences the performance by supporting the enactment of scripted patterns or promoting the enactment of unscripted patterns in getting the job done.

**7.1.3. Stage set (environmental aspect)**
Apart from the actors and their interactions, the stage set influences the performance. This includes all the environmental factors that may come into play in a performance, such as the patient condition and/or acuity, workload, and available resources, among others.

*Act III* in the previous chapter, shows how the patient condition, i.e. a mysterious nosebleed, triggered the enactment of unscripted role and routine patterns. Despite the level of experience of the emergency doctor, which in most cases would be more than enough to deal with any patient, she could not solve the case without resorting to unscripted patterns. The patient acuity can also trigger the enactment of particular patterns, as this nurse explains:

“... the ambulance calls in if we need to prepare something for the patient. They usually call in for red-triaged patients and some of the orange ones. And the red ones, it could be severe chest pain, trouble breathing, cardiac arrest, trauma patients, where you need to maybe call for more resources, you need to call down the trauma team or the CPR team or you need to clear the resuscitation room and just to be prepared when they arrive.” [Registered nurse, interview]
These examples clearly show how an environmental aspect, such as the patient condition or acuity, can be enough to influence which patterns are drawn upon in performing roles and routines. Another environmental factor that comes into play when enacting roles and routines, is the availability of resources. The two working modes (daytime sections vs. nighttime emergency teams), for example, affect the resources available in different ways and thus the role and routine patterns drawn upon in accomplishing work:

“During nighttime when you work more tightly and you have the emergency physicians and you have [registered] nurses and assistant nurses working [in] one section, you can always ask a colleague, you are not as alone as you could be during daytime when it’s more patients and you are more spread out over the department.” [Registered nurse, interview]

As expressed by this nurse, working closer to others, in terms of proximity, makes it easier to resort to unscripted patterns. Having someone ready to help out in situ and trusting that individual may be able to deal with the situation, can move one to enact for example a stretched routine pattern. According to this, how one performs a routine can be different during nighttime compared to daytime when people seem to work more independently. Thus, the working modes seem to favour the enactment of some patterns more than others.

Another environmental aspect that can influence a performance is the existence of artefacts. For example, the triage routine is very much a step-wise process, where a form is basically guiding the triage registered nurse through the information that needs to be collected to be able to complete the patient’s first assessment. Relying on an artefact seems to make it easier to enact scripted role and routine patterns. Nevertheless, this does not mean that no effortful action is needed in triaging a patient. On the contrary, because the scripted patterns associated to the triage are more structured, in the sense that they follow formalized procedures, only qualified nurses are assigned the triage role and routine (see chapter 5, scripted role patterns). Thus, the performance of the triage not only involves the use of guiding artefacts but also requires critical thinking. The following illustrates:

“and then as a nurse you have to assess... if you [as a patient] say “Oh! It’s the worst pain I’ve ever had!” but you are walking in, you are eating something, you are talking without any kind of symptoms for pain, then [...] I wouldn’t choose [...] severe pain. They [patients] wouldn’t become orange with me then, they would become yellow. And I think there, as a nurse, I mean you have the chance to set your own limitations as well. I think there you do a bit different depending on what nurse is sitting in the triage but most of us are quite good at looking at the patient and then decide what kind of [symptoms...] I mean stomach pain, that’s a very, very common thing to seek medical advice for, but you have some
This quote shows how an artefact can promote the enactment of scripted patterns by guiding the individual. At the same time, as the nurse points out, how one evaluates a patient depends a bit on who the nurse is, i.e. the individual aspect also plays a role in the performance. As such, and as illustrated in Act III, a nurse could choose to enact unscripted patterns and ask the doctor or any other colleague for help when triaging a patient.

Overall, the environmental aspect adds to the complexity of performing roles and routines by influencing in different ways which patterns are enacted. This, combined with the individual and interpersonal aspects, make the situation of every performance unique. Having explored each of these aspects individually, let’s now go back to the scene.

### 7.1.4. The scene

As it has already been argued, three elements, namely actors (individual), interactions (interpersonal) and stage set (environmental), constitute the scene in which the performance takes place. By performance I mean the enactment of role and routine patterns.

Figure 16 summarizes the scene and its constituting elements. Each of these elements, individually and together with the others, influences the performance of roles and routines. First, there are individual factors at play: personality may incline an individual to ask for help when not knowing how to proceed or lacking experience; being experienced or self-confident may lead the individual to skip activities, such as waiting for test results. Second, interpersonal factors also influence the scene: working with someone inexperienced may result in the experienced individual stepping in the other’s role, therefore enacting unscripted role and routine patterns. Third, there are environmental factors, such as the patient condition, acuity, or workload, which influence the role and routine patterns that are enacted. For example, working on a surgery patient requires registered and assistant nurses to enact the corresponding scripted role and routine patterns.

The scene, i.e. the situation in which performances take place, provides the input for both situating and patterning processes. Which role and routine patterns individuals choose to situate in the performance are dependent on the individual, interpersonal, and environmental aspects of the situation at hand. Performances
therefore draw on patterns through the situating processes. The situated performances, in turn, feed back to the patterning processes, triggering the creation, modification or maintenance of patterns. Let’s now take a look at the specifics of these processes.

![Diagram showing the interaction between individual, interpersonal, and environmental aspects in the performance process.]

Figure 16. The scene

7.2. Situating processes
In the previous chapters, scripted and unscripted, role and routine, patterns were explored separately for analytical purposes. However, in practice, they all coexist and individuals combine them and/or move between them, back and forth, and back again, in trying to find ways that help them uphold roles and routines. As introduced in the previous sections, the scene provides the basis on which to choose the role and routine patterns to enact. In any given situation, the selection of patterns will be triggered by individual, interpersonal and/or environmental aspects. Staff members then choose among the scripted and unscripted, role and routine, patterns and situate them in the particular scene for performance. These processes of situating patterns in the scene will be the focus in the sections that follow. First, personalizing roles, the process of situating role patterns, is discussed. Second, customizing routines, the process of situating routine patterns, is explored.

7.2.1. Personalizing roles
Personalizing is the process of situating role patterns in a performance and entails picking one or a combination of role patterns to enact based on the situation. In most cases, scripted role patterns should suffice. However, sometimes staff members find themselves in situations where these patterns are not enacted as intended because of the influence of individual, interpersonal and/or environmental aspects. Quoting again the specialist in surgery,

“It’s not that the interactions between people depend on the roles they take [scripted], but on the people [individual]. Things go differently if you have a
Even when scripted role patterns exist, and set certain standards in terms of role enactment, having different individuals performing the same roles entails “deviations” from the scripted patterns. This consequently drives staff members to enact unscripted role patterns. In the previous quote, working with a surgeon who knows what he or she is doing and leads the team may support the choice of scripted role patterns. On the contrary, working with a new doctor who does not know how to perform his or her scripted role seems to push the others to choose to enact unscripted role patterns, which results in stepping into the others’ scripted roles. Different combinations are thus possible enabling the personalization of roles in any given performance.

A further example illustrates the point. During my first visit to the emergency department, a surgery doctor asked the surgery registered nurse that I was shadowing to give three drugs to a patient. Nothing out of normal; this is a typical interaction between doctors and registered nurses following scripted role and routine patterns. The registered nurse went to the drug storage room, prepared the drugs, and heading toward the computer said that he wanted to check if he could inject one of the drugs into the muscle. He explained that the surgery doctor ordered it that way but that he usually administered that drug intravenously and he was not sure about the doctor’s request. The registered nurse experienced a mismatch between his previous experiences with that drug and the doctor’s request, which triggered the assessment of the situation and the selection of unscripted role patterns.

The registered nurse drew on career-stage, professional, and scripted role patterns. First, the nurse did not know if the doctor was still studying or if she was done with medical school and doing her AT internship but he was sure that the doctor was a junior and explained that during daytime most doctors are inexperienced: residents, interns, and even students during their last semester. Second, following professional conduct, the registered nurse drew on his professional role pattern when deciding to check if a request that he thought might be wrong was in fact it, before administering the drug to the patient. Third, the registered nurse explained that if he would administer drugs in the wrong way he would also “get the blame for the mistake”, even if it was an order given by the doctor, pointing at the accountability vested in his scripted role pattern. Finally, the nurse noted that he was not drawing on an individual role pattern by highlighting that “it’s not that I don’t trust [AT doctor’s name] particularly but
usually AT doctors don’t have enough experience and I need to double check things.” When he finally checked it up, he was right: the drug should only be administered through blood as he had suspected. He went back and looked for the doctor because registered nurses are not allowed to decide themselves and administer certain drugs as they think is best. Instead, the doctor should change the order. When the registered nurse finally found the doctor, he explained her how that drug was supposed to be administered and she signed a new order, allowing the nurse to intravenously inject the drug.

The previous example clearly shows how the scene serves as input for personalizing roles. If the doctor would have ordered the administration of the drug intravenously, the nurse would have probably not reacted to the request and continued to enact the scripted patterns. Or maybe another nurse with no previous experience with the drug would have not reacted and administer the drug as ordered by the doctor, sticking to the scripted role and routine patterns. Thus, in the case above, the request and the individuals involved, i.e. the scene, meant that the registered nurse personalized the roles by situating career-stage, professional and scripted role patterns in the performance.

Overall, experiencing discrepancies between scripted role patterns and enacted patterns can trigger the personalizing of roles. When encountering a situation where scripted role patterns are not enough or appropriate to handle it, individuals can personalize roles by drawing on a combination of scripted and unscripted patterns, which enables them to keep up their work. Inconsistencies between scripted and enacted patterns can be said to serve as cues that individuals extract from the environment in order to make sense of the situation (Weick, Sutcliffe, & Obstfeld, 2005) and engage in personalizing roles. Furthermore, when personalizing roles, individuals engage in customizing routines, and vice versa. It is these processes to which now we turn.

**7.2.2. Customizing routines**

Customizing is the process of situating routine patterns in a performance. While the scripted routine patterns should be the norm, as already discussed, the diversity of individuals and the uniqueness of each scene means that unscripted routine patterns will also be drawn upon. Customizing entails picking one or more routine patterns to enact, among the existing ones, according to the situation at hand. In the previous example where the surgery registered nurse double checked the doctor’s request, apart from personalizing roles by enacting a combination of scripted and unscripted role patterns, the nurse chose to situate a stretched routine pattern, customizing the routine performance.
Being triggered by the scene, which routine patterns are selected through this situating process is influenced by individual, interpersonal, and environmental aspects. In general, whenever an event that prevents the individual to proceed with the routine performance happens, the routine gets stuck or is put on hold. The routine being on hold triggers an assessment of the situation. While scripted routine patterns should enable smooth performances, a mismatch between these patterns and the actual enactments following the particularities of the scene means that unscripted routine patterns are needed to continue performing the routine. Based on held patterns and the situation at hand, individuals choose the routine patterns to situate, customizing the routine.

The pool of patterns provides staff members with a spectrum of possibilities to uphold the routine under concern when the scripted patterns are not enough or appropriate. To illustrate, when asked how she would deal with a situation where she did not know how to do something, a registered nurse described:

“I would call the ward that usually takes care of the kind of patient that I’m taking care of. [...] if I haven’t given a medicine and I don’t know how it’s supposed to be given, I can always call like, neurology and ask them: “Have you ever worked with a patient that needs this kind of medicine? [...] do you have a PM [pro memoria, i.e. memory aid]? [...] Could you maybe send it down so I can have a look at it? Or can you explain what I should be aware of?” [...] but sometimes I ask a more experienced nurse or sometimes I ask the doctor but if I feel like I don’t get the answer I feel comfortable with I know that there is always someone somewhere in this building that knows it…” [Registered nurse, interview]

As mentioned before, “no one knows how to do everything”. Having worked in the emergency department for four years at that point in time, this registered nurse had developed her ways of customizing routines. Either she would call up the ward, ask a nurse with more experience than her, or talk to the doctor, situating stretched routine patterns whenever not knowing how to proceed.

While the above illustrates what happens when an obstacle impedes to continue performing a routine, it could also be the case that the scene provides an opportunity to speed up work and therefore a shrunk pattern is situated into the performance. The following quote illustrates this point:

“Usually now I admit without blood tests. I have a feeling what this is all about. I make this clinical judgment. It’s like an algorithm. I know what this is gonna be without ECG or clinical parameters. You know what this is. This is not a patient you can send home.” [ST doctor, interview]
This quote exemplifies how the assessment of the situation, in this case the patient condition, can move someone to situate a shrunk routine pattern instead of sticking to the scripted one and waiting for the results. However, again, which patterns one chooses to situate is dependent on the individual as well. Situating shrunk routine patterns usually comes with experience. For instance, while emergency physicians would speed up the process by seeing the patient first and avoiding waiting for test results when unnecessary, in general, junior doctors would not meet the patient before having some kind of initial assessment done, and this sometimes included waiting for test results:

“*It’s a lot more waiting during the day I think. ‘Cause a more experienced doctor can make a decision that “this patient needs to stay in the hospital” even if we don’t find anything wrong, kind of, “Cause I can’t send this patient home”. But sometimes they [junior doctors] want all the answers before they take the decision to let the patient stay.”* [Registered nurse, interview]

As an ST doctor noted, “sometimes the blood tests change your whole judgment if you are not experienced.” However, it could also be the case that despite being experienced one does not proceed with the routine unless feeling comfortable with how things are unfolding, as expressed above by a registered nurse.

Overall, individuals customize routines by situating scripted, stretched, shrunk, and/or shuffled patterns in each performance following an assessment of the scene. Despite the particularities of each scene, staff members in the emergency department need to recreate the routines to deliver certain outcomes (e.g. triage, diagnosis), which are mostly associated to their scripted role patterns. These routine outcomes can be reached in different ways. The pool of routine patterns offers individuals the possibility to customize routines when a routine can be speeded up or is put on hold due to a mismatch in scripted and enacted patterns.

### 7.2.3. Situating roles and routines

Personalizing roles and customizing routines, as situating processes, enable staff members to pick and choose suitable patterns to enact in a particular scene. Paraphrasing a registered nurse, one always needs to be mirroring the other to see how they are thinking about the patient. Sometimes it is the scripted roles and routines which suffice to successfully reach the outcomes. Other times, unscripted patterns help in overcoming obstacles or taking advantage of opportunities that the scene presents. While the specific patterns picked for enactment are dependent on a variety of aspects following the scene, some commonalities across situating processes, independently of the selected patterns, can be identified. All situating processes are triggered by an assessment of the situation, about the self, the peer, and/or the environment, which is done by the self or the peers. This assessment enables individuals to link the situation to the
existing role and routine patterns and select the ones that they consider appropriate to get the job done in the situation at hand. Thus, once the situation is assessed, patterns will be chosen.

Which patterns are considered appropriate will depend on who is choosing them. Some individuals may choose to enact patterns individually; for example, situating a stretched routine pattern by searching for information on their own. Some others may draw on patterns that require the involvement of two or more people, which may be routine insiders and/or outsiders. The former refers to individuals who are part of a specific routine. For example, the surgery doctor, who is responsible for diagnosing surgery patients, may ask the surgery registered nurse for his or her opinion regarding the patient diagnosis. Outsiders instead means non-participants, i.e. individuals that are not meant to perform a specific routine, considering its scripted pattern. For example, according to its scripted pattern, the triage routine is to be performed only by nurses, but they still may choose to ask doctors for help, as illustrated in Act III. Furthermore, situating patterns into a performance may imply an intervention, which can be verbal or physical. As earlier discussed, an intervention can be within or across boundaries depending on the professional groups or specialty to which the individuals involved belong.

Independently of how the performance unfolds, with each enactment one learns how to perform roles and routines, and therefore which patterns to draw upon in which situations. Each performance provides staff members with new information or help them reconfirm held understandings, which in turn feeds back into the patterning of roles and routines, to which now we turn.

7.3. Patterning processes
The previous sections explained how individuals situate scripted and unscripted patterns in a performance depending on the scene, i.e. the situation where the performance takes place. Through personalizing roles and customizing routines, individuals place patterns in a particular situation for performance. In what follows, the focus will be on the patterning processes that happen after the performance has taken place. Patterning processes are ways in which individuals develop role and routine patterns. Once accomplished, the performance becomes an input for the creation of new patterns, the maintenance and/or modification of existing ones. The sections that follow will go into the details of these processes. On one hand, depersonalizing roles, the process of patterning roles, is discussed. On the other hand, abstracting routines, the process of patterning routines, is explored.
7.3.1. Depersonalizing roles
Depersonalizing is the process of patterning roles. Role patterns are created by depersonalizing role performances. The following quote illustrates:

“I think more experienced personnel can kind of talk to the doctors because you’ve had the patient even if the patient has another name, you’ve had the same kind of patient before and you normally know what should be done and that way you can maybe also direct the more inexperienced doctor to make a decision. “So, do you think you are gonna wanna do an x-ray on this patient?” kind of like to communicate to make them make a decision sooner...” [Registered nurse, interview]

In this quote, we can see how all aspects of the scene play a part in depersonalizing roles: the individual, being a more experienced staff member; the interpersonal, working with a more inexperienced doctor; and the environmental, having the “same kind of patient”. It is clear that this registered nurse is relating all these aspects of the performance to already existing role and routine patterns. Besides, the registered nurse talks about “experienced personnel” and “inexperienced doctor” in a hypothetical situation where one is experienced and has to work with someone inexperienced. This shows how, despite the level of experience of specific individuals, the nurse is reconfirming held career-stage role patterns, which are developed around groups of individuals at the same career stages: the experienced and the inexperienced staff members. This also means that these unscripted role patterns may be situated in a performance every time that an inexperienced individual shows up and, if successful, the role patterns will be maintained when depersonalizing the roles.

Considering that each new performance triggers the patterning of roles in some way, the pool of scripted and unscripted role patterns is rather dynamic and co-constructed in a continuous manner. It is often the case that one assumes a specific individual to be inexperienced for example due to his or her career stage and therefore situate a specific role pattern in the performance. However, during the performance one may have a different experience, which triggers the creation of new or the negotiation of held role patterns. To illustrate, let’s go back to an earlier example where a registered nurse double checked the order given by the doctor because it was not in line with the nurse’s previous experiences with the administration of that specific drug. If the nurse would have been wrong and the doctor right regarding the form of administration of the drug, the mismatch between held and enacted role patterns could have fostered the creation of new or negotiation of existing role patterns. The registered nurse may have thought that that particular junior doctor was not as inexperienced as he had assumed and deserved more trust, creating an individual role pattern around that particular doctor and maybe even negotiating career-stage role patterns about AT
doctors in general. The mismatch could have otherwise promoted the maintenance of existing role patterns, as it was the case in the example. By following his hunch, the registered nurse reconfirmed the idea of junior doctors being inexperienced, which required him to be extra careful, thus maintaining held career-stage role patterns regarding AT doctors.

Another way in which performances trigger the patterning of roles, and also routines, is storytelling. Performances generate stories and staff members tell and retell stories of experiences they have had, with the aim of raising awareness about the challenges of working with diverse individuals. Through storytelling, individuals engage in patterning roles. Stories are mainly told among staff members within professional groups. It was very common to hear nurses talking about doctors, and doctors about nurses. But staff members would also talk about particular individuals in smaller groups. This storytelling sometimes turned into gossiping. Similar to Orr’s (1996) finding that talk was a central part of technicians’ daily practice and success, gossiping within professional groups in the emergency department promotes awareness about own and other groups’ practices and aids the successful completion of work.

Let’s take an example to illustrate how storytelling helps depersonalizing roles. It has already been introduced that daytime doctors are mostly AT doctors, and a few ST doctors. A common story retold among nurses is the fact that AT doctors being inexperienced take longer time in getting the job done. A registered nurse explained, “They come for three months so every third month you see an increase in the number of patients spending more than four hours in the emergency department.” [Field notes] As, at the moment of the study, there was a national project aiming at having no patients over four hours in the emergency departments in Sweden, this was a recurrent problem for permanent staff. Besides, there was a whiteboard in one of the corridors where they kept track of the number of patients staying longer than four hours on a daily basis, which served as a constant reminder of the issue. Permanent staff knew that if they were to reduce wait times it was basically up to them. Daytime doctors, not being employed by the emergency department, did not pay much attention to the department’s goals. Thus, telling this story over and over served to raise awareness about the need to be proactive in order to speed up the process and reduce the length of patient stays when possible. This example shows how, through storytelling, individuals depersonalized roles developing unscripted role patterns that would help them act in consequence. As AT doctors did not have enough experience to do their job as fast as emergency physicians would, nurses would expect them to take longer than experienced doctors. This means that, when working daytime, nurses set higher expectations on themselves and fellow nurses in order to make patient stays in the emergency department as short as possible.
The previous examples support the idea that individuals develop multiple unscripted role patterns on top of the scripted ones given by the organization. Once more, even if, from a managerial perspective, scripted role patterns should suffice to get the job done, staff members engage in depersonalizing roles in a continuous manner, deeming necessary the development of unscripted role patterns in order to deal with inconsistencies in the enactment of scripted patterns. Let’s now take a look at how routines are patterned.

7.3.2. Abstracting routines

Abstracting is the process of patterning routines. Similar to depersonalizing roles, this is also triggered by the performances. The examples in the previous section illustrate how staff members abstract routines based on performances. Nurses have developed routine patterns which are consistent with their idea that daytime doctors tend to take long time in doing their parts in the routines and getting the patients through the emergency department. Being inexperienced, daytime doctors usually situate stretched routine patterns, which they have developed, abstracting routines, to counteract the inability to perform scripted patterns to the letter. The account provided by this recent graduated AT doctor illustrates:

“[…] if I don’t [feel confident about something] I can always call someone senior and ask […] I try to remember to use SBAR. […] You start with the situation and then background and then the news, the actual things that are right now, and then the recommendations […]. So, then I tell my senior that I have this situation, like my patient right now in the emergency, “I have a patient I think is pneumonia” and the background, “she has lung fibrosis since before, and she’s also done some surgery in the heart a long time ago and she’s been worsening in the breathing for the last five years. Her doctor told me on the phone”. And then the [current assessment], what is right now, “well, she has fever, she has difficulty breathing, she falls asleep when I don’t talk to her, she has a high pulse”, and the recommendations, what I think and what I want to do. So right now, I asked, “What kind of antibiotics should we pick for this patient? Because I don’t want to pick the less broad one because she is very old. Should I pick something broader then?” Because I didn’t know. And then the senior colleague told me, “Yeah, you should pick the broad one, I would do that” and then I ask about this lung fibrosis, “I don’t know how much hypoxia you could accept. And the oxygen in the blood, what should it be like? How many litres of oxygen should I put there?” Because the patient was at 87% and my senior colleague said that “well, 90 to 92 that’s fine” and I said “alright”, so then… “I think this is the diagnosis, I would like to do something like that, can I ask you about it?” “Yeah”, and then you get a fast response and then you can do the best thing for the patient.” [ST doctor, interview]

SBAR (Situation, Background, Assessment, Recommendation) is a communication technique originally developed in the military sector (Pope, Rodzen, & Spross, 2008).
This quote illustrates stretched routine patterns developed by this ST doctor, which are further applied to a particular patient that the same doctor has just met. Not sure about the patient diagnosis and consequent treatment, the doctor situates stretched routine patterns in order to fulfil both routines, by calling a senior doctor in order to clear out her doubts about how to proceed with the patient. These patterns have already been developed by the ST doctor, most likely following previous performances of the routines. Note that the doctor starts by saying that she tries “to remember to use SBAR”. This is a clear indication of a developed pattern: in order to enable the senior to virtually guide her, as the senior is on the phone, the first step is to abstract the patient case from the emergency department and give the senior doctor, who is perhaps in his office up in the hospital or at home, a concise idea of the kind of patient she is dealing with. The ST doctor does this to confirm that the tentative diagnosis she is considering is right (“I think is pneumonia”), which will enable her to complete the diagnosis routine. Giving the senior doctor all the details, he can get an idea of the patient, even without meeting him or her, and thus figure out if the diagnosis that the ST doctor is thinking of is reasonable. This being confirmed, she moves to the treatment routine and asks for information regarding antibiotics, hypoxia, and oxygen in blood, so as to be able to perform the treatment routine, because she “didn’t know” this. In this quote, the ST doctor uses storytelling in recounting how she abstracts and enacts routines when not being able to stick to the scripted patterns.

Based on performances, nurses also use storytelling in developing routine patterns. They talk about how they try to speed up routines by prompting doctors to make decisions faster, not to shrink the routine but to uphold the scripted routine patterns and avoid the enactment of stretched patterns. They develop shuffled routine patterns, changing the order of activities, because they believe that enacting such a pattern will help them achieve the routine outcome in a shorter period of time than sticking to the scripted pattern. This is why nurses take blood samples sometimes even before the doctor had met the patient or without consulting them. Being a bottleneck in the process, as test results take around two hours to be ready, nurses do what they can to minimize the time patients spend in the emergency department. Doing this means abstracting routines by developing unscripted patterns, which are not always in line with the scripted ones:

“they [nurses] are not allowed to decide which blood tests should be done. But informally they do so. Sometimes there will be discussions but most often they take that decision; they just say: “Is it okay that I take this?” and the doctor answers, “yes, yes, yes”. But they are not allowed to decide which blood exams or examinations should be done, no.” [Double specialist, interview]
Quoting again this double specialist, the decision of which blood work is to be done on the patient is the doctor’s responsibility and not the nurse’s. However, nurses do step into the doctor’s roles, perform this routine activity and even change the order of activities in the overall routine, patterning the diagnosis routine in a way they think works better than the scripted pattern, at least in certain situations.

Overall, staff members abstract routines by developing a variety of unscripted routine patterns which coexist with the scripted ones provided by the emergency department. Over time, routines are adapted to include multiple patterns. This to the point that, although people can relate to a common understanding of what a specific routine entails, there is no single description of it. Most staff members would relate to the routine outcome when asked to describe a specific routine, because that remained the same, despite how it was achieved.

7.3.3. Patterning roles and routines
Both patterning processes reviewed, depersonalizing roles and abstracting routines, are triggered by the performances and enable individuals to create, maintain and/or negotiate role and routine patterns. Similar to what happens with situating processes, thus, patterning processes will be influenced by the individual, interpersonal, and/or environmental aspects of each performance. Being new in the emergency department, one will develop new patterns through performing them. As many staff members highlighted, “you learn as you work […] the longer you work the more you get to see, and the more you know” [Registered nurse, interview]. Once developed, the role and routine patterns may be maintained as long as they are not challenged, as encountering situations similar to previous ones will likely reinforce existing patterns. Nonetheless, encountering a situation which has not been experienced before, is likely to trigger different patterning processes. Taking the environmental aspect again, it could be the case that the patient condition is unknown to oneself, as the mysterious nosebleed in Act III, triggering the creation of new, or negotiation of existing, patterns. In summary, the assessment of the situated performance will prompt patterning processes, which may result in the creation, maintenance and/or modification of role and routine patterns. These patterns will then be drawn upon through the situating processes and into the performances, keeping the cycle going.

This last empirical chapter has explored the dynamics involved in performing scripted and unscripted, role and routine patterns. In doing so, the scene, which is the situation where a performance takes place, was disassembled into three constituting aspects, namely, individual, interpersonal, and environmental. These aspects serve as input to various processes. Two situating processes,
role personalizing and routine customizing, and two patterning processes, i.e. role depersonalizing and routine abstracting, were explored. While situating processes help individuals choose which patterns to bring into a performance, patterning processes are the ways in which people co-construct role and routine patterns.

In the next chapter, the findings presented throughout the empirical chapters are brought together in a framework, and discussed in relation to existing literature. The contributions of the study as well as the implications for theory and practice are also outlined.
8. The interplay of roles and routines

In this thesis, I have set out to answer how roles and routines enable flexible performances, with the purpose to increase the understanding of their interplay and their role in organizations. As argued in the theoretical background, there is a dearth of research regarding this interplay, and a few major shortcomings that I have argued can be addressed by bringing together the literatures on roles and routines. Having presented the findings of this study, therefore, in this chapter I will discuss their relevance for understanding the role of roles and routines in organizations and how this helps advance current understandings in organization theory. I start the chapter by summarizing and bringing together my findings in the conceptual framework sketched out at the end of the theoretical background, which integrated my understanding of roles and routines (see Figure 3, p. 37). I enrich this framework in Figure 17 to illustrate how roles and routines interplay to enable flexible performances, therefore answering the research question posed in the introduction. I then discuss how the findings of this study extend previous research, by addressing the shortcomings identified in the introduction and theoretical background, and the implications of the findings for theory and practice.

The findings of this study have been progressively presented throughout the empirical chapters and are summarized in Figure 17. Chapter 5 introduced the scripted role and routine patterns (upper dashed ovals in Figure 17), those that are given by the organization to ensure its functioning. These scripted patterns are planned in advance and serve as guidelines to accomplish work. Chapter 6 explored the unscripted role and routine patterns (lower dashed ovals in the figure), those that are not formally sanctioned by the organization but that have been developed by the staff members. Three sets of unscripted role patterns (professional, career stage and individual) and three unscripted routine patterns (stretched, shrinked and shuffled) were identified and discussed. These unscripted patterns have neither been planned in advance nor written down in documentation but they are necessary when the scripted patterns are not sufficient or suitable to get the job done. Chapters 5 and 6 have thus provided an account for the variety of role and routine patterns that individuals hold (englobed by the larger ovals on the left and right sides of the figure). Building on these ideas, in chapter 7 I explored how the scripted and unscripted patterns of roles and routines are enacted in performances and how they are continuously co-constructed through situating and patterning processes. As depicted in Figure 17, scripted and unscripted patterns are situated in the performances (represented by the oval in the middle of the figure) through the personalizing of roles and customizing of routines (upper dashed rows). These two situating processes are the ways through which people place role and routine patterns in
the performances. Which patterns are situated in a specific performance is influenced by the situation at hand, i.e. the scene, which is constituted by individual (actors), interpersonal (interactions), and environmental (stage set) aspects (see Figure 16 in p. 155). The scene therefore provides the input to the situating processes. It also triggers the patterning of roles and routines as, once enacted, situated performances serve as inputs to develop, maintain and/or negotiate patterns by depersonalizing roles and abstracting routines (lower dashed arrows in Figure 17). Through cycles of situating, performing, and patterning, roles and routines interplay in a dynamic fashion.

![Diagram of Situating and Patterning Processes](image)

*Figure 17. The interplay of roles and routines*

Bringing together the findings of this study, this framework outlines the dynamics that take place in the interplay of roles and routines, therefore answering the overall research question posed in the introduction, i.e. *how do roles and routines interplay to enable flexible performances?* First, the framework shows that roles and routines are flexible because both are formed by a combination of scripted and unscripted patterns. Second, these scripted and unscripted, role and routine, patterns are drawn upon through personalizing and customizing processes and situated in specific performances for enactment, where they interplay. Third, this enactment of roles and routines occurs in situated performances, and different sets of patterns can be combined through the situating processes, enabling flexible performances. Fourth, although flexible, these situated performances feed into depersonalizing and abstracting processes, therefore contributing to the patterning of roles and routines, respectively, and therefore aiding stability.
In what follows, I discuss how these findings contribute to current understandings of roles and routines. I do so by focusing on the arguments put forth in the previous paragraph, which address the main research question in a more detailed manner by answering the three sub questions posed in the introduction. I start by looking at the flexibility, and stability, afforded by roles and routines. I then move to the ways in which roles and routines interplay, through situating processes, in specific performances, and through patterning processes based on these situated performances. Finally, I discuss the selection of patterns for enactment, its influence on performance flexibility and on the patterning of roles and routines.

8.1. Patterns aid stability and flexibility

As discussed in chapters 5 and 6, roles and routines consist of scripted and unscripted patterns. In this section, I further argue that the existence of multiple patterns is what enables individuals to perform roles and routines flexibly while ensuring stability. The section is structured around three areas, namely, the multiplicity of patterns, the stability, and the flexibility afforded by these patterns. I will discuss how, being co-constructed through patterning processes, role and routine patterns afford stability. At the same time, patterns afford flexibility, as they can be combined differently following the scene. Viewed in light of previous research, I will discuss how the findings of this study support and extend current understandings and the implications of this knowledge for practice.

As reviewed in the theoretical background, previous studies in the role and routine literatures have shown that individuals can develop multiple role and routine patterns. Role studies have shown that, within the same role, individuals develop different role patterns due to external changes (Barley, 1990), job characteristics and individual skills (Morgeson et al., 2005), among others. As I will further discuss, these role patterns can be negotiated through performances (Bechky, 2006). In addition to this, because individuals perform various roles in organizations, different occupational groups develop distinct routine patterns (Cacciatori, 2012; Nigam et al., 2016; Turner & Rindova, 2012; Zbaracki & Bergen, 2010). This means that roles influence how individuals understand and view organizational routines, therefore triggering the development of multiple routine patterns (Dionysiou & Tsoukas, 2013).

The findings of this study support previous research on roles and routines by identifying the existence of multiple role and routine patterns. Further, this study extends existing literature by delineating scripted and unscripted, role and routine patterns. While scripted patterns are used as templates in developing unscripted patterns, the two sets are different in nature. As discussed in chapter
5, scripted role and routine patterns are those given by an organization in order to ensure its functioning. These patterns may be written in documentation, and they are definitely planned in advance, before they are performed. Providing an outline for performance, scripted role and routine patterns serve as guidelines regarding how things should be done. Not being prescriptive though, these patterns leave room for improvisation. This is what allows other role and routine patterns to emerge. Unscripted patterns, discussed in chapter 6, are those that are or have been co-constructed by organizational members in dealing with contingencies when the scripted patterns are not enough. Unscripted patterns may or may not be acknowledged by the organization, and they are definitely not formally imposed by the management.

Another way in which this study furthers previous research on the multiplicity of patterns is by identifying different types of unscripted role and routine patterns. Regarding roles, three sets of unscripted patterns were found, namely, professional, career stage, and individual. The three unscripted role patterns, together with the scripted ones, form the basis for a more holistic understanding of roles than previous literature has provided. These unscripted patterns are shared at different levels, for example, people in the same career stage, or profession, are likely to develop shared patterns that are different from those developed by individuals in a different career stage or professional group. While patterns may vary from one organization to another, the relevance of acknowledging their existence lies in understanding that, contrary to claims made in previous studies, people do not just understand routines differently because they perform different roles in an organization. They also understand roles differently depending on who they are, the career stage they are in, and how they are socialized into their profession. Regarding routines, three sets of unscripted patterns were identified, namely, stretched, shrunk and shuffled. These unscripted routine patterns are related to, and developed based on, the unscripted role patterns, as depending on the role patterns enacted, a routine will be performed in different ways. As already discussed, unscripted routine patterns help individuals save time or solve problems when facing opportunities or challenges, respectively.

In addition, this study extends previous research by acknowledging a connection between role and routine patterns. As discussed in chapter 5, scripted routine patterns rely on the existence of scripted role patterns. As the latter outline the activities associated to them, and therefore vest roles with accountability and responsibility, individuals assigned a certain scripted role pattern will also be responsible for the corresponding activities associated to the scripted routine patterns. Regarding unscripted patterns, although not formally sanctioned, the findings of this study also show how role and routine patterns are related. Stretched and shrunk routine patterns are usually associated to different career-
stage role patterns: the higher up one is in the career ladder, the more experienced one is in performing the scripted pattern and therefore has the ability to shrink routines. On the contrary, the less experienced the individual is, the more inclined he or she will be to enact stretched routine patterns in dealing with the lack of experience.

Overall, this study has shown that the existence of scripted and unscripted, role and routine, patterns is what helps individuals to uphold work in organizations. Apart from considering the multiplicity of role and routine patterns, several scholars have called for studies that look at their effects to further an understanding of social systems and organizational coordination (e.g. Biddle, 1986; Pentland & Feldman, 2005, 2008a; Turner & Rindova, 2012). Building on these calls, in what follows, I discuss the effects of role and routine patterns in terms of the affordance of stability and flexibility in organizations.

When it comes to stability, previous research on roles and routines has extensively shown that, taken as regularities, both of them afford organizational stability. In particular, studies following structural perspectives have provided evidence of organizations being built around systems of roles, which are deemed as normative expectations associated to a position (Katz & Kahn, 1966, 1978), and routines, which, enabling the coordination of tasks among role occupants, ensure stability. Treating roles as job descriptions and routines as standardized procedures certainly promotes a view of roles and routines as enablers of organizational stability (cf. Barley & Kunda, 2001). Largely black boxing roles and routines, these perspectives have helped to advance understandings of the inputs and outputs associated to these phenomena, being stability one of the most researched ones.

In line with previous research, the findings of this study support the idea that roles and routines enable stability. However, contrary to previous studies black boxing roles and routines, the approach adopted in this thesis has allowed to delineate a more nuanced explanation for the stability afforded by them. Looking at the internal dynamics of roles and routines separately and jointly, this study extends previous research by suggesting that stability is enabled by the existence of scripted patterns. Scripted patterns are those given by the organization and which support the existence of a deindividualized role structure (Klein et al., 2006). As already argued, emergency departments as well as other organizations are said to keep up thanks to the reliance on role-based structures (Bechky, 2006; Klein et al., 2006; Valentine & Edmondson, 2015). Being deindividualized means that these structures count with roles which are established a priori and individuals fill them following their shifts (Klein et al., 2006). Faraj and Xiao (2006) further argue that such structures can work independently of who the specialist taking each role is, as long as each individual count with the expertise
needed. This idea is, in this thesis, supported by the existence of scripted role and routine patterns, which serve as the scripts given by the organization to all staff members. In addition to this, individuals co-construct these scripted patterns through situating and patterning processes, therefore having a stabilizing effect, and providing organizations with the structure needed to not collapse. Contrary to studies focusing on stability, however, this thesis suggests that scripted patterns, while providing structure do not account for the whole story. They are just one set of patterns. As already discussed, in line with previous studies which acknowledge the multiplicity of patterns, I have identified not only scripted but also unscripted, role and routine, patterns. This takes us to the effects of patterns on flexibility.

In addition to stability, previous research has provided substantial evidence to support the idea that, due to the agency of individuals, roles and routines afford flexibility. Some studies have shown flexibility as an outcome of change. Individuals can adapt to external changes such as the introduction of new technologies, which require the performance of new activities and/or development of skills, by adapting role and routine patterns (Barley, 1986, 1990; Edmondson et al., 2001). People may also purposefully choose to change a routine internally, repairing, expanding, or striving to make better a routine pattern (Feldman, 2000), or they may choose to expand their role patterns (Morgeson et al., 2005). Independently of their intentions, individuals have the ability to create, modify, and/or maintain patterns. Further, because roles and routines are relational, and therefore connect people (Feldman & Rafaeli, 2002), changes in patterns enacted by an individual are likely to alter patterns of interaction (Barley, 1990; Bechky, 2006). Taking roles and routines as patterns of action, therefore, previous studies show that role and routine patterns can be negotiated through performances (Barley & Kunda, 2001; Bechky, 2006). Furthermore, patterns have been acknowledged to not only be shared understandings but also distributed, multiple, and even conflicting sometimes (Feldman & Pentland, 2008). Differences in role and routine patterns held by various groups can create conflicts, requiring a corrective action to repair the breach (Heaphy, 2013; Turner & Rindova, 2012). Many of the studies highlighting the flexibility afforded by roles and routines also emphasize that structural features influence the extent to which enactments are flexible (Bechky, 2006; Feldman, 2003; Mantere, 2008; Morgeson et al., 2005; Pentland & Rueter, 1994).

Building on previous research highlighting the flexibility afforded by roles and routines, the findings of this thesis show that flexibility is enabled due to the existence of unscripted role and routine patterns. As pointed out earlier, scripted patterns aid the functioning of structures by defining role responsibilities and relationships among roles, which are connected through routines. However,
while this is partly true, it does not account for the whole story. This thesis shows that when for example the expertise needed to perform a role is lacking, individuals may be exposed to role conflict, i.e. “incongruity of the expectations associated with a role.” (Van Sell, Brief, & Schuler, 1981, p. 44) Role conflict may paralyze individuals putting both roles and routines on hold. This study extends this line of research by identifying unscripted role and routine patterns which aid people in overcoming this paralysis by enabling them to perform roles and routines flexibly. Unscripted patterns are those that individuals develop to adjust to working with diverse people who enact the same roles and routines differently. This is particularly relevant in the emergency department. Looking at the actions involved in enacting these patterns, therefore, this study suggests that role structures are not only deindividualized but are also individualized. While the former follows the scripted role patterns, the latter, is based on professional, career-stage, and individual role patterns.

This thesis further builds and extends previous research regarding the effects of the multiplicity of routine patterns. Studies on routines have shown that individuals develop multiple patterns in ensuring flexibility and stability. Turner and Rindova (2012) identify dual routine patterns, one associated to flexible performances and one to consistent performances. Similarly, Danner-Schröder and Geiger (2016) talk about flexible and stable routine patterns, and Sonenshein (2016), about novel and familiar patterns. The findings of this study, in line with previous research, also identify unscripted and scripted patterns, which enable individuals to perform roles and routines flexibly while ensuring stability. This study extends previous research, though, by showing that the unscripted patterns that enable flexible performances are not only different in nature to the scripted patterns given by the organization, but are also multiple. More specifically, while previous research have tended to identify dual patterns in explaining the affordance of stability and flexibility, I identify one scripted and three unscripted (stretched, shrunk, and shuffled) routine patterns, which do so. This more detailed understanding about the influence of multiple routine patterns on flexibility has been enabled by looking at the internal dynamics of roles. While previous research has suggested that different patterns can arise based on the roles people are performing, this study further claims that looking inside each role, instead of taking roles for granted, allows to identify a myriad of patterns based on the various roles that a person performs.

Furthermore, this study shows that unscripted patterns are not a one-time response. Instead, both roles and routines are continually formed by scripted and unscripted patterns. This is in line with the routine dynamics perspective, which takes routines as sources of endogenous change (Feldman, 2000; Feldman & Pentland, 2003; Pentland et al., 2011). However, contrary to previous studies which look at role flexibility as a punctual response to some external change, this
study extends previous research by claiming that flexibility is also an ongoing feature of roles. As different combinations of patterns can be enacted in any situated performance, roles are themselves a source of endogenous change (cf. Feldman, 2000). Nonetheless, as it will be further discussed, this flexibility is constrained. Finally, while unscripted patterns afford flexibility, if acknowledged by the organization, these patterns may become scripted, therefore influencing stability. Regarding the enactment of new patterns, while these may be random and therefore not change the structure of roles and routines, if they persist, being replicated through time, they will most likely become part of the held scripted and/or unscripted patterns (cf. Barley, 1986).

Having discussed the multiplicity of role and routine patterns and their effects in terms of the affordance of stability and flexibility, it is time to look at the practical implications of this.

It is clear that the emergency department, as well as organizations operating in similar conditions, need roles and routines to be clear-cut, so that everyone knows what to do individually and how to work in teams, in order to ensure patient safety and quality in the care provided keeping the organization from collapsing. Considering this, the reliance on deindividualized structures to organize work seems to make sense. However, this study shows that roles and routines also need to enable flexible performances to accommodate for different factors, such as environmental uncertainty (e.g. patient conditions), working with different people, and availability of resources. Therefore, this study highlights the importance of designing role structures that have an individualized component. By acknowledging the existence of unscripted patterns, managers may benefit from identifying those that are critical in performing work and therefore make them part of the existing scripted patterns. In addition to this, it may be advantageous to consider the existence of multiple patterns, and how they influence work, already in the educational programs and other training activities of healthcare professionals.

Clearly, existing scripted and unscripted patterns will vary from one organization to another. While in some organizations professional role patterns may be very salient, in other contexts other role patterns, such as the career-stage ones, may be more important. While I do not claim that the patterns identified in the findings will look the same, this study still suggests that other organizations would also benefit from identifying existing unscripted patterns, as this can help managers organize work in a better way for staff members by avoiding for example role and/or routine conflicts, which may arise due to the existence of multiple patterns.
For researchers, looking into the multiple unscripted role and routine patterns that exist in organizations, may help explain conflicts. While role theorists have long studied role conflict in social systems, organization scholars have not focused on the effects that balancing multiple patterns may have for organizations. As this study shows, the mere existence of multiple patterns do not always lead to conflicts, and when it does, individuals find ways to deal with it. Further, this study suggests that the multiplicity of patterns is what enables organizational flexibility and also stability. Therefore, focusing on patterns, which may be different in nature as this study suggests, may help develop richer understandings of the stability/flexibility paradox.

8.2. Interplaying in, and through, situated performances

Having discussed the multiplicity of role and routine patterns and their effects regarding stability and flexibility, in this section I discuss how these patterns interplay in, and through, performances. Interplaying through situating and patterning processes, I argue that roles and routines mutually reinforce and change each other. The findings of this study are considered in light of previous research and their implications for theory and practice.

Studies surfacing connections between roles and routines have shown that performing routines in relation to others increases agreement regarding role patterns (Morgeson et al., 2005). Besides, because people perform different roles in organizations, their views on routines also differ, therefore developing distinct routine patterns (Cacciatori, 2012; Nigam et al., 2016; Turner & Rindova, 2012; Zbaracki & Bergen, 2010). This means that held role patterns influence the content of routine patterns. The only study that has aimed at explaining how this is done is the contribution by Dionysiou and Tsoukas (2013). They argue that through role taking (Mead, 1934), individuals view themselves from the others’ positions, which enables them to develop shared role patterns. This in turn allows individuals to anticipate each other’s actions and therefore develop shared routine patterns. However, as it is a conceptual contribution, Dionysiou and Tsoukas (2013) do not provide empirical evidence supporting how individuals align their actions in performances and how they develop shared patterns (LeBaron et al., 2016).

As discussed in the theoretical background, studies looking at how roles and routines enable organizational coordination have also surfaced some connections between the two. Taken as means for coordination, roles and routines help organizations accomplish work by creating accountability, predictability, and common understandings (Okhuysen & Bechky, 2009). However, the main focus of this literature is on the outcomes of roles and routines, i.e. how they help
accomplish a collective performance, therefore largely taking roles and routines as given and ignoring the details of their interplay.

Overall, while previous studies have shown the relevance of understanding how roles and routines interplay, they have for the most not treated them at the same level, largely taking one, the other, or both phenomena, for granted. Furthermore, while some of these studies have shown that role and routine patterns influence each other, how this is done remains under-researched.

This study extends previous research regarding the interplay of roles and routines in several ways. First, by opening up both black boxes, i.e. roles and routines, simultaneously, and looking at their internal dynamics, this study shows that this approach holds promise to advancing knowledge of how organizations work. Second, the findings provide evidence for how role and routine patterns influence each other, which has been largely overlooked in previous research. In what follows, I put forth two arguments regarding the mutual influence of roles and routines. I first argue that roles and routines reinforce each other through situating processes. Besides, I argue that roles and routines change each other through patterning processes.

As it was already argued, the existence of multiple role and routine patterns is what enables flexible performances. This study extends previous research by delineating how individuals align their actions in performances through situating processes.

While scripted and unscripted patterns have been analytically separated in the findings, as discussed in chapter 7, in practice, role and routine patterns interplay. Role and routine patterns come together in performances, through situating processes. Depending on the situation at hand, individuals pick and choose among the various patterns in adapting to the scene, and therefore perform roles and routines flexibly. In doing so, roles and routines reinforce each other. The flexible performances of roles are enabled through a personalizing process, which supports individuals in selecting the combination of role patterns to enact in any particular encounter. Moreover, the flexible performances of routines are enabled by a customizing process, which aids individuals in choosing an appropriate routine pattern to enact according to the situation at hand. These two situating processes take as input the interaction among the individual, interpersonal, and environmental aspects at play in that specific moment. Through personalizing roles and customizing routines, role and routine patterns interplay by reinforcing each other as they are brought into defined relations in specific performances.
While these processes will be explored in more detail in section 8.3., the point that I want to make here is that roles and routines reinforce each other in performances, as individuals bring patterns together in their joint enactment. Besides, as already explained in section 8.1., role and routine patterns are connected, routine patterns relying on the existence of role patterns. Sonenshein (2016) claims that individuals personalize routines, taking personalizing as the process of intertwining one’s idiosyncratic background in the performance of a routine. Building on the connection between patterns, however, I argue that, individuals personalize their roles and, in doing so, customize routines. Looking at the internal dynamics of roles, provides a more detailed understanding of how people personalize their roles, and how this influences the routine performances as well.

This study further extends previous research on the interplay by explaining how individuals develop role and routine patterns, through patterning processes. The latter are the processes through which people co-construct, i.e. develop, maintain, and/or change, role and routine patterns following their joint enactment. Again, these patterning processes will be explored in more detail in section 8.3., as they are related to the scene where performances take place.

The argument put forth in this section though, is that as role and routine patterns are enacted together and these performances serve as input to the patterning processes, roles and routines change each other. Although performances are situated, depersonalizing roles and abstracting routines are key processes in ensuring the co-construction of the pool of scripted and unscripted patterns. Flexible performances, feeding into the patterning of roles and routines, also support the maintenance of role patterns and therefore prevent the collapse of organizations. The findings of this study further show that the development of various routine patterns is interrelated with the existence of multiple role patterns, which are not only based on different organizational roles, but also on professional, career-stage and individual roles.

Sonenshein (2016) takes depersonalizing as the avoidance of integrating oneself in a routine performance, which according to the findings of this study would be a situating process. Looking at the internal dynamics of both roles and routines, in opposition to Sonenshein’s (2016) claim that individuals depersonalize routines, I argue that depersonalizing is a patterning process through which role patterns are co-constructed, and which influences how individuals abstract routine patterns. As performances bring together role and routine patterns and trigger patterning processes, the pools of scripted and unscripted patterns are dynamic and co-constructed continuously.
Regarding practical implications, for the emergency department and organizations in general, these findings mean that individuals do not only draw upon the scripted patterns provided by the organization in performing work. Because they enact roles and routines in relation to others, and because situations they face may require it, people will necessarily develop unscripted patterns. Therefore, managers and organizational members alike should acknowledge the existence of different patterns, which will in turn help them understand why and when people do things differently. Probably this could lead to providing support to employees who need to, for example, develop additional skills in order to be able to do their jobs as scripted. This could also help avoid unnecessary frustration among employees who may not understand the reasons why one cannot perform work as expected.

For researchers, these findings emphasize the need to explore the situating and patterning processes in explaining how roles and routines balance the tension of ensuring flexibility in enactments, while supporting consistency in patterns. While the findings of this study provide an initial answer to the call by LeBaron et al. (2016), further studies are needed to develop a more detailed understanding of how individuals align their lines of actions and develop both role and routine patterns.

Having discussed the mutual influence of role and routine patterns, the next and final section goes into the details of performances that trigger situating and patterning processes.

8.3. The scene: individual, interpersonal and environmental aspects

As discussed in chapter 7, role and routine patterns are not enacted in a vacuum. They are situated and enacted in a scene, depending on the individual, interpersonal, and environmental aspects at play in a certain moment. In what follows, I discuss how the scene, consisting of actors, interactions, and stage set, influences the selection of scripted and unscripted, role and routine, patterns for enactment. Further, I discuss how these three aspects guide the patterning of roles and routines. Similar to the structure of previous sections, the discussion is organized around various aspects, namely, individual, interpersonal, and environmental. I address each of these by looking at what we know from previous research, how the findings of this study support and extend what we already know, and the practical implications of this.

Regarding the individual aspect, previous studies have shown that people in different organizational roles hold different routine patterns, therefore enacting routines differently (Cacciatori, 2012; Nigam et al., 2016; Turner & Rindova,
2012; Zbaracki & Bergen, 2010). Individual characteristics, such as experience (Turner & Fern, 2012), creativity (Sonenshein, 2016), skills and the ability to develop role-related skills (Barley, 1990; Morgeson et al., 2005), have been shown to influence the extent to which individuals adapt both their role and routine performances. Some of these studies have shown that certain individual characteristics make for better enactments of roles and routines. For example, cognitive ability and job-related skills improve role performance, as individuals can broaden their roles (Morgeson et al., 2005). The ability to develop new skills, needed to enact new role and routine patterns, also improves performance (Barley, 1990). Furthermore, as the level of experience increases, an individual is said to be better at performing routines (Turner & Fern, 2012). This means that despite performing the same organizational role, individual characteristics help explain why people enact role and routine patterns differently.

The findings of this study support previous research in noting that who the individual is matters. In the previous sections, I have argued that the development of unscripted patterns is related to individual aspects. Here, I further argue that individual aspects also influence which patterns are situated in a performance. I extend previous research by specifying distinct situating processes for roles and routines. Because role and routine patterns are distinct, yet intertwined, and individuals are different, they will personalize roles and customize routines based on who they are. To illustrate, in the same situation, one person may be more risk-averse than others and trust his or her gut feeling, choosing to situate scripted patterns, while another individual may prefer to consult someone with more experience, enacting unscripted patterns. Therefore, even if different people are expected to perform the same patterns, how individuals enact them will differ because of individual characteristics, such as personality, preferences, or skills. I further extend previous research by identifying different individual aspects. It is not only the individual characteristics that matter, but also who the individual is in terms of educational background and career stage. These different individual aspects, in conjunction, is what makes each person unique and one of the reasons for why performances may vary depending on who is enacting the roles and routines.

Besides showing that people matter in how performances unfold, I extend previous research by showing that individual aspects influence the development of a myriad of role and routine patterns through patterning processes. If all organizational members would perform roles and routines the same way, then unscripted patterns would probably not exist. However, because people differ individually, their understandings of roles and routines also differs, to a lesser or larger extent. Uncovering the existence of unscripted patterns therefore extends previous studies by providing a more nuanced explanation for why people perform and understand roles and routines differently. It is not only because
people are different. It is because their differences and agency enables them to develop other patterns than the scripted ones given by the organization.

Apart from the individual aspect, with work being so interdependent, interactions between organizational members is another relevant aspect that influences the performances of roles and routines. Previous studies have shown that because roles and routines are relational, connecting people through social networks, they help develop shared understandings (Barley, 1990; Bechky, 2006; Feldman & Rafaeli, 2002; Turner & Rindova, 2012). As people develop shared understandings about what should be done and why (Dierdorff & Morgeson, 2007; Feldman & Rafaeli, 2002), by taking the role of others, they can align their individual lines of actions in jointly performing roles and routines (Dionysiou & Tsoukas, 2013). Familiarity with other organizational members, given by the experience working together, is said to help to perform routines better (Turner & Fern, 2012). Being able to anticipate each other’s actions (Dionysiou & Tsoukas, 2013) is therefore one way in which the interpersonal aspect influences performances. However, other studies have also noted that organizations working with fluid personnel rely on deindividualized role structures (Klein et al., 2006), as these enable unfamiliar people to coordinate tasks (Bechky, 2006; Valentine & Edmondson, 2015). As roles shape and define interpersonal relations (Klein et al., 2006), these structures are said to counteract the lack of familiarity and ensure the smooth performance of roles and routines.

Building on this familiarity paradox, this study extends previous research regarding the interpersonal aspect in a number of ways. Looking at an organization with a mix of permanent and temporary staff members, this study has allowed to see how individuals with varying levels of familiarity, from not knowing each other to having worked together for years, adapt their enactments of role and routine patterns depending on whom they are working with. While previous research has acknowledged but largely taken for granted the existence of familiarity, i.e. people working together know each other (cf. Okhuysen & Bechky, 2009), I argue that familiarity should not be taken for granted, as it is not always the case that individuals know each other. Independently of the level of familiarity, individuals need to adapt to each other in performing interdependent work. This study therefore extends previous research by addressing how familiarity, and the lack of it, is dealt with in performing roles and routines. By showing how familiar and unfamiliar individuals work together, the findings of this study show how different combinations of unscripted and scripted patterns are situated depending on whom one is working with. I also extend previous research by showing that the development of shared understandings is not always connected to familiarity. Even when people do not know each other, they may develop temporary understandings regarding the task
at hand and therefore situate a combination of patterns that fit with the individuals they are working with, regardless of the level of familiarity.

Further, while previous studies have acknowledged that the interpersonal aspect facilitates the performance of roles and routines, how this is done remains a lacuna. As LeBaron et al. (2016) have noted there is a lack of knowledge regarding how individuals align their actions and develop shared understandings in real time to enable flexible but consistent performances. In terms of the development of shared understandings, the findings of this study show that two patterning processes are used in developing role and routine patterns, namely depersonalizing roles and abstracting routines. These processes help co-construct patterns, not only aiding the development of new ones but also the maintenance and/or change of existing ones. While familiarity has been largely acknowledged to help develop shared patterns, though, how these patterns are situated in performances has been largely overlooked. Adding to this, the existence of multiple patterns has not been studied in terms of how these are brought about in performances and therefore how patterns are situated for enactment. This study addresses this by showing that two situating processes are used in aligning individual actions in situated performances. Considering the interpersonal aspect, individuals personalize roles and customize routines, choosing which scripted and/or unscripted patterns are appropriate to enact in a specific performance. Because roles and routines are relational, their joint performance is a social process, therefore the importance of the interpersonal aspect in selecting which patterns to situate.

A third aspect that has been said to influence how roles and routines are performed, is the environmental one. Previous studies have shown that contextual features, such as job characteristics (Mantere, 2008; Morgeson et al., 2005), career progression and social pressures (Bechky, 2006), enable and constrain the enactment of role patterns and the extent to which individual agency influences performances. Other environmental aspects, such as surprises (Bechky & Okhuysen, 2011) and environmental uncertainty (Faraj & Xiao, 2006), also influence which role and routine patterns are enacted, as organizational members cannot predict unexpected events and still need to be able to adapt to these. In a more radical way, punctual external changes, such as the introduction of new technologies, have also been shown to require individuals to enact new role and routine patterns therefore triggering the development of new, or change of existing, patterns (Barley, 1986, 1990; Edmondson et al., 2001). All these studies show that environmental aspects influence not only the performance but also the patterning of roles and routines. However, most of these studies, highlighting how external changes or structural constraints influence the agential aspect of roles and routines, deem flexibility as adjustments to these environmental aspects and not as an ongoing feature of organizational life.
Moreover, how individuals choose which patterns to enact in response to the environment has been less researched.

The findings of this study support the idea that environmental aspects, which may include any relevant contextual factor to the situation at hand apart from the individuals involved, influence the performance and patterning of roles and routines.

Previous studies take contextual changes as changing patterns in a punctual manner, i.e. role and routine patterns are changed because of a need to adapt to the new context. Contrary to previous studies, I do not take environmental aspects as external changes which require an adaptation of performances in order to reach stability and not collapse. While I have not disregarded this type of changes, in this thesis I have focused on more mundane aspects of the studied context such as the patient condition or acuity, the modes of organizing work, and the use of artefacts, which are part of the daily operations of the emergency department. By doing this, I have shown how individuals adapt to the scene in a continuous manner, due to the influence of environmental aspects, which are ever-changing, and not one-time events. Considering the context, when uncertainty, time and resource constraints are part of the daily work, the environmental aspects are always present. While previous research has noted that environmental aspects influence performance, I extend this by explaining how this happens. Acknowledging that environmental aspects play a role in the choice of patterns to enact, I identified two situating processes through which this happens. The availability of resources, for example, may direct an individual to personalize his or her role and customize routines in different ways: in the middle of the night, a doctor may choose not to call and wake up his or her senior but trust his own judgment, while the same individual may not even doubt to call a senior during daytime. In the same way, environmental aspects influence how individuals co-construct patterns by depersonalizing roles and abstracting routines based on the circumstances. Going back to the resource availability issue, people will develop different understandings of how roles and routines can be performed depending on the shift one is working in.

Overall, and in line with previous research, the findings of this study have shown the relevance of individual, interpersonal, and environmental aspects. Each of these aspects have some bearing in enabling and constraining the situating and patterning of roles and routines.

While this thesis emphasizes the importance of considering the three aspects together in understanding situating and patterning processes, however, previous research has mainly looked at one or two aspects, therefore lacking a holistic understanding of the scene where performances take place. Some studies have,
for example, shown that both individual and external aspects influence role patterns (Barley, 1986, 1990; Morgeson et al., 2005). Morgeson et al. (2005) argue that increased autonomy, which is an environmental aspect, fosters the broadening of roles. My findings add to this by showing how people broaden their roles through the enactment of unscripted role and routine patterns. To illustrate, enacting a stretched routine pattern by adding activities not originally planned is a way of broadening one’s role. I further extend the understanding of role breadth by providing evidence for the existence of temporary role broadening. Because every scene is different and therefore the combination of patterns to enact may differ from one situation to another, individuals may enact patterns which broaden their roles in a specific scene and then go back to enacting scripted patterns or even narrowing their roles. Contrary to Morgeson et al. (2005) who claim that autonomy promotes role breadth, my findings show that even when counting with enough autonomy to broaden a role, if an individual lacks experience for example, he or she may narrow his or her role, instead of broadening it. Thus, adding to their findings, I argue that increased autonomy (environmental aspect), if it is not coupled with skills and knowledge (individual aspect), will not promote role breadth. Nonetheless, when these aspects are considered together, my findings show that individuals do broaden their roles, as it is the case when nurses take over tasks belonging to the doctor’s role.

This study also adds to existing knowledge on the influence of these three aspects on performance, by arguing that it is not only the presence of the singular aspects, but also their combination in a specific situation, that influences which patterns are situated and thus how performances unfold. It might be the case that in certain situations some aspects are more salient than others. Regardless, the three aspects always play a role in how the performance unfolds. The scene thus triggers the selection of patterns, which may be combined in different ways. For example, an individual may relate the current scene to previous ones, because a similar combination of aspects has already been experienced, and therefore choose to situate those patterns which have worked in similar situations in the past. Or a person may encounter a completely new combination of individual, interpersonal, and environmental aspects, which requires the individual to select other sets of patterns to enact. Situating processes therefore do not prescribe which patterns will be selected for enactment but are the means through which individuals link what is happening in the situation at hand to held understandings of roles and routines. Based on this, people personalize their roles and customize routines. Furthermore, individuals will engage in patterning processes following these enactments. The combination of aspects, through situated performances, feeds into and influences the depersonalizing of roles and abstracting of routines, triggering the co-construction of scripted and unscripted patterns.
In addition to this, while the three aspects are always present in a scene, it is in conjunction with each other, i.e. people performing roles and routines in relation to others and to a situation, that they enable a constrained flexibility. Furthermore, counting on scripted and unscripted patterns, which are not set in stone but co-constructed continuously, also allows roles and routines to enable flexible performances. I characterize flexibility as constrained because, even though it has been argued for example that individuals broaden their roles when certain conditions are present (see Morgeson et al., 2005), broadening a role and/or routine may be temporary following the particular scene that individuals are immersed in. Besides, people do not always broaden their roles and routines. As the findings show, individuals may enact shrunk routine patterns when their career-stage role patterns allow for it. Therefore, there is no fixed way of situating and patterning roles and routines, as these will depend on the circumstances faced. Nonetheless, while the existence of a myriad of scripted and unscripted, role and routine patterns means that there exist many possible combinations to enact in a particular scene, the alternatives are not unlimited, therefore the existence of a constrained flexibility. The latter means that the existence of multiple patterns constrain to certain extent the alternatives to choose from, but it also suggests the possibility of flexibility in enactments and in how individuals understand, differently, how the organization operates (Feldman, 2003). Further, as already argued, the alternatives offered by held patterns can be changed (Feldman, 2000; Pentland & Rueter, 1994): re-enacting unscripted patterns over time can lead the organization to make them scripted, or the enactment of random patterns may persist and lead to the development of new unscripted and/or scripted patterns.

Having addressed the scene, and its constituting aspects, from a theoretical point of view, it is important to take this a step further and discuss the associated practical implications. In the previous discussion, I have claimed that who one is (individual aspect), who the staff members working with one are and how they relate to each other (interpersonal aspect), and the contextual elements (environmental aspect) present in a specific situation, influence the ways in which individuals situate, perform, and pattern roles and routines. What does this mean for the emergency department, organizations in general, and researchers?

In terms of practical implications, for emergency departments and other organizations working with fluid personnel, this study shows that differences in individual aspects are at odds with the reliance on deindividualized role structures, which presuppose that roles can be performed by anyone as long as they count with the needed expertise (Bechky, 2006; Faraj & Xiao, 2006; Valentine & Edmondson, 2015). Deindividualized role structures, contrary to what is stated in the literature, do not seem to be enough to ensure the smooth performance of roles and routines. The identification of scripted and unscripted
role patterns shows that the role structure will look different depending on who comes to work, resulting in a (de)individualized structure. In the emergency department studied, managers knew about the influence that having diverse staff members had on how work was performed. However, they still relied on a deindividualized role structure, and left it up to staff members to deal with the contingencies of having to work with different people. Thus, apart from the need to consider the unscripted patterns that people may develop, managers should contemplate the influence that individual staff members, their relations, and the context, have on how work is done. This means that it is necessary to consider the individualized part of the role structure, and thus count on flexible role structures, which provide a structure but also leave room for flexible performances. This may have implications in terms of staffing, which should probably account for unscripted patterns, and not only follow the scripted role patterns assigned to individuals. Moreover, apart from the individual aspect, this type of organizations would benefit from considering the influence of the interpersonal aspect. This study shows that, while familiarity may ensure smooth operations, the lack of it moves individuals to develop unscripted patterns in order to deal with working with people that they do not know. Therefore, it may be advantageous to consider how individuals are staffed depending on the familiarity level, apart from considering individual aspects, such as levels of experience. Having two individuals with little experience on how to perform roles and routines, coupled with a lack of familiarity, is very likely to present obstacles.

For organizations in general, while routines are usually to be performed by individuals who are assigned scripted role patterns, the existence of other nuances means that individuals will develop and enact both unscripted role and routine patterns following the scene. By showing that individuals do not always count with the same level of experience, among other differences in individual aspects, this study suggests that role structures, which consider the diversity of individuals, may be a more appropriate way to organize work in organizations. Further, this means that it might be relevant to account for the lack of familiarity when hiring new personnel or forming work teams. While individual characteristics may counteract the lack of familiarity by enabling unfamiliar individuals to coordinate their tasks, it is more often than not the case that people need time to get to know each other before being able to align their actions.

For researchers, this means that we can neither take for granted that the lack of familiarity will be counteracted by the reliance on role-based structures nor that role structures will help organizations to accomplish work. Instead, there is a need to look at how individual, interpersonal, and environmental aspects influence the ways in which both roles and routines are performed, how they are upheld and changed. In essence, as Barley and Kunda (2001) urged, bringing
work back into organization studies is what will help scholars develop richer understandings of how organizations work.

Having answered the research question motivating this study, i.e. how roles and routines interplay to enable flexible performances, in the next chapter I conclude the study by addressing what we can learn from it. In doing so, I will outline the contributions of the study, implications for theory and practice, limitations and suggestions for further research.
9. Concluding remarks

In this study, I set out to increase the understanding of the interplay of roles and routines in organizations. In doing so, I conducted an organizational ethnography of an emergency department at a Swedish university hospital. The findings of the study, presented in chapters 4 to 7, and summarized in Figure 17 (p. 168), served to answer the main research question posed in the introduction, i.e. how do roles and routines interplay to enable flexible performances? In this chapter, I conclude the study by outlining its key findings, contributions and implications for theory and practice. I further discuss the limitations of the study and ideas for overcoming these, and also provide suggestions for future research.

Discussed in relation to the existing literature in chapter 8, the findings of this study have addressed the three sub questions aimed at bridging the gaps identified in the theoretical background presented in chapter 2.

First, this thesis has provided an answer to the sub question “why are roles and routines flexible?” The findings of this study have shown that because roles and routines consist of, not only one but, multiple scripted and unscripted patterns, which coexist and are different in nature, they provide both structure and the ability to adapt to situations, enabling the enactment of flexible performances.

Second, the findings of this study answer the sub question, “how do roles and routines interplay?” As it has been shown, roles and routines interplay by reinforcing and changing each other, through situating and patterning processes, respectively. On the one hand, roles and routines reinforce each other as individuals bring role and routine patterns together in performances that are situated. Based on the situation at hand, thus, different role and routine patterns come into an interplay, which, once enacted, promote the co-construction of patterns. On the other hand, because role and routine patterns are enacted simultaneously and these performances trigger patterning processes, roles and routines change each other.

Third, the sub question “what contextual aspects influence which patterns come into play?” was answered by delineating different aspects of the scene, i.e. the situation where performances take place. Three aspects, namely individual, interpersonal, and environmental, influence the situation that provides the context for performances, and therefore serve as input to situating processes, and also trigger the patterning of roles and routines.

All together, these three sub questions bridge gaps in current understandings of the interplay of roles and routines, and in turn help to answer the overall research
question posed at the beginning of the study. Roles and routines interplay in and through performances, by means of situating and patterning processes. Their interplay enables flexible performances because roles and routines consist of scripted and unscripted patterns, which are situated together in performances, depending on the context, and which in turn triggers further patterning processes.

Having recapitulated the key findings of this study and answered the research questions posed in the introduction, I now turn to discuss how these contribute to current knowledge and their associated implications.

9.1. Contributions and implications

Following calls to bring work back in, and study what people do in organizations to understand the act of organizing (Barley & Kunda, 2001; Bechky, 2011; Feldman & Orlikowski, 2011), I engaged in an organizational ethnography, which has proven to counteract the shortcomings of relying only on interviews in studying organizational behavior. Apart from being critical to understand how work is accomplished in organizations, engaging in field work has allowed me to explore the role of context, which tends to be taken for granted in organization studies (Bechky, 2006; Johns, 2006). In this section, I highlight five distinct contributions that this study makes and their theoretical and practical implications.

The first, and overarching, contribution of this study lies in providing a framework which delineates the interplay of roles and routines and a vocabulary to explain this.

In their respective literatures, roles and routines have been considered the building blocks of organizations (Katz & Kahn, 1966, 1978; Nelson & Winter, 1982). Nonetheless, apart from studies looking at how they achieve coordination (Okhuysen & Bechky, 2009), their joint role in organizations has not been explored. In addition, as argued in this thesis, the few previous studies that have surfaced a relationship between roles and routines have taken for granted either roles or routines, or both simultaneously, which results in the neglect of the multiplicity of patterns, critical to understand the accomplishment of work (Turner & Rindova, 2012). To the best of my knowledge, this is the first study that approaches roles and routines as dualities of structure and agency and details how they interplay. The framework presented in this thesis has therefore implications for how scholars should understand roles and routines in organizations, as it changes the approaches adopted in these literatures by unpacking both phenomena simultaneously and treating them at the same level.
As reviewed in the theoretical background, certain role theories treat roles as imposed patterns while others treat them as improvised patterns (Biddle, 1986; Handel, 1979; Hilbert, 1981). Yet, a few scholars have suggested that roles are formed by both imposed and improvised features (Bechky, 2006; Powers, 1981). Taking roles as dualities of structure and agency (Callero, 1994; Giddens, 1984), this thesis has helped explained the imposed and improvisational character of roles through the identification of scripted and unscripted patterns. Regarding studies of roles in organizations, the framework and vocabulary presented in this study shows that opening up roles and routines simultaneously helps to understand the effects of roles on the accomplishment of not only individual but also interdependent work, and consequently on the larger organizational context in which roles are embedded.

Regarding the literature on organizational routines, while it has furthered a rich understanding of the internal dynamics of routines, the influence of roles on these has been largely disregarded (cf. Dionysiou & Tsoukas, 2013). The few studies that have looked at roles have taken them as given, as mere job descriptions (cf. Barley & Kunda, 2001). This study therefore has implications for how roles should be studied in relation to routines. Looking at roles as dualities provides a more detailed understanding of routine dynamics and shows that opening up roles helps explain the stability and change afforded by routines based on a variety of role patterns enacted by individuals. This also provides a more detailed explanation to why routine enactments, and the associated patterns, vary.

The framework presented in this study also has implications for coordination studies. This literature has moved towards an understanding of coordination as an emergent, rather than a planned, process (Faraj & Xiao, 2006; Okhuysen & Bechky, 2009) and studies in this field have approached roles and routines in a more balanced manner. Nonetheless, as argued in the theoretical background, they tend to black box both phenomena and focus on their outputs, i.e. how roles and routines achieve coordination. This study, however, shows that taking roles and routines as patterns of action enhances the understanding of how they accomplish coordination, therefore answering the call by Okhuysen and Bechky (2009). This has implications for how scholars study roles and routines, as opening up both phenomena helps to explain coordination as an emergent process rather than as an outcome of means of coordination. Further, such an approach provides a detailed explanation of how roles and routines achieve coordination together through their interplay. This also has implications for coordination studies looking at organizational change, where change is predominantly taken as external, for example a change in technology. Looking at how work is accomplished in an emergent manner requires to also think of organizational change as endogenous and incremental, which complements the predominant focus on change as external.
An overarching implication regards organization theory. This study has restored the concept of roles in organizations, a concept that organization scholars, despite acknowledging its relevance for organizations, have tended to treat as job descriptions (Barley & Kunda, 2001). By taking roles as patterns of action that are situated and negotiated through performances (Bechky, 2006), this study has furthered the understanding of how roles contribute to organizing. Pointing out the benefits of drawing on ideas from other fields, such as sociology, this study suggests that organization scholars may benefit from looking at the internal dynamics of roles in studying organizational behaviour. Further, the conceptualization of roles and routines, and the study of the two phenomena in concert, is another implication that organization scholars should consider. Adopting a common terminology to refer to roles and routines ameliorates definitional issues that have pervaded both literatures (Becker et al., 2005; Biddle, 1986; Cohen et al., 1996; Pentland & Rueter, 1994).

This also has practical implications for organizations. As roles and routines are deeply intertwined, counting with job descriptions on one side, and procedures on the other, only widens the gap in understandings of organizational work held by managers and employees. Taking seriously that roles and routines are performed in concert, therefore coupling the dynamics and effects of roles and routines, instead of taking roles as only defining who does what as part of an organizational routine, can help organizations understand why individuals in the same role may perform work differently and how this provides organizations with the flexibility needed to adapt to circumstances.

Moreover, this can aid both managers and employees in understanding why role boundaries are blurry, which may create conflicts among staff, and routines loosely defined, which leaves room for improvisation, and therefore results in variations in enactments. Understanding that this flexibility is constrained also explains why roles and routines are performed in a seemingly consistent manner most of the time, providing the structure needed for organizations to not collapse.

Furthermore, this has implications for how work is organized. Counting on deindividualized role structures may be useful when other characteristics of the employees do not play a big role in getting work done. However, when knowing that differences among individuals are important, managers should consider developing structures that account for these differences. In particular, this has implications for how work is organized in settings such as the emergency department, where the diversity of employees, in terms of professions, career stages, and individual characteristics, play a role in accomplishing work. This may also be relevant for organizations where individual creativity is considered an asset, as constraining roles too much may hamper the creative side.
The second contribution of this study lies in distinguishing and explaining the situating and patterning processes of roles and routines, and their connections to the joint performances, which take place in a situation characterized by individual, interpersonal, and environmental aspects.

As argued in this study, previous research has largely neglected the implications of jointly studying roles and routines. While studies in the separate fields have further understandings regarding the development of multiple patterns, which influence how performances unfold, little has been done on their joint performance, which results in scarce knowledge regarding the patterning processes (Danner-Schröder & Geiger, 2016). This study therefore contributes to studies on roles, routines, and coordination, in organizations by explaining how the interplay happens in and through performances, by means of situating and patterning processes. Further, it provides a detailed explanation, not only of the situating and patterning processes, but also of how roles and routines reinforce and change each other in and through their interplay.

This has implications for how scholars study work in organizations. In particular, it encourages the study of the joint enactment of role and routine patterns, and the processes of role personalizing and depersonalizing, and routine customizing and abstracting.

Previous research has called for studies that look at the influence of contextual features on role enactment and the development of routine patterns (Dionysiou & Tsoukas, 2013). By emphasizing the role of the situation, this study turns the focus to a number of contextual factors that serve as inputs to both situating and patterning processes. Looking at the situation where performances take place can help identify the sources for the co-construction of role and routine patterns. Because roles and routines are not static entities but instead are co-constructed in a continuous manner, they should be studied as patterns of actions which are situated in a particular context for performance and patterned therefrom.

This also has implications for studies on routine performing and patterning. Most studies on routines take roles for granted and therefore do not allow for the identification of multiple role patterns. In particular, previous studies have failed to account for how individuals align their actions and develop shared patterns that aid them in performing routines flexibly but consistently, in real time (LeBaron et al., 2016). This study suggests that studying people in organizations requires that scholars stop taking roles for granted and instead consider them as dualities of structure and agency. Looking at the internal dynamics of both roles and routines hold the potential to develop a more nuanced and holistic understanding of why individuals develop, and therefore enact, multiple routine patterns. Individuals do not just understand routines differently because they
have different roles in organizations, but because they are different people, they are at different career stages, they have different professions and are socialized into these differently (cf. Dionysiou & Tsoukas, 2013). Therefore, the development of multiple routine patterns, i.e. the abstracting process, is undoubtedly associated to the scripted and unscripted role patterns in an organization. Similarly, this study has implications for how we understand performance variety in routines. Routines are performed in different ways because of the existence and enactment of different role patterns. Through personalizing their roles, individuals customize routines in performances. Scholars can benefit from taking these considerations into account in future studies on performing and patterning.

Another implication of these processes regards the coordination of work. As problematized in this thesis, coordination research has largely neglected the internal dynamics of roles and routines. The findings of this study however suggest that these dynamics should be considered when studying how patterns are accomplished in achieving organizational coordination. Further, coordination studies have acknowledged the adaptability of roles and routines, but largely considered this as a consequence of external changes, such as the implementation of technology (Edmondson et al., 2001), surprises in the environment (Bechky & Okhuysen, 2011), or a problematic patient trajectory (Faraj & Xiao, 2006). By looking at the internal dynamics, this thesis suggests that change in roles and routines can be more endogenous and less drastic than portrayed in current literature.

This also has implications for emergency departments and other organizations. Recognizing which patterns are situated in performances depending on the context may help managers and staff members recognize the need for additional support in order to achieve organizational goals, such as targeted wait times, through the training of staff, for example. Realizing that depending on the situation at hand people will act differently, can help managers to staff teams that work more effectively and efficiently than others. For example, staffing a team with individuals having varying levels of experience and familiarity may be a better option than staffing individuals at the same career stage who do not know each other. Diverse team compositions will trigger situating complementary patterns and therefore foster the development of role and routine patterns, which account for the diversity of staff members.

Depending on the organization, different situational aspects may influence how people work. This study suggests that it is important to consider who the individuals are, the interpersonal relations they build and how they relate to each other, and finally, how the environment, both inside and outside the organization, influences the performance of work. In organizations where teams are more
stable, this may mean that the individual and interpersonal aspects are not as changing as in organizations with fluid personnel. However, there might be other features of the situation that become more prominent and that have an influence on how employees enact their roles and routines and therefore in how they understand them.

The third contribution of this study lies in the categorization of patterns in scripted and unscripted.

Previous studies have acknowledged the existence of multiple role patterns (e.g. Barley, 1990; Bechky, 2006; Dierdorff & Morgeson, 2007) and distinguished different routine patterns based on organizational role patterns (e.g. Cacciatori, 2012; Nigam et al., 2016; Turner & Rindova, 2012; Zbaracki & Bergen, 2010). Despite this, the multiplicity of role and routine patterns and how they interplay has been largely disregarded, which has fostered calls for studies comparing multiple routine patterns across different roles to understand the sources of convergence and/or divergence (Dionysiou & Tsoukas, 2013; Turner & Rindova, 2012).

The categorization of patterns presented in this thesis changes existing understandings in several ways and has implications for the study of stability and flexibility in organizations. In this thesis, patterns have been categorized, according to their nature, into scripted and unscripted. While the former are those patterns given by the organization, the latter are the ones developed by the employees. This is important because it provides an explanation to why individuals co-construct patterns, which are shared, i.e. scripted, and other patterns which may or may not be shared, i.e. unscripted. While previous studies have acknowledged the existence of multiple patterns, this study extends that knowledge by highlighting that patterns may be different in nature. By emphasizing roles and routines as patterns of actions, formed by scripted and unscripted patterns, this study also furthers an understanding of these phenomena as emergent. This is important for both role and routine scholars and suggests that further studies should consider the types of patterns, and study these in relation to different organizational settings. Scholars should explore which patterns are more prominent in an organization, as these are the ones that will shape behaviour (cf. Dionysiou & Tsoukas, 2013) and therefore have an influence on stability and flexibility over time.

Another implication of the categorization of patterns is that routine patterns are different to role patterns, which acknowledges that roles and routines are different phenomena. While unscripted routine patterns are alternatives to performing the scripted pattern of a routine, unscripted role patterns embrace the diversity of individuals and differ in terms of professions, career stages, and
individual characteristics. This has implications for the understanding of the blurriness in role boundaries and the improvisational character of routines.

Furthermore, the categorization of unscripted patterns into different sets has allowed to uncover relationships between role and routine patterns such as that routine patterns are based on role patterns, as individuals perform routines following the roles assigned to them. This has implications for how we study the ostensive aspects of routines. It has been acknowledged that routine patterns are not necessarily shared understandings but that they can be “distributed and partial [...] multiple [...] inconsistent or conflicting.” (Feldman & Pentland, 2008, p. 303) Looking at roles, this thesis has shown that unscripted routine patterns are only variations of the scripted pattern, which may not lead to inconsistencies. Instead, it is the role patterns that can take multiple forms and result in conflicts. Considering that routine patterns are based on role patterns, this thesis therefore implies that studying roles is a necessary step to understand routine dynamics at a deeper level.

This also has implications for the understanding of divergence and convergence of patterns. Dionysiou and Tsoukas (2013) noted that, because individuals belong to different groups, their understandings of roles and routines will diverge, and called for studies that explore how multiple memberships influence the recreation of routines. Besides uncovering scripted and unscripted patterns, this thesis has explored why they exist (due to differences in individual, career-stage, professional and organizational aspects), why people diverge in enactment (e.g. due to differences in professions and career stages) and why they converge (e.g. individuals in the same professional group and same career stage tend to develop shared understandings). As patterns are shared to varying degrees, identifying unscripted patterns and exploring how these are shared and among whom, can help understand groups in organizations. Individuals belonging to the same professional group or the same career stage are more likely to develop similar role and routine patterns compared to individuals in other groups. Thus, considering scripted and unscripted patterns will have implications for how work is organized and accomplished.

The categorization of patterns has further implications for studies on coordination. As it has already been argued, despite recognizing the adaptability of roles and routines, scholars have mainly attributed this to external changes (e.g. Barley, 1986, 1990; Edmondson et al., 2001). Recognizing that unscripted patterns are inherent to roles and routines, and aid flexibility, has implications for how scholars view these phenomena. Instead of taking them as means that help coordinate work, studies in this field should consider that individuals create coordination by drawing on a variety of role and routine patterns, which gives coordination its emergent character.
The identification of multiple, scripted and unscripted, role and routine patterns, is relevant to understand how emergency departments uphold work. Emergency departments are usually portrayed as organized around strong professional roles, which clearly establish boundaries between individuals, and strictly defined routines, which clearly stipulate how work is to be coordinated among professionals. This study has shown that this is only one side of the coin. The other side, the unscripted patterns, breaks with and changes the typical stereotype of emergency departments. Managers usually rely on scripted patterns, leaving it up to the employees to figure out how to deal with contingencies. Acknowledging the existence of unscripted patterns can therefore help managers to see that roles are not merely scripted patterns or job descriptions, and that routines are not simply procedures that people follow at face value.

On a more general level, this insight can aid managers in different organizations in updating job descriptions on a regular basis, taking input from the employees and how they get work done. Maybe it would even be possible to structure the process, and keep roles updated following changes in tasks and responsibilities. In this way, it would be easier to track for example when scripted patterns may become obsolete, unscripted patterns need to become scripted due to their repetitive nature and importance in accomplishing activities, and random patterns emerge as a response to the environment. This can also help both managers and employees in designing staffing procedures, and arranging training and/or team building activities to help everyone share and communicate their held understandings. Furthermore, as managers are rarely engaged in the performance of roles and routines, their understandings of what this entails are likely to be more limited than the patterns held by the people actually engaged in doing the job. Considering both scripted and unscripted patterns, can aid managers and employees in developing approaches to work that are more inclusive, and therefore account for diversity. This can not only help improve the work environment but also reduce the stress related to having to deal with multiple patterns, and as a consequence decrease staff turnover.

Further, organizations can benefit from knowing their employees and the patterns associated and/or developed by them in terms of staffing and training. Recognizing which patterns are more salient in an organization can help in hiring processes, by aiding managers in the selection of individuals who fit better in the organization. Managers should also watch out for unscripted patterns that create role or routine conflicts, as these can hinder the achievement of organizational goals and have consequences for accountability. While unscripted patterns aid individuals in flexibly performing work, too many unscripted patterns may result in role and routine conflicts for staff members. Because managers are rarely directly involved in doing the job, they tend to reduce roles and routines to their
scripted patterns, even when employees may complain about conflicts created by having to deal with unscripted patterns. This study therefore suggests that managers not only acknowledge the existence of unscripted patterns, but also consider how they influence work.

The categorization of patterns is also relevant for educators. If all patterns are important in the everyday practice of organizations, then it would make sense to teach students not only the scripted patterns but also the unscripted ones. Therefore, the existence of different patterns should be reflected in the curricula of educational programs to ensure students have the tools needed for a smoother transition to work.

*The fourth contribution of this study lies in highlighting the effects of patterns.*

As discussed in this thesis, previous studies have failed to account for the simultaneous existence of role and routine patterns. Apart from resulting in a lack of understanding regarding the interplay, and the convergence and divergence of routine patterns held by individuals in different roles, this has limited the understanding of the effects of multiple role and routine patterns on social systems and organizations (Biddle, 1986; Pentland & Feldman, 2005, 2008a; Turner & Rindova, 2012).

By categorizing patterns in scripted and unscripted, this study contributes to current understandings of the overall effects on stability and flexibility. This study also contributes to the conversation on the effects of patterns by identifying more specific effects of unscripted patterns. Professional role patterns have effects in terms of status and professional conduct, career-stage patterns provide individuals with autonomy and power, and individual role patterns provide trustworthiness. Unscripted routine patterns have effects in terms of problem solving (stretched routine patterns), and time saving (shrunk and shuffled routine patterns). All this addresses calls for studies on the effects of having multiple role and routine patterns (Biddle, 1986; Pentland & Feldman, 2005, 2008a). A relevant implication is that researchers need to explore the various effects of patterns more closely than before, as these might hamper the achievement of organizational goals. Further, organization scholars in general may benefit from drawing on the specific and overall effects that patterns have, in explaining for example conflicts in organizations. Understanding what effects multiple patterns have, can help scholars to further understand how and why conflict happens, as patterns with conflicting effects may be enacted simultaneously.

The effects of patterns have also implications for management and training of personnel in organizations. Acknowledging that different patterns can result in
various effects can help managers identify and link patterns to outcomes and therefore work towards promoting the development of patterns which will help accomplish organizational goals. This could be considered when training personnel, or doing team building activities, that help employees develop shared understandings about their roles in organizations and the effects of performing work in certain ways. Additionally, managers should keep in mind that if their employees do not share common understandings on how work should be done, they might act in unexpected ways, to the detriment of organizational goals.

Further, there are practical implications for hospitals and emergency departments. Being one of the missions of university hospitals to train staff members, it is widely accepted that trainees take more time than experienced personnel in getting the job done. The stretched routine patterns identified in this study usually implied that routines were expanded in time, space, number of participants, and costs. In terms of time, all additional activities (calling a senior, taking more tests) mean additional waiting time for everyone. The total time involved in performing the routine thus becomes longer. In terms of space, junior doctors involve other specialists and senior doctors in the organizational routines through consultations, individuals who are physically outside of the emergency department. As these other doctors are generally somewhere else in the hospital or even sleeping at home (some of the on-call doctors), it means that routines are expanded in space. The number of routine participants is also expanded, as more people are involved in doing these additional activities: lab staff is needed to run the extra tests, and senior doctors are involved in diagnosing the patient. Finally, the costs involved in performing routines also increase, as more activities and more staff mean more expensive routines. While this is unavoidable, it results in social and economic impacts. Acknowledging the effects that different patterns have can help to influence the length in patient stays in a positive way and therefore help organizations to be more efficient in terms of time and costs.

The effects of patterns also have implications for the society and governments. Wait times in emergency departments have become a societal issue worldwide, not only because of the effects that waiting can have on the patient’s health condition but also for the excessive and unnecessary costs it carries (Hayden, Burlingame, Thompson, & Sabol, 2014; Rowe et al., 2011). In countries such as Sweden where healthcare is largely taxpayer funded, misusing the services just increases costs unnecessarily. This cannot be put on the people’s shoulders only, as many times, individuals believe their symptoms are acute enough to go to the emergency department, they go there because it is the only place to turn to in the middle of the night, or maybe they do not know what counts as emergency and what does not. Governments should probably take initiatives to educate people about where to turn to in which case.
The recognition of effects of patterns is also relevant for educators. Understanding that people co-construct multiple role and routine patterns, which can have a variety of effects on how work is done, can help in designing educational programs that account for these differences. This would help nursing and medical students to incorporate such knowledge in their socialization processes from the beginning of their education, which would hopefully smooth the transition to the job market. Besides, this also has implications for practitioners. Learning that how one performs roles and routines results in different effects, may raise awareness and aid individuals in choosing how to do their jobs. Similarly, this could help managers and students of business administration to understand why outcomes may vary and design solutions that can contribute to decrease wait times and increase efficiency.

*The fifth and last contribution of this study lies in considering the context and its role in understanding how work is accomplished.*

Scholars have emphasized that the influence of context on organizational behaviour is easily overlooked (Bechky, 2006; Johns, 2006), which ignores the fact that work practices are situated (Barley & Kunda, 2001). One key contextual feature regards familiarity, which has been acknowledged to play a critical role in successfully performing roles and routines, as it allows individuals to trust each other and anticipate each other’s actions (Okhuysen & Bechky, 2009). However, the existence of familiarity is commonly taken for granted. This is at odds with many organizations that work with fluid personnel or have high staff turnover, as this complicates the development of familiarity among employees (Bechky, 2006; Valentine & Edmondson, 2015). The lack of familiarity in turn is seen as an obstacle to coordination (Okhuysen & Bechky, 2009). In addition, disregarding the context means that other features are also easily neglected. For example, as this study has shown, unscripted patterns are developed in dealing with unplanned contingencies, and the co-constructed patterns are tightly related to the context in which they are performed. This has implications for studies of work in organizations, as it is common to disregard informal patterns that emerge as responses to uncertainty (Okhuysen & Bechky, 2009).

This study thus contributes by identifying several aspects of the context which have a bearing in how roles and routines are enacted and patterned. It is the context, including the individual, interpersonal and environmental aspects, which trigger the co-construction of multiple patterns, and enable individuals to anticipate and/or adapt to others’ actions regardless the familiarity level. This focus on the context thus has implications for how we understand performance of roles, routines, and how coordination is achieved. It further implies that organizational behaviour should be studied in relation to the context.
This also has implications for the study of routines. Scholars have called for studies that evidence the influence of varied contexts on routine performance (Dionysiou & Tsoukas, 2013; Parmigiani & Howard-Grenville, 2011). Several studies on routines explore traditional organizations where there is little or no rotation of staff and turnover and therefore also tend to assume the existence of familiarity. This also has implications for coordination studies, which also tend to assume that co-workers know each other, taking familiarity for granted (Bechky, 2006; Okhuysen & Bechky, 2009). By looking at an emergency department, where personnel rotate through on a daily basis, and which employs and staffs their permanent employees but also receives temporary staff from other departments, this study challenges that assumption by showing how individuals coordinate their work regardless of the level of familiarity (cf. Bechky, 2006). Examining non-traditional settings therefore may require a focus on roles or other organizational phenomena in order to explain routine dynamics at a deeper level.

For emergency departments, counting with different work modes, employing permanent and temporary staff, and staffing them on a random basis, may make the work environment worse by adding stress and uncertainty. While little can be done about the environmental aspect, in terms of incoming patients as it is impossible to predict the number of patients that will arrive at any point in time, their symptoms and acuity, managers might be able to staff people in more stable teams for short periods of times so as to help them develop shared understandings, familiarity and hopefully a sense of belonging.

In other organizational settings, the environmental aspect may be easier to influence or control, therefore reducing the associated uncertainty. Regardless of the setting, knowing that individual and interpersonal aspects also have an influence on how work is done, provides practitioners with an advantage. Understanding these aspects can be useful in staffing teams, as by embracing the diversity of individuals, managers can put teams together depending on the individual characteristics and relations. This understanding can also be used in designing team building activities so as to raise the awareness of the influence of these aspects on how work is done.

Further, while the contexts in which organizations are immersed may vary, this study can be of use to managers in identifying which features are more relevant in their organizations, and thus provide them with the knowledge needed to realise that while some aspects cannot be changed, for example one cannot control what one cannot predict, others allow for managerial intervention. This may also have implications for the design of roles and routines, as certain contextual aspects will require more or less flexibility in performing work.
This is also relevant for educators. While the environmental uncertainty surrounding certain organizations is usually well understood, teaching medical, nursing, and business students about the influence of individual differences and interpersonal relations on the accomplishment of work, can help them prepare better to deal with an ever-increasing diverse workforce.

Having discussed the contributions and implications of the study, in what follows I highlight its limitations and suggest areas for further research, which could be fruitful to explore in further advancing the understanding of the interplay.

9.2. Limitations and suggestions for further research

This study is of course not without limitations. In what follows I first discuss issues that could have been better and how these could be overcome in future studies. Then, I turn to suggest further avenues for future studies, which although outside of the scope of this study, seem relevant to explore in relation to the interplay of roles and routines.

One of the most common challenges in doing ethnographic studies is getting access to organizations (Hammersley & Atkinson, 2007). As discussed in chapter 3, however, I got access to the emergency department quite easily. Nonetheless, this did not automatically grant me unlimited access, which represented a limitation, as I had to negotiate it with every single individual involved in my study and I did not get access to all the individuals I would have liked to. For example, I would have liked to interview AT doctors (juniors) but despite my insistence, I did not get anyone to accept an interview. While this was counteracted with my field visits, as I did observe staff members in every role, I believe that getting access to formally interview them would have enriched this study.

Another limitation of this study is its focus on staff members. While it would have been difficult, and challenging from an ethical point of view, to study the development of patterns from a patient perspective, as their visits to the emergency department are usually one-time events, other healthcare organizations may offer the possibility to study this, as evidenced by the study by Heaphy (2013). This could also be studied from a customer/client perspective in other organizations, considering that relationships are more stable or long-term than in an emergency department. Furthermore, although this study has looked at temporary staff members and individuals at other hospital departments interacting with permanent staff at the emergency department, it would be interesting to study how patterns are developed across different departments in organizations. Physical proximity and familiarity are two aspects that may influence the development of different patterns. Additionally, while I did
interview some of the managers, not being involved in the daily operations of the emergency department limited their participation in this study. As the findings are relevant for management, further research could look more in depth into their perspectives, as they are likely to co-construct other unscripted patterns than the ones held by staff members.

The language barrier could also be said to represent a limitation in this study. Even though, as extensively discussed in chapter 3, I did not find this problematic, one could argue that speaking the native language could have given me access to more staff members. It would not be strange to speculate that some people may have disagreed to participate in the interviews because they were held in English. As it has been suggested, this is a limitation that researchers should keep in mind when doing cross-language qualitative research, which can be overcome by using translators or interpreters (Squires, 2008, 2009).

As other empirical studies in organization theory, this thesis relies on the study of a single organization. As problematized in this thesis, the lack of research on the interplay of roles and routines required an in-depth explorative study (Robson, 2002). While I believe that it would not have been possible to reach the findings of this thesis without immersing myself in the organization and studying it for a long period of time, it is also valid to have considerations regarding the transferability to other departments, organizations or contexts. As already argued, I do not confine my findings to the specific context where the study took place. Nonetheless, I believe that the role and routine patterns developed in other organizations may look different. An avenue for future research is therefore to further elaborate on the findings of this study by examining not only other emergency departments but also other organizational settings in different contexts.

Apart from reflecting on the limitations of this study, throughout my research process, many ideas came up that, although outside of the scope of this thesis, represent opportunities for further research.

First, while the patterning processes presented in this study point at the possibility of change, how and when patterns are changed have not been in focus. While this was outside the scope of the thesis, it is an interesting area for future research. This study suggests the existence of incremental changes in scripted patterns due to the co-construction of unscripted patterns. Through situating and patterning processes, incremental changes in patterns may occur. However, unscripted patterns may not be enough or applicable in all situations and therefore new scripted patterns may need to be developed to uphold work. Radical pattern changes, which require the development of new patterns, may derive from the introduction of new technology, for example. This did happen in
the emergency department studied. A new software system for patient tracking was introduced but the management did not consider this to be such a dramatic change as to adapt the existing, or create new, scripted role and routine patterns. As this was a case that in fact did require a radical pattern change, the implementation of the new technology failed in the beginning. It was not until the management realized that the software was not merely replacing the manual way of tracking patients, but the interactions among staff members and therefore the patterns needed to be enacted to accomplish work, that the implementation worked. Future research could therefore look into radical changes and how these influence role and routine patterns. Furthermore, the shift from incremental to radical changes can be an interesting area to explore.

Second, behind the scope of this study but relevant for further research is the temporality of patterns. As argued throughout this thesis, scripted and unscripted patterns are continuously co-constructed through situating and patterning processes. Thus, despite being stable in the sense that these patterns persist over time, they are also flexible, as each performance may trigger the modification of existing patterns. However, patterns can also be temporal, i.e. limited in duration. For example, due to the rotation of staff it is likely that individuals will work with people that they do not know. Still, even if working with someone for the first and last time, one would most likely work a whole shift with that individual, as people are staffed in teams. Therefore, an individual may still develop a pattern associated to that person, especially if the person does not enact the scripted patterns as expected. Therefore, individuals may develop temporary role patterns associated to new or temporary staff members. On the contrary, having worked with a colleague for a long time may mean holding permanent patterns associated to that individual. By permanent I mean patterns that are lasting, that do not change drastically unless something out of the normal happens repeated times. More research could shed light on this issue, by studying organizations with different staffing practices.

Third, I believe that culture, both national and organizational, may have an influence on which patterns are co-constructed and enacted, and which patterns are repressed. In the studied organization there was no clear organizational hierarchy between staff members. The only hierarchy that could be seen to certain extent was the professional one, as doctors had authority over nurses regarding medical decisions. At the same time, it was clear that there existed an informal hierarchy on the other direction, i.e. nurses over daytime doctors, as nurses were part of the permanent staff and therefore knew how the emergency department worked. Regardless, these power influences remained latent unless a conflict that would make these hierarchies visible came up. From my understanding, this is very much part of the Swedish culture. Thus, it would be interesting to see how
the dynamics play out in different organizations and cultures where power distances are more prominent.

Fourth, and related to the previous, while I have acknowledged the existence of power dynamics, power was not central in this study. However, I could not refrain from seeing it popping up in my data. Power evidenced itself in the development of patterns, in the enactments, and in the relations between different groups, among others. A suggestion for further research would therefore be to study the influence of both formal and informal power, not only on the interplay, but also on the unscripted patterns that are developed and enacted in organizations. One could speculate that, because certain individuals or groups have more power than, or power over, others, what patterns are co-constructed are influenced by this. At the same time, individuals or groups which lack power or are less powerful, may not be able to materialize the development of role and routine patterns from their perspectives but instead have to adopt the patterns developed by more powerful people. In relation to this, another area for further exploration is that of legitimization. Individuals are likely to undergo legitimization processes, which may result in positive (role legitimization) or negative (role deligitimization/stigmatization) outcomes. While the former outcome may be considered desirable, and vest individuals with power, the latter may put individuals in a position of having to deal with conflicting role patterns, as due to the lack of power they may have to adopt other patterns. I believe that the findings of this study can further shed light on conflict resolution. In particular, the acknowledgment of unscripted patterns in relation to power and legitimization, may help understand power struggles in organizations and help resolve them.

Fifth, as discussed in the findings, this study has argued that how individuals are socialized into their roles will have an influence on their learning processes and therefore on the patterns they develop. Considering that different experiences lead to the co-construction of different patterns, organizational learning could be a fruitful area to further explore in understanding the influence and effects of multiple patterns on organizations. Particularly relevant are practice approaches to organizational learning, which treat knowledge as the practice of knowing, that is entangled with doing, rather than as an entity that is external to individuals (see e.g. Gherardi, 2000, 2011). Such approaches highlight the importance of studying situated activities as performed by skillful participants (Lave, 1993), which is in line with the approach adopted in this study.

Last but not least, another suggestion for further research is to explore sensemaking in the interplay of roles and routines. My findings indicate that sensemaking, the process that individuals or groups go through when interpreting novel and ambiguous situations (Weick, 1995; Maitlis & Christianson, 2014), is a useful theoretical lens to further dig into the situating
and patterning processes involved in the interplay. While I have identified three contextual aspects that influence these processes, sensemaking can help to further detail how individuals engage in situating and patterning processes. Divergences between expected and actual behaviours may serve as cues that individuals extract from the environment in order to make sense of the situation (Weick et al., 2005) and engage in situating and patterning processes. Further, because sensemaking is a process triggered by violated expectations (Maitlis & Christianson, 2014), situated performances where such violations take place are likely to result in the change and/or creation of role and routine patterns. Thus, adopting a sensemaking lens can be helpful to understand the tacit knowledge involved in performances. In fact, routines have been referred to “as sense making repetitions” (Reynaud, 2005, p. 855), even if research connecting routines and sensemaking is notably scarce (Maitlis & Christianson, 2014).

### 9.3. A final remark

Far from being perfect, this thesis was an attempt to explain the interplay of roles and routines in understanding the act of organizing. The findings presented show, probably one out of many ways, in which individuals perform their work in organizations. I believe that looking at what people do in organizations can greatly improve our understanding of work, and enable researchers to better support practitioners in dealing with the challenges and opportunities posed by the vast number of patterns of action performed in organizations on a daily basis.
References


Feldman, M. S., & Rafaeli, A. (2002). Organizational routines as sources of


### Appendix 1. Studies of roles and routines in organizations

<table>
<thead>
<tr>
<th>Author/s</th>
<th>Research question</th>
<th>Context</th>
<th>Method</th>
<th>Key findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edmondson, Bohmer, &amp; Pisano (2001)</td>
<td>How are new behaviours and routines developed when implementing technologies?</td>
<td>16 US hospitals</td>
<td>Case study: interviews, archival clinical data</td>
<td>The old routine reinforced status relationships. The new technology changed the tasks to be performed, blurred role boundaries and demanded increased interdependency putting all roles at the same status level. Implementation success was only feasible if embracing the changing relationships.</td>
</tr>
<tr>
<td>Faraj &amp; Xiao (2006)</td>
<td>How is knowledge work coordinated in fast-response organizations?</td>
<td>Medical trauma centre</td>
<td>Case study: interviews, observation, documents</td>
<td>Expertise practices, e.g. reliance on routines and role structures, enable knowledge and skill coordination. Yet, when things do not go as planned, dialogic practices help bring work back on track by blurring role boundaries and enabling joint resolution independently of specialty.</td>
</tr>
<tr>
<td>Dierdorff &amp; Morgeson (2007)</td>
<td>How does context influence consensus in role expectations?</td>
<td>US labour force</td>
<td>Survey of 20,057 incumbents working in 98 different occupations</td>
<td>The higher the interdependence and autonomy, the less consensus regarding role tasks, i.e. individuals define their role enactments. The routinization of tasks enhances consensus.</td>
</tr>
<tr>
<td>Bechky &amp; Okhuysen (2011)</td>
<td>How do organizations develop the collective resources needed to continue with work after a surprise?</td>
<td>One police SWAT team, and four film production crews</td>
<td>Case study: interviews, observation, documents</td>
<td>Crew members use organizational bricolage in handling surprises. Shared understandings developed among individuals enable them to shift roles, switch routines, and reassemble work in response to unexpected events.</td>
</tr>
<tr>
<td>Authors</td>
<td>Question</td>
<td>Methodology</td>
<td>Findings</td>
<td></td>
</tr>
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<td>-------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Cacciatori (2012)</td>
<td>How are new routines developed?</td>
<td>Engineering design firm</td>
<td>Interactions among artefacts guide agency in redesigning an organizational routine. Occupation-specific artefacts create conflicts between roles leading to a partial adoption of the new routine.</td>
<td></td>
</tr>
<tr>
<td>Turner &amp; Fern (2012)</td>
<td>How does individual experience shape routine performance?</td>
<td>Municipal garbage collection</td>
<td>Experience performing a routine promotes stability and increases the individual’s ability to adapt in the face of contextual changes.</td>
<td></td>
</tr>
<tr>
<td>Dionysiou &amp; Tsoukas (2013)</td>
<td>How are routines (re)created from within?</td>
<td>Conceptual paper</td>
<td>Through role taking individuals develop shared schemata, which guides them in aligning their individual lines of actions in jointly performing routines.</td>
<td></td>
</tr>
<tr>
<td>Valentine &amp; Edmondson (2015)</td>
<td>How do new mesolevel structures affect coordination in temporary role-based groups?</td>
<td>US emergency department</td>
<td>Team scaffolds enable coordination among fluid personnel even when membership stability is lacking. These structures promote prioritization of group efforts, communication on progress, accountability, and mutual help.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2. Confidentiality agreement

Sekretessförbindelse

Sekretesslagens bestämmelser måste följas av alla som arbetar inom hälso- och sjukvården. Hit hör till exempel:

- Vårdpersonal
- Städpersonal
- Administrativ personal
- Vaktmästare
- Teknisk personal
- Elever och praktikanter
- Övriga, t. ex. tolk

Utomstående som mer eller mindre tillfälligt arbetar i sjukvårdslokaler skall informeras om sekretesslagens huvudregler.

Den som avslutar sin anställning är fortfarande bunden av sekretessen eftersom den gäller för all framtid.

Huvudregel

Sekretess innebär förbud att lämna ut en uppgift muntligt, skriftligen eller på annat sätt. Sekretessen gäller både mot enskilda personer och mot myndigheter.

Sekretess i vården innebär:

- Uppgifter om en patients hälsotillstånd eller andra personaliga förhållanden är hemliga. Med "andra personliga förhållanden" menas t.ex. sociala förhållanden, ekonomi, medicinering, arbetsförmåga, karaktär och att patienten vårdas på sjukhus.

- Uppgifterna är hemliga både under och efter vårdtillfället.
• Uppgifterna är hemliga även för arbetskamrater som inte är inblandade i vården av patienten.

Genom att bryta om denna förbindelse om tystnadsplikt ädrar man sig ett personligt skadeståndsansvar samt att krav på skadestånd kan komma att riktas mot min arbetsgivare.

I övrigt, se sekretesslagen.

Har tagit del av informationen om tystnadsplikten och förstått

Ort: ........................................  Datum:.................................

..........................................................  ..........................................................

Namn arbetstagaren  Sjukvårdens representant

..........................................................

Personnr arbetstagaren
Appendix 3. Interview guide in English

Name:

Age:

Gender:

Position/job title:

Introduction - Own role

1. Could you please introduce yourself? What is your professional background?

2. How long have you worked in the emergency department? How are your shifts scheduled?

3. Could you describe a typical day at work? [Follow up on responsibilities, day/night, sections/triage]

4. Have you worked somewhere else before? Can you compare the two workplaces in terms of your job? What were your responsibilities/tasks?

Working with different people

5. What are the different “job positions” in the ER?

6. Could you describe the process a patient goes through since he/she arrives to the ER until he/she leaves? What activities are you responsible for?

7. Is there anyone else responsible for the patient? How do you collaborate? Who has authority to make decisions? Are there any tasks you need approval for before doing? Is this different in different situations/with different patients?

8. Could you recall your first days/weeks working at the ER? [Follow up on job application, theory/practice, previous knowledge] Did you get any introduction to the workplace? How did you learn how to do your job? How did you learn e.g. to triage a patient?
9. Let’s say a new [nurse, doc] starts working and you are assigned as the tutor. How do you introduce the new person to the ER and his/her responsibilities?

10. What happens when you don’t know how to do something? How do you deal with that?

11. Let’s say you get a call from the ambulance saying they are bringing in an acute patient. Could you describe how the process unfolds from the call until the patient is discharged? Does this unfold in different ways depending on the patient?

12. How is it to have two different work shifts [section vs. ER]?

13. How does your working day start [assignment to sections]?

14. Let’s say in a certain shift you have to work with a new [doctor/nurse]. Could you describe how that is compared to working with someone that is experienced?

15. Could you give me an example of a situation when you had to work with someone you didn’t know?

16. What happens when you are working with someone that doesn’t know how to do his/her job? Or when he/she knows how to do it but doesn’t do it? How do you deal with this? What happens when you are working with someone who is used to do things in a different way (maybe trained in another hospital/country)?

Wrap-up

17. Anything else you would like to add or ask?
Appendix 4. Interview guide in Spanish

Nombre:

Edad:

Sexo:

Puesto de trabajo/título:

Introducción – Rol propio

1. ¿Podrías presentarte? ¿Cuáles son tus antecedentes profesionales?

2. ¿Cuánto tiempo has trabajado en el servicio de urgencias? ¿Cómo se programan tus turnos de trabajo?

3. ¿Cómo es un día típico en el trabajo? [responsabilidades, día/noche, secciones/triage]

4. ¿Has trabajado en algún otro lugar antes? ¿Puedes comparar los dos lugares de trabajo, en términos de tu trabajo? Cuáles eran tus responsabilidades/tareas?

Trabajando con distintas personas

5. ¿Cuáles son los diferentes puestos de trabajo en el servicio de urgencias?

6. ¿Podrías describir el proceso que atraviesa un paciente desde que él/ella llega al servicio de urgencias hasta que él/ella se va? ¿De qué actividades eres responsable?

7. ¿Hay alguien más que sea responsable por el paciente? ¿Cómo colaboras con ellos? ¿Quién tiene autoridad para tomar decisiones? ¿Hay alguna tarea para la que necesites aprobación antes de realizarla? ¿Cambia esto dependiendo de la situación/paciente?

8. ¿Puedes contarme cómo fueron tus primeros días/semanas en el servicio de urgencias? [solicitud de empleo, teoría/práctica, conocimientos previos] ¿Recibiste alguna introducción al lugar de trabajo? ¿Cómo aprendiste a hacer tu trabajo? ¿Cómo aprendiste, por ejemplo, a hacer el triage a un paciente?
9. Supongamos que un [enfermero, doctor] nuevo empieza a trabajar y te asignan como su tutor. ¿Cómo lo introduces al servicio de urgencias y sus responsabilidades?

10. ¿Qué pasa cuando no sabes cómo hacer algo? ¿Cómo lidias con eso?

11. Supongamos que recibes una llamada de la ambulancia diciendo que vienen en camino con un paciente grave. ¿Podrías describir cómo es el proceso desde que recibes la llamada hasta que el paciente se va? ¿Hay alguna diferencia en este proceso dependiendo del tipo de paciente?

12. ¿Cómo es tener dos turnos de trabajo diferentes [sección vs. ER]?

13. ¿Cómo comienza tu jornada de trabajo [asignación de secciones]?

14. Supongamos que en un cierto turno tienes que trabajar con un [médico/enfermera] nuevo. ¿Podrías describir cómo es comparado con trabajar con alguien que tiene experiencia?

15. ¿Me podrías dar un ejemplo de una situación en que tuviste que trabajar con alguien que no conocías?

16. ¿Qué ocurre cuando estás trabajando con alguien que no sabe cómo hacer su trabajo? O cuando él/ella sabe cómo hacerlo, pero no lo hace? ¿Cómo lidias con esto? ¿Qué ocurre cuando estás trabajando con alguien que está acostumbrado a hacer las cosas de una manera diferente (tal vez entrenado en otro hospital/país)?

Cierre

17. ¿Hay alguna otra cosa que quisieras agregar o preguntar?
<table>
<thead>
<tr>
<th>Patient 1</th>
<th>Patient 2</th>
<th>Patient 3</th>
<th>Patient 4</th>
<th>Patient 5</th>
<th>Patient 6</th>
<th>Patient 7</th>
<th>Patient 8</th>
<th>Patient 9</th>
<th>Patient 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>RN calls patient in reception</td>
<td>AN talks to patient in reception</td>
<td>RN asks what happened</td>
</tr>
<tr>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient goes in triage room (baby)</td>
<td>Patient's wife tells story</td>
</tr>
<tr>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
<td>RN asks what happened</td>
</tr>
<tr>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
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<td>RN asks routine questions, fills in registration and first part of triage forms</td>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
<td>RN asks routine questions, fills in registration and first part of triage forms</td>
</tr>
<tr>
<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
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<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
<td>RN takes vital parameters and writes results in white form</td>
</tr>
<tr>
<td>AN calls pediatrician</td>
<td>RN gives dad a survey</td>
<td>RN asks patient for an urine sample</td>
<td>RN starts checking vital signs</td>
<td>RN's phone rings. Call from emergency number</td>
<td>RN goes to medicine office and reports the patient</td>
<td>Patient goes to toilet</td>
<td>RN checks for a free room</td>
<td>AN talks to patient in reception</td>
<td></td>
</tr>
<tr>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
<td>RN informs about future steps</td>
</tr>
<tr>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
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<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
<td>Patient goes to waiting room</td>
</tr>
<tr>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
<td>RN goes to children office</td>
</tr>
<tr>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN writes patient in list and leaves triage form</td>
<td>RN and AN go out to entrance</td>
</tr>
<tr>
<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
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<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
<td>RN and AN go back to triage room</td>
<td>RN and AN go out to entrance</td>
</tr>
</tbody>
</table>
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