‘GET the oxygen get an airway’: Doing leadership in medical emergencies

by

Polina Mesinioti

A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Applied Linguistics

Applied Linguistics

University of Warwick

October 2021

Table of Contents

List of Tables

List of Figures

Acknowledgments

This thesis would not be possible without the support of many people, whom I would like to thank here.

First and foremost, I would like to express my gratitude to my supervisor, Professor Jo Angouri, for generously sharing her knowledge, time, and energy, and for being so much more than a fantastic supervisor. Thank you, Jo, for supporting me in all aspects of academic and personal life, and for being such an important part of this journey! I am grateful for all the teaching moments and hope I can continue learning from you.

I would also like to thank my second supervisor, Professor Dimitrios Siassakos, for his support and guidance and for allowing me to work and publish on the *SaFE* dataset. I am also grateful to Dr Chris Turner for all the support and for making time for long conversations despite his extremely busy schedule. My work has benefited greatly from their valuable insights into the medical context.

I owe very special thanks to the participants of the *TeamLeader* project, not only for taking part in the study, but also for being extremely generous and helping me in all possible ways during the data collection. They inspired me to work harder; this thesis would not be possible without them.

This work was supported by the *Economic and Social Research Council* (*ESRC*) [grant number ES/J500203/1].

Thanks are also due to colleagues and friends for the discussions and feedback on earlier drafts of the work, but, more importantly, for reaching out in difficult times and making me laugh. Thank you for listening; you are an amazing support network.

Finally, my heartfelt gratitude goes to my family, my brother, Haris, and my parents, for their unconditional love and support. My mother has always been by my side and empowers me to pursue my dreams. Ευχαριστώ, μαμά, για όλα έκανες και συνεχίζεις να κάνεις! A belated thank you to my father, too, who has always been there for me, but will not see the end of this adventure. He is greatly missed, and this thesis is dedicated to his memory.

Declaration

This thesis is submitted to the University of Warwick in fulfilment of the requirements for the degree of Doctor of Philosophy. I confirm that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree at another university.

Abstract

Leadership in medical teams is a multifaceted phenomenon which has significant implications for patient safety and quality of care. Although vastly investigated, leadership remains a debated concept and relatively few studies take an interactional, sociolinguistic approach especially in the context of medical emergencies. When it comes to the embodied performance of leadership, the gap is even more prominent, as previous linguistic research has prioritised talk over other semiotic resources of meaning. Viewing leadership as enacted in the situated interaction, this thesis examines the ways in which the designated team leaders claim a leadership role (or not), with a particular focus on how staff members position selves in the material space of the emergency room. The study takes an Interactional Sociolinguistics approach and brings together video recordings of simulated obstetric emergencies and ethnographic observations and audio recordings from real-life trauma emergencies, in order to shed light on the, largely understudied, multidisciplinary ad hoc teams negotiating leadership in situ.

The findings demonstrate that leadership is claimed, resisted, and negotiated discursively in the material space of the emergency room. The analysis illustrates the ways in which linguistic devices, notably directives and questions, are consistently mobilised by team leaders across datasets for allocating tasks and turns, controlling the conversational floor, and ultimately, *doing* leadership. These are intertwined with positioning in the material space, in which team leaders consistently demarcate certain material zones as their zones of expertise. The study's methodological innovation lies in illustrating an approach for systematically studying positioning in the material space, even across different contexts and data collection methods. The findings also add to the existing body of sociolinguistic literature on discursive approaches to leadership, and build on and expand earlier conceptualisations of leadership as embodied. Positioned in the field of health sociolinguistics, this work is relevant to both workplace discourse analysts and healthcare professionals, and aims to contribute to healthcare research and feed into medical training.

Chapter 1: Introduction

This thesis investigates how leadership is enacted by ad hoc teams in the context of medical emergencies. Taking a discursive approach, which views leadership as enacted in the situated interaction, I aim to provide an insight into the discursive strategies mobilised by healthcare professionals for *doing* leadership, with the primary focus laid on the role of the institutionally defined team leader. Particular attention is paid to staff members' positioning in the material space of the emergency room, considering it an integral part of enacting any professional role.

I position my work in the field of health sociolinguistics and aim to make an original contribution to healthcare research. I set the scene below by illustrating how linguistic research is relevant to and beneficial for the healthcare sector. I provide the background and rationale for this project, followed by the research aim and questions that I seek to address. I then frame the research context and conclude this chapter with a brief overview of this thesis to signpost the reader.

1.1. Setting the scene; health linguistics

In this section I reflect on what linguistics can bring to health research, as well as the current gap that my work aims to start addressing. I begin with providing evidence on the significance of health communication, as defined and described in medical literature. I continue with critiquing the conceptualisation of communication as separate from clinical practice, which remains the dominant praxis in the healthcare sector. I self-identify as a sociolinguist and have thus framed the discussion as such. I acknowledge, however, that positioning work under the *sociolinguistics* or *applied linguistics* labels is often a matter of terminology and the boundaries between the two are porous. I return to this point as I discuss relevant research later on. I have included in the discussion relevant literature from medical studies to provide connections between linguistic and medical research.

1.1.1. The significance of health communication; the evidence

The significance of communication in healthcare and its impact on patient safety and quality of care is equally recognised by linguists and healthcare professionals. On the one hand, linguists have been arguing for quite some time now that most of the healthcare encounter is accomplished through language (cf. Sarangi, 2010a), and that most aspects of illness and healthcare are inherently linguistic in nature (Demjen, 2020). Medical literature, on the other hand, has convincingly illustrated, in the last thirty years or so, the impact of – the broadly labelled – communication on: a) patients, b) staff members, and c) institutions. To begin with

patients, there is now a good body of work providing evidence on how effective communication between physicians/medical teams and patients improves patients' self-management (Heisler et al., 2002), adherence to treatment (Zolnierek and Dimatteo, 2009), participation in their care (D'Agostino et al., 2017), and perceptions of care (Wanzer et al., 2004); taken together, all the above have a direct benefit on patients' health. As for staff members, good communication within their teams has been shown to result in lower turnover rates (Lein and Wills, 2007), smaller risk of burnout (Darban et al., 2016), and higher levels of job satisfaction (Vermeir et al., 2017).

What further underlines the significance of studying – and improving − communication in healthcare, is its link with increased patient safety; Manser's (2009) review on teamwork in secondary healthcare contexts brings evidence on the relationship between teamwork and the causation and prevention of adverse events, while effective communication is also linked to increased diagnostic accuracy in Verónica et al. (2018). In the same vein, De Meester et al. (2013) trained nurses to use the SBAR (Situation; Background; Assessment; Recommendation) tool with physicians, with their findings demonstrating nurses' increased perceptions of effective communication and collaboration, as well as a decrease in unexpected deaths.

Increased patient safety does not only directly benefit patients and professionals, but has significant implications for the institutions, too, as it reduces malpractice and litigation risks. As an illustration, Huntington and Kuhn (2003) underlined the malpractice risk of insufficient communication between physicians and patients, concluding that 'good physician-patient communication is the mainstay of a therapeutic, mutually respectful, and trusting relationship' (p. 160). This is seconded by the findings of a study conducted by CRICO Strategies (2015), which analysed national medical malpractice claims in the US and found that 30% of all claims filed from 2009-2013 involved a communication failure, with 37% of the high-severity injury cases and 34% of the obstetric cases (one of the contexts examined in this thesis) involving a communication failure.

Overall, the above studies and reports provide strong evidence on how communication within medical teams and between physicians/teams and patients is a core part of clinical performance and directly related to clinical outcomes. This, however, is not yet mirrored in clinical practice and current training. I discuss this in the following section.

1.1.2. Communication as separate from clinical practice; the gap

Insufficient communication can have a significant impact on patient safety, which is even greater in high-severity cases as the emergencies investigated in this thesis. Despite the evidence, as per the earlier section, communication and teamwork are still understood as separate from clinical practice and tend to be overlooked in medical education/training, leaving little space for the translation of linguistic findings into practice; I elaborate on training applications of sociolinguistic research in Chapter 9, in light of my findings.

The gap in existing training is acknowledged by medical associations that try to address it by providing communication-related tools and resources; the Royal College of Physicians (2017), for instance, published a resource on team communication (Resource 3), recognising, at the same time, that 'unfortunately, in medicine, effective communication and teamwork is often assumed and training in this area not prioritised' (p. 2). In the same vein, the World Health Organisation (WHO, 2012), issued guidelines on how to be an effective team player, foregrounding the importance of communication in healthcare. Importantly, in line with my research aim and questions, WHO's guidelines draw attention to effective leadership as a key characteristic of effective teams. These reports are indicative of the disconnect which sociolinguists studying healthcare have noted over the years.

Sociolinguists conducting health research, however, do not always feed their results back to their participants, nor do they translate their findings to be accessible by another discipline, and synergies between those and healthcare professionals are scarce, although fruitful, as I will illustrate later. As Sarangi (2010a) points out, raw discourse analytic findings are rarely directly applicable or relevant to healthcare; this entails that, for sociolinguistic work to be relevant to health institutions, we need to collaborate more closely with healthcare professionals and invest on translating our findings and 'talking down' abstract theories to a format suitable for other audiences; I provide an illustration of how to make our work more accessible to other disciplines in Chapter 9 (for an example of what can be achieved through co-designed projects and ongoing collaboration between sociolinguists and healthcare professionals see also Mesinioti et al., fc.). This gap in medical training arising from the dissociation between linguistic work and healthcare practice has been recently pointed out by Demjen (2020), who argued that 'linguistic analysis […] has been conspicuously absent from the mainstream of medical education, health communication training and even the medical or health humanities' (p. 1).

The limited evidence on what linguistics can bring in healthcare research, however, are encouraging, as there is currently a body of work illustrating how sociolinguistic and applied linguistic approaches can, amongst others, improve our understanding of patients' lived experiences of chronic diseases (Angouri et al., fc.; Demjen et al., 2020), feed into communication training (Slade et al., 2018), and improve/revise the existing diagnostic tools (Fritz et al., 2017; Semino et al, 2020). Recently, Udvardi (2019) also looked at the role of linguistics in improving the evidence base of healthcare communication, underlining the importance of integrating qualitative linguistic analyses in future health communication research.

The above nicely illustrate (socio)linguistics' potential to feed into and directly benefit healthcare practice, and make a case for the need for further research, particularly in sites that are difficult to access, such as the contexts investigated here. The discussion also pointed to the difficulties in translating sociolinguistic findings into medical training, which I further address in the discussion, in Chapter 9.

To contextualise my research, I provided evidence on the importance of effective communication in healthcare, particularly in emergency contexts, and illustrated what sociolinguistic research can contribute to that end. I now turn to the background and rationale of my research design and questions.

1.2. Background and rationale

Leadership is one of the most broadly researched social phenomena and has been approached from multiple methodological angles and across disciplines/fields. Yet, the concept itself remains ambiguous. Previous work on healthcare leadership has contributed leadership taxonomies and assessment tools (i.e., Leenstra et al., 2016; Salas et al., 2005) but further research is required in order to pin down which are the behaviours that 'make' an effective team leader particularly from a sociolinguistic perspective; this research aims to start addressing this gap.

My work draws on (workplace) sociolinguistics, which has conceptualised leadership as a discursive accomplishment, and employs the concept of 'doing', a key concept in the Interactional Sociolinguistics (IS)/Conversation Analysis (CA) agenda (Angouri, 2018; Holmes and Marra, 2004; Vine et al., 2008). Discursive approaches to leadership have been on the rise for more than ten years now, but there are still gaps in our knowledge as to how leadership is dialogically achieved in the situated moment (Clifton, 2012; Jian and Fairhurst,

2017); the gap is even greater in contexts that are challenging to access, as is the case with the healthcare emergency settings investigated here.

Earlier studies on leadership have primarily focused on its verbal enactment, neglecting its material accomplishment and the interplay with other semiotic resources (Küpers, 2013; Sergi, 2016). This leaves a critical gap on the embodiment of leadership, particularly in secondary care. Building on a strong body of sociolinguistic leadership studies, the present study moves towards an embodied conceptualisation of leadership, paying particular attention to leaders' positioning in the material space.

Further, previous research on leadership has mainly focused on how stable teams work, with ad hoc teams, as the ones investigated here, remaining vastly understudied. In ad hoc team formations, staff members are brought together temporarily for the duration of the task, without experience of working together as a team, and in some cases, they do not even know who is who when entering the emergency room. Such ad hoc teams have been shown to exhibit worse leadership and team performance than stable teams (Hunziker et al., 2009), which renders them a fertile ground for further research. The multidisciplinary team composition, although the norm in today's specialised care, further adds to the complexity of the setting, as the different specialties do not always share a professional language and ways of *doing* (Stühlinger et al., 2019). Against this backdrop, my work aims to contribute to the leadership agenda by shedding light on how leadership is claimed, negotiated, and challenged in the situated interaction of ad hoc multidisciplinary teams.

In what follows, I provide an insight into the research context, before turning to the research aim and questions that I aim to address in this thesis.

1.3. Research context

My work brings together two healthcare emergency contexts, both of which are high-risk, high-urgency environments involving multidisciplinary ad hoc teams.

The study that preceded chronologically and set the basis for the analysis is the *Simulation and Fire-drill Evaluation* (*SaFE*) study. The study was a multi-site randomised controlled trial of training for obstetric emergencies, conducted in six sites across the UK. The participating teams were video recorded handling a common but life-threatening obstetric emergency, *eclampsia*, during simulated drills that included a patient-actor. The *SaFE* study was a clinical study, with no linguistic component involved in its original conceptualisation until my two supervisors, Prof. Angouri and Prof. Siassakos, collaborated. The research outputs of this collaboration

started drawing connections between aspects of teamwork/leadership and clinical efficiency (cf. Siassakos et al., 2011, 2013); my work is influenced by and builds on their work. I conducted a secondary analysis of the *SaFE* video recordings taking an IS approach.

The second study is the *TeamLeader* study, led by Prof. Angouri and a consultant, which took place in the resuscitation area (commonly called 'resus') of a Major Trauma Centre (MTC) in the UK.[1] This study aimed to address human factors affecting in-hospital pre-briefing practice of trauma teams, looking specifically at leadership and risk negotiation. Taking again an IS approach, the *TeamLeader* study employed an ethnographic design, with the data consisting of observations and audio recordings of real-life trauma incidents.

The research aim and questions addressed in this thesis follow next.

1.4. Research aim and questions

The study aims to provide an insight into how leadership is enacted discursively in ad hoc teams in the context of medical emergencies, addressing a critical gap in existing knowledge.

The key research questions (RQs) I aim to address are the following:

1. How do staff members enact their professional role in the spatiomaterial context of the emergency room?
2. How do team leaders mobilise directive and questioning mechanisms to *do* leadership?
3. How do the stages of the encounter impact on who claims a leadership role in this complex multi-actor system?
4. What is the relationship between teams' interactional and clinical performance (*SaFE* dataset)?

Question 1 is primarily answered in Chapter 5, which unpacks the use of material zones by the various professional roles. Question 2 is addressed in chapters 6 and 7, which illustrate how directive and questioning mechanisms, respectively, are mobilised by team leaders for *doing* leadership. Expanding on and deepening the discussion of Question 2, Chapter 8 focuses on the stages of the emergency encounter and the ways in which those affect the enactment of leadership, addressing Question 3. Finally, Question 4 is a question that runs through all the analysis chapters. I provide a visualisation of my RQs and the chapter in which each of them

[1] As this is an ongoing project, the *TeamLeader* is a pseudonym, while the consultant's name and the study's original title are not mentioned anywhere in this thesis, to protect the unit's and participants' anonymity.

is addressed in Figure 4.1 and revise the discussion illustrating how they all come together in a complex matrix for *doing* leadership in Chapter 9. For the last part of this chapter, I provide an overview of the thesis.

1.5. Thesis overview

The thesis begins with setting the theoretical and analytical framework through reviewing relevant literature in Chapters 2 and 3. As multimodality is at the core of my work, Chapter 2 is central in providing the lens through which the RQs are addressed and draws on a body of work that brings solid evidence that interaction is always multimodal. It substantiates the case for further multimodal sociolinguistic research, pays particular attention to previous multimodal research in secondary healthcare contexts, and concludes with an overview of established approaches for conducting multimodal discourse analysis. Next, I turn to the concept of leadership, in Chapter 3. I provide an overview of earlier and more recent developments on the study of leadership in secondary healthcare contexts, and then proceed to discussing previous research on its multimodal performance and the documented gap in the literature. For the last part of Chapter 3, I revise concepts associated with leadership employed in my analysis, that is, questions and directives, and draw connections between floor management and *doing* control/power. This paves the ways for the analysis chapters that come later.

Continuing with Chapter 4, this is concerned with my methodological and analytical approach. I illustrate my research design, including context, team composition, and data collection methods, before zooming in on the IS approach, which is the analytical approach taken here. I touch upon IS's origins, key stages and tools, as well as the way in which I applied it in the study of medical emergencies, before completing the chapter with ethical issues in health sociolinguistic research. I discuss the importance of multi-method studies and provide a methodological framework which I revisit in my contribution later on.

Moving on to the analysis chapters, Chapter 5 is concerned with staff members' positioning in the material space of the emergency room. I discuss the ways I conceptualised and subsequently analysed professionals' movements in and out of material zones and argue that positioning in the material space is a role-claiming act. I reflect on the significance of my findings which indicate consistent patterns across the datasets in the ways in which team leaders position self in a central material zone – and thus in the centre of action. This chapter provides the foundation for reading the three chapters that follow (Chapters 6-8) and which demonstrate the inseparable relationship between language and space.

In Chapter 6 I focus on team leaders' directive strategies as prototypical ways of exerting control, while maintaining the focus on positioning in the material space. I discuss the frequency of directive strategies in my data and present the emerged typology in a spectrum from less to more direct/forceful directives. In the analysis of the wide range of ways for issuing directives, questions have arisen as the most frequent strategy employed by team leaders for allocating tasks; I thus zoom in on questions in the following chapter which is concerned with their format and functions expanding relevant research.

Chapter 7, then, sheds light on team leaders' questions as key discursive strategies for allocating tasks and turns, thus managing the conversational floor, and, ultimately, *doing* leadership. I pay particular attention to questions' spatiotemporal dimensions, making a case that their verbal accomplishment is intertwined with the speaker's positioning in the material space, as well as the stage of the encounter in which the question is raised; both of these are an integral part of the question itself. In completing the linguistic analysis, I broaden the lens by bringing in the sociological concept of *interaction rituals*. This is an attempt to expand the theoretical tools available for capturing the nuances of medical emergency encounters. My analysis illustrates that the institutionally defined leaders do not always – and are not the only ones – enacting leadership in this context, and that other staff members also step into the team leader's role by mobilising questioning mechanisms in similar ways.

These findings on the emergent nature of leadership, and the attempt to connect smaller/larger patterns in the analysis, bring me to the next and final analysis chapter (Chapter 8), which opens a discussion on how other professional roles can also claim a leadership role, perpetuating the team leaders' identified discursive strategies. Specifically, my analysis illustrates the ways in which staff members other than the team leader can also claim responsibility for certain tasks and position self as the main agent at certain spatiotemporal points. By employing the organisational concept of *professional routines*, I transition from a micro-analysis of interaction to considering time and space more holistically. This is an illustration of possible ways to open sociolinguistic work to other disciplines, too.

The next and final chapter (Chapter 9) brings all the findings together, demonstrating how, taken together, they answer the question of how professionals *do* leadership in emergency encounters in a dynamic and holistic way. Chapter 9 is also concerned with the potential applications of my work, paying particular attention to how we can make such sociolinguistic work relevant to other disciplines, before offering directions for future research.

Chapter 2: More than talk; the multimodal accomplishment of interaction

2.1. Introduction

This chapter is concerned with interaction as a multimodal accomplishment and sets the theoretical and analytical framework for addressing my RQs. Multimodal interaction is the heart of my study, plays a central role in my critical review of literature and hence it constitutes the first chapter of the theoretical part of the thesis. I review here relevant strands of work and discuss the tools available for accommodating a range of semiotic resources in the analysis of interaction. This then builds on the rationale for my analytical and methodological choices. I briefly discuss matters of definition under the 'multimodality' umbrella before turning to the range of semiotic resources social actors draw on to co-construct reality. I zoom in on multimodal research in secondary healthcare contexts, drawing on studies conducted in surgery and emergency contexts; these studies underline the importance of looking beyond talk in the analysis of healthcare interaction, and call for further research in the field. I then turn to established approaches to multimodal discourse analysis, namely, Systemic Functional Linguistics (SFL), Mediated Discourse Analysis (MDA), and CA, and briefly discuss convergence and divergence points with IS, which is the approach taken in this thesis and is extensively discussed in Chapter 4.

2.2. Matters of terminology

Depending on the theoretical tradition, field, and discipline, different terms have been used to refer to the semiotic resources mobilised in interaction, which I list in the next section. Those lexical choices are usually not explicitly defined, nor consistently used. This inconsistency has resulted in over 200 different word combinations that are used for the, broadly speaking, use of body in interaction, which are grouped by Nevile (2015) under the following nine labels: *nonverbal/nonvocal*, *embodied*, *body*, *(multi)modal*, *visible/visual*, *gestural*, *kinesic*, *semiotic* and *physical*. Delimiting each of these groups goes well beyond the scope of this section; the presentation of the main turns in relation to body/space later on, however, gives an insight into the complexity of issues of definition and the different disciplines' attempts to mark this research area.

Phrases under the nonverbal group (e.g., 'nonvocal'*;* 'nonlinguistic') have been criticised early on within gesture studies for presenting human conduct in a binary way and for privileging talk

(see Mondada, 2014, for a discussion). This prioritisation, however, is, at least to some degree, anticipated in linguistic approaches. As Bezemer and Jewitt (2010, p. 183) note:

> while modes of communication other than language are, to varying degrees, being attended to in social-linguistic work, its central units of analysis are usually linguistic units (e.g. 'intonation unit') or units defined in linguistic terms (e.g. a 'turn' is defined in terms of 'who is speaking').

I use, throughout this thesis, the terms *multimodal* and *embodied*, in line with the terms most often found in interactional linguistics and, mainly, the CA tradition (I discuss later on why I use key CA terms; see also the discussion on the embodied and the multimodal turn below). I use the term *multimodal* to refer to the various semiotic resources (modes/modalities) mobilised by social actors in the situated interaction. As such, I understand *multimodality* as an umbrella term including but not limited to the semiotic resources included in Table 2.1 below, and drawing attention to visual, written, and audio artefacts; the term *embodied*, then, falls under the umbrella of multimodality and prioritises, as the name suggests, the role of the body in interaction.

In what follows I provide an overview of the semiotic resources used in interaction drawing on previous literature.

2.3. Semiotic resources and their interrelation

In Table 2.1 below I list some of the semiotic resources mobilised in interaction as discussed, among others, by Bezemer and Jewitt (2010), Fele (2019), Day and Wagner (2019), Mondada (2016; 2021), and Nevile (2015) (the list is not exhaustive but includes key contributions and work most relevant to the discussion here). I grouped the resources into five major categories, depending on their relation to talk, face, body, handling objects, and senses (left raw), with the latest being the most recent development in the field (see, for a discussion Fele, 2019; Mondada 2021). I then listed the semiotic resources related to each of these main categories (middle raw) and provided some specific instances in the right raw.

Table 2.1. Semiotic resources mobilised in interaction according to the literature.

Broad categories	Types of semiotic resources	Specific instances
Talk	verbal cues	prosody, intonation, syntax, grammar, lexical choices, deixis, semantics, larger syntactic structures (e.g., interrogatives)
Face	gaze	direction of gaze, length of gaze
	facial expression	smiling, frowning, looking puzzled, surprised, opening or closing the mouth, raising or flashing eyebrows
Body	hand gestures	pointing, waving, crossing fingers, thumb signal
	head gestures/movements	nodding, head shaking, head tilting
	moving the whole body	walking, jumping
	placing the whole body	posture, orientation, positioning in the material space
Manipulating technologies, objects & tools	handling objects	grasping, touching, handling, and moving objects
	coordinated activities	operating equipment, flying/driving a vehicle, reading, typing, drawing, writing
Senses		smell, taste

I have marked, in Table 2.1, the semiotic resources that serve as my study's focus, namely talk and positioning in the material space. The above presentation into categories aims to provide an overview of the main areas that have caught researchers' interest in the past and is not meant to be exhaustive; the various resources should be conceptualised as interrelated and analysed holistically. Well put by Bezemer and Jewitt (2010), 'the meanings realized by any mode are always interwoven with the meanings made with those other modes co-present and co-operating in the communicative event' (p. 184). The idea that the different modes are interrelated and should be examined as a whole is also found early on in Goodwin and Goodwin (1987, 1992), according to whom talk, intonation, and body movements should be treated as elements that are integrated with one another rather than as distinct separate channels. Following this line of thought, although I prioritise talk and positioning in the material space, I also pay attention to other semiotic resources when they stand out as significant in interaction (e.g., gaze direction; raise of volume), without systematically analysing all occurrence, though. I further expand on this in Section 4.7.2, where I discuss my approach to contextualisation cues.

Next, I discuss relevant trends that bring, in a way, body to the fore, and have been all labelled as 'turns'.

2.4. 'Turns'; how many do we need?

In recent years, work on social interaction has moved from a conceptualisation of interaction as primarily verbal to encompassing a range of resources mobilised by interactants for *doing* things, such as the ones I illustrated in Table 2.1 above (for the concept of *doing* see also Section 3.2). Many of these have been labelled as 'turns', including the *embodied*, *multimodal*, *spatial*, *visual*, *material*, *materiality*, and *mobility* turns. I briefly introduce these below, as they shed light on core concepts of multimodality − and from multiple angles. From a terminological point, however, labelling any conceptual development as 'turn', as is often the case nowadays, is problematic. Carrigan (2014) touches upon the turn rhetoric in the humanities and social sciences, arguing that labelling a trend as a turn usually aims at having a performative effect; that is, to create, rather than describe, a turn, by declaring it. And more often than not the disciplinary politics result in each discipline coining a new 'turn' to talk about things that other disciplines have been concerned with for years; the fact that there are at least three different terms for the same trend, as I illustrate below, is indicative of this pattern. Angouri (2021) also indicates the problem with turns, arguing that this labelling does not correspond to distinct phases of the field, but, rather, functions as a tool for a retrospective reading of the literature.

Nevile (2015) introduces the term 'embodied turn', which he traces back to around 2001, to refer to the point when the body attracted social scientists' – and particularly conversation analysts' – interest in the study of language and social interaction, as well as the spatial and material environment in which the interaction takes place.

Remaining in the CA realm, Mondada (2016) discusses the 'visual turn', within which action is conceptualised as 'situated, indexically organized, and specifically shaped by, as well as shaping, the social and material context in which it happens' (p. 339). The visual turn has been also defined as follows:

> 'a shift in emphasis in the humanities and social sciences toward an increasing concern with the importance of the visible. It is usually seen as having gained prominence in the 1990s and as having succeeded the linguistic turn.' ('visual turn', Oxford Reference).

I understand Nevile's embodied turn as conceptually close to the visual turn; both refer to the social scientists' focus on the body as a whole and its role in interaction, with the visual turn placing emphasis on the increasing use of video recordings which has been a contributing factor in that focus. In the same vein, Jewitt (2009) deploys the 'multimodal turn' to recognise that language usually co-exists with other semiotic resources (or modes), all working in tandem to produce meaning (on the ways communication is multimodal see also Bateman, 2014; Kress, 2003).

I thus interpret the embodied, visual, and multimodal turns as different terms pointing to the same direction and research findings; that of acknowledging that verbal cues account only for a small part of social interaction, and interplaying with other meaning-making modes. That these turns are often used interchangeably and under the same tradition (in this case, the CA), further supports this claim.

Zooming out of the CA tradition, recent work in organisation studies has been concerned with what has been labelled as 'spatial turn'; this refers to the conceptualisation of space as a constructing and transforming factor of organisational life, rather than the background in which organisational life unravels (e.g., Dale and Burell, 2008). Organisational scholars emphasised the social dimensions of space; in Mengis' et al.'s (2018) words, such scholars 'argued against the idea that space is a neutral, relatively fixed and independent container within which organizational activities and processes unfold […] Instead, space can be seen as a social space with values, power relations, and aesthetics built into it' (p. 292). In the same vein, Chanlat

(2006) argues that organisational space is simultaneously 'divided, controlled, imposed and hierarchical, productive, personalized, symbolic, and social' (p. 21), while Dale and Burrell (2008) adopt a perspective on space 'as socially produced and simultaneously socially producing; as concurrently material and imaginary; as intimately connected to embodiment; and as irreducibly political' (preface).

This strand of work bringing to the fore social aspects of space and the relationship between organisational space and power is influenced by Lefebvre (1991), who was the first to conceive space as ideological, lived and subjective. The Lefebvrian approach has influenced the CA line of thinking, too; I also consider in my work such social aspects of space, such as the symbolic use of central material zones by those embodying a leadership role, as well as the way space is controlled by those in power.

Remaining in the organisational scholarship, of relevance to the discussion is also the 'materiality turn'; emerged in the 90s and associated with a posthumanist approach, this school of thought argues against associating artefacts with their attributed semiotic/social meaning and their relationship with practices, and in favour of considering artefacts themselves as 'actors'. For Latour (2005), agency is not an essence only inherent in humans and 'actors' can equally be human and non-human, while Pels et al. (2002) argue that 'it is not so much what materials … symbolize within social action that matters but their constitutive agentic effects within the entangled networks of sociality/materiality' (p. 2); and see also Hayles (1999) on the disembodiment of agency. Operating under a social constructionist approach and drawing on IS affordances, in my work human agency is still in the centre of social action; and space and artefacts are only significant insofar they are related to – and are part of – my (human) participants' social practices.

Moving on, I do not discuss here space in its broader definition and the concept of *place*, for which there is a rich body of work within migration studies and (human) geography, as it goes well beyond the scope of my work. Although broadly relevant to the conceptualisation of our surroundings as integral to social action, I am strictly concerned in this thesis with the material space of the emergency room, within which staff members *embody* their professional role and in tandem with verbal interaction; this is the reason why I do not elaborate on theoretical movements concerned with mobility from one geographical location to another and the social inequalities involved, such as the 'mobility turn' (Faist 2013; Urry 2000) and the 'material turn' (Wang, 2016, for an introduction).

The turns introduced above are summarised in Table 2.2.

Table 2.2. A summary of 'turns' relevant to space.

Term	Main argument	Key advocates	Disciplinary origin
Embodied turn	Body central to the study of language and social interaction	Deppermann & Streeck 2018; Nevile 2015	Humanities and Social Sciences
Visual turn	Action is shaped by and shaping the social and material context in which it happens; emphasis on video recordings	Mondada 2016	Humanities and Social Sciences
Multimodal turn	Language's co-existence with other semiotic resources/modes, with all working in tandem to produce meaning	Jewitt 2009	Social sciences
Material turn	Shift from dichotomies in migration studies (e.g., internal/international migration; skilled/non-skilled migrants etc.) to a more nuanced conceptualisation of the intersectionalities of geographical movements	Basu & Coleman 2008; Wang 2016	Social Sciences (Migration studies)
Mobility turn	Reconsideration of spatial mobility and its implications for social mobility and social inequalities	Faist 2013; Urry 2000	Social Sciences (Migration studies)
Spatial turn	Space as a constructing and transforming factor of organisational life	Dale & Burrell 2008	Organisation studies
Materiality turn	Artefacts themselves as 'actors'	Hayles 1999; Latour 2007;	Organisation studies

In the next section I zoom in on the healthcare context and review key studies conducting multimodal research, in order to provide an overview of the field my work builds on and expands, as well as the literature gap I aim to address.

2.5. Multimodal research in secondary healthcare contexts

There is dearth of studies looking beyond verbal cues in healthcare interaction, which the present study aims to address. The gap is even greater in secondary healthcare contexts, as such research ideally involves video recordings and/or the researcher's presence in the field, rendering getting access particularly challenging (Section 4.8 for a discussion). There are, however, some notable exceptions which I discuss next. I have grouped those studies in relation to their setting into surgical and emergency contexts.

2.5.1. Operating theatres

Moore et al. (2010), drawing on ethnographic methods and the use of video recordings, provide a linguistic analysis of surgical teams' interactions in the operating room (OR). Taking an SFL approach, they make a case that the joint action of surgery is accomplished by verbal but particularly by 'non-verbal cues', and illustrate the ways changes in professionals' head and body alignment can signal a new phase in the surgical procedure (I introduce the SFL approach below, in Section 2.6.1). The significance of interactants' alignment for effective team collaboration and coordination is a pattern found elsewhere, too. Korkiakangas et al. (2014) conducted a video ethnographic research in a major teaching hospital in the UK; in their findings, the scrub nurse's alignment (gaze direction) with the surgeon has been found to impact on communication, and consequently, on the speed of object transfer. Although not the primary focus, in my work, I also pay attention to the bodies' alignment, as it is a key part of interactants' positioning in space.

Remaining in the surgical context, there is a body of work looking at the multimodal accomplishment of giving instructions in surgical teams. Notable examples include Mondada's (2014a) study on the ways surgeons direct their assistants' hands, which is part of a relevant special issue on 'the body in medical work and medical training'. Mondada argues that instructions are accomplished rarely through verbal directives (e.g., deictics; imperative forms), and most frequently through a combination of verbal and a gestural instruction (e.g., waving gesture) or a silent embodied sequence (e.g., repeated pointing gestures). Mondada's study is particularly relevant to my work, not only because of the emphasis paid on the use of directives, a key discursive strategy explored in this thesis, but also because of the focus on the multimodal accomplishment of the in situ instructions.

In the same vein, Bezemer et al. (2011) examined the coordination between surgical trainers and trainees in the OR. Their findings illustrate that interactants coordinate their actions through the mobilisation of all available resources, including speech, gesture, gaze and posture, and use of instruments, highlighting the dynamic, embodied nature of interaction. Their focus on team members with different status (consultants/trainees) and the ways instructions are perceived are directly relevant to my work, which also involves staff members with different levels of seniority giving and receiving instructions. This focus on team members with different status is maintained by Hindmarsh et al. (2011), too, whose work looks at training episodes between dentists and their trainees. Their analysis sheds light on the multimodal resources mobilised by dentists to assess trainees' understanding, some of which are body movement and orientation such as turning and leaning. Trainees follow dentists' instructions in an embodied way, too, exhibiting understanding mainly through body posture and nodding. Based on their findings, Hindmarsh et al. (2011) argue in favour of taking into account participants' embodied conduct and mutual monitoring in the study of interaction; this is directly relevant to my work, too, where medical teams also consist of members with different status.

I now turn to studies taking a multimodal approach to investigate emergency contexts, which are similar to my research context (see Chapter 4).

2.5.2. Emergency contexts

In emergency care training, Büscher (2007) provided an audiovisual ethnographic account of emergency response training exercises involving major incidents, bringing evidence of the significance of mobilising multimodal resources in coordinating emergency teamwork. Büscher's findings illustrate that embodied conduct and movement impact on decision-making, the establishment of rapport, and the dynamics of a shared understanding of events, pointing out that there is a need for further research on interactants' movements in space in emergency encounters.

Studies taking a CA approach have prioritised certain semiotic resources, particularly gaze and gesture. Tsuchiya et al. (2017), for instance, take a multimodal CA approach to examine joint attention between healthcare professionals in emergency care training in the UK, paying particular attention to gaze direction. Their findings illustrate that joint attention between the doctor and nurses was accomplished through showing or gazing at an object, and vocalisation. Gaze also arose as significant for participants' coordination in Deppermann's (2014) study, who analysed paramedics' interactions during advanced training as 'multimodal multiactivity' (p. 247). In his findings, paramedics mobilise talk, gaze, and pointing as routine ways of

coordinating simultaneous activities. Deppermann's chapter is included in one of the few volumes focusing on multiactivity on the basis that it is 'a social, verbal and embodied phenomenon' (Haddington et al., 2014, p. 4), covering a range of contexts (e.g., ultrasound examinations; surgical theatres; customer phone calls) and semiotic resources (e.g., gaze; head and body orientation; gesture).

The above studies are related to my study not only in the sense that they make visible the role of various semiotic resources in the situated healthcare interaction, but also because they bring evidence on the authenticity of emergency simulations, as the ones conducted in the *SaFE* study, illustrating that such emergency drills constitute a core part of healthcare training (for a brief discussion see also Section 4.4.4).

The findings are similar in real-life emergencies; Trasmundi (2020) conducted a multimodal interaction analysis in the context of emergency medicine drawing on ethnographic methods; although with a focus on cognitive events, her book provides a good insight into the ecology of the emergency ward, which still remains a relatively unexplored context, including team formation and role hierarchies, as well as a focus on certain semiotic resources, such as voice, gesture, and gaze.

Moving on to a different emergency context, Fele (2012) explored aspects of coordination and collaboration in medical emergency calls in a dispatch centre. From a methodological point of view, Fele argues that video recordings provide access to the ecology of the shared workspace, 'making the interaction between the caller and the call-taker less relevant, while instead foregrounding the importance of what is being said for the parties sharing that ecological space' (p. 300).

Turning next to a different line of research, there is a strand of work looking at the physical arrangements of the emergency/trauma context and their impact on the departments' efficacy. Dean et al. (2016), for instance, have shed light on the need for analysing workspace arrangements and the intersection with team communication and professional roles in the trauma context. Dean et al.'s ethnographic approach also brings to the fore the impact of the material space on team interactions, underlining the need for further research. In the same vein, Goodarzi et al. (2015) conducted a cross-sectional study in Tehran, Iran, to investigate the influence of physical environment in Emergency Departments (ED) on efficacy, with their findings indicating that all parameters relating to physical environment were problematic. In this body of work are also included studies investigating ways to improve patient flow in the

EDs (Jensen and Crane, 2008; see also Oredsson et al., 2011, for a review of relevant interventions). Although these studies are illustrative of the impact of material space on team communication and efficacy, I do not expand here as my focus is on the ways staff members make use of a given material space, rather than the physical arrangements per se.

It is thus evident that, although multimodal research has evolved in the last twenty years or so, embodied resources, such as gesture and gaze, are still privileged. Other semiotic resources, however, such as body posture and movement particularly from a holistic angle that brings them together with other modes, are less studied. The gap is pointed out by Hausendorf (2013), who argues that 'spatial resources' have been neglected. By using the term 'spatial resources' Hausendorf refers to 'environmental affordances', or, in Goodwin's (2000) words, the 'material structure in the surround' which includes the surrounding space, objects, materials etc. Similarly, Lindström and Mondada (2009) have called for an expansion of multimodality's conception by taking into consideration larger actions within the environment such as body displacements and objects' manipulations. My work aims to contribute to this agenda, looking primarily at interactants' positioning and movement in the material space.

In this section I have drawn on a number of studies taking a multimodal approach in secondary healthcare contexts; all of those converge in making visible the interplay of various semiotic resources in the in situ interaction and underline the need for further research, in line with my project's design and focus. None of them, however, focuses on professionals' positioning in the material space; when material space is involved, this is usually in relation to the physical arrangements of the workplace and artefacts (e.g., Dean et al., 2016; Goodarzi et al., 2015), rather than the ways interactants make use of a given space. In studies taking a sociolinguistic perspective the gap is even greater; this thesis aims to start addressing this gap.

In what follows, I briefly discuss the established approaches to analysing discourse multimodally. The IS approach taken here, however, is illustrated in detail in Chapter 4, where I illustrate my methodological and analytical approach.

2.6. Main approaches to multimodal discourse analysis

Although multimodal approaches have been increased with the recent rise of video-recordings, the concept of multimodality dates back to early 1970s, when semiotics started paying attention to gestural, bodily, and other ways of meaning making which did not focus exclusively on talk. Currently, the dominant approaches to multimodal discourse analysis are the following (for a discussion see Pirini, 2017):

a. Systemic Functional Linguistics (SFL), underpinning a social semiotic approach,
b. Mediated Discourse Analysis (MDA), underpinning an action-based approach,
c. Conversation Analysis (CA), underpinning a turn-taking based approach.

Although the approach I take is IS, I briefly introduce those below as they all share common ground in understanding meaning-making processes as more than talk; as such, their differences are often attributed to matters of definition, rather than conceptual differences. I then turn to discuss the IS affordances for the study of the various semiotic resources.

2.6.1. Systemic Functional Linguistics

Under a social semiotic approach, the social interpretation of language and its meanings is extended to the whole range of modes of representation and communication employed in a culture (Kress 2009; van Leeuwen 2005).

Scholars working under such an approach are concerned with the ways meaning is embedded within images and artefacts, including the study of 'speech, gesture, gaze, image and writing' (Bezemer and Jewitt, 2010, p. 180; see Table 2.1 for a list of semiotic resources). The framework has its origins in Kress' and van Leeuwen's (1996) and O"Toole's (1994) work and largely draws on Halliday's (1978) Systemic Functional (SF) theory. Halliday's contribution is significant not only for making visible the various semiotic resources, but, more importantly, for foregrounding the *interaction* of those semiotic resources, seeing culture as 'a set of semiotic systems, a set of systems of meaning, all of which interrelate' (Halliday and Hasan, 1985, p. 4). There is a line of SFL research primarily concerned with the ways in which meaning is constructed in (visual) artefacts, e.g., in textbooks (Guo, 2004), films (O'Halloran, 2004), and newspapers (Bateman et al., 2006); others, however, have focused on spoken interactions: a notable example illustrating the SFL approach step by step is Eggins' and Slade's (1997) work on casual conversation in English. As stated in their introduction, 'linguists recognize that conversation tells us something about the nature of language as resource for doing social life' (p. 7); in exploring a range of interactional phenomena, including humour, storytelling, gossip, etc., Eggins and Slade demonstrate their analytical process to shed light to the 'social work' that goes on through chat. Closer to my research context, Slade et al. (1995) make a convincing case on how an SLF approach is suitable and useful for the study of workplace interactions.

Other work taking an SLF approach include Iedema's (2004) study on a hospital documentary, illustrating a social semiotic analysis of moving images in television and film; Pang's (2004)

multimodal analysis of an exhibition at the Singapore History Museum which brings to the fore dominant social structures; and, more recently, Janssen's (2017) work on banks' advertisements and brochures during the 2008 financial crisis, illustrating how written text and images of external banking discourse complemented each other to mitigate the reputation damage of Australian banks.

I briefly introduce the MDA approach in turn below.

2.6.2. Mediated Discourse Analysis

MDA (also called 'nexus analysis') is traced back to Scollon and Scollon (Scollon, 2001; Scollon and Scollon, 2004) and aims at bringing together discourse, agency, and practice into what Scollon calls a 'nexus of practice'. A nexus of practice is defined as 'the intersection of multiple practices (or mediated actions) that are recognisable to a group of social actors' (Lane, 2014, p. 9). In the centre of MDA approaches is action and its complex relations with discourse; and 'all action is seen as inherently social and mediated; that is carried out by social actors through the use of mediational means' (ibid., p. 1).

In contrast to the social semiotic approach, in which artefacts are sometimes the primary focus, in MDA the starting point is interaction, which is viewed broadly as encompassing not only talk but also use of artefacts, images etc.; these are significant insofar social actors interact with them. This aligns with the way in which I include artefacts and the surrounding space in my analysis; taking an IS approach, I pay attention to those when they become relevant in interaction. One of the main differences of MDA, however, with approaches based on turn-taking which prioritise talk is that 'the focus of mediated discourse analysis is not discourse per se, but the whole intersection of social practices of which discourse is a part' (Jones and Norris, 2005, p. 4). In that regard, IS and an MDA approach are conceptually close. I discuss this in relation to IS in more detail in Chapter 4, where I exemplify the key tools and concepts of IS and the potential for moving beyond boundaries for further theoretical development in the field.

Illustrative examples of studies conducting nexus analysis include Lane (2009), who explores language shift and identity construction through visual and linguistic means in two Finnic-speaking communities, Pietikäinen et al. (2011), who are concerned with the linguistic landscape (LL) of North Calotte, viewing 'LL as a discursively constructed space and consequently signs as ''frozed actions'' by various actors' (p. 277), and Al Zidjaly (2019) who looks at constructions of Arab identity on Arabic Twitter.

2.6.3. Conversation Analysis

Although MDA and CA share a commitment on interaction, in approaches based on turn-taking, as is the CA, talk is still considered the primary mode and guides the analysis. Comparing to SFL and MDA, the way I look at space and its role in interaction is more heavily influenced by the CA tradition, which has conceptualised early on space and speech situation itself as interactively achieved.

The interest in multimodal aspects of interaction under a CA approach, and particularly work on gaze and gestures, can be traced back at least to the 1970s (for the CA contribution to the field see also the discussion on the embodied and visual turn later on). Goodwin (1979), for instance, examined the role of gaze in interaction, analysing gaze direction as indicative of the recipient's attention to the speaker. In this early -now classic- work, Goodwin argued that an utterance cannot be conceptualised as a unit apart from the situated occasion of its production. In the same vein, Schegloff (1984) looked at hand gestures and illustrated the ways these 'are organized, at least in part, by reference to the talk in the course of which they are produced' (p. 273), acknowledging that words' production is accompanied by aspects such as posture, gesture, facial expression, preceding talk and voice quality.

As for most recent developments in the field of multimodal CA, Mondada (2019) provides the current state of the art and makes a case for expanding multimodality to consider multisensoriality. In the multimodal resources participants mobilise to co-produce meaning, she includes language, gaze, gesture, body posture, movement, and objects' manipulation; and among the multisensorial practices are touch, smell, and taste. For Mondada, this interactional conceptualisation of multisensoriality 'invites us to deepen our understanding of what makes embodied details accountable, within their fine-grained multiple temporalities, and how they contribute to the publicly intelligible shaping of actions' (p. 60).

Illustrative work taking a multimodal CA approach outside the healthcare context includes Laakso's (2014) study on displays of affect by aphasia sufferers, with her findings indicating that the most common affect displays consist of smiling, laughing, frowning, and shifts in gaze and/or body posture. Taking a similar approach, Koutsombogera and Papageorgiou (2009) explore facial, hand and body gestures and their respective communicative functions in terms of feedback and turn management in the context of Greek TV interviews. In the healthcare context, Heath et al. (2017) examine the ways in which materials are passed by the scrub nurse to the surgeon in the OR, seeing this process as a 'collaborative production of complex tasks in and through bodily action and interaction that reflexively reconstitutes the occasioned sense

and significance of material objects and artefacts' (p. 298). Although covering a broad range of contexts, the above studies are illustrative of the ways CA approaches encompass the body in the analysis of interaction.

Before bringing the above approaches together, I briefly discuss here temporality, a core concept in the CA tradition, which I also involve throughout my analysis.

2.6.3.1. Temporality

The sequential organisation of talk is in itself not new to the linguistic community and has been extensively discussed in the CA literature (Pomerantz, 1984; Sacks et al., 1974; Schegloff, 2007, to name but a few); with CA and IS approaches sharing an interest to the detailed micro-analysis of interaction, this sequential organisation of talk also constitutes a basic principle for traditions drawing on interaction analysis. Expanding this position, in my analysis I bring to the fore time in the sense of how encounters unfold and staff members proceed from one task to another, with the start of the emergency and the completion of it being the ends of my temporal axis. I am thus particularly interested in identifying key stages of the event, e.g., the diagnostic window (Figure 7.5), and shed light to how these stages impact on who claims a leadership role.

The need for considering time in the analysis of participants' coordination of synchronous actions has been pointed out by Mondada (2014b), who argues that 'the detailed way in which multiple involvements are initiated, sustained and managed over time remains understudied, as does the way in which participants skilfully organise the complex temporality of their actions' (p. 33); this is particularly relevant to my work, where multiple actors perform a variety of tasks simultaneously. To that end, Depperman and Günthner's (2015) volume on the temporality in interaction suggests a multimodal, temporalised approach to interaction, indicating the need for a temporal understanding of linguistic structures. The analyses included in the volume demonstrate how 'the course of the ongoing production of linguistic structure is shaped by co-participants' local verbal and non-verbal (re-)actions as well as the opportunities and restrictions provided for by the linguistic structures which are accomplished at a given moment of interaction' (p. 2); this work has affected my thinking and helped me draw connections between the various stages of the encounter and participants' utterances; I pay attention to the stage of the encounter throughout Chapters 5-7, and more systematically in Chapter 8.

Zooming out of the importance of time to the situated encounter, and returning to the approaches discussed earlier, overall, SFL, MDA, and CA are established approaches to multimodal discourse analysis and I touched upon key points of convergence and divergence with the IS approach adopted in this thesis. I introduce in detail IS's key concepts and tools in Chapter 4. The approaches discussed here are summarised below, in Table 2.3. Scholars associated with one tradition, often self-associate or could also be associated with others; this shows the porous boundaries as the thinking in our fields evolves. Norris' work is a case in point; that she is listed as a key advocate both in MDA and IS points to the relationship between the two, which I unpack further in Chapter 9.

Table 2.3. Multimodal approaches to discourse analysis.

Approaches to multimodality	Underpinning approach	Focus	Some key advocates
Systemic Functional approach	Social semiotic approach	***Artefacts*** (and the ways meaning is constructed in those)	Kress & van Leeuwen (1996); O"Toole (1994); Halliday (1978)
Mediated Discourse Analysis	Action based approach	***Social actions*** (discourse is considered part of those)	Jones & Norris (2005); Scollon (2001); Scollon & Scollon (2004)
Conversation Analysis	Turn-taking approach	***Talk*** (and its situated performance)	Mondada (2016); Nevile (2015); Sidnell (2006)
Interactional Sociolinguistics	Interactional approach paying attention to context	**Situated interaction & sociocultural context**	Gumperz (2008); Norris (2004)

established approaches to multimodal discourse analysis

2.7. Conclusion

This chapter provided an overview of previous work on multimodal ways of interaction, setting the tone for the framing of the thesis and my analysis later on. I started with revising the current terminology and provided my rationale for using the terms *multimodal* and *embodied*, making a case that these terms bring together the various modes, rather than perpetuating the problematic dichotomy of *verbal* and *non-verbal*. I drew attention to semiotic resources that have previously caught researchers' attention, with the focus laid on how these are intertwined, which is the stance also taken throughout this thesis. To link with my research context, I sketched out the field on multimodal research in the secondary healthcare context, illustrating a gap in regard to the study of the material space, which my work aims to address. The last part of the chapter was concerned with the most established approaches to multimodal discourse analysis, namely, SFL, MDA, and CA; in presenting these, I started drawing connections with IS, which is the approach taken in this thesis and is discussed in detail in Chapter 4. Important for the reader to retain here is my position in IS as sharing tools with CA and aims with MDA which will be echoed in my reading of the data. Also the review of the literature that follows shares the principle of connecting and building on previous studies for providing in depth analysis of the complex settings that constitute my focus.

Having set the scene on multimodal interaction, in the next chapter (Chapter 3) I zoom into the concept of *leadership* and provide an overview of scholarship on healthcare leadership and leadership as an embodied accomplishment. Together, chapters 2 and 3 will pave the way for zooming in the context of this thesis.

Chapter 3: Leadership and healthcare; sketching out the field

3.1. Introduction

In the previous chapter I have discussed interaction as multimodal accomplishment, drawing on multiple contexts and shedding light on a range of semiotic resources. In this chapter I turn to previous work on leadership, a multifaceted phenomenon which still remains a debated concept. In this thesis I take a discursive approach, which views leadership as achieved and co-constructed in the situated interaction. I zoom in on leadership in secondary healthcare contexts, particularly surgical, trauma, and maternity teams, with the latter two being the closest to my research contexts. My reading of the literature reflects my sociolinguistic stance and training, and demonstrates a prioritisation of leadership taxonomies and assessment tools and a lack of studies pinning down what makes an effective leader in the situated interaction of the emergency context; my study aims to contribute to this agenda. In line with my focus on multimodality, I then touch upon a body of work in and outside healthcare which is relevant to me as it is concerned with the multimodal accomplishment of leadership in order to set the tone for the conceptual framing of my study.

For the second part of the chapter, I turn to discursive strategies associated in the literature with leadership and control, namely, questions and directives. Questions have a significant history in linguistics in terms of form and function and have been shown to be key strategies for establishing leadership, particularly in the context of business meetings. Directives have been more extensively investigated as prototypical control acts, with some of the studies also paying attention to their multimodal accomplishment. These are the main discursive strategies I explore across my datasets and which I then use as a solid foundation to connect with how teams operate. For the last part of the chapter, I discuss previous evidence on the relationship between controlling the conversational floor and being in a chair/leadership position, in line with CA and IS literature, illustrating the ways in which looking at floor management and turn-taking becomes relevant to the study of leadership.

3.2. A discursive approach to leadership

Even though leadership has been widely studied from multiple methodological angles and across research fields, it remains a complex and sometimes loosely defined concept. Research in workplace sociolinguistics has conceptualised leadership as a discursive accomplishment, shedding light on the ways in which interactants ‘do being’ a leader in the situated interaction

(Holmes and Marra, 2004). 'Doing' is a key concept in the IS/CA agenda, placing emphasis on the situated and co-constructed nature of interaction (cf. Angouri et al., 2017; Vine et al., 2008). Angouri (2018) draws connections between the concept of *doing* and the notions of *performance* (Goffman) and *performativity* (Butler), arguing that

> In workplace contexts, teams develop, over time, shared and distinct ways of 'doing' and members can display and claim membership by indexing command of what differentiates 'us' from other groups. This involves all the tacit assumptions that are normalised and then taken for granted in the everyday routines and ways of carrying out work. (p. 97)

Turning to the concept of *performance*, Goffman was a sociologist and, contrary to popular belief, did not take an IS perspective per se; his analysis of face-to-face interaction as a situated phenomenon, however, and his observation that 'within the walls of a social establishment we find a team of performers who cooperate to present to an audience a given definition of the situation' (1959, p. 231), have been considered for many a significant contribution to the conceptual framework of IS. In the same vein, Butler (1990) also emphasised the performative nature of interactants' (gender) identities through 'the repeated stylisation of the body, a set of repeated acts within a rigid regulatory frame which congeal over time to produce the appearance of a substance, of a ''natural kind of being''' (p. 33). This concept of *doing* – in my case, leadership – is the line taken in this thesis.

My work aims to contribute to the research gap underlined by Clifton (2012), who notices that 'despite the recent interest in discursive approaches to leadership, relatively little research actually provides fine-grained analyses of how leadership is dialogically achieved in interaction' (p. 148).

Discursive approaches to leadership have been taken particularly in relation to corporate settings and business meetings; Holmes and Marra (2004), for instance, explore the ways in which leaders of different white-collar workplaces manage conflicts, with their findings indicating that 'good' leaders adopt strategies addressing both their transactional and relational goals, such as conflict avoidance and resolution through negotiation. In the same vein, Vine et al. (2008) investigate the ways leadership is co-created among leaders through talk in three organisational contexts. Their analysis demonstrates that successful leaders shift roles in a dynamic way, encompassing both task-related and maintenance-related functions of

leadership. Vine's et al.'s study is methodologically relevant to mine, as they also employ an IS lens to analyse leadership performance.

Further, relevant to RQ2, which aims to identify team leaders' discursive strategies for doing leadership, are Clifton's and Wodak's et al.'s work, which sheds light on the discursive resources mobilised by leaders in their respective contexts; with a focus on business meetings, Clifton (2012) pays attention to the sequential properties of assessments, with his analysis demonstrating that first-position assessments constitute claims of epistemic primacy, while second assessments can be realised 'as going with the flow and accepting another's right to manage meaning' (p. 152). Similarly, Wodak et al. (2011) are also concerned with the range of discursive strategies mobilised by a CEO in two meeting genres; their findings illustrate that the CEO's choice of discursive strategies affects the outcome of the meeting, with an egalitarian style of leadership increasing the possibility of achieving a durable consensus. More recently, Angouri (2018) also illustrated the ways leadership is done interactionally in a small retail firm, shedding light on team claims of collective identity, as well as phenomena of disalignment/disagreement.

As discursive approaches to leadership gain ground, there has been also a number of volumes and monographs focusing specifically on discursive leadership in workplace contexts; Schnurr's (2008) book is a case in point, looking at how leaders employ humour in their everyday workplace interactions. Holmes et al. (2011) also bring valuable insight into everyday workplace interactions, exploring the relationship among leadership, ethnicity, and language use in contrasting 'ethnicised' contexts. The latest addition to this body of work is Clifton's et al.'s (2019) book on the construction of leadership identities through narratives from a social practice perspective. Finally, although not exclusively on leadership, Angouri's and Marra's (2011) edited volume brings together research on identity construction in professional and institutional contexts, with many of the chapters exploring leadership phenomena, such as leadership styles in managers' feedback (Svennevig), chairing international business meetings (Rogerson-Revell), and co-constructing leadership identities (Schnurr).

In what follows, I zoom in on leadership in healthcare contexts.

3.3. Leadership in high-risk teams; a case for multi-method designs

Although leadership is one of the most widely studied phenomena in the healthcare context, the question of what makes an effective leader in the situated interaction is yet to be answered; the need for further research is evident when considering the potential impact on patient safety and quality of care (see Chapter 9 for a discussion on the existing gap and potential impact).

Relevant to the discussion on leadership, here, is that I do not theorise in this thesis on the concept of 'role'. Previous interactional work has drawn attention to the doctor's competing roles contained within the professional 'role-set' (Sarangi, 2010b). This, however, is not the position taken here; rather, in discussing role, my starting point is the institutional roles, and I then examine the ways in which those are enacted discursively (see also Section 4.7.2 for a discussion on background knowledge and institutional context). Figures 4.2 and 4.5 provide, later on, a summary of the institutional hierarchy and the involved roles in the *SaFE* and *TLCT* data respectively.

Both the *SaFE* and the *TeamLeader* dataset involve ad hoc teams (on the teams' composition see Sections 4.4 and 4.5), which might further hinder leadership performance. The complexity added to this context is well documented in the literature, with Sarcevic et al. (2011) noticing that most studies so far have focused on the functions and behaviours of leaders of stable teams, leaving ad hoc teams unexplored. The difference between preformed and ad hoc teams is a theme also emerging in Hunziker et al. (2009), who, comparing the ways the different team formations performed cardiopulmonary resuscitation (CPR), found that ad hoc teams overall exhibited worse leadership and team performance comparing to established teams. More specifically, ad hoc teams made less leadership statements, had less hands-on time during the first three minutes of the arrest, and delayed the first defibrillation. The above illustrate the lack of evidence in how ad hoc teams work, highlighting the need for further research in the field.

In secondary healthcare, leadership studies have primarily focused on surgical and trauma teams; I discuss those in the following three sections and make a case for multi-method designs.

3.3.1. Leadership in surgical teams

Giddings and Williamson (2007) recognise that patient safety is enhanced by effective leadership and teamworking and recommend leadership and team management training for surgeons, making a clear link between leadership and improved patient outcomes. Similarly, Hu et al. (2016), drawing on the transformational/transactional leadership theory, provide a framework for surgeons' leadership and its impact on team performance; in their findings,

transformational leadership is linked to improved team behaviour, suggesting that surgeon leadership development can improve the safety and efficiency of operative care. The evidence on leadership's impact on patient safety and quality of care highlight the need for further exploring leadership phenomena, particularly in high-risk contexts as are mine. I have touched upon this in the introduction and revise the discussion in Chapter 9.

To narrow down from the extensive body of work broadly looking at leadership, I report here on studies concerned with team interaction or, more broadly, communication, in line with my research's focus (see also introduction for the significance of health communication). Halverson et al. (2012), exploring leadership in the OR, draw attention to the importance of effective communication, arguing that surgeons need to 'set the tone' in the OR. The theme of setting the tone, even though not originally studied, also arose in Frasier's et al.'s (2017) study on teamwork in the operative room, with surgeons being identified as the main agents in setting the tone; in their findings, good communication at early stages led to an improved OR atmosphere, while miscommunication was found to be related to later tensions. These studies are relevant to my work, as I also explore the process by which the team leader is setting the tone from an interactional perspective; to do so, I pay particular attention to the ways in which team leaders control the floor and its impact on (lack of) interactional trouble (see also discussion later on, regarding how uncertainty 'filters through' the emergency team).

Leadership has been also discussed in the literature in relation to the concept of epistemic authority; this body of work is concerned with the ways in which authority is negotiated and/or challenged in the OR. Minehart et al. (2020) explore leadership in the OR from a gender perspective, arguing that, although good leadership has been traditionally considered as authoritative and directive (characteristics stereotypically associated with men), inclusive leadership styles are better suited for the OR context, enhancing team cohesion and effectiveness and providing opportunities for information sharing and 'speaking up'. I elaborate on directiveness in the specifics of my contexts and, more broadly, in high-risk emergency contexts in Section 6.5.

This impact of 'speaking up' and challenging authority in such hierarchical contexts has been recently picked up elsewhere, too; Pattni et al. (2019) conduct a narrative synthesis of the literature laying emphasis on the fact that 'an often-overlooked competency in educational curriculums is the skill set required to challenge authority' (p. 234). Their review demonstrates that the most frequently observed themes affecting the ability to challenge authority are hierarchy, organisational culture, and education. In the same vein, Sydor et al. (2013)

investigate how hierarchy in the OR team influences trainees' ability to challenge consultants' decisions in simulated crisis scenaria; their analysis demonstrates that, although the hierarchical structure did not affect trainees' ability to challenge authority, the challenges were suboptimal in quality, potentially reflecting the lack of training in challenging authority in an effective and appropriate way. Finally, Endacott's et al.'s (2015) investigation of nursing students' and registered nurses' teamwork skills reveals an inconsistency among self-reported and interactional data; although in the interviews team members report on their willingness to challenge the team leader and their sense that this is acceptable, this was not visible in the video data of the simulated emergency scenaria, pointing, again, to the difficulties in challenging more senior members in this context. Their findings also bring evidence on the importance of multi-method designs in complex healthcare contexts, as is mine (Angouri et al., fc., for a discussion on the significance of multiple datasets). Particularly, ethnographic studies conducted in the trauma context are directly relevant with the design of *TeamLeader* and I turn to this next.

Closing the discussion here, the body of work I reviewed illustrates the dynamic, rather than stable, nature of leadership and authority, and sheds light on the complexities of challenging authority in highly hierarchical contexts. In my data, I am also interested in how staff members challenge the designated leader and/or step into the leader's role (Section 7.6.2 and Chapter 8 for a discussion).

3.3.2. Leadership in trauma teams from an ethnographic angle

Ethnographic designs employ a combination of data collection methods (e.g., audio/video recordings; interviews; observations), as does the *TeamLeader* design (Section 4.5). Such studies are scarce, not only due to the fact that getting access in highly sensitive contexts is particularly challenging (cf. Chapter 4), but also because healthcare research still draws on a positivist paradigm, heavily relying on quantitative methods and/or interviews (see also Mesinioti et al., fc.); the few existing ethnographic studies looking at real-life trauma encounters have been conducted mainly in Australia and the US, indicating the need for further research in the UK context.

Starting with the US context, Sarcevic et al. (2011) conduct an ethnographic study at two US Level-1 trauma centres to explore leadership structures. Their analysis demonstrates the following five leadership structures during trauma resuscitation: solo decision-making and shared decision-making under the broader category of intra-disciplinary leadership, and intervening/parallel/collaborative shared decision-making under cross-disciplinary leadership.

In their findings, it is reported as particularly problematic 'when leadership is shared between physicians from different disciplines with different levels of experience, which often leads to conflict, reduces teamwork efficiency and lowers the quality of care' (p. 236). Also employing ethnographic methods in the context of trauma resuscitation teams, Yun et al. (2005) draw connections between leadership styles, trauma severity, and team experience; in their findings, directive leadership was found to be more effective in high trauma severity and/or inexperienced teams, while in low trauma severity and experienced teams empowering leadership seemed to work better. Previous experience and whether team members have worked together in the past seemed to be important in my data too; its impact on team effectiveness, however, is something I did not monitor as I did not have access to this layer of information for all the teams in my data; this is something future research could address further.

In the Australian context, Slade et al. (2015) conducted one of the most complete multi-site studies, exploring communication in five EDs; their rich multi-method design involved observations, audio recordings of patient trajectories through the ED from triage to disposition, analysis of medical records, follow-up interviews with staff and patients, and focus groups with ED staff members. Although not focusing exclusively on leadership, Slade et al. shed light on the differences in the communication styles employed by senior and junior doctors, which is relevant to my work. Their linguistic analysis also provides a rich insight into the physical environment and the time constraints of the EDs, as well as the communicative challenges in those, and makes a case for multi-method designs and a focus on the situated interaction. The significance of the role in this hierarchical context and its impact on leadership and teamwork is something I also consider in my analysis; I return to this in Section 4.6.2.

To complete the discussion, I turn to research on leadership in the obstetric context, in line with the *SaFE* data.

3.3.3. Leadership in maternity teams

Even though the *SaFE* study was not originally designed for the study of leadership (see Section 4.4), researchers working on the *SaFE* data have identified (in)effective leadership behaviours. Bristowe et al. (2012) conducted interprofessional focus groups to investigate maternity teams' perceptions of effective teamwork in medical emergencies. Their participants considered as a good leader's attributes clearly delegating roles and tasks, communicating clear objectives to the rest of the team, and explicitly taking on a leadership role. Bristowe et al. also show how the team leader sets the tone (see earlier discussion in surgical teams), as, according to one of their participants, 'if the person who's leading is panicked and shouting and chaotic

then it *filters through*' (p. 1386, emphasis mine); I am elaborating on this observation and in my analysis I show the ways in which team leaders' strings of uncertainty filter through the rest of the team and result in interactional trouble and delays (cf. Excerpts 7.3 and 7.5).

Similarly, Siassakos et al. (2011) conducted a secondary analysis of the *SaFE* video recordings to identify teamwork attributes associated with greater clinical efficiency. Although they observed four leadership styles (directive, guiding, mixed, and observational), teamwork has not been found to be affected by the style of the leader, which the authors attribute to the experience of the team. In a later work, Siassakos et al. (2013) further unpack effective leadership behaviours in the same context, recommending that team leaders should use the *SBAR* tool, closed-loop communication (directed; acknowledged; executed; confirmed), and remain hands-off to avoid distractions.

Zooming out of the *SaFE* study, Janssens et al. (2020) analyse video recordings of maternity teams responding to simulated postpartum hemorrhage (PPH) in Australia; the context is similar to mine, as the *SaFE* teams also handle a simulated obstetric emergency (eclampsia). One of their main findings is that leadership is spontaneously shared across team members, with the primary leader uttering only approximately half of all leadership utterances (57.7%); this provides further evidence on leadership as a discursive accomplishment and the need to look beyond the designated leader. Finally, Cornthwaite et al. (2013) review the literature to provide evidence-based methods to team leaders in order to reduce risk in maternity. Such risks from suboptimal teamwork are maternal mortality and morbidity, perinatal mortality and morbidity, perceptions of care, and litigation and complaint risks. Their recommendations include the most experienced team member leading the emergency and passing on to the most suitable person in unexpected situations, the leader being familiar with all staff members and their roles in advance, and the use of closed-loop communication. The last two echo what I see in the data of high performing teams as I show later.

Having illustrated some of the main strands of research on healthcare leadership, I now turn to discussing its embodied aspect, a core issue in this thesis.

3.4. Leadership as embodied accomplishment

The growing interest in discursive approaches to leadership has been illustrated in the previous sections; this body of research, however, tends to prioritise talk, neglecting its embodied performance. The gap is pointed out by Küpers (2013), who, taking a phenomenological perspective, provides evidence on the 'prevailing marginalization [. . .] of the body in social,

organizational and leadership theory and practice' (p. 335), and Sergi (2016), who recently noted that, up to now, materiality has only been vaguely studied in leadership (cf. Chapter 2 on the overall lack of a focus on materiality even in multimodal studies). Although from an IS perspective, my work aims to address this gap, looking specifically at the interface of leadership and the material space.

Outside healthcare, Melina's et al.'s (2013) volume on the embodiment of leadership explores leadership as a discursive practice and a performative identity, covering a range of topics such as somaesthetic practices (Hanold), dramatic leadership (Katafiasz), and leadership/followership enactment through dance (Burge et al.). To this end, Raelin's (2016) edited volume on leadership as practice, and particularly part II, which is concerned with the embodied nature of leadership, is also enlightening, touching upon issues of physical space and artefacts (Carroll), as well as materiality in its broader sense (Sergi). Although not from a sociolinguistic perspective, both volumes encompass previously neglected aspects in the study of leadership, such as physical space, material objects, and embodiment, paving the way for shifting away from traditional definitions to leadership and proposing instead its embodied conceptualisation. I am building on this work and also arguing on the potential and need for further synergies between health linguists and medical researchers (Chapter 9).

Studies taking a posthumanist perspective have been also concerned with leadership and materiality/embodiment, paying attention to objects' agency (on a posthumanist understanding of materiality see section 2.4). Such examples include Ropo's and Salovaara's (2018) sociomaterial understanding of leadership, which 'explicates leadership as being produced in an embodied and performative process between people and space' (p. 461). Their work draws on an extensive body of organisational studies looking at materiality (see discussion on the material turn in section 2.4), influenced by Lefebvre's 'lived space' (1991), which is not the stance I take; the discussion on the performative and co-constitutive relationship between human and space is, however, directly relevant here. This sociomaterial approach to leadership is also taken by Oborn et al. (2013) who explore leadership in public policy making in the UK, demonstrating that leadership is enacted through an entanglement of coalitions, technologies, polls, and statistics. Finally, one of the most cited studies contributing to this agenda is Hawkins' (2015), who, drawing on ethnographic methods, investigates how staff members of the British Royal Navy understand and enact leadership. In line with the posthumanist school of thought and the 'thing-ness' of leadership, Hawkins brings material objects to the fore, arguing that they 'play an active role in generating, transmitting, legitimizing and undoing

meanings associated with leadership' (p. 952). This conceptualisation of objects as agents is not the approach taken here; it is, however, useful as material artefacts and space play an important role in doing leadership.

Conceptually closer to the interactional approach taken here, Van De Mieroop (2020) recently investigated leadership in video-recorded meetings drawing on an, inspired by multimodal CA, 'micro-interactional perspective', integrating *discursive*, *sequential*, and *multimodal* analytical layers. Her findings demonstrate leadership as a collaborative accomplishment, in which interactants employ 'a complex interplay between verbal and non-verbal resources' (p. 615); the observed 'non-verbal' resources include head shakes as negation tokens, nodding, pointing, and hand gestures functioning as non-verbal directives – all relevant to my work, too.

Turning back to the healthcare context, Vuojärvi and Korva (2020) draw on fourteen trauma simulation trainings in a Finnish hospital to investigate leadership. In their analysis, they take a leadership-as-practice (LAP) perspective and draw attention to the rich *sociomaterial* context of trauma care, arguing that 'technology, equipment, protocols, procedures and professional hierarchy are all needed for efficient trauma care and for team operations' (p. 188). Originating in management and organisation studies, the LAP approach aimed at moving the field towards an understanding of leadership as 'occurring as a practice rather than residing in the traits or behaviors of particular individuals' (Raelin, 2016, p. 1); this principle is not new to the sociolinguistic community, however, in which practice is a core concept and workplace phenomena, such as leadership, were never understood as characteristics of particular individuals. Taking an IS perspective, in earlier work, we have also made a case for the importance of capturing the *spatiomaterial* context of the emergency room, be it in the obstetric or the trauma context (Mesinioti et al., 2020, fc.); this is also illustrative of how the LAP approach is conceptually close with the discursive approach taken here.

From a CA perspective, which is conceptually and methodologically central to the interactional approach taken in this thesis, Hindmarsh and Pilnick (2005) examined teamwork in preoperative anaesthetic work. Their findings illustrate how anaesthetists coordinate action with their assistants through body movements, gestures, and glances, underlining the importance of 'analyzing embodied conduct, not just language or talk, when examining copresent organizational activities' (p. 139).

More recently, Mondada (2014a) also drew attention to the multimodal resources mobilised by chief surgeons to direct their assistants, with her findings demonstrating the importance of

gestures in issuing directives; I elaborate more on this later, in section 3.6.1, where I specifically discuss multimodal directives.

Looking specifically at the *SaFE* context, Siassakos et al. (2011), although not taking a multimodal approach and not from a linguistic angle, have identified space as a possible factor affecting clinical efficiency, drawing connections between teams' performance and the number of members' exits from the emergency room; this helped me orient towards the significance of material space early on in my analysis. Building on earlier work on the *SaFE* data we demonstrated that leadership is claimed, projected, and resisted discursively (Mesinioti et al., 2020). Further, we conceptualised leadership as an embodied accomplishment, with healthcare professionals drawing on talk, material space, and body and gaze orientation, to *do* leadership; I maintain and further expand this position throughout this thesis.

To sum up, I have illustrated above the discursive approach adopted in this thesis, which views leadership as multimodally accomplished in the situated interaction. I reviewed relevant strings of work paying particular attention to the trauma and the maternity context which are most relevant to my work and I discussed recent work on multimodal leadership. I now turn to questions and directives, both previously identified as dominant ways of *doing* leadership and the main linguistic strategies for discussing *doing* leadership in the data.

3.5. Questions in the study of leadership

Previous work has explored questions and their leadership functions primarily in the context of business meetings. I review relevant work below.

Questions have been widely studied as discursive strategies for doing both control and collaboration in the workplace (for an overview of their functions in institutional discourse see Freed and Ehrlich, 2010); my focus here is on how questions are mobilised by those in power (chairs/managers/leaders). Vine (2004) highlights the need for taking into account contextual factors in order to define whether an interrogative sentence is functioning as a control act or is a request for information; her work has influenced my thinking as I looked in contextual factors, and I illustrate later how I took into account the team's uptake in order to decide a question's pragmatic function(s) in section 7.2.2. Other relevant work includes Holmes and Chiles (2010), who find questions to be a flexible discursive strategy for enabling those in position of power to maintain control of the agenda and construct authority and a leadership role; I also find in my data questions aiming to set the topical agenda, raised almost exclusively by team leaders (Section 7.3 for the typology of questions).

Further, Aritz et al. (2017) explore the functions of questions in small group business meetings and identify questions as a key resource for influencing group decision making and establishing leadership. A similar focus on the role of questions in team decision making and setting the agenda is also found in Halvorsen (2015), who, looking at decision-making episodes in operational planning meetings, finds that questions are raised in a strategic way to lead the decision-making process by setting the agenda and constraining subsequent interaction. Although these studies are relevant to my work as they bring to the fore the link between leadership and questions, I do not maintain such a focus on decision-making in my analysis, partly because explicit negotiation and references to decision-making in my emergency contexts are rare (see discussion in Excerpt 7.5), but also due to the overall difficulty to identify a certain moment when a decision is taken, as the decision-making is embedded 'in the flow of events' (Chia, 1996, p. 194; for the emergent nature of decision-making see also Angouri and Angelidou, 2012; Kim, 2018).

In the healthcare context, questioning/answering schemes have been in the spotlight already from the 70s, with medical encounters having been identified by Byrne and Long (1976) as 'a genre of questions' where 'much doctor behavior falls under the broad heading of questioning' (p. 30). About fifty years later, physicians still heavily control the content and flow of consultations through questions, with most of them aiming at taking history and setting the agenda (Heritage, 2010); the latest is one of the main pragmatic functions identified in my data, too. The recent shift to patient-centred care (Institute of Medicine, 2001) shed further light on questioning in physician-patient interaction (e.g., Hanyok et al., 2012, on questions used by physicians to get to know their patients), with a particular interest in patient-initiated questions; these are, for Stubbe et al. (2021), an opportunity for the patient to also exert interactional control and claim agency (see also Murtagh et al., 2013, for patient-initiated questions in oncology consultations; a patient perspective is not relevant to my context but is an important angle for future studies). In the context of caller-call taker emergency interaction, Booker et al. (2018) examine the emerging questions and argue that 'alternative question' formats (e.g., 'forcing a choice between two candidate events', i.e., forcing the caller to choose between the 'fainted' or 'nearly fainted' options) appear particularly problematic and result in interactional trouble; in line with this, my analysis also aims to identify which question formats upset the interactional flow, but this time at an intra-team level (Chapter 7).

This intra-team focus taken here aims to address a gap in the literature, as much less attention has been paid to questions *within* the healthcare teams; and even more rarely studies have

looked for systematic patterns on the pragmatic function and format of questions across contexts; my work aims to contribute to this agenda.

In an earlier work we started unpacking questions as strategies for doing interactional control, providing a typology of their pragmatic functions in the emergency encounter of the *SaFE* context (Mesinioti et al., 2020); building on and expanding that typology, I demonstrate here the consistency of the questions' control functions across the two emergency contexts. Chałupnik and Atkins (2020) have also explored questions in the same context of simulated obstetric emergencies; in their findings trainee doctors who employed indirectness and mitigation strategies when making requests were found to achieve tasks and complete the station faster, encountering fewer interactional difficulties. As I will show, this pattern is not confirmed in my data, where direct and unmitigated forms of questions are associated with lack of interactional trouble and used by leaders that are perceived as effective and being in-control by the rest of the team. I return to the study and provide my reading of the discrepancy in p. 127.

In what follows, I turn to the most studied discursive strategy for *doing* leadership, the directives.

3.6. Directives as control mechanisms

'Directive speech acts' have been introduced by Searle (1969), encompassing all utterances that get the addressee to perform some action, which were further categorised into command, request, permission, prohibition, and question. For Searle directive speech acts are only satisfied 'if the world comes to match its propositional content […] In addition, this match must result from the performance of the directive itself' (Kissine, 2016, p. 5). As a recent illustrative example of this line of research, Purwaningsih and Yoga Pratama (2020) examine the directive speech acts addressed by caregivers to residents in a nursing home in Bali; in their findings, the forms used were prohibition, imperative, and question. Černý (2007) also focuses on the function of speech acts in the context of doctor - patient interaction, illustrating that directives are rarely initiated by patients, with doctors dominating and controlling the floor (62/63 directives issued by doctors). Short directives were also found to be preferred over longer questions during physical examination. I do not expand here on research taking a speech act perspective as it is not the framework adopted in this thesis; I zoom in on interactional approaches which are conceptually closer to my research later on.

In an early, now considered one of the most influential studies on directives, Ervin-Tripp (1976) investigated the structure of American English directives, identifying six types of directives which are still influential in current work; these are illustrated in Table 3.1 below.

Table 3.1. Types of directives identified by Ervin-Tripp (1976) [the examples are also from Ervin-Tripp]

Directive type	Example
Need statements	*I'll need a routine culture and a specimen.*
Imperatives	*Coffee, black.*
Imbedded imperatives (formal addition + explicit directive)	*Why don't **you open the window**?*
Permission directives	*May I see that for a minute, please?*
Question directives (provide the addressee with the opportunity to treat a directive as an information request)	*-You ready?* *-Not yet.*
Hints	*My nose is bleeding.*

Although I encounter all the above forms in my data, I use different terminology for my own taxonomy of directives which I introduce in Chapter 6 (Figure 6.4); I argue that a more elaborated taxonomy is necessary for capturing the nuances of my dataset and perhaps contributing to further research in this context. Importantly, Ervin-Tripp reports in her findings interactants' easy access to which utterances constitute a directive, without inference from a prior literal interpretation required; this is a dominant theme across the literature and my data, with interactants overall having no interactional trouble to decipher the pragmatic function of directive structures (see example in Excerpt 6.2, where the whole team perceives the team leader's question as a directive to step in – and do so accordingly).

Previous CA work has already started unpacking directives from a micro-analytical perspective in a range of contexts. Craven and Potter (2010), for instance, explore directives occurring in UK family mealtimes; in their findings, in instances where sequences involved multiple and/or repeated directives, non-compliance resulted to upgraded (more entitled and less contingent) directives. Although in a different context, this is also the case in my data, where I find

instances of intensification of the same request over time. As I discuss in Chapter 6, this is significant for understanding the dynamic nature of the encounter and, ultimately, leadership in this setting (Figure 6.2 on the senior doctor's intensification work in the context of the encounter).

As prototypical 'control acts' (Vine, 2001), directives are frequent in instructions from superiors to subordinates, typically concerning routine tasks (Holmes and Stubbe, 2015). Directives have been investigated from an IS perspective in the workplace context, where such status differences are the norm, with a significant body of work stemming from the *Language in the Workplace* Project (LWP, 1996 onwards). Vine (2004), for instance, conducted one of the most extensive studies on control acts, including directives, requests, and advice, and identified the following sub-categories in relation to directives:

- control acts requiring immediate compliance or not (*now/later*);
- control acts asking the addressee to do something specific or general (*specific/general*);
- control acts that need to be addressed under certain circumstances or not (*condition/no condition*);
- directives asking the addressee to do something vs asking them not to do something (*prohibitives*).

In a later work, Vine (2009) explores directives from managers in New Zealand government departments; her data reveals a diverse range of directive strategies, expressed as interrogatives and imperatives, which Vine considers endpoints in relation to their forcefulness. This variation is confirmed in my data, too, where I am also interested in identifying a spectrum from the least to the most direct strategy; I broaden the directives' definition, however, to encompass other syntactic structures, such as declaratives and conditionals, as well as embodied cues, such as gestures. Contrary to Vine, in my analysis interrogatives are positioned in the middle of the forcefulness/directiveness spectrum, as I identify even less forceful ways of issuing a directive (the typology of directive strategies is shown in Figure 6.4 and a more detailed discussion is provided accordingly).

Remaining in LWP work in New Zealand workplaces, Stubbe (2000), in exploring the strategies mobilised by staff members to 'get the message across' in a factory production team, also identifies different forms of directives, ranging from explicit imperatives, which are also intensified through repetition and emphatic intonation, to milder forms such as requests and suggestions. In contrary to my findings, where team leaders tend to use forceful directives,

Stubbe reports that in her data 'the most direct or economical discourse strategies are therefore not necessarily the most effective' (p. 1), with less forceful strategies contributing to the establishment and maintenance of good relationships. This discrepancy could be attributed to the different degrees of urgency in Stubbe's and my contexts; team building and 'saving face' is not the goal during the trauma/obstetric emergency encounters, where healthcare professionals must deal with very sick patients in a short time window (but see Section 6.5 for staff members' opportunities to bond in a different space and time). My findings regarding the use of overt directives by team leaders align with Holmes (1999), who explores how managers get things done at work in the context of small and informal workplace meetings; Holmes illustrates that those in power issue explicit directives, including unmitigated imperatives ('follow that up'), penultimate interrogatives ('can you get onto them and organise a meeting immediately if not sooner'), and final declaratives ('that needs to be couriered today') (p. 9). Holmes also points out that these overt directives are only used by superiors to subordinates and not vice versa; this is also the case in my data, where more junior members (e.g., junior midwives) employ various softening strategies (see examples in Section 6.4 for some of those softening strategies).

The literature and examples provided above are illustrative of the tight connection between task allocation (canonically communicated through directives), leadership, and teams' performance. Fernandez Castelao et al. (2011), for instance, look at staff members' verbalisations during CPR and identify as team leader the person with the higher proportion of the following 'leadership mechanisms': a) direct orders, b) undirected orders, c) planning, and d) task assignments (on task allocation by team leaders see also Tschan et al., 2011). This interrelationship between allocating tasks and *doing* leadership and control is even more prominent in the emergency contexts investigated here, where quick task allocation is at the core of the encounter, as I discuss in presenting the context (Chapter 4), and in more detail in Section 8.3 (*SaFE* data); this is the reason why I pay particular attention to processes of task allocation in my analysis (Chapters 6-8). These studies provide a foundation for the reading of the data discussed here and I return to them in the later parts of the thesis. In completing this chapter, I zoom in on the embodied accomplishment of directives, in line with my overall focus on multimodality in the study of leadership.

3.6.1. Multimodal directives

The multimodal accomplishment of directives has been mainly investigated in the classroom context, as the given power asymmetry between teachers and students renders it a prototypical environment for issuing directives. As an illustration, Cekaite (2015) focuses on directives addressed by adults to children in both family and primary educational settings in Sweden, with her findings demonstrating the crucial role of touch (e.g., push; pull; shepherding), which, together with verbal directives 'constituted a united semiotic resource in pursuing the child's compliant embodied response' (p. 171). Her findings further support my earlier claims on the intertwined nature of semiotic resources and the need for studying contextualisation cues as embodied (Section 4.7.2.4 on cues). More recently, Satar and Wigham (2020) explored multimodal instructions in online language learning via videoconferencing, with their analysis illustrating the ways in which teachers mobilise all the resources available to them, including hand gestures, gaze shifts, head nods, and facial expressions, as well as verbal cues.

Directly relevant to my research are studies considering the multimodal performance of instructions in the healthcare context. Mondada (2014a) explores directives addressed by a chief surgeon to his assistant during a surgical operation, with her analysis demonstrating the situated and embodied accomplishment of directives. In her findings, directives have been rarely found to be only verbal; rather, they are mostly accomplished through a verbal and a gestural instruction or a silent embodied instruction. This pattern is also confirmed in my data, where part of the directive strategies mobilised by team leaders consists of silent imperative gestures (Figure 6.5).

These findings are in line with Bezemer et al. (2011), too, who conduct an ethnographic study looking at requests in ORs in the UK. In their findings, they identify instances where coordination between the nurse, registrar, and consultant is mainly achieved through gaze and bodily conduct, including body orientation towards specific actions, moving closer/away from other staff members and so on. Significant for my research is also Bezemer's et al.'s observation that requests in their context are mostly found in the form of imperatives; in contrary to other contexts, or even in the healthcare context (see earlier on Stubbe's findings), where imperatives are considered too face-threatening, in my data many of the directives are also found in a prototypical imperative form; I further theorise on the need to consider the emergency context and the appropriateness of directiveness in such high-pressure environments later on (Section 6.5). This has implications for our understanding of leadership and role performance in this setting.

I have briefly illustrated here the key role of questions and directives in constructing a leadership role through allocating tasks and turns, setting and managing the agenda, and so on. For the last part of the chapter, I turn to floor management and its link with doing leadership and control.

3.7. Floor management and leadership

I have discussed questions and directives as key discursive strategies for doing leadership and thus argue that these are appropriate foci for the study of the macro-concept. Leadership is undoubtedly 'difficult to pin down and highly contested' (Jian and Fairhurst, 2017, p. 1); I am aligning with researchers claiming that an IS approach can help us pin down the nuances of the phenomenon. As Baxter (2015, p. 444) argued, '[IS] can show exactly what leadership "looks and sounds like" at particular moments […]'. In this last section, I briefly illustrate why I associate leadership with control of the conversational floor, in line with CA and IS literature.

Previous IS work has provided ample evidence that leadership is interactionally achieved. This body of work has illustrated the ways in which claiming, holding, and opening/closing the floor are directly related to the enactment and resistance of power structures in workplace discourse (particularly in business meetings, e.g., Angouri, 2018; Holmes and Stubbe, 2015). As an illustration, Angouri and Marra (2011b) look at how senior managers construct the role of the chair in formal and informal meetings, with their findings demonstrating that the chair controls the meeting through holding the floor for longer time periods, allocating turns, and setting the topical agenda.

CA research, traditionally looking at turn-taking, has also provided a rich body of work directly linking leadership to good control of the conversational floor, and illustrating the ways in which leaders/chairs manage, to some degree, the participation of others; see, for instance, Asmuß and Svennevig (2009) for an illustration of chairs' turn-taking practices for managing the interaction of participants and Ford (2008) on how women leaders manage meetings' openings and allocate turns. In the same vein, Pomerantz and Denvir (2007) are concerned with how the chairperson enacts their role in upper institutional meetings, with some of the ways being setting and controlling the meeting agenda and allocating turns by formally granting participants with the right to talk (and thus restricting access to other participants). This body of work has been particularly useful for framing the multilayered relationship between floor management and doing leadership. The transition between speakers and (lack of) evidence of trouble (Nofsinger, 1991; Schegloff, 2000) in the flow of interaction provides the researcher

with useful moments for the study of power relationships between team members and the role performance of senior and, more broadly, high skilled professionals.

Particularly relevant to the discussion on floor management here is the concept of interactional trouble (also discussed in the literature as *interactional challenge*); I discuss interactional troubles and examine their effect on teamwork throughout Chapters 6-8. Break points have consistently attracted attention in the study of professional interaction as teams need to negotiate the management of relationship, the task at hand and existing hierarchies that are known and preexist the encounter (Angouri, 2018). Interactional trouble is associated with the breakdown of communication which might be attributed to 'errors in turn taking and turn allocation, misunderstanding, false starts, problems in hearing, and simultaneous talk to mention but a few' (Belgrimet, 2020, p. 459). Particularly the study of interruptions has preoccupied relevant scholarship; I return to those immediately afterwards as they are amongst the cues I addressed in my analysis (even though not my primary units of analysis; see Section 4.7.2). Troubles as the ones reported above are not always – or only – verbal; Wiklund (2016), for instance, examines prosodic and other 'non-verbal' features of trouble-source turns looking specifically at autistic preadolescents' turns, although her findings can be also relevant to neurotypical population. Amongst her findings, the most relevant to the discussion here is that 84% of the problematic turns involved lack of eye contact between the speakers, which in 38% of the cases was also associated with overlapping speech; I also draw attention in my data to gaze direction (or lack of) and the impact on the team's uptake.

Returning to interruptions, these have been traditionally interpreted as a means for seizing turns and dominating talk early on in the field of sociolinguistics. Ng et al. (1995), for instance, have drawn connections between interruptions and high social influence, viewing interruptions primarily as a means for gaining the floor, while Brown and Levinson (1987) have discussed interruptions as a way of exhibiting power and dominance in interaction. Indeed, interruptions seem to have that function of exhibiting dominance in my data, too, where they are primarily used by senior members to claim the floor and set/manage the agenda (see senior doctor's interruptions in Excerpt 6.1). Clyne (1996) also interprets interruptions as 'the classic case of competition for control of the ''floor''' (p. 95); I also discuss in light of my data when I consider those competitive based on the interactants' uptake. In favour of the competitive nature of interruptions are also Eckert and McConnell-Ginet (2003), who, exploring women's and men's linguistic repertoires, report in their findings that males' more frequent use of interruptions is a way to claim a dominant role in conversation.

That is not to say, however, that interruptions only function as mechanisms of power and control; both interruptions and overlaps have been also found to work as a tool for conveying rapport and cooperation with the other speaker (Goldberg, 1990). For instance, although Ng et al. (1995) discuss interruptions mainly as a means for gaining turns, they also mention two positive functions of interruptions; interruptions as *rescuers*, which 'help the current speaker save face and rescued the conversation from of imminent moments of awkward silence or disfluency' and interruptions as *promoters*, which serve 'the promotion of the current conversational topic' (p. 378), enabling the interrupter to elaborate on it with supportive content. In the same vein, the expression of support and the completion of an anticipated point have been pointed out as functions of cooperative overlaps in Yang (2001) and Li (2001).

Although interruptions are not the primary focus of the thesis, I am interested in their mobilisation for controlling the floor and exhibiting power, in line with my broader aim to explore leadership multimodally in the emergency context. I return to the way I embedded interruptions in my analysis, as well as overlaps, in Section 4.7.

Overall, CA scholarship has contributed significantly to a multimodal realisation of the ways in which floor is managed; Chen et al. (2006), for instance, investigate multiparty meetings and the contribution of embodied cues to floor control changes. In their findings, the most prominent multimodal cues that emerged were gazes from the current to the next floor holder, and gestures assisting with holding the floor (e.g., deictic gestures). My analysis yields similar patterns to the studies discussed here as I am showing later (chapters 6 and 7); staff members heavily rely on gaze direction to signify the potential addressee (cf. Excerpt 6.1 for an illustration). Similarly, Mondada (2007) is concerned with multimodal resources for turn-taking in work meetings, zooming in on the role of pointing gestures; her findings demonstrate the key role of gestures in defining speakership, by denoting potential next speakers and displaying participation shifts. I further expand on the discursive strategies and interactional cues discussed above in light of my data in the analysis chapters (Chapters 6-8).

Closing this chapter, I draw the core points in the next section.

3.8. Conclusion

This chapter has been concerned with the study of leadership in the literature. By reviewing relevant strands of work, I identified a gap in studies conducting a fine-grained analysis of how leadership is interactionally achieved particularly in emergency healthcare contexts, and argued in favour of a discursive approach that views leadership as achieved in the situated interaction.

Further, I illustrated a lack of sociolinguistic studies paying attention to the embodied performance of leadership. Notable exceptions, and particularly the ones taking an interactional approach as the one adopted in this thesis, underline the contribution of embodied resources in constructing a leadership role. The few existing studies, however, prioritise some embodied resources, such as gaze and gesture, over others; in relation to the use of material space, which is my focus here, there is almost a complete void of studies.

Zooming in on dominant discursive strategies for establishing a leadership role, I drew on a body of work looking at questions and directives. Questions have been identified as a key resource for doing leadership, with earlier studies illustrating the variety of questions' formats and pragmatic functions; I return to this in Chapter 7, where I go in more detail on what constitutes a question both in previous literature and in my study. Significant to retain here is my arguing of the need to look into questions in their situated spatiomaterial context. As for directives, previous work provided vast evidence on their functions as prototypical control mechanisms and set the tone for conceptualising them in a forcefulness spectrum, which I also attempt to do with my data. I also touched upon a body of work illustrating the multimodal accomplishment of directives; these findings are directly relevant to my emergency contexts, where embodied behaviours are 'a crucial contributor to the ''economy'' of interaction aimed at achieving an appropriate emergency response efficiently and swiftly' (Büscher, 2007, p. 3). Bringing questions and directives together allows for a richer understanding of how staff members do leadership in situ, as the two strategies complement each other, often serving similar pragmatic functions for *doing* control and leadership. This has been elaborated in Sections 3.5 and 3.6.

For the last part of the chapter, I turned to floor management and turn-taking, drawing on CA and IS work, and illustrated that claiming, holding, and managing the conversational floor is directly relevant to the study of leadership and its situated achievement.

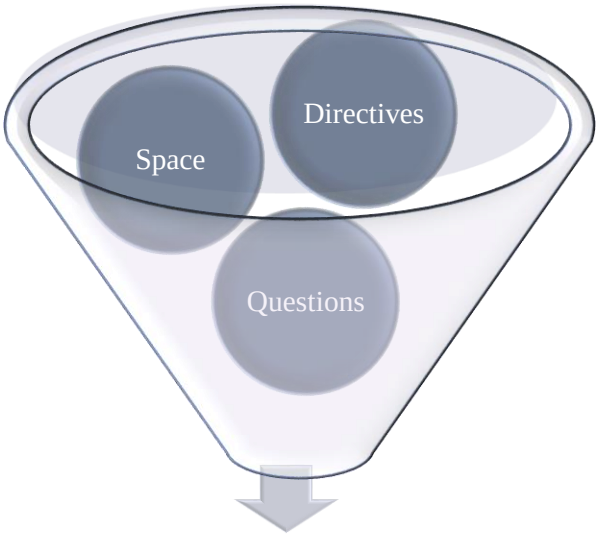
In discussing leadership strategies, I drew on a variety of methods and analytical frameworks to provide an overview of the field. I mostly rely on CA and IS work, however, with the latter being the approach taken here. IS' contribution to my work lies in the fact that it allows for a holistic consideration of those strategies (directives; questions), paying attention not only to the micro-level (their utterance in the here-and-now interaction), but also to the institutional (macro-) level, shedding light on the ways in which those are mobilised differently by senior/junior roles (managers-subordinates etc.). I argue that the meso level is significant for

unpacking teamwork and as such IS is an appropriate framework and methodology for relevant research.

In line with the IS agenda, I drew systematically on CA work, as it does not only provide me with the tools for conducting a detailed micro-analysis (for the micro/macro layers of my analysis see section 4.7.2.5) of the situated interaction, but also because of its rich tradition on drawing connections between floor management, turn-taking, and control. I revisit the potential of bringing together IS and CA later in the thesis (Chapters 4 and 9).

In summary, I explore the interrelationship between questions and directives in showing how teams perform their roles in the material space of emergency room in my data and, in doing so, they negotiate leadership in situ, as shown in Figure 3.1. below. In the following chapter, I turn to the research design and methodology of the study.

Figure 3.1. Main elements of leadership in the analysis.



Chapter 4. Methodological and analytical approach

4.1. Introduction

This chapter is concerned with the research design and analytical approach employed for unpacking the ways healthcare professionals *do* leadership in medical emergencies. I begin with the study on simulated obstetric emergencies (*SaFE* study), illustrating the context, team composition, and dataset, before turning to the role of simulations in the healthcare sector. This constitutes the reference dataset of the study and I describe how it has informed the analytical principles as well as the methodological model I have developed for combining simulations, and video data more broadly, with other datasets. I then continue with the study on real-life trauma emergencies (*TeamLeader* study), introducing the context and team composition, as well as the research design, which is ethnographically informed, before discussing the commonalities of the two studies and how I bring them together. Next, I turn to the analytical approach taken throughout this thesis, which is a holistic, IS approach, and illustrate the ways in which such an approach is relevant to my research aim and suitable for addressing the RQs. For the last part of the chapter, I consider ethical issues, including consent, and participant anonymity in the *TeamLeader* study, as well as a more general discussion on the difficulties of getting access in medical contexts for video-based health linguistic research. The chapter concludes with a summary before turning to the data section of the thesis.

4.2. Research aim and questions

The study aims to provide an insight into how leadership is enacted discursively in ad hoc teams in the context of medical emergencies, addressing a critical gap in existing knowledge. The findings of the work could make a direct contribution to both patient safety and staff training (Section 9.2 for the study's potential impact).

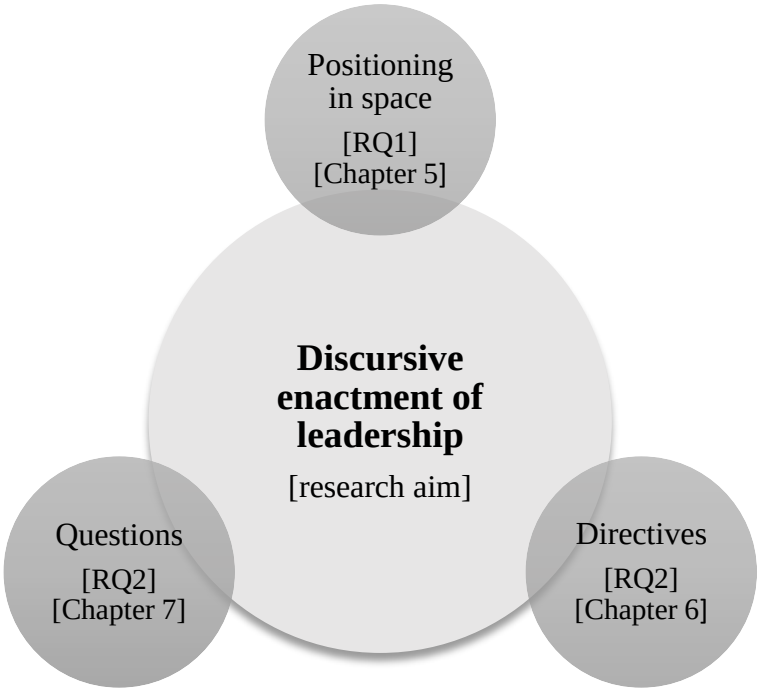
The key research questions addressed in this thesis are the following:

1. How do staff members enact their professional role in the spatiomaterial context of the emergency room?
2. How do team leaders mobilise directive and questioning mechanisms to *do* leadership?
3. How do the stages of the encounter impact on who claims a leadership role in this complex multi-actor system?
4. What is the relationship between teams' interactional and clinical performance (*SaFE* dataset)?

Each chapter focuses on a different question; Question 1 is primarily answered in Chapter 5, which unpacks the use of material zones by the various professional roles. Question 2 is addressed in chapters 6 and 7, which illustrate how directive and questioning mechanisms, respectively, are mobilised by team leaders for *doing* leadership. A simple illustration of this relationship is provided in Figure 4.1 below, and will be revised in the final discussion (Chapter 9). Expanding on and deepening the discussion of Question 2, in Chapter 8 I bring in the concept of time and pay attention to the ways in which the stages of the emergency encounter affect the enactment of leadership, addressing Question 3. Finally, Question 4 is a question that runs through all the analysis chapters; it is concerned, however, only with the *SaFE* dataset, for which the teams' clinical performance is available (see methodology for a discussion). The relationship between team members' interactions and their clinical performance in the obstetric context and the relevant gap in the literature have been extensively discussed and reflect the work my two supervisors (Prof. Jo Angouri and Prof. Dimitrios Siassakos) have carried out in the area since 2009 (cf. Siassakos et al. 2011).

In my analysis chapters (Chapters 5-8), I illustrate how the above questions are intertwined, as shown below, and attempt to address them holistically.

Figure 4.1. Research aim and questions.



I now turn to illustrate the research design employed to address these research questions, and introduce my research context.

4.3. Research design

I draw on two healthcare emergency contexts, simulated obstetric emergencies (*SaFE* study) and real-life trauma emergencies (*TeamLeader* study), both of which are high-risk, time-sensitive environments involving multidisciplinary ad hoc teams. The *SaFE* study chronologically preceded the *TeamLeader* study and functions as the reference dataset, providing the foundation and framing of my work; on the ways the *SaFE* data helped me conceptualise space and set the tone for the analysis also of the *TeamLeader* data see Chapter 5.

In what follows, I introduce separately each of the studies, due to their different research design and setting; after I have introduced them, I draw connections between the two in Section 4.6. I start with the *SaFE* study, following the chronological order of the data collection and analysis.

4.4. *SaFE* study

4.4.1. Context

The obstetric dataset is drawn from *Simulation and Fire-drill Evaluation* (*SaFE*) study, a multi-site randomised controlled trial of training for obstetric emergencies, in which simulated emergencies were video-recorded in six sites in the UK. The teams, 24 in total (and a total of 140 participants), were recorded managing *eclampsia*, an obstetric emergency requiring staff members to perform several clinical tasks simultaneously, with a scenario that included a patient-actor (for a detailed account of the *SaFE*'s design and methodology see Ellis et al., 2008; Siassakos et al., 2010).

The *SaFE* study was a clinical study; commissioned by the Department of Health for England and Wales, it aimed at comparing the effectiveness of training for managing eclampsia. The simulated sessions were part of the training courses staff members regularly attend in the healthcare sector. To measure the effectiveness of the training, simulated drills were video recorded both pre- (these are the baseline evaluations) and post-training. As no linguistic component was involved in its original conceptualisation until Angouri and Siassakos collaborated, and I was not involved in the study design or the data collection, I conducted a secondary analysis on the *SaFE* video recordings taking an IS approach.

Turning to the drills' design, staff members were provided with generic instructions before entering the room and were aware that their performance would be assessed; they did not know,

however, the nature of the emergency they would deal with – in this case eclampsia. The patient-actor (named *Lucy* throughout the drills), was instructed to have a seizure for about one minute, starting one minute after the end of the first handover.

Once in the room, the sources available to staff members for retrieving the patient's information were the following:

- A scripted handover given to the only junior midwife who was present in the room at the beginning of the session (including patient's symptoms and week of pregnancy),
- a partogram with the patient's information (including progress of labour, dilation, etc,),
- an intercom system through which members of the evaluation team (not present in the obstetric room) provided further information (e.g., blood pressure, pulse) using the standardised script.

The successful management of eclampsia includes early identification of indicators of eclampsia (fit and elevated blood pressure), followed by the administration of magnesium sulfate for seizure control and secondary prevention (Siassakos et al., 2011; I elaborate on the main tasks that need to be performed in eclampsia in Section 8.3). The clinical assessment of the teams' performance was based on a number of standard clinical criteria, the most important of which were found to be the following: the success in obtaining, preparing, and administering magnesium sulfate, and the time interval to the administration of the magnesium sulfate. The clinical efficacy score, provided by the clinical team, and its interpretation are illustrated in Table 4.1 below (from worst to best performance). I explain the relevance of the team performance for the reading of the data throughout the analysis (Chapters 5-9) and in Section 7.6.2 in particular.

Table 4.1. Clinical efficacy score in the *SaFE* study.

Clinical efficacy score	Score interpretation
Magnesium not obtained	Magnesium not administered – poor clinical performance
Magnesium obtained but not prepared	
Magnesium prepared but not administered	
Magnesium administered in more than 6 mins	Magnesium administered – good clinical performance
Magnesium administered within 5-6 mins	

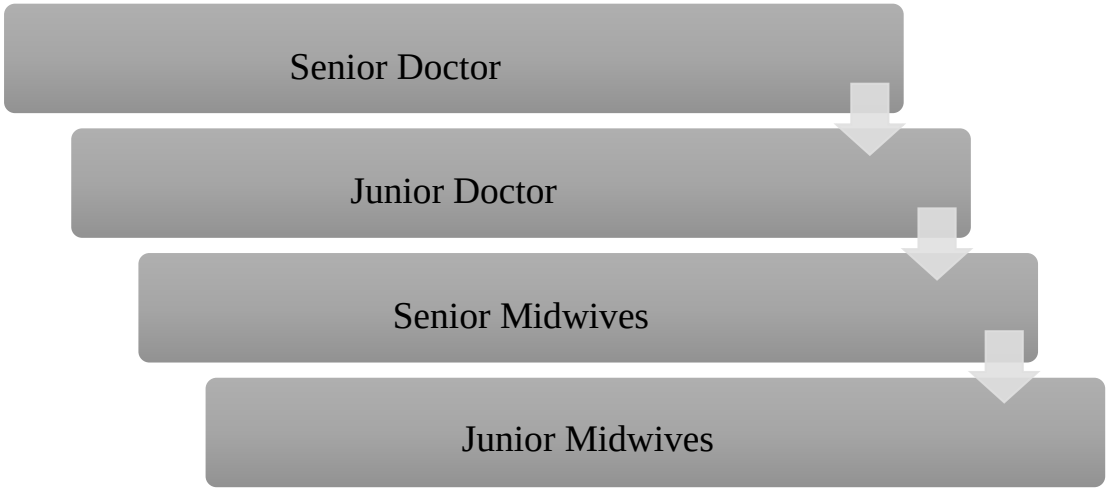
Magnesium administered in less than 5 mins	

In what follows, I zoom in on the teams' composition.

4.4.2. Team composition

In the *SaFE* study, the canonical form of the teams includes six members: one senior doctor (the designated team leader), one junior doctor, two senior midwives and two junior midwives (Siassakos et al., 2011, for the description of the *SaFE* teams). These are not stable teams; I elaborate on their ad hoc formation later on. Some of the teams originally recorded for the *SaFE* study were not complete, missing, for instance, the senior or the junior doctor. The professional hierarchy is depicted in Figure 4.2:

Figure 4.2. *SaFE* institutional hierarchy.



My analysis has shown a different hierarchy in the situated interaction, with the roles of junior doctors and senior midwives often overlapping, which I discuss in more detail in Chapter 7. I provide content here to help the reader with following the data that are drawn from this complex setting.

Figure 4.3. *SaFE* emerged hierarchy in the situated interaction.

As I will argue, the overlap between the junior doctor and the senior midwives in Figure 4.3. visualises the way they overlap in their performance, too; senior midwives in this context play a key role and are frequently found to coordinate the whole team claiming a leadership role (cf. Excerpt 7.5). At the same time, there are junior doctors who remain uninvolved and silent for most of the drill; the synthesis of the findings and my reading of the implications for role enactment is provided in Chapter 9. At this stage this illustration is provided to help the reader in reading the plasticity of junior doctors' and senior midwives' roles who are found to adjust their behaviour in relation to the senior doctor's (lack of) leadership; I return to this in Chapters 6-8.

4.4.3. Dataset

Out of the 48 video recorded sessions (24 pre- and 24- post training) which constitute the complete *SaFE* dataset, I fully analysed ten cases for this study. These were selected as follows: my dataset included only complete teams (1 senior doctor; 1 junior doctor; 2 senior midwives; 2 junior midwives), and cases of adequate sound and image quality; I thus excluded drills with poor sound, particularly when it was difficult to produce a transcript of sufficient quality for an IS analysis, and/or cases where cupboard doors and other artefacts obscured the cameras' view. From the remaining recorded sessions, I intentionally chose teams exhibiting both poor and good clinical performance, in order to address RQ4 on the relationship between the teams' clinical and interactional performance. As shown below in Table 4.2, there are more teams in the 'good' end in my sample (Cases 4-10); this is only because the total number of teams with good clinical performance was originally considerably bigger, with 12 out of the 19 teams which completed both the pre- and post-training drills managing to administer magnesium. This is also the reason why I have not included teams that did not manage to obtain magnesium,

as there was only one team in that category but did not meet the criteria of the sound and image quality.

In relation to pre- and post-training sessions, I drew on both, as a) changes in clinical practice are not relevant in my analysis, and b) the analysis illustrated early on that teams' interactional performance has not changed after training. Since a small sample at the beginning of the analysis did not yield different patterns in pre- and post-training interactional performance, I did not conduct a systematic comparative study in the whole dataset. In my subset, all teams that did not administer magnesium are pre-training (Cases 1-3), as in the post-training evaluation 92% of the teams completed the magnesium administration (Ellis et al., 2008). Table 4.2. below summarises the *SaFE* dataset on which I draw here.

Table 4.2. *SaFE* dataset and teams' clinical performance

Dataset	Pre/post	Clinical efficacy score	Score interpretation
-		Magnesium not obtained	Magnesium not administered – poor clinical performance
Case 1	Pre-training	Magnesium obtained but not prepared	
Case 2, Case 3	Pre-training	Magnesium prepared but not administered	
Case 4, Case 5	Case 4 pre-training; Case 5 post-training	Magnesium administered in more than 6 mins	Magnesium administered – good clinical performance
Case 6, Case 7, Case 8,	Case 6 & 8 post-training; Case 7 pre-training	Magnesium administered within 5-6 mins	
Case 9, Case 10	Case 9 post-training; Case 10 pre-training	Magnesium administered in less than 5 mins	

For the last part of this section, I discuss the role of simulations in healthcare, before turning to the *TeamLeader* study.

4.4.4. Simulations in healthcare

Simulations have been vividly debated in the literature on the authenticity of context, as well as their impact and effectiveness; even though they are expected to 'replace and amplify real experiences with guided ones, often "immersive" in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion' (Lateef, 2010, p. 48), participants know in advance that they handle a simulated emergency. More, the fact that the patient is usually an actor, as was the case in the *SaFE* study, or a full-body mannequin simulator, naturally can affect perceptions of risk and urgency. Siassakos et al. (2011) have already discussed the criticism in relation to the *SaFE* data, arguing that 'simulation, role play and rehearsals can all be viewed as a variety of naturally occurring data, as long as they elicit interactions between participants' (p. 603); in a previous work we have also argued that the criticism against simulations' authenticity constitutes a monodimensional approach (Mesinioti et al., 2020). I expand on this position here in relation to a. the role of simulations specifically in the healthcare context, and b. the impact of cameras on the participants.

Starting with the role of simulations, these have been used for a long time now in healthcare, with the first full-body mannequin simulators being introduced in the context of anaesthesia in the late 1960s (Lateef, 2010). Simulations are by now well embedded in medical training, with some healthcare professionals receiving regular simulation-based medical education, particularly in large and/or research hospitals; this provides evidence on professionals' familiarisation with the simulated practice. Previous studies have convincingly demonstrated not only the effectiveness of simulated-based medical training (Kim et al., 2016; Meyer et al., 2011), but also the way simulations can be an authentic environment for medical training; Rystedt and Sjöblom (2012), for instance, argue that simulators can function as 'authentic representations of real-world tasks' (p. 785), while Lateef (2010) illustrates the conditions under which simulated training can be 'just like the real thing'.

I now turn to another issue, that of participants' acceptability of video-based research in healthcare (for a review see Parry et al., 2016). Previous work in the field demonstrates that participants habituate to the cameras' presence quite rapidly, particularly in healthcare settings, where being video recorded is part of the established professional routines. Penner et al. (2007), for instance, have explored participants' reactivity towards the cameras in oncology consultations and found that the highest frequency of camera-related behaviours occurred

within the first four minutes of the recording. Going further, Gordon's (2013) work provides evidence on the active role video methods can play in the data, with her findings illustrating that participants incorporated the recording devices into their everyday activities and used them to accomplish identity work, e.g., to portray themselves as cooperative research participants. I do not argue here, however, that participants' behaviour is not affected by the cameras' or recorders' presence. As Lomax and Casey (1998) argue, the two mainstream views that video recording either faithfully represents or distorts social phenomena 'are at the expense of exploring the degree to which the process helps socially and interactionally produce the data' (p. 121). The stance taken here, thus, is that the researcher plays indeed a role in the meaning-making process, without this being a drawback, as this is always the case in any research design; from the research questions' formulation to the data collection methods and analysis, the researcher is always voiced to a greater or lesser extent.

Based on the above, I consider the *SaFE* simulations authentic environments for what they are, and appropriate for the study of team interactions. That the emerging patterns are consistent with the ones from the real-life *TeamLeader* data, as I illustrate in the analysis chapters (Chapters 5-7), further supports this claim. I thus argue that, given the complexities of collecting real-life data in emergency contexts (see Section 4.8 for a discussion), studies relying on simulations, whether these are designed for research purposes, or are part of professionals' regular training, as is the case in the *SaFE* study, are a valuable resource for understanding 'how things are done' in this complex context and still unexplored by health (socio)linguistic studies; I return to this in Section 7.6.2 and in the overall discussion in Chapter 9.

Next, I introduce the *TeamLeader* dataset before bringing the two contexts together.

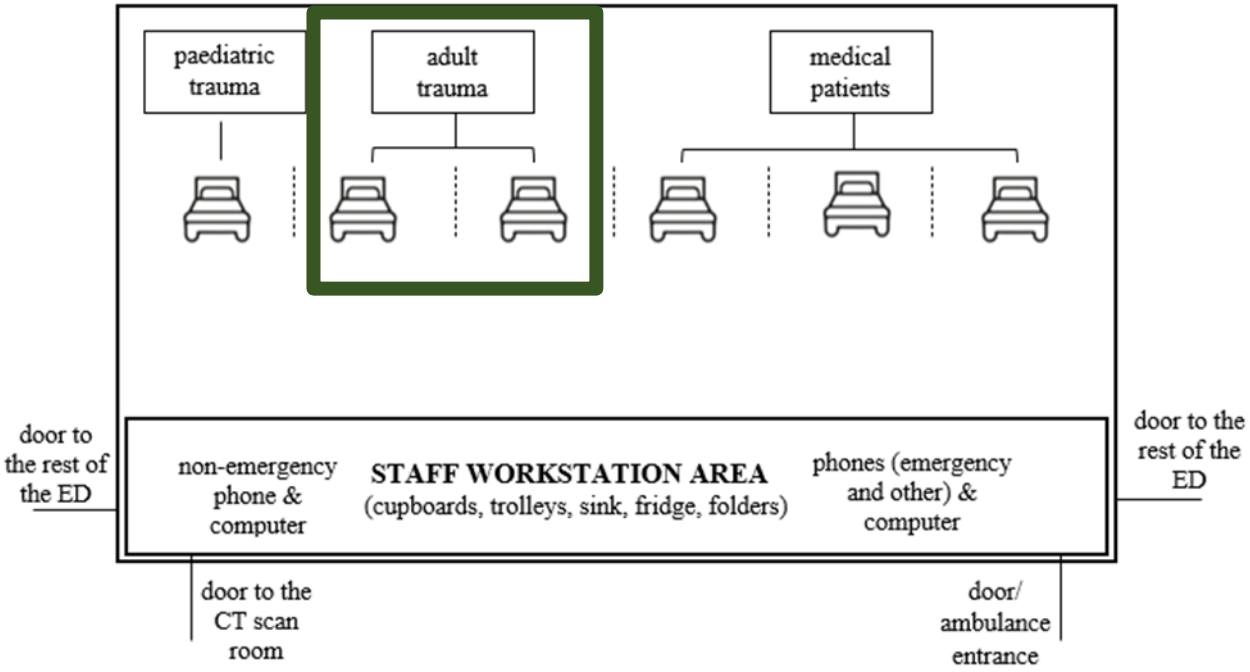
4.5. *TeamLeader* study

4.5.1. Context

The *TeamLeader* study is an ongoing team project, led by Professor Jo Angouri and a consultant, which takes an ethnographic approach and aims to explore leadership and risk negotiation in real-life trauma teams. With the research team, we targeted this specific context as trauma is a leading cause of mortality globally (Global Burden of Disease Study, 2010), the leading cause of death for people under 40 in the UK, and a major cause of debilitating long-term injuries (Findlay et al., 2007). Previous studies have already illustrated the need for understanding and addressing leadership, teamwork, communication, and decision making in trauma teams (Mercer et al., 2014, 2015; for an illustration of the literature gap see Section 3.3); my work aims to contribute to this agenda.

The locus of this study is the resus of one of the busiest MTCs in the UK; this is a key area in any ED, dealing with the most seriously ill (medical) or injured (trauma) patients; my research focuses on the management of trauma patients. The rest of the ED includes majors, minors, and the paediatric ED. The resus under investigation is six bedded, including one paediatric, two adult trauma, and three adult medical resus bays (see Figure 4.4); the adult bays, however, are often used interchangeably depending on demand. My focus on adult trauma patients is illustrated in the figure.

Figure 4.4. The resuscitation area layout (Mesinioti et al., fc.).



The *TeamLeader* study targets only trauma teams handling adult cases, as paediatric trauma patients (<16 years old) are treated by different teams, thus exceeding my work's scope; I present the trauma team composition immediately afterwards. More, conducting research which involves children requires an even more complicated ethical procedure (for the challenges of getting access see Section 4.8 at the end of this chapter).

4.5.2. Team composition

Compared to the *SaFE* teams, the composition of the *TeamLeader* teams is far more complex and fluid; the teams' size ranges from five to 14 staff members, depending on the trauma severity and perceived risk, the time allowed prior to the patient arrival, and the staff members' availability at a particular moment (see Tiel Groenestege-Kreb et al., 2014, on trauma teams' variation (inter)nationally). The specialties involved also vary, depending on the type of

trauma, as well as patient history, and most frequently include intensive care, emergency medicine, trauma and orthopaedics, and surgery, as well as nursing and support staff; in certain occasions cardiothoracic surgeons, neurosurgeons, and other specialties complement the team. Each of the above contributes simultaneously to the assessment and management of the trauma patient, under the coordination of a team leader (Georgiou and Lockey, 2010).

In my data, trauma incidents are usually handled by an ED consultant (team leader – this is usually also the one taking notes, unless there is a scriber), an ED registrar (performing the initial patient assessment -or *primary survey*-), an Operating Department Practitioner (ODP; although ODPs are not doctors, they are a key role in traumas, assisting the anaesthetist, transferring the patient to the resus bay, taking patient's temperature, removing patient's clothes etc.), and at least one ED nurse (assisting with any required procedure); these are also joined by an airway competent doctor – often an anaesthetic registrar – (responsible for assessment and management of airway and ventilation), and another registrar (of various specialties - responsible for the intravenous [IV] access). The *TeamLeader* institutional hierarchy is summarised in Figure 4.5 below.

Figure 4.5. *TeamLeader* professional hierarchy [only the core team included].

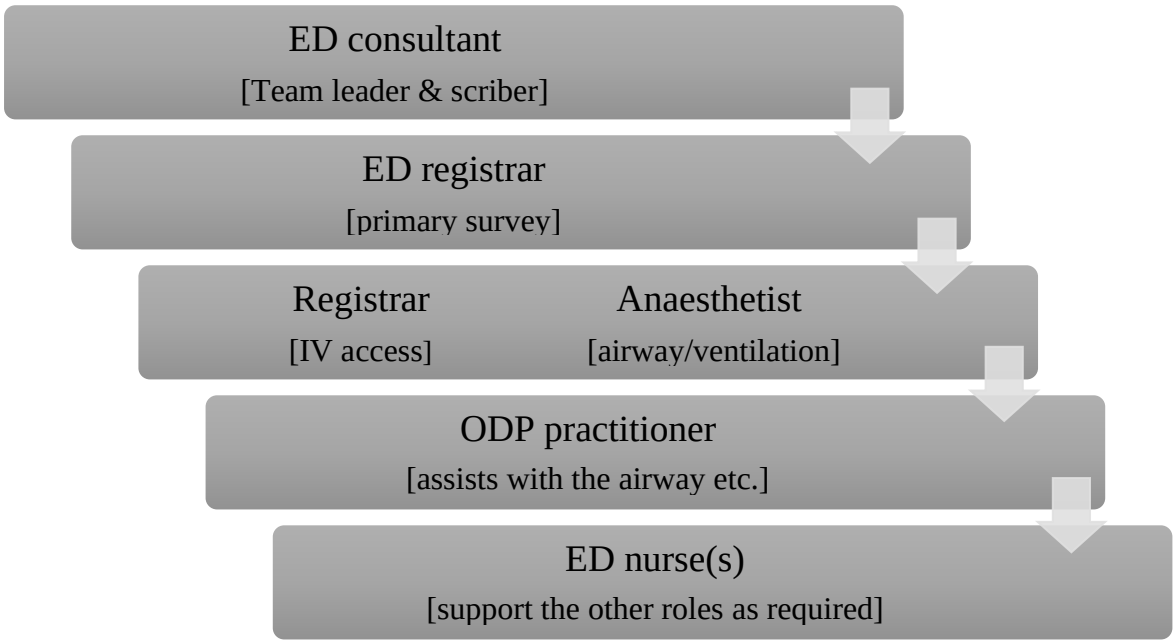


Figure 4.5 depicts the various professional roles in a linear way for reasons of illustration, and following the formal professional hierarchy; note, however, that staff members *do* their role in a dynamic way in the situated interaction (in line with the discussion concerning the *SaFE*

data). In Chapters 6-7, I illustrate instances where professionals comply to, negotiate, or challenge the given professional hierarchy, stepping up in other team members' roles.

Next, I discuss the ethnographic design of the *TeamLeader* study.

4.5.3. Ethnographic approach

The *TeamLeader* study is ethnographically informed, combined with an IS approach (see Section 4.7.2 below for the IS affordances; and Mesinioti et al., fc, for a detailed account of our ethnographic approach in hospital settings). Ethnographic research is based on the practice of fieldwork and aims to provide an insight into the local context of the researched phenomenon – an 'insider's' perspective to the degree that this is possible (on the insider/outsider pendulum see below on observations).

The most recent line of thinking views ethnography as a 'multi-method research approach' (Hall and Davis, 2021); a perspective (Dong, 2017); '*not* a single method' (Angouri, 2018; emphasis in the original). As such, ethnography can encompass a broad range of data collection methods, including interviews, recordings, narratives, documents, and questionnaires – practically anything that could increase our level of understanding in regard to the participants' local context. As we argued elsewhere, however, observation 'is so deeply embedded in ethnography that is often seen as a *sine qua non*' (Mesinioti et al., fc.), a requisite component in all studies taking an ethnographic approach; the *TeamLeader* study is a case in point.

In line with the above, the *TeamLeader* dataset is comprised of observations and audio recordings of trauma cases in the resus, complemented with post-event conversations with staff members. The current dataset has been collected over a three-month period; the data collection was initially designed to last longer, as long-term periods of fieldwork are better suited to ethnographic designs. The timing of the fieldwork, however, overlapped with the emergence and rise of the COVID-19 pandemic, rendering it impossible to maintain access in the field, due to the increasing pressure on ED departments, as well as safety issues. In those three months I conducted more than 140 hours of observations, getting a rich insight into the department's ecology. I expand on the data collection methods in turn below.

4.5.3.1. Fieldwork and observations

To begin with the observations, which also chronologically preceded the audio recordings and the post-event conversations, these were initially limited to part of the resus, as this was the space which is materially central to the project and was indicated to me in my first few visits in the unit. The main gatekeeper, who is an insider to the organisation, and, as confirmed by

data, respected in their role, introduced me, and the study, to the trauma teams. This legitimised my presence to a degree, and made the initial, and often awkward, stage of entering the field easier; I discuss later the increasing quality and level of access once this stage was over.

I made sure to cover day and night shifts, as well as weekdays and weekends, in order to get an insight into different work patterns and develop a more holistic understanding of the existing professional routines, reaching a total of 146 hours of observations in the unit, which spread across 23 shifts. It soon became apparent, for instance, that the resus has a completely different rhythm at night, being overall much quieter and with fewer staff members; a relevant observation is that there is only one ODP practitioner covering the night shift, while there are two during the day shift.

Staff members also provided personal insights regarding the pace and flow in the resus, with Friday and Saturday late nights generally being considered the busiest in terms of trauma incidents, followed by morning and evening rush hours, Sunday mornings, and so on. I made sure to attend both shifts that were expected to be busy, as well as the quieter ones; the busy ones allowed me to observe and record trauma cases, which was the targeted interactional event, while some quiet midweek nights, for instance, provided me with a unique opportunity for long conversations with my participants, as they were more relaxed and had time to reflect on previous incidents and work experiences. Further, being there on a Saturday night at 3am, for instance, made staff members take me more seriously; they would sometimes comment on my dedication and ask what they could do to help, acting as gatekeepers and opening up more 'layers' of their material space. Although I did not record anything outside the resus, in line with the access approvals we have been granted (though see Hammersley, 2006, for the difficulties ethnographers face on defining the spatial boundaries of what they study), the point to note here is that, over time, *layers of context* become available to the researcher impacting the framing of the research and ultimately the representation of participants' realities (Mesinioti et al., fc.; Sarangi, 2019).

Earlier understandings of ways of observing in the field drew a rigid dichotomy between participant and non-participant observation, separating between situations where the researcher interacts with participants and the local ecosystem (researcher as an insider) and situations where the researcher does not participate at all in what is being observed (participant as an outsider); see Hammersley (2015) for a recent discussion. This dichotomy is still widespread in research methodology discourse although it stands for a limiting and limited understanding of what 'being in the field' entails. Other conceptualisations include Gold's (1958) classic

typology of research roles in sociological field observation, who illustrated the degrees of participation in the following continuum: complete participant >> participant as observer >> observer as participant >> complete observer.

In my case, as a social researcher external to my participants' professional practice, I could never fully share their lived experience, and it was impossible for me to join any of the *work* activities taking place in this high-risk medical context. In due course, however, I was legitimised as a participant by staff members, particularly the core trauma team whom I met regularly (for a detailed account on the stages of the researcher's legitimisation in the field, and how these are also inscribed in the material space, see Mesinioti et al., fc.).

To elaborate more on this, around two months in the field, the quality of access and degree of participation in my participants' routines increased considerably. Getting to know them and open up entailed that they became interested in (and some of them more actively involved to) my research. I was thus soon introduced to other spaces and interactional events focal to their professional routines; those ranged from formal events, including trauma debriefs following particularly challenging and sensitive trauma cases, morning and evening shift handovers of both senior and junior staff members, and weekly multidisciplinary team meetings, to informal ones, including lunch breaks at the staff room, coffee breaks at the hospital's cafeteria and other social events taking place in the hospital (e.g., retirement celebrations and farewell parties). I do not suggest here that these opportunities and new levels of access meant that I was now considered an insider for my participants; they are, however, indicative of how all ethnographic designs are participatory to a degree, and illustrate the difficulty of drawing a line between participant and non-participant observation. In what follows, I illustrate my notetaking process.

4.5.3.2. Fieldnotes

I tried to keep extensive fieldnotes from everything I observed, no matter how irrelevant or insignificant might have seemed at that time. Seligman (1951) made a case against delaying or omitting notetaking a long time ago, arguing that 'it is unwise to trust to memory; notes should be written as soon as possible' (p. 45). This still applies. There is by now an excellent body of work emphasising the need for taking copious notes (Emerson et al., 2011; Mills and Morton, 2013). The notes are part of the analysis and the only way in which raw material can become a body of data for further, and systematic, processing; and yet the importance of the context of fieldnotes is underestimated in healthcare ethnography (Rashid et al., 2015).

Most of my notes were taken when I could find some privacy (e.g., during bathroom breaks, which have been also identified by Pope (2005) as a good opportunity to take notes when conducting ethnography in medical settings), or at the end of the day, once I have left the unit. I adopted this strategy as I did not want to be seen taking notes in the field in order not to make my participants overconscientious of my researcher's role. This is in line with Angouri (2018), who, in providing tips on fieldnotes in workplace discourse research, argues that the practice of taking notes in front of the participants 'puts people in a ''lab animal'' position which will backfire as you will then be positioned as the ''researcher''' (p. 166).

The above were confirmed in my case, too, as early on in the fieldwork I made a flitting note in front of my participants, and the reaction was immediate. The ED registrar who was present asked me, in a seemingly joking manner, if I am taking notes about her. This instance made me aware of the constant monitoring and the sensitivity of my relationship with the participants; a more discreet notetaking process helped me avoid similar awkward moments onwards. More, as soon as I established a relationship with staff members, and they started inviting me to other spaces and including me in personal conversations, it felt inappropriate to open my notebook and take notes in the middle of a joke during lunch break, for instance, or when staff members were gossiping. Taken together, however, all these 'informal' moments increased my scope of interpretation, providing an insight into the team dynamics and relationships in a way that would not be possible when only observing the 'formal' event of handling a patient; this complemented my analysis under an IS approach, to which I return later on.

I have not conducted real-life observations in a medical setting before, and, even though I have received training on how to conduct research in sensitive settings and I was well supported by the research team, I found the first days in the field overwhelming, both overall and in relation to what to write down (for a discussion on how ethnographic designs can be overwhelming, particularly for the novice researcher, see Fine et al., 2009). The unknown medical terminology, the continuous patient flow and tension, the constant rotation of various professional roles, and, at the same time, my attempt to blend into the context, or 'fit in', rendered it difficult to immerse. As soon as I familiarised myself with the context, however, I stopped worrying about how I am perceived and I was able to focus on what was going on; the preceded analysis of the *SaFE* data helped me quickly get my head around what was significant and relevant to my research and set a frame, and led the notetaking process.

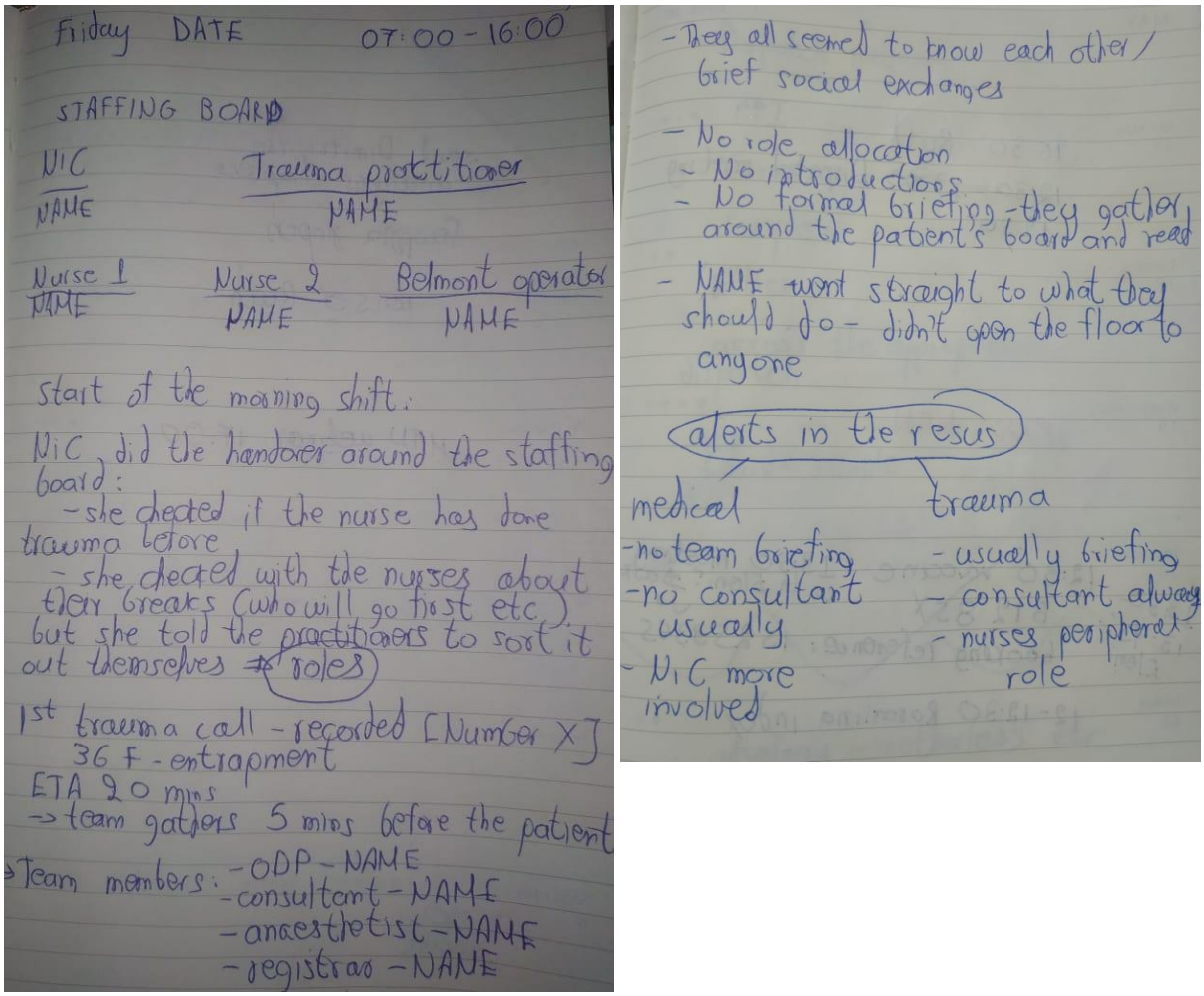
My notes covered multiple layers of information, ranging from 'descriptions' of whatever was happening in the setting (e.g., participants; time and day; team members' interactions;

workflow and tasks in the working environment; material artefacts and so on), to assessments in relation to what strike as significant, as well as personal reflections on how I felt at a given time. Note, however, that even what the researcher considers as *descriptive*, is, in essence, their interpretation; the matter is nicely captured by Emerson et al. (2011, p. 5-6):

> To view the writing of descriptions as essentially a matter of producing texts that correspond accurately to what has been observed is to assume that there is but one "best" description of any particular event. But, in fact, there is no one "natural" or "correct" way to write about what one observes.

An important component in my notes, in line with my research questions and aims, was the use of the material space by the professionals; as this is not only a methodological matter, but rather, a significant part of my analysis, I elaborate on this in Chapter 5. I have provided in Figure 4.6, below, an example of my notes in the field. To protect participants' anonymity, the figure is a reproduction of the original notes without any identifiable information, rather than a screenshot.

Figure 4.6. An example of my fieldnotes (re-constructed for illustration purposes).



Next, I discuss audio recordings and post-event conversations.

4.5.3.3. Audio recordings and post-event conversations

In the three-month fieldwork, I recorded 13 trauma incidents, three of which were identified as silver trauma[2]. For each event I recorded I received signed consent from all participants.

From the recorded cases, I fully transcribed and analysed 10,[3] partly for reasons of symmetry with the *SaFE* dataset (though see Angouri, 2018, on the myth of symmetric samples in workplace discourse research), but mainly because some of the rest were either of very poor

[2] The term refers to cases where elderly patients (>65) have suffered major trauma, with the most common mechanism of injury being a fall of <2m (TARN, 2017).
[3] On what I considered as a 'full transcript' in my analysis see Chapter 5.

sound quality (e.g., an instance where the air ambulance helicopter landed at the hospital during the recording), or cases that I could not use for confidentiality and anonymity reasons.

The data was recorded with a good quality portable audio recorder, the noise cancelling function of which significantly improved the sound quality; in those I did not encounter significant difficulties in capturing most of what participants were saying. Within the research team, we have originally debated alternative ways of recording, including installing stable microphones in the resus and providing participants with wearable voice recorders; the first was rejected because it was impossible to cover all the resus bays with fixed microphones, and the second on the grounds that wearable devices might be too intrusive for participants and there was a high-stakes risk of them forgetting them on when exiting the resus.

I kept the audio recorder on me throughout my visits, not only in order to be ready to turn it on in case of a trauma incident, but also because of the sensitive data it included. At the end of each day, I would remove the recordings from the portable device and store them on the hospital's secure servers, in line with the ethics approval. While recording, I would usually approach the team as much as possible in order to be able to capture what was happening but at the same time without positioning myself at the centre of action. Going back to the importance of building relationships with the participants, at a late stage of the data collection staff members, in seeking ways to help me, would place the audio recorder on the scriber's desk or put it in their pocket; this was as good as it gets, and made a big difference to the sound quality.

Finally, turning to the post-event stage, some of the recordings were followed by ad hoc conversations involving staff members that handled the trauma case. Those conversations were either initiated by members of the core trauma team, who explained, and in some cases justified, aspects of what has just happened, or myself when I needed clarifications. Those were not recorded, as they had the form of informal chats, even though participants were still aware of my role as a researcher (see earlier discussion on observations). Although not systematic, these ad hoc conversations broadened my scope of interpretation, providing, in this case, indeed an *insider* perspective; during these interactions staff members did not only explain standard procedures and terminology, but, more importantly, their expectations of other professional roles, and particularly the leader (see Quotes 7.1 and 7.2 for an illustration), as well as a personal evaluation of team relationships and practices they interpreted as 'bossy', 'in/effective', and so on.

Professionals' personal accounts, either in the form of informal conversations, or when stemming from interviews/focus groups, are in themselves a rich dataset providing an insight into professional ideals and expectations, and thus offer a more holistic understanding of what each professional role entails (see, for instance, Bristowe et al., 2012). In this thesis, however, the focus is laid primarily on teams' interactions during the trauma encounter, in line with the IS approach that tends to prioritise interactional data (see discussion also later on). I thus treat post-event conversations as a complementary source of data and only provide a few quotes relevant to the excerpts I draw on, to illustrate how such accounts can be used to enhance our interpretation of the interactional data; this is the reason why I will not be discussing these separately.

Before turning to bringing the *SaFE* and the *TeamLeader* study together, I summarise the *TeamLeader* dataset in Table 4.3.

Table 4.3. *TeamLeader* datasets.

Datasets	Full volume collected	Subset used here
ethnographic observations	146 hours covering at least part of 23 shifts	Mainly observations taken place in the resus
audio recordings of trauma incidents	13 (3 silver)	10 (2 silver)
post-event conversations		

4.6. Bringing the two contexts together

I have presented above the *SaFE* and the *TeamLeader* data separately, as they are conducted in different research settings and draw on distinct research designs. Table 4.4 summarises the full dataset employed in this thesis.

Table 4.4. Summary of the thesis' datasets.

Study	Data collection methods	Number of cases	Total duration
SaFE	video recordings of simulated obstetric emergencies	10 cases	78 minutes
TeamLeader	audio recordings of real-life trauma emergencies	10 cases	181 minutes
	observations in the resus		
	post-event conversations		

The two contexts, however, share common ground, which is the reason why I weave them together to address my research aim. I elaborate on their commonalities in turn below, namely, the contexts' urgency and hierarchical structure, as well as the multidisciplinary ad hoc team formation, before turning to discussing the ways each dataset feeds into another under a holistic approach.

4.6.1. (Em)Urgency

Both the *TeamLeader* and the *SaFE* study are concerned with emergencies involving fast-paced, time-sensitive environments where high risk is the norm. The teams are expected to respond to the emergency rapidly, performing multiple tasks simultaneously. In the past, linguistic studies looking at healthcare interactions have primarily targeted contexts of lower risk (e.g., primary care; doctor-patient consultations and so on), partly because of the difficulties in accessing high-stakes emergency contexts (see discussion on ethics at the end of this chapter). There is, however, a lack of studies exploring what is broadly labelled as 'communication' in emergency contexts (for notable exceptions see Pun et al., 2015; Scheeres et al., 2008; Slade et al., 2015); by weaving together the emergency obstetric and trauma context I aim to contribute to this agenda, making a methodological contribution in regard to how different datasets can be synthesised for multi-layered analysis.

Continuing here, in the *SaFE* study, the successful management of eclampsia requires recognition of the fit and elevated blood pressure (indicators of eclampsia), followed by the team preparing and administering magnesium sulfate. The time window allowed from the team handover to the patient's seizure, the emergency's identification and, ultimately, the

administration of magnesium, was ten minutes; as the use of magnesium for eclampsia is linked to reduced maternal and perinatal morbidity and mortality (Duley et al., 2010), the time limit for its administration not only represents a measure of the efficiency of the team's coordinated response, but it is also a valid indicator of patient outcome (Siassakos et al., 2011).

The trauma teams in the *TeamLeader* study also face time constraints, as the overall aim is the patient to leave the resus for computerised tomography (CT) scan within twenty minutes from arrival (some patients may require theatre rather than CT). This leaves team members with a short time window within which they should receive the paramedics' handover and perform primary assessment, IV access, immediate life-threatening interventions, and the patient's preparation for CT, illustrating the need for the team's rapid coordination.

4.6.2. Hierarchical structure

Another feature both studies share is that, as is the case with most healthcare contexts, both contexts still maintain a pyramid-shaped formal hierarchy model, with the team leader being at the top of this pyramid (the teams' composition has been described earlier). The role of the team leader is marked, as it comes with an institutionally recognised status and accountability; note, also, that no matter what the situated circumstances are, the overall responsibility for the patient lies with the team leader for medicolegal purposes. The team leaders' role has been identified as the most significant factor affecting the teams' performance; see, for instance, the 2013 Advanced Trauma Life Support (ATLS) guidelines emphasising that for a team to 'perform effectively one team member should assume the role of the team leader'. The situation is very similar in obstetric emergencies, where the role of the team leader is identified as the most dynamic aspect of teamwork (Madden et al., 2011). This is one of the main reasons why my main focus is on the discursive strategies mobilised by the team leaders (Chapters 6-7).

This is not to say that the designated team leader is the only possible role *doing* leadership; White et al. (2018), argue that 'in ad hoc multidisciplinary medical teams, power is influenced by existing hierarchies but may not always belong to the person at the "top" of a hierarchy when others have more knowledge or expertise in the specific task at hand' (p. 381). I illustrate the negotiation of the pre-existing hierarchy in my data in relation to time and space later on, and particularly in Chapter 8.

Next, I touch upon the team formation in this particular context.

4.6.3. Multidisciplinary and ad hoc team formation

At the very core of both contexts is the multidisciplinary and ad hoc formation of the teams. Multidisciplinary teams, consisting of professionals from different disciplines, are not rare in healthcare, particularly in contemporary health settings in which holistic approaches to specialised patient care is the norm. O'Daniel and Rosenstein (2008) calculate that a patient will possibly interact with 50 healthcare professionals over a four-day hospital stay, making a case that effective clinical practice requires effective communication and team collaboration. Previous research has provided ample evidence on the ways communication failures within multidisciplinary teams can lead to medical errors (Manser et al., 2009; Reader et al., 2007), rendering the need for further research necessary.

Turning to ad hoc team formation, although previous research has looked extensively at healthcare leadership, much of it has focused on leaders of stable teams (Sarcevic et al., 2011); the identified competencies, however, are not wholly transferable to healthcare contexts, where up to 76% of the medical teams have varying membership (Andreatta, 2010). Ad hoc teams in resuscitation contexts have been found to show less leadership and a worse team performance compared with established teams (Hunziker et al., 2013), indicating that the lack of stability in the teams can pose significant challenges to effective team performance – and consequently patient safety (see Section 3.3.); I aim to contribute to this agenda by bringing the two contexts together and showing the consistency in the leaders' ways of doing leadership *across* ad hoc emergency encounters. I will revisit this point in the light of the data chapters and in the discussion.

Having presented both research settings, as well as their common ground, I now turn to the analytical approach I take in this thesis.

4.7. Analytical approach

4.7.1. A holistic multi-method approach

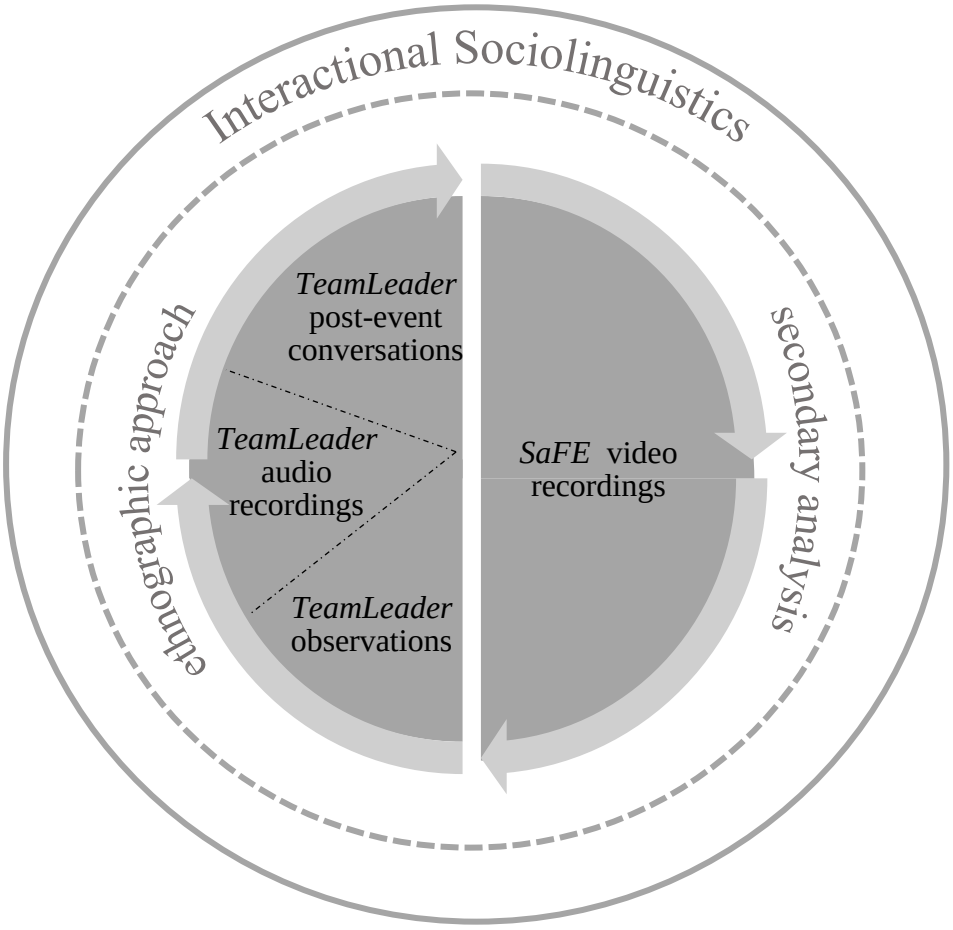
Taking a holistic approach, I bring the *TeamLeader* and the *SaFE* study together to understand the ways ad hoc teams work in the context of medical emergencies. Angouri (2018) makes a case for holistic research, arguing that 'moving towards a holistic research is necessary to capture the complexity of the questions in social sciences in general and Workplace Sociolinguistics in particular' (p. 165). The ethnographically informed design taken in the *TeamLeader* study, which led not only the data collection but also the analytical process, is well aligned with holistic lines of analysis. Well put by Whitehead (2004, p. 6):

> The ethnographer should employ any and all means necessary and prudent to create the most holistic understanding of the cultural system or group being studied, including qualitative, quantitative, classical, and non-classical ethnographic methods.

I thus drew on multiple data collection methods (video recordings; observations; audio recordings; post-event conversations) and research approaches (secondary analysis of the *SaFE* data including interactional and clinical performance; ethnographic approach in the *TeamLeader* study) to develop a better understanding of what is going on in this particular context; all datasets are brought together under an IS approach, which also allows for a holistic interpretation of the findings; I discuss this below.

Under the holistic approach I advocate here, I treated all datasets together, each of which shed light on different layers of meaning in relation to the phenomenon under study – in this case the ways team members *do* leadership. Each of the datasets, thus, feeds into and is informed by the other; most of them are informed by an ethnographic approach, and all of them are analysed under the prism of an IS approach; I visualise these different layers in Figure 4.7 below. The *SaFE* video data constitutes the reference dataset and feeds into the design as per the earlier discussion.

Figure 4.7. Bringing the datasets and analytical approaches together.



Next, I zoom in on IS and illustrate the ways in which such an analytical approach is appropriate and suitable for addressing the research questions.

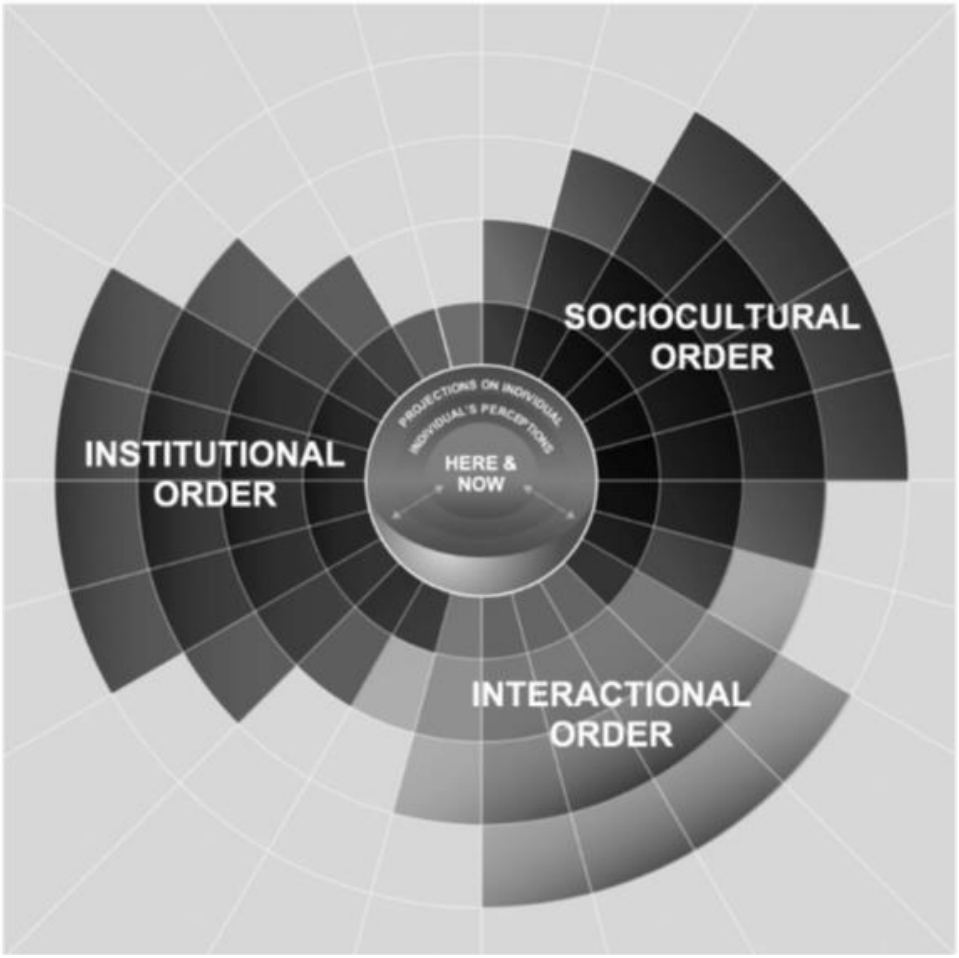
4.7.2. Interactional Sociolinguistics

4.7.2.1. Origins and analytic approach

IS is a discourse analytical technique examining the dialectic between linguistic signs and social knowledge in discourse. It has its origins in linguistic anthropology and ethnomethodology, particularly Gumperz's (1964) and Hymes' (1972) early work. As Auer and Roberts (2011) note, one of Gumperz's and Hymes' significant contributions to the field was 'to take the speech event as the unit of analysis rather than community-wide linguistic and cultural norms, to see that culture did not stand outside talk but was constituted in and through situated speaking practices' (p. 385). I bring in the discussion my units of analysis later in the chapter.

What distinguishes IS from other discourse analytical approaches is that it brings together the here-and-now interactions (micro-level) and the large-scale social processes and the broader environment within which the interactants operate (macro-level), on the grounds that linguistic structures are not context-free. Angouri (2018) visualises these micro/meso/macro levels of practice and the ways interactants operate at the interface of *institutional*, *sociocultural*, and *interactional* order in a 3D model, shown in Figure 4.8 below:

Figure 4.8. 'A model for contextual interpretations' (Angouri 2018, p. 188).



In my context, I used the situated moment, the 'here and now' in anchoring my observations for the team processes and the way in which these are negotiated in the hierarchical context of the medical emergency. Anchoring observations in the interactional context is shared between IS and CA traditions. IS relies on CA techniques in its micro-analytical approach to interaction, drawing on CA's highly technical transcription system (Jefferson, 2004). Both approaches call for a sequential analysis of interaction in order to analyse and understand social behaviour and 'share a commitment to the slow and intensive analysis of recordings of natural interaction' (Rampton, 2017, p. 6). Angouri and Mondada (2017) bring together the CA and IS tradition in

the context of business meetings, not only illustrating each of these approaches' contribution, but also weaving them together and foregrounding their common ground. A difference between the two, however, is that an IS approach explicitly considers the wider sociocultural context impacting on interactions (Stubbe et al., 2003).

This interface of the micro- and macro-context renders IS a valuable approach for researching institutional discourse. I touch upon IS's contribution in the field of workplace studies in the following section and discuss my own approach; and I return to the benefits of operating at the meso level under an IS approach in Chapter 9.

4.7.2.2. IS in the workplace

IS has been extensively used in analysing workplace discourse following the influential and still widely used approach developed by Holmes and the *Language in the Workplace Project* (LWP, 1996 onwards). Studies taking this approach have addressed a variety of institutional contexts, including corporate settings (Angouri and Marra, 2011a; Holmes et al, 2011), healthcare institutions (Chimbwete-Phiri and Schnurr, 2020; Zayts and Lazarro-Salazar, 2020), courtrooms (Eades, 2010), and the job interview event (Roberts, 2013; Roberts and Campbell, 2006). Key phenomena under study include, among others, leadership (Choi and Schnurr, 2014; Mesinioti et al., 2020), decision-making (Angouri and Machili, 2020; Huisman, 2001), problem-solving (Holmes and Stubbe, 2015; Kim and Angouri, 2019), and disagreement (Lazarro-Salazar et al., 2015; Marra, 2012). IS studies interface with other applied linguistic research. Slade's work in the healthcare context, for instance, is based on complementary principles and shows the porous boundaries between applied and sociolinguistic research, particularly in the field of health linguistics (see also in the Introduction).

A significant contribution of IS in the field of workplace discourse analysis is that it shifted the interest in what people *actually do* at work, rather than what they *say* or *think* they do, prioritising naturally occurring data and treating other datasets, such as focus groups and interviews, as secondary. See, however, the discussion in Angouri (2018), who draws attention to the fact that recording participants' interaction does not entail that the researcher's influence on the process is absent, nor is this influence automatically considered a drawback in any given study (p. 92).

Turning to the IS's relation to power, although IS has not been traditionally used for exploring issues of power and politics, recent work revisits its affordances and makes a case for the relevance of the framework for a critical study of professional interaction. Well put by Rampton

(2017), the IS framework is particularly useful for exploring 'interactions in which there are significant differences in the participants' sociolinguistic resources and/or institutional power' (p. 2). In the same vein, Price (2017) notes that 'across workplace contexts, power, status, and asymmetry are treated as features of social organization that have an analyzable impact on talk in interaction' (p. 8).

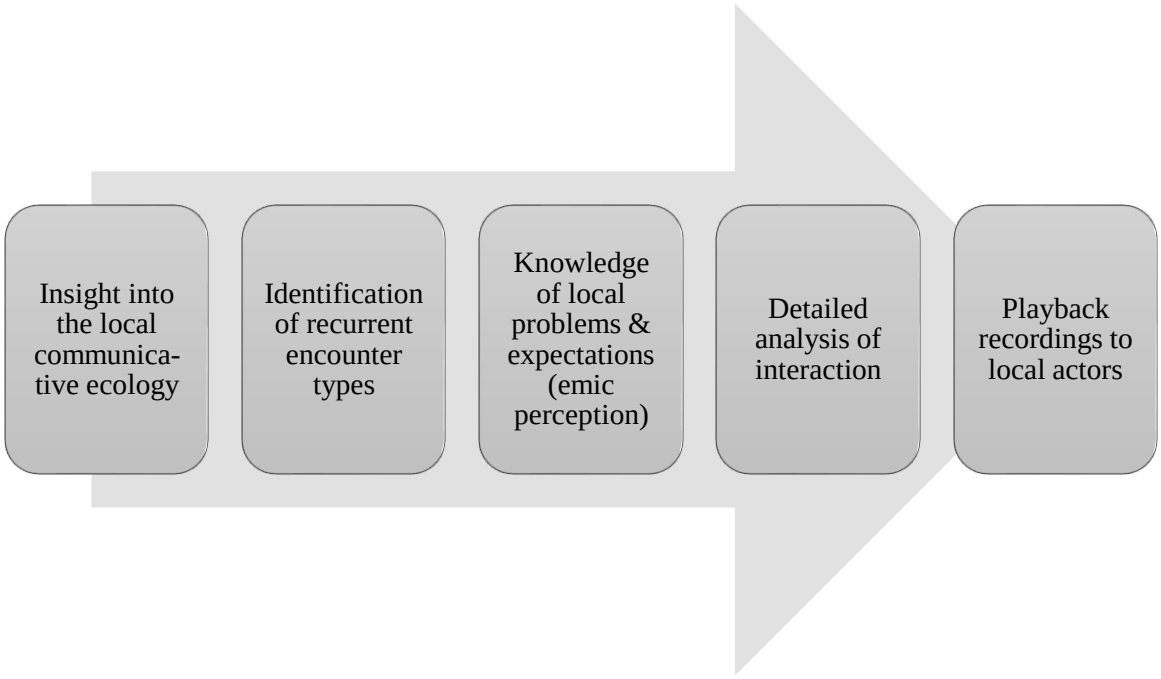
My research fits well under this body of work, as I am interested in exploring how professional roles are enacted in highly hierarchical medical contexts and the ways leadership is negotiated among staff members with evident power asymmetries (junior/senior members). I pay close attention to the discursive strategies employed in this workplace context, following Drew and Heritage (1992), according to whom 'interaction is institutional insofar as participants' institutional or professional identities are somehow relevant to the work activities in which they are engaged' (p. 2-3).

Next, I illustrate the key stages under an IS approach, as well as the main IS affordances on which I draw.

4.7.2.3. Key stages and analytical tools

Gumperz, for many the founding father of the IS approach, details the key stages in IS work, shown in Figure 4.9. I have also included in the figure the playback technique, which was adopted early on by Gumperz and is now a well-established IS tool; this involves playing the recordings back to those involved in the interactions, or to other local actors of a given community, and asking for their interpretations in an open-ended way (see Gordon, 2011, for a discussion). The advantage of playing the recordings back to insiders is that it provides multiple perspectives on the interactional event, leading to a more holistic understanding. Although it was not possible for us to play the recordings back to staff members in neither the *SaFE* nor the *TLCT* study, in both projects we work closely with medical professionals in order to develop a more nuanced understanding of their respective contexts.

Figure 4.9. Key stages in IS work (Gumperz, 2008).



In order to apply the process illustrated in Figure 4.9, I draw on two core IS concepts, the *conversational inference* and *contextualisation cues*. To bridge the micro- and macro-level, Gumperz (1982) introduced the notion of *conversational inference*, to refer to the situated or context-specific process of interpretation. Under an IS approach 'an act or utterance is read in a particular way by the interactants not on the basis of its linguistic form but on the potential meaning it carries in context' (Angouri, 2018, p. 74). The concept of conversational inference allows us to consider in the analysis interactants' active predictions of what will come next in the light of on-going talk and prior interactive experience (Tannen, 1992). As Sarangi and Roberts (1999) explain, 'this interpretive assessment is based both on background knowledge, including ideological presuppositions and metapragmatic knowledge, and on local inferences based on CA type sequential and preference organisation' (p. 398).

Turning to the *contextualisation cues*, another key concept in IS, these can be anything from phonological markers to larger structures in interaction. To put it in Gumperz's (2001) words:

> '[…] any *verbal sign* which, when processed with symbolic grammatical and lexical signs, serves to construct the contextual ground for situated interpretation and thereby affects how constituent messages are understood.' (p. 221-2; emphasis mine)

Typical contextualisation cues include syntactic or lexical choices, intonation, prosody etc. These cues can be described as indicators of meaning in interaction and according to Gumperz

(1992) they ‘serve to highlight, foreground or make salient certain phonological or lexical strings vis-à-vis other similar units, that is, they function relationally and cannot be assigned context-independent, stable, core lexical meanings’ (p. 232). I elaborate on how I extend the definition of contextualisation cues and conceptualise them as embodied in turn below.

4.7.2.4. Contextualisation cues

Although Gumperz explicitly refers in the above definition to verbal signs, he was one of the first scholars paying attention to ‘non-verbal’ signs, including gestures, acknowledging the fact that 'communicative practice largely rests on the discursive practices of actors *acting* in pursuit of their everyday goals and aspirations' (1999, p. 454; emphasis mine). Other key IS scholars also exhibited an early, although not systematic, interest in the body (Hymes, 1962; cf. also Pride and Holmes, 1972). This early work indeed prioritised talk and understood other modes of meaning-making as peripheral; even when multimodal resources were taken into account, they were usually treated as the context where the interaction occurs – rather than the interaction itself – or placed beyond the scope of the analysis.

More recent IS work, however, extends the cues’ definition to encompass ‘non-verbal signals’ such as gaze direction and gesture (Ishida, 2006), ‘paralinguistic activity’ such as kinesics (Barraja-Rohan, 2000), ‘multi-modal contextualisation cues’, such as body postures and movements (Kolberg, 2012), ‘embodied features’ such as facial expressions and laughter (Fukuda, 2017) and so on. This work followed the emergence of a poststructural theorising of the body as a discursive construction, in the early 90s, which set the tone for a consistent orientation towards embodiment (for a discussion see Bucholtz and Hall, 2016).

Following this line of thought, I understand contextualisation cues as encompassing both verbal and embodied signs and, in line with the earlier discussion on issues of definition (section 2.2), I prefer the use of the term *embodied contextualisation cues* to draw emphasis on the shift from verbal-only signs to signs encompassing other modalities, too. I thus treat in my analysis embodied behaviours, and particularly positioning in the material space, as discursive strategies and consider them integral parts of the interaction itself, rather than the context within the interaction occurs.

In what follows I exemplify what I considered as contextualisation cues in my context and, more generally, what an IS approach can contribute to the study of healthcare interaction.

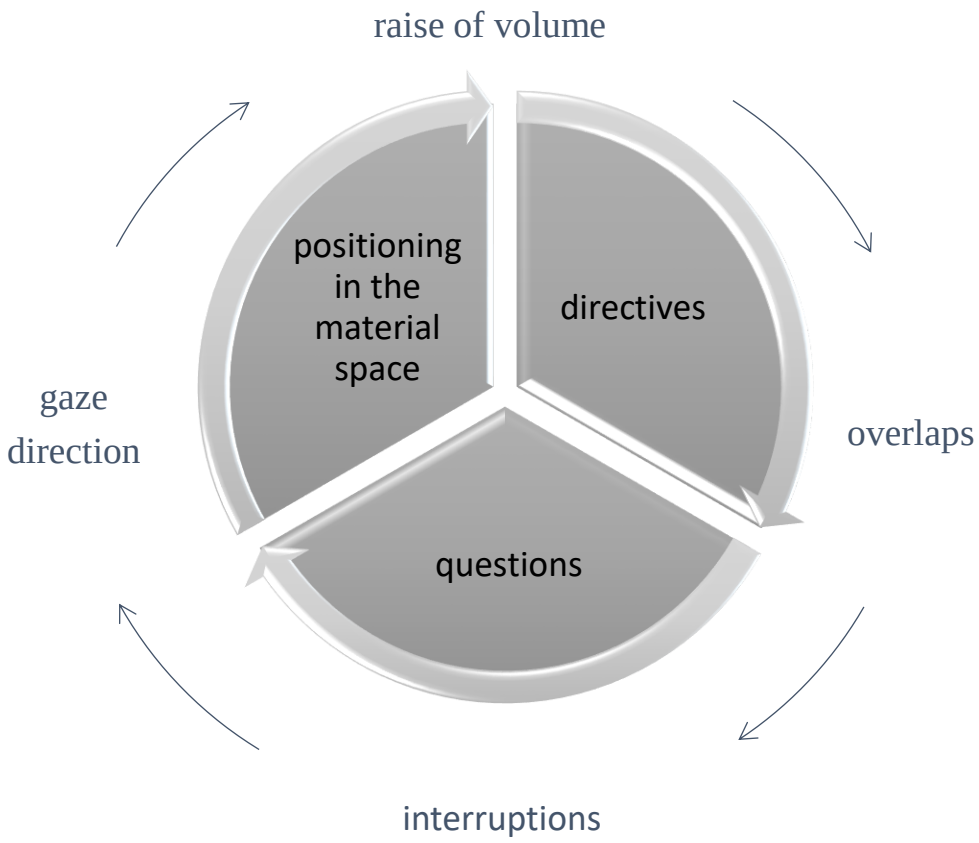
4.7.2.5. Applying IS in the study of medical emergencies

4.7.2.5.1. Here-and-now interactions

The departure point of my analysis in the micro-level are linguistic (verbal/embodied) cues as they become relevant in the situated interaction. As discussed earlier, interactants draw on a range of semiotic resources to co-create meaning, which more often than not are not separated, but co-exist (Bezemer and Jewitt, 2010).

The linguistic cues I primarily focused on in this context are the directives, questions, and interactants' positioning in space. The set of cues interactants employ, however, is dynamic and may change during the various stages of the episode. Thus, while I consistently analysed the above features across the datasets, I also included in my analysis other resources, when those stood out as significant (*marked*) in the interactional event as interpreted by the teams' uptake. Overall, cues related to claiming, holding, and opening/closing the floor (i.e., raise of volume, but also overlaps and interruptions) became relevant as they are directly related to the enactment and resistance of power structures in workplace discourse (see Angouri, 2018; Holmes and Stubbe, 2015). As for other modalities, gaze direction frequently emerged as a speakers' mechanism for allocating turns. Figure 4.10 below visualises both the core linguistic cues as well as the 'peripheral' ones that emerged in the situated interaction.

Figure 4.10. Contextualisation cues considered in the analysis.



In the process of selecting my contextualisation cues, and, more broadly, my units of analysis, I adopted a bottom-up approach in line with the IS framework. My starting point was not a predetermined set of features; rather, I was guided by the interactants' uptake, focusing on what is interpreted as significant by them, as it became evident in their respective turns. This is well aligned with the IS approach, which has broadened the scope of investigation to include 'listenership' behaviours, too, as 'any utterance by any participant in a conversation is a joint production, influenced by speaker, listener, and audience' (Tannen 1992, p. 11).

Even in bottom-up approaches, however, this selection of 'what is important' is informed by previous research; in this case, directives and questions have been widely identified as discursive control devices in previous workplace research. In the same vein, extensive CA work on floor management and turn-taking has already analysed interruptions and overlaps as speakers' means to demonstrate power, dominance, and control (Chapter 3 for a discussion on control mechanisms). This knowledge has been particularly useful at the initial stages of

making sense of the data, as it guided the analysis and helped me identify the most relevant features in the study of leadership and power issues.

Finally, there are also practical issues to be taken into account in the process of the cues' selection, related to data collection methods and levels of access. As an illustration, subtle features of embodied behaviour, such as gaze direction, could not have been captured consistently without video recordings, which was the case in the *TeamLeader* dataset. More, both the *SaFE* video and the *TeamLeader* audio recordings have been collected in noisy environments and did not provide sufficient sound quality to allow for a detailed analysis of vocal cues, such as pitch and tone variation.

I now turn to discussing the institutional context considered in the analysis.

4.7.2.5.2. Background knowledge and institutional context

Knowledge of the dominant power structures that pertain to healthcare institutions and the pyramid-shaped organisational structure that is still the norm was particularly useful for interpreting interaction (Chapter 4 for the institutional hierarchy). This background knowledge of the particular workplace structures also provided valuable information about interactants' institutional roles and the level of responsibility attached to each role, which constitutes part of professionals' core training. Part of this knowledge, for instance, that guided my analysis and would not be instantly accessible through focusing only on the situated interaction, is that the overall responsibility is tied to the senior doctors' (*SaFE* data)/ED consultants' (*TeamLeader* data) role for medicolegal purposes. In the same vein, junior midwives' (*SaFE* data) and nurses' (*TeamLeader* data) role institutionally comes with a limited responsibility. I obtained this information from healthcare professionals who were familiar with this given context – the insiders/gatekeepers in line with an IS approach – while at the same time examining the ways those roles and the responsibility attached emerged in interaction.

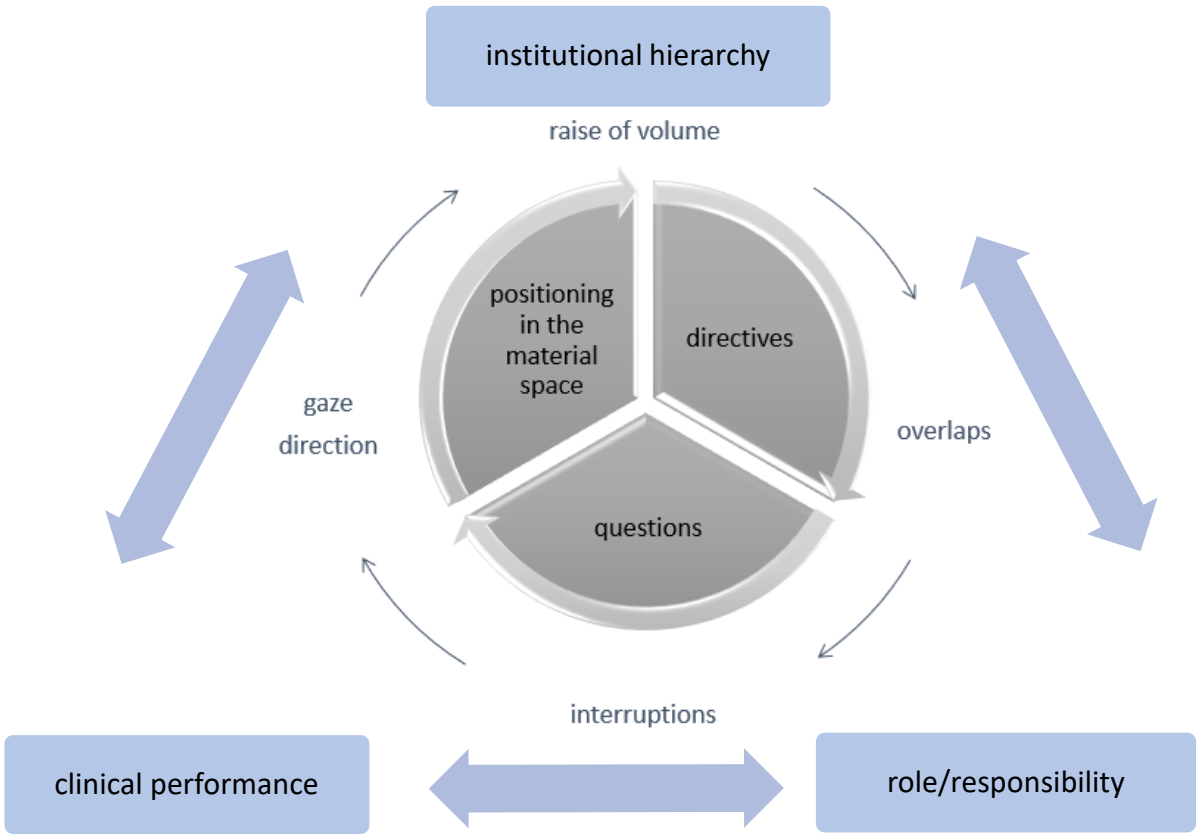
More, in the *SaFE* data, which preceded the *TeamLeader* study and set the tone for all the analysis, part of the background information available was the teams' clinical performance based on standard clinical criteria (for a discussion on the *SaFE* design and the teams' clinical assessment see section 4.4.3). The clinical ranking of the teams provided a valuable insight into the relationship between *interactional* and *clinical* performance.

Overall, although my analysis is heavily influenced by a CA approach for the analysis of the here-and-now interactions and the conceptualisation of space as integral to interaction, an IS approach renders it possible for the analysis to benefit from essential knowledge of the

sociocultural context which sheds light on more layers of context, allowing for a more holistic understanding of the ways interactants *do* things; the background knowledge of the organisational structure and existing power issues and the teams' clinical performance is a case in point. The notion of contextualisation cues has been also proved to be a valuable IS tool, shedding light on both finer markers and larger structures that impact on the interpretation of the situated interaction. With embodied behaviours being an integral part of contextualisation cues, IS provides the affordances required for a holistic analysis of interaction as a multimodal accomplishment; I elaborate more on this in Chapter 9.

In Figure 4.11, I summarise the main components I considered in my analysis at the micro- and macro-level under an IS approach.

Figure 4.11. Contextualisation cues and institutional context considered in the analysis.



Having illustrated my analytical approach, I next turn to ethical issues and considerations before summarising the chapter. I aim to provide a discussion on general issues that bear a direct impact on social sciences, and health linguistics in particular, in relation to projects seeking to draw on video data from medical contexts. In doing so I draw on experience in different stages of my PhD journey and the pathway to the final framing of the project.

4.8. Ethical issues in multidisciplinary health linguistic research

The section is divided into two parts; the first one is concerned with ethical issues emerged in the *TeamLeader* study, including consent and participant confidentiality and anonymity. In the second one I reflect on the difficulties I encountered in attempting to get ethical approval for video recording real-life obstetric emergencies; I then open the discussion and touch upon a number of systemic problems in accessing medical contexts as a PhD and social sciences researcher.

4.8.1. TeamLeader study; ethical issues and considerations

Prior to the *TeamLeader* data collection and once ethical approval was granted, the research team distributed the Participant Information Leaflets (PIL), which have been approved by Research and Development (R&D), to staff members. The PIL described in detail the study's aim, procedures, and potential risks, and provided a contact point in case participants wanted to further discuss the study with the research team. I do not provide the details of ethics documents, to protect the unit's and participants' anonymity.

Staff members were then asked to provide written consent, in line with the General Data Protection Regulation (GDPR) principles. The information in the PILs and consent forms emphasised that participation in the study is voluntary and that participants may withdraw at any time and for any reason. While in the field, I re-confirmed participants' consent verbally every time before turning on the recorder, to make sure it still applies to all team members. In line with the research design, if staff members did not consent, the material would be excluded from the study; however, there was no case in which staff members denied or withdrew consent.

To protect participants' anonymity and confidentiality, the following strategies have been adopted: the signed consent forms have been secured in a locked filling cabinet in a secure (locked) research room. All information and research data collected during the study were (and still are) kept strictly confidential and have been only dealt within the research team. A unique study identification number was assigned to all participants, which has been then used throughout the study and all discussions. The audio recorded data was transcribed, and the transcripts only include the participants' unique number and date on them. Transcriptions do not contain any identifying marks and any comments which might allow individuals to be recognised (e.g., use of first names) have been removed during the transcription process. I removed all data from the audio recorder device as soon as possible, and stored it in the secure

electronic systems of NHS, while anonymised data was also stored in the secure electronic servers of the University of Warwick; these are, again, accessible by the research team only.

Zooming out of the details on the *TeamLeader* study's ethics, I turn to a more general discussion on the difficulties encountered in multidisciplinary teams and the institutional gatekeeping events in the process of getting access.

4.8.2. Multidisciplinarity and systemic problems in getting access

My PhD's research plan originally involved video recording real-life obstetric emergencies, which would be complemented with the simulated obstetric emergencies from the *SaFE* study under a collaborative project supervised by Prof. Angouri and Prof. Siassakos with the acronym '*TREAT'*. I have been working on long applications and went through multiple ethics committees for almost three years, but I was never granted access to obstetric emergencies' real-life data, despite persisting and taking all feedback onboard. In this section I reflect on my experience and the systemic constraints on carrying out health linguistic projects involving video data.

'Multidisciplinary' and 'interdisciplinary' approaches are the current trend, with funding bodies increasingly emphasising the need for collaboration among disciplines. There is much less discussion, however, on how to communicate linguistics/social sciences' research effectively to different audiences – in my case healthcare professionals – speaking a different 'institutional language'. This involves the use of terminology, ways to describe methodological issues, including video based methods, but also differences in positivist/constructionist stances which form the backbone of a project's design (for the pitfalls of multidisciplinary research see also Angouri, 2018). Beyond that, professionals from the various disciplines come with multiple institutional/organisational agendas and priorities, and managing those occupies much of the time allocated for research; my project is just a case in point.

Although multidisciplinarity is a 'hot buzzword' (Schmitt, 2014), academic silos are still a reality and certain discourse practices are construed as bureaucratic (Sarangi and Slembrouck, 1996). Funding schemes are indeed keen on supporting multidisciplinary teams, as was the case with the *TREAT* project. But when it came to ethic committees, the project was deemed too clinical for social sciences committees and not clinical enough for clinical committees (for the problem of reviewing interdisciplinary research proposals and how to 'conclave the Tower of Babel' see Laudel, 2006). As an illustration, the University Research Sponsorship Committee rejected the project on the grounds that 'there were many potential risks for the

NHS Trust involved with regards to the recording of the procedures, the security of the video data and potential negligence claims'. The systemic dysfunctionality of a university committee that rejects a social sciences PhD project – already approved for funding by another university body – in order to protect the hospital's interests is evident.

The clinical committee also denied the responsibility for the project, providing little or no evidence for rejecting our team's application for sponsorship. As an illustration, one of the reasons provided was that in defining the 'problem' (a required section in the research protocol), we referred to previous studies that have shown that as many as 50% of maternal deaths and 75% of intrapartum stillbirths could be prevented with better teamwork. The committee felt that this mere reference to earlier academic findings imposed 'significant reputational and litigation risk'. Another example is related to the sample size (another required section in the protocol); for this we provided an 'optimistic' (versus a 'conservative') estimate, following the language of previous successful clinical protocols of the research team. The committee condemned it inappropriate to discuss about an 'optimistic' estimate when we refer to obstetric emergencies. Again, my reading is that the project was not rejected on the grounds of its academic value/potential contribution etc.; rather, I understand the different rejection phases as gatekeeping events, with the involved bodies avoiding the responsibility for potential risks, mainly related to litigation.

Not being able to surpass those problems of accessing the field, and given the time limitations every PhD project has, we decided to significantly change the project's focus, aims and RQs, shifting from video recording real-life obstetric emergencies to video recording team handovers. These would take place in the staff room, thus not including any patients, and we could easily guarantee that staff members would have consented prior to any data collection. Reframing the project again took a significant amount of my time, as, apart from reconceptualising the whole project, I also had to rewrite all the ethics documents, including the research protocol, PIL, Consent form, IRAS form etc. To give an estimation of the volume of work required, during this process I produced more than 200 pages of ethics. Yet the different university committees (for sponsorship and ethics) rejected it once and granted conditional approval twice, before finally fully approving it; and each time I was asked to change something that has been requested and approved by the previous committee and so on. Note that for any change I made, I had to go back and amend our documents from the previous successful stages (and get re-approval for those changes). I do not go into full detail here regarding the received feedback not only because it is outside the scope of my research focus,

but also to protect the anonymity of the involving bodies; an illustrative example, however, is one of the raised comments asking 'why it is necessary to video record handovers and whether the study could be completed using audio recordings only' – this in relation to a project aiming at exploring the multimodal performance of leadership and the use of material space.

All the above point to another systemic problem, that of intra-university committees not communicating with each other, rendering the process of getting consecutive approvals for projects, such as the ones discussed here, extremely laborious and time-consuming. The short time allocated for reviewing those applications by competent, but not subject-specific, administrators, impacts on the reading of complex multidisciplinary research designs and creates an extra obstacle in the whole process.

In addition to this, the GDPR changes in 2018 with the bureaucratic changes that ensued and are still being introduced, added an extra layer of complexity and have provided grounds to ethic committees to reject such social sciences projects on confidentiality and anonymity.[4] Finally, the COVID-19 pandemic (although after the final reframing of this project) left healthcare professionals, including research partners and administrators, with even less time and resources for non-COVID-19 research which will have a long-term impact in the field.

In conclusion, the team decided not to go ahead with another ethics submission and to reconfigure the project drawing on video data from the *SaFE* simulations for which ethics has been in place, rather than real-life incidents, in the obstetric context, and compare with the *TeamLeader* context as described earlier.

Summing up, multidisciplinarity may sound good in principle and is nowadays often a prerequisite for funding but, more often than not, the involved agents are not trained for reviewing multidisciplinary designs; in my case, social sciences committees would refer the project to healthcare committees just because the data collection would take place in a hospital, while healthcare committees would keep asking questions such as the absolute number of participants required in an ethnographic design, where there is no right answer (Pope, 2005, on how qualitative research has to 'fit in' in quantitative NHS forms). The final framing of this

[4] Data protection reforms of the GDPR were enforced across Europe on May 25, 2018. GDPR was designed to provide greater protection of personal data and rights to individuals and altered how businesses and other organisations can handle the information of those that interact with them. GDPR's seven principles are: lawfulness, fairness and transparency; purpose limitation; data minimisation; accuracy; storage limitation; integrity and confidentiality (security); and accountability (Article 5 of the legislation).

project provides a novel and original sociolinguistic insight into the life of healthcare teams managing medical emergencies and a methodology to combine datasets; it is not the project I originally wanted to conduct, however, and it has been a challenging process from which lessons can be learned. Further on this, future projects should allow a long time window for the initial phase of getting access, as (re)conceptualising, (re)writing, and (re)submitting long ethic forms occupy a big part of the PhD time; it also goes without saying that getting access in such complex settings is impossible without insiders/local actors who are familiar with the process and keen on handling part of the bureaucracy.

I summarise the points covered in this chapter in turn below.

4.9. Summary

This chapter has been concerned with the research design, methodology, and analytical approach employed in this thesis. I have presented the two research contexts, namely, simulated obstetric and real-life trauma emergencies, discussed their commonalities, and made a case that bringing them together sheds light on the ways different types of ad hoc multidisciplinary teams work in emergencies, increasing my scope of interpretation. It also provides the opportunity to strengthen the claims made in relation to each dataset by studying them comparatively across contexts.

I paid special emphasis on the ethnographically informed design of the *TeamLeader* study, a key component of my research design, illustrating the core role of observations; in doing so, I argued against the – still dominant in research methodology – dichotomy between participant and non-participant observation, making a case that all ethnographic designs entail some degree of researcher's participation.

I then continued with the holistic approach taken here, which allows for the combination of different datasets and research methodologies, before zooming in on the IS approach. Having discussed its origins, key stages, and analytical tools, I demonstrated how such an approach allows for accommodating in the analysis both participants' situated interactions, as well as background knowledge and the broader institutional environment, which renders it appropriate for the study of staff members' interactions in the highly hierarchical medical context.

Finally, I provided an overview of the ethical issues starting from this project and leading to a broader discussion on the difficulties of getting access in a high-stakes medical context for video-based research as a PhD health linguistics researcher, and the involved array of gatekeeping professionals and bodies.

In what follows, I turn to the first of four data analysis chapters, which is concerned with the ways in which professionals position self in the material space, making a case that positioning in space is a role enactment strategy. I illustrate how I conceptualised and monitored professionals' positioning in space, as well as the emerged patterns in regard to which material zone is marked by each professional zone as their zone of expertise. As the use of space is integral in my analysis, Chapter 5 lays the basis for the next analysis chapters which focus on other discursive strategies for *doing* leadership, that is, directives and questions.

Chapter 5. Positioning in space as a role enactment strategy

5.1. Introduction

In this chapter I illustrate the ways I conceptualised and subsequently analysed the use of material space as a discursive strategy in my datasets. I start with a brief discussion on the CA contribution to my understanding of space as integral to social action. I then turn to my conceptualisation of positioning in (and out of) the material zones in the emergency room as contextualisation cues under an IS approach, bringing together the broader institutional healthcare context in which positioning in the material space is part of the professionals' formal training.

Starting with the *SaFE* data, I discuss how I embedded multimodal information in the verbal excerpts before presenting the main material zones I identified. I then talk through the analytical process I followed for monitoring my interactants' positioning in and out of the identified material zones. I continue with the *TeamLeader* data, and, after briefly touching upon the similarities and differences of the two contexts' material space, I discuss how I identified and monitored the use of the material zones in the resus.

My analysis of space illustrates consistent patterns in the ways professional roles position self in the material room, and I thus argue that positioning in the material zones constitutes part of a role-claiming act and works in tandem with the verbal data, addressing RQ1. By bringing together the obstetric and the trauma context, I illustrate my work's possible methodological contribution on observations and space. I make a case for the potential applicability of my methodological framework to other healthcare emergency contexts.

5.2. Material space as integral to social action

5.2.1. CA contribution

In the literature review I have touched upon recent shifts that moved from a conceptualisation of interaction as primarily verbal to encompassing a range of resources mobilised by interactants for *doing* things, such as gesture, gaze, facial expression, body posture and movement, use of objects etc. (Section 2.4 for the *embodied*/ *spatial*/ *visual*/ *multimodal* turns). In investigating space, my work is informed by a CA conceptualisation of space and speech situation itself as interactively achieved. Although the field has evolved in the last 20 years or so, embodied resources, such as gestures and gaze direction are still privileged; spatial resources, on the other hand, have been neglected (Hausendorf, 2013). I use the term 'spatial

resources' to refer to 'environmental affordances' (ibid.) or, in Goodwin's (2000) words, the 'material structure in the surround' which includes the surrounding space, objects, materials etc. My work aims to contribute to this agenda.

CA analysts, drawing on the concept of 'interactional space', have made a strong argument in favour of the 'relevance of participants' bodies as arranged in the material surroundings in which their social activities take place' (Mondada 2013, p. 247). Interactional space, however, is still an abstract concept, interpreted in multiple ways and often used as a 'catchphrase' (Hausendorf 2013, p. 276); what exactly it consists of and how we can systematically monitor it is yet to be answered. I discuss here the studies that have informed my approach and what I mean by referring to 'material space' throughout this thesis.

For Mondada (2011), the notion of interactional space captures 'the *relative* embodied positions of the participants, and thus the way in which participation frameworks are spatially distributed' (p. 291; emphasis mine), while Hausendorf (2013) discusses the achievement of 'a *mutually shared* "here" for perception, movement and action' (p. 277; emphasis mine). Both definitions point to a dynamic definition of interactional space as temporary and flexible, depending on participants' co-orientation and coordination, rather than the material space in which they position themselves. From this lens, interactants use embodied resources such as gaze and gestures to mark 'temporary ecological huddles' (Goffman, 1964) or 'temporary territories' (Mondada, 2011). And there is indeed a significant body of CA research looking at the mutually created and shared interactional space. To name but a few, researched contexts include food shop encounters (Harjunpää et al., 2018), help desks (Mortensen and Hazel, 2014), democracy meetings (Mondada, 2011), classrooms (Ikeda, 2011), and business meetings (Raclaw and Ford, 2015). Healthcare settings, however, remain under-researched; the gap is even greater in emergency contexts, partly because of the aforementioned difficulties in access.

5.2.2. IS tools

Zooming in on the material space, at the micro-level, the aforementioned understanding of interactants' arrangement in the material space as integral to social action has been a contributing factor in defining my units of analysis, considering positioning in the material zones as contextualisation cues. For my theorisation on contextualisation cues and for the elements that constitute the micro/macro levels in my analysis see Section 4.7.2.5 in the methodology.

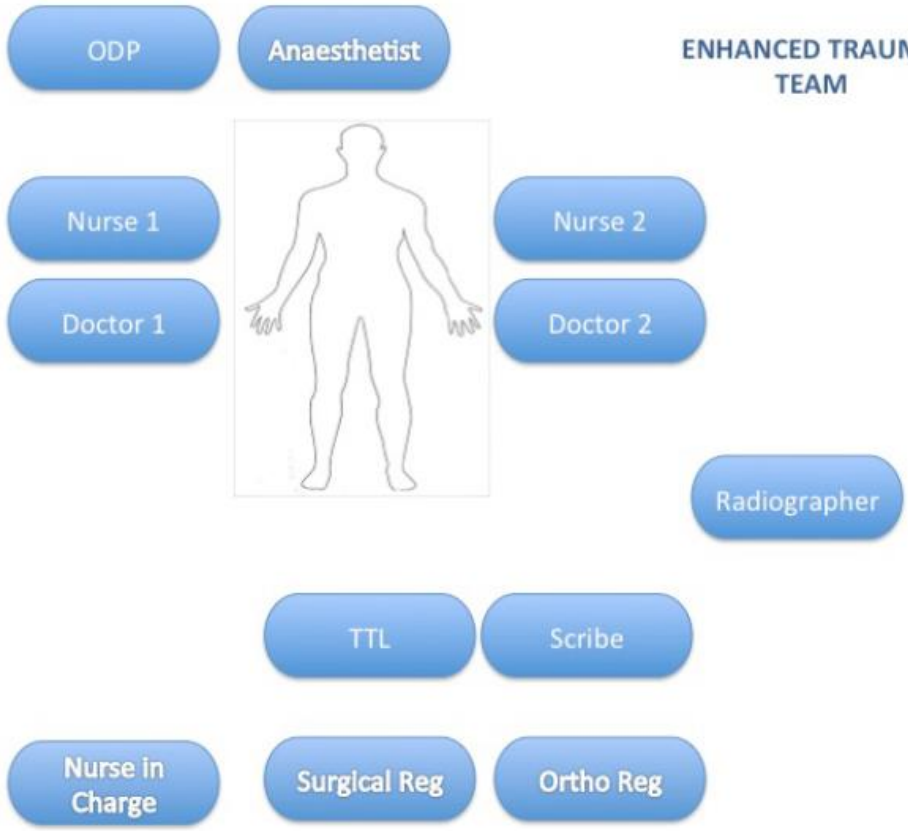
Following this line of thought, although interested in the interactionally shared space created by participants with respect to the projected activity (Mondada, 2009), the starting point of my analysis is those rather stable or permanent elements of the material space, namely, the material zones of the emergency room. I understand them as stable in the sense that, once identified, they continue to exist even in a room empty of interactants, something not possible with the mutually constructed interactional space. They are dynamic, however, in the ways they are employed, negotiated, and/or challenged by my participants for performing their role; I elaborate on this mainly in Chapters 7 and 8. And they are also flexible in the sense that we *need* the interactants in the room to initially identify what the significant material zones are, as they emerge in and through interaction.

For the rest of this thesis I refer to these elements of material space as *material zones*. Different terminologies have been debated in similar lines of research, e.g. *territories*. I avoid using the concept of *territories*, however, due to its marked use in the fields of (human/political) geography, where it is used to refer to 'a portion of geographic space that is claimed or occupied by a person or group of persons or by an institution' (Storey, 2001, p. 1), while also encompassing the political aims of those groups (Gottman, 1973); see also Elden (2013) for a discussion on territories as one of the central political concepts of the modern world.

On the macro-level, IS allowed me to accommodate in my analysis the institutional specifics of the healthcare setting. Unlike the contexts mentioned earlier (classrooms, shops etc.), positioning in the material space (i.e., where to stand) consists part of healthcare professionals' regular training. In relation to the trauma context, for instance, NHS Lothian (2017) provides the following guidance as to where is the expected position of staff members in case of enhanced trauma team activation.[5]

[5] For the 'Enhanced Trauma Team' activation criteria see NHS Lothian (2017).

Figure 5.1. Positions of the enhanced trauma team in the emergency room [Figure taken from the NHS Lothian Training and Educational resources].



Although positioning in the material space (often discussed in medical terminology under the umbrella term *human factors*, which includes 'aspects of the physical space where situation occurs, the devices in that space, their layout and spread' (Parush et al., 2011), is part of staff members' regular training on their role and responsibilities, professionals still can – and do – deviate from the professional spatiotemporal routines (for examples of such deviation see Section 8.5). This renders such contexts fertile ground for focused research on the ways staff members mobilise material space and the negotiation/deviation of the routines, as well as the impact this can have on interactional and clinical performance.

My work thus aims to start addressing the gap in the literature in relation to the spatial resources mobilised for doing leadership, particularly the professionals' positioning in the material space of the emergency room. As discussed, I take into account other resources when marked and available (cf. Figure 4.10) – note that the *TeamLeader* dataset does not include video recordings, rendering a detailed analysis of micro-features such as gaze impossible. Next, I

elaborate on the analytical process I followed for identifying and monitoring my participants' positioning in the material zones of the emergency rooms.

5.3. Positioning in the material space of the emergency room

5.3.1. *SaFE* data

5.3.1.1. *Creating multimodal excerpts and identifying key material zones*

In order to identify the main material zones in the *SaFE* emergency rooms, I observed and analysed four full episodes selected on the best quality of image/sound. I started with the verbal transcription of the data to familiarise with the context and participants. As soon as I had the verbal transcripts, I started paying attention to the interactants' positioning in the room, as well as the task they performed. I created an excel sheet for each case where I included screenshots and kept notes next to the verbal transcript regarding the positioning and movement in space (see Figure 5.2). At that stage I also tried to decide on the level of multimodal detail I would include in my transcripts; it soon became apparent, for instance, that I would not analyse gaze direction or gestures in detail, not only because of the poor video quality, but also due to my main interest being the whole body's positioning in the emergency room. As was the case with the verbal transcript too, I later had to go back and add some level of detail, e.g., marking the rising volume which became relevant in my analysis at a later stage. This initial stage of deciding what I would transcribe and how has been a long and laborious process, as is usually the case with bottom-up approaches where the researcher is not entirely sure what they are looking for. Such approaches, however, although 'may look less tidy, may in fact provide a more systematic way into the phenomenon under study' (Angouri 2018, p. 84).

In Figure 5.2 I provide a screenshot of what my transcripts looked like initially. As shown below, transcripts at that exploratory stage did not have the same level of linguistic detail as the final product (cf. with excerpt 7.1 which is the final version). All screenshots from the videos are heavily blurred for anonymity reasons.

Figure 5.2. Example of my excerpt including multimodal information.

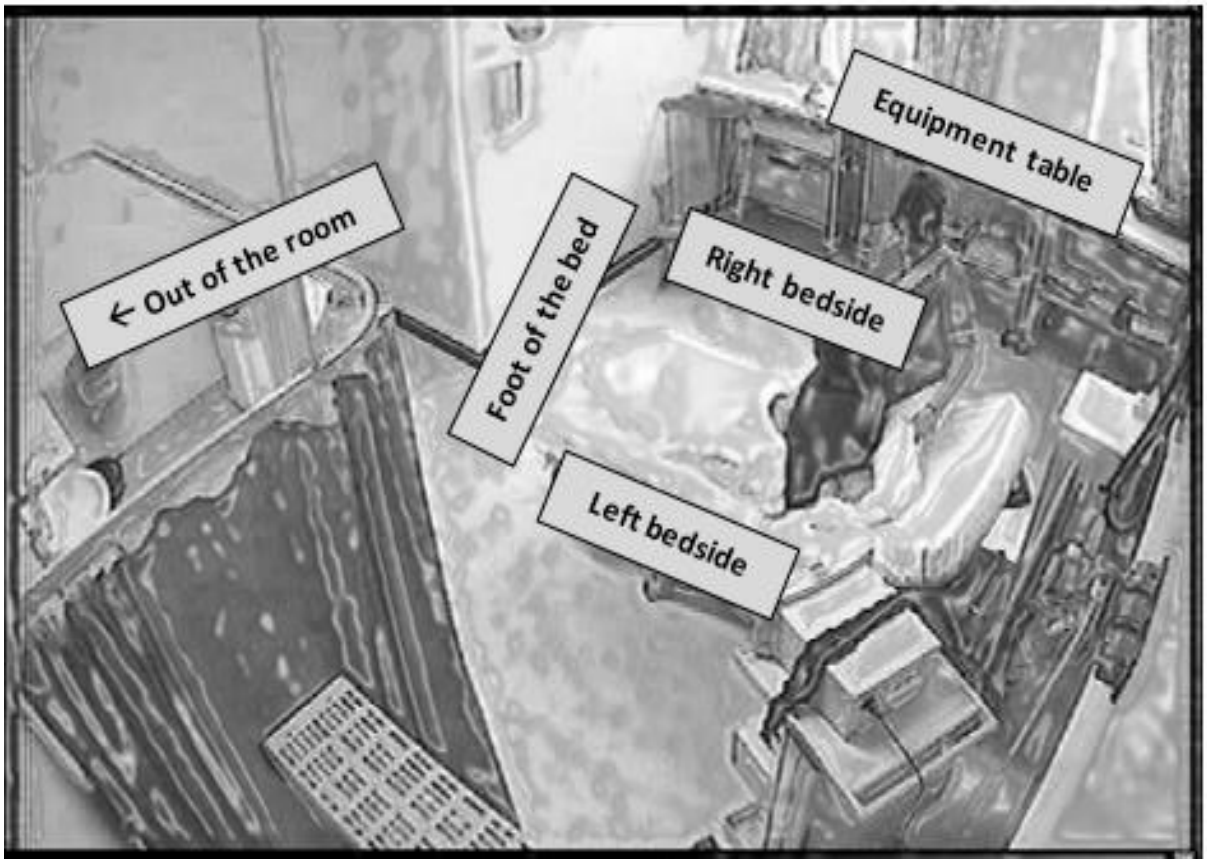
Key for the reading of all *SaFE* excerpts: SD: senior doctor; JD: junior doctor; SM: senior midwife; JM: junior midwife

Lines	Speaker	Utterance	Notes	Screenshots
1.	SD	hello [everyone	SD enters the room	
2.	JD	[can I have a blood pressure done please		
3.		((3.0 multiple overlaps))	SD moves to right bed side	
4.	SD	shh shh ((hushes team)) what's going on↑	SD turns her torso and gaze to the equipment table where SM2 and JM2 are standing	
5.		((2.0 multiple overlaps))		
6.	JM1	this is Lucy she's gone into spontaneous labour five centimetres half an hour	SD moves to left bedside and bends over to the JM1 who JM1 updates her	
8.	SM2	[what in	JM1 and SM1 Apply blood pressure cuff to patient	
9.	JM2	[they go (.) they have eight		
10.		mils of sodium and then twelve mils of		
11.	JM1	[(indec.)		
12.	S.Doc	right		
13.		((SM2 and JM2's discussion at equip. table overlaps the handover at the bed side, unable to hear bedside handover therefore))		
14.	JM2	so I've got a twenty mil syringe and I'm just gonna do it all		
15.	SM2	right okay then let's have a look		
16.	J.Doc	alright my dear? [I'm just gonna put a venflom in you're just gonna	J.Doc inserts venflom into patient's hand	

Through the observations, I identified four main positions in the emergency room which I then used for the analysis of the rest of my data. These positions are the following: equipment table, right bedside, left bedside, and foot of the bed. In one of the four cases a fifth position emerged as significant, the equipment trolley. As the *SaFE* videos have been recorded in six sites in the UK (Section 4.4), not all the emergency rooms in that dataset were the same; some of them had an equipment trolley in a different material zone and some had it attached to the equipment table. Due to this variation I decided not to consider the equipment trolley a distinct material zone, as I could not analyse consistently throughout the dataset. It will be illustrated in my analysis that the two artefacts, irrespective of being in the same or a different space, are consistently used by the same professional roles for similar purposes.

I also encompass in my analysis a fifth zone, that of 'out of the room'. The team that has been working on the *SaFE* data prior to my involvement has already identified a possible relationship between teams' clinical efficiency and the number of members' exits from the labour room (Siassakos et al., 2011). In their findings, they reported that 'teams that administered magnesium sulfate within the allocated time (10 minutes) had significantly fewer exits from the labour room compared with teams who did not' (p. 601). This pointed from the start to the potential significance of staff members' exits from the room, and not only their positioning *in* the room. I illustrate, in Figure 5.3, the key material zones in the *SaFE* dataset and I then turn to the way I monitored their use.

Figure 5.3. Key material zones in the *SaFE* data.



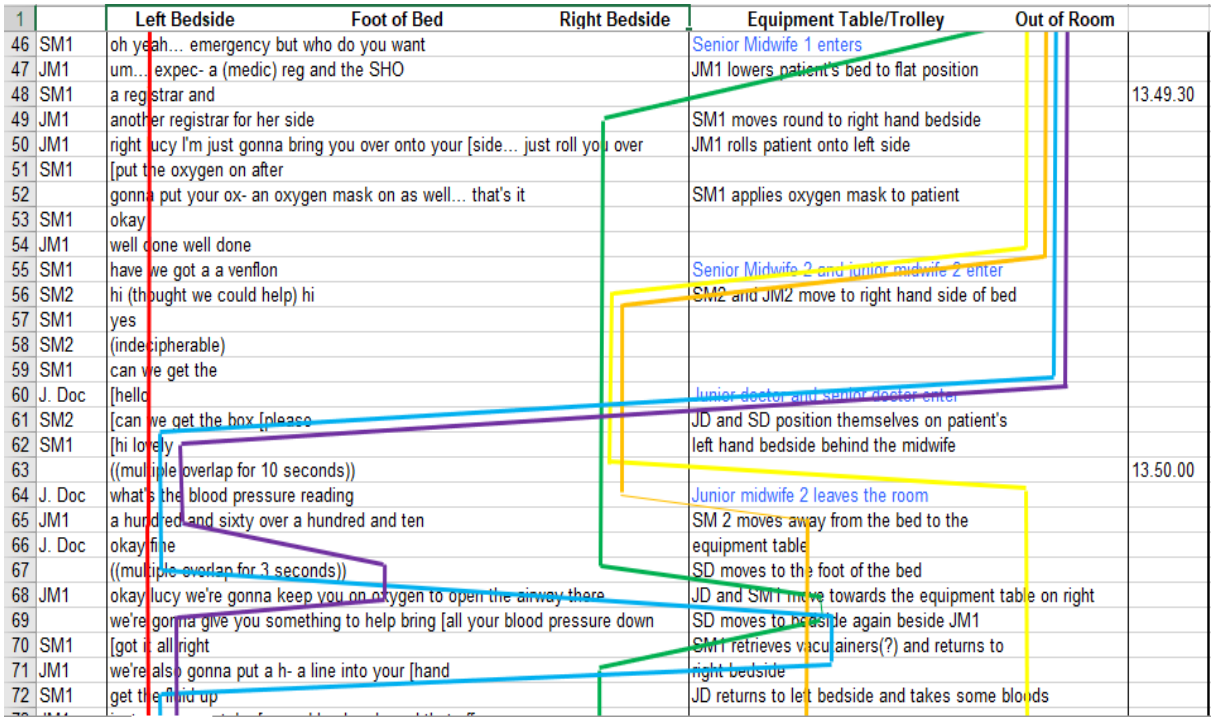
5.3.1.2. *Monitoring the SaFE material zones*

As soon as I identified the key material zones, I systematically monitored professionals' movement in and out of those throughout the episode in the following way: I created logs for each one of the staff members marking their position every 30 seconds or so. The timings are approximate, as, in line with previous literature that has identified that key actions are delivered upon interactants' stabilisation in a certain position (Mondada, 2016), I waited for staff members to complete their transition to a material zone before writing down their position.

Keeping notes on the position of each of the six members every 30 seconds, however, soon became difficult to decipher and impossible to systematise – perhaps the irony of relying on verbal cues for representing multimodal information. To visualise my participants' movement in space and thus be able to identify patterns, we debated ways of representation and our first attempt involved drawing coloured lines (one colour for each professional role) on the excerpt in the excel sheet to show movement. The final product looked like the one in Figure 5.4.

Figure 5.4. Including participants' movements on the verbal transcript.

Key for participants: red: JM1; yellow: JM2; green: SM1; orange: SM2; blue: JD; purple: SD



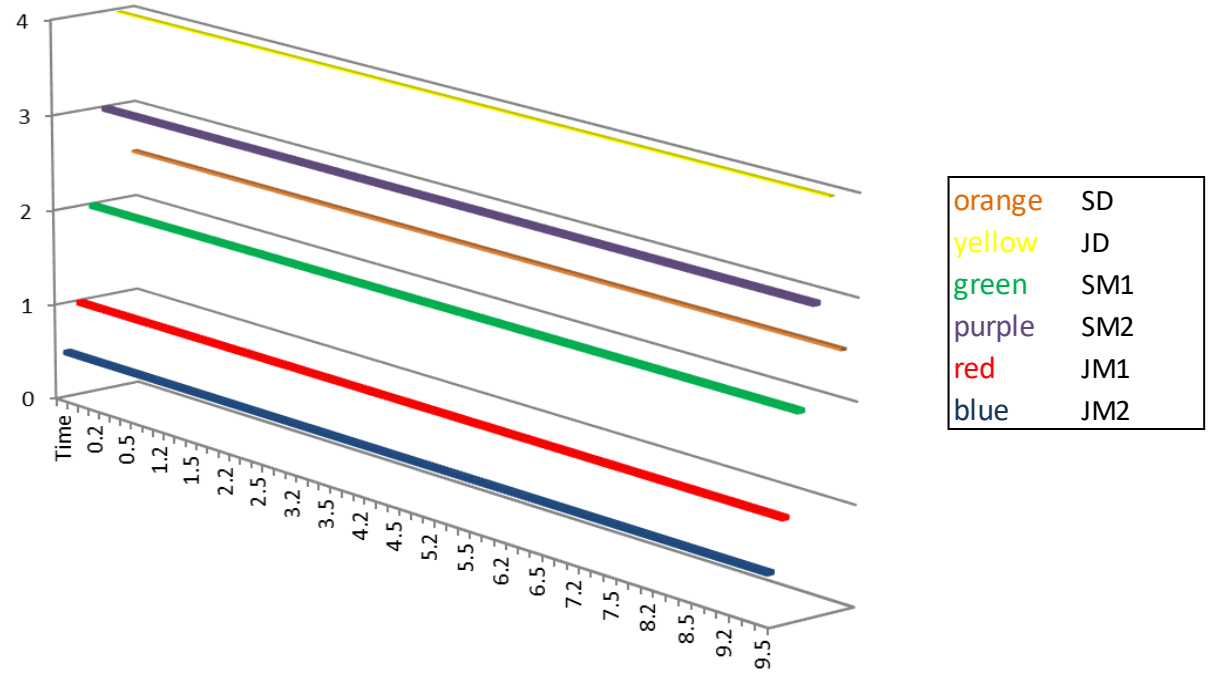
1		Left Bedside	Foot of Bed	Right Bedside	Equipment Table/Trolley	Out of Room	
46	SM1	oh yeah... emergency but who do you want			Senior Midwife 1 enters		
47	JM1	um... expec- a (medic) reg and the SHO			JM1 lowers patient's bed to flat position		
48	SM1	a registrar and					13.49.30
49	JM1	another registrar for her side			SM1 moves round to right hand bedside		
50	JM1	right lucy I'm just gonna bring you over onto your [side... just roll you over			JM1 rolls patient onto left side		
51	SM1	[put the oxygen on after					
52		gonna put your ox- an oxygen mask on as well... that's it			SM1 applies oxygen mask to patient		
53	SM1	okay					
54	JM1	well done well done					
55	SM1	have we got a a venflon			Senior Midwife 2 and junior midwife 2 enter		
56	SM2	hi (thought we could help) hi			SM2 and JM2 move to right hand side of bed		
57	SM1	yes					
58	SM2	(indecipherable)					
59	SM1	can we get the					
60	J. Doc	[hello			Junior doctor and senior doctor enter		
61	SM2	[can we get the box [please			JD and SD position themselves on patient's		
62	SM1	[hi lovely			left hand bedside behind the midwife		
63		((multiple overlap for 10 seconds))					13.50.00
64	J. Doc	what's the blood pressure reading			Junior midwife 2 leaves the room		
65	JM1	a hundred and sixty over a hundred and ten			SM 2 moves away from the bed to the		
66	J. Doc	okay fine			equipment table		
67		((multiple overlap for 3 seconds))			SD moves to the foot of the bed		
68	JM1	okay lucy we're gonna keep you on oxygen to open the airway there			JD and SM1 move towards the equipment table on right		
69		we're gonna give you something to help bring [all your blood pressure down			SD moves to bedside again beside JM1		
70	SM1	[got it all right			SM1 retrieves vacutainers(?) and returns to		
71	JM1	we're also gonna put a h- a line into your [hand			right bedside		
72	SM1	get the fluid up			JD returns to left bedside and takes some bloods		

As shown in bold in line 1 of Figure 5.4, we split the excel sheet in 5 (invisible) columns, representing the five material zones. As an illustration, the senior midwife 1 (green line) moves to the right bedside in line 49 and remains there until line 67, when she briefly moves to the equipment table and back to the right bedside in line 71. Similarly, the senior midwife 2 (depicted in orange) and junior midwife 2 (in yellow) enter the room together and position selves to the right bedside in line 56. This way of representation had the advantage of bringing together the verbal transcript and the multimodal information and it also provided an initial insight into how stabilised/mobile team members were; it is easily noticeable, for instance, that the junior midwife 1 (red line) remains stable at the left bedside for the whole excerpt. Drawing the lines on the excel files, however, was a demanding and slow process. More, the transcripts started getting more and more complex in phases where team members moved a lot, and it soon became challenging to read some of the lines as they were covered by lines (line 68 is a case in point). I soon realised that this was not a viable solution for the full dataset.

The next attempt involved creating figures depicting the movement of each professional role (each role in a different colour) in time (horizontal axis) and space (vertical axis). Figure 5.5 below shows all members appearing static in a material zone for the whole episode for reasons of illustration.

Figure 5.5. Representation of movement in material space.

Zones [vertical axis]: 0: out of the room; 1: equipment table; 2: foot of the bed; 3: right bedside; 4: left bedside

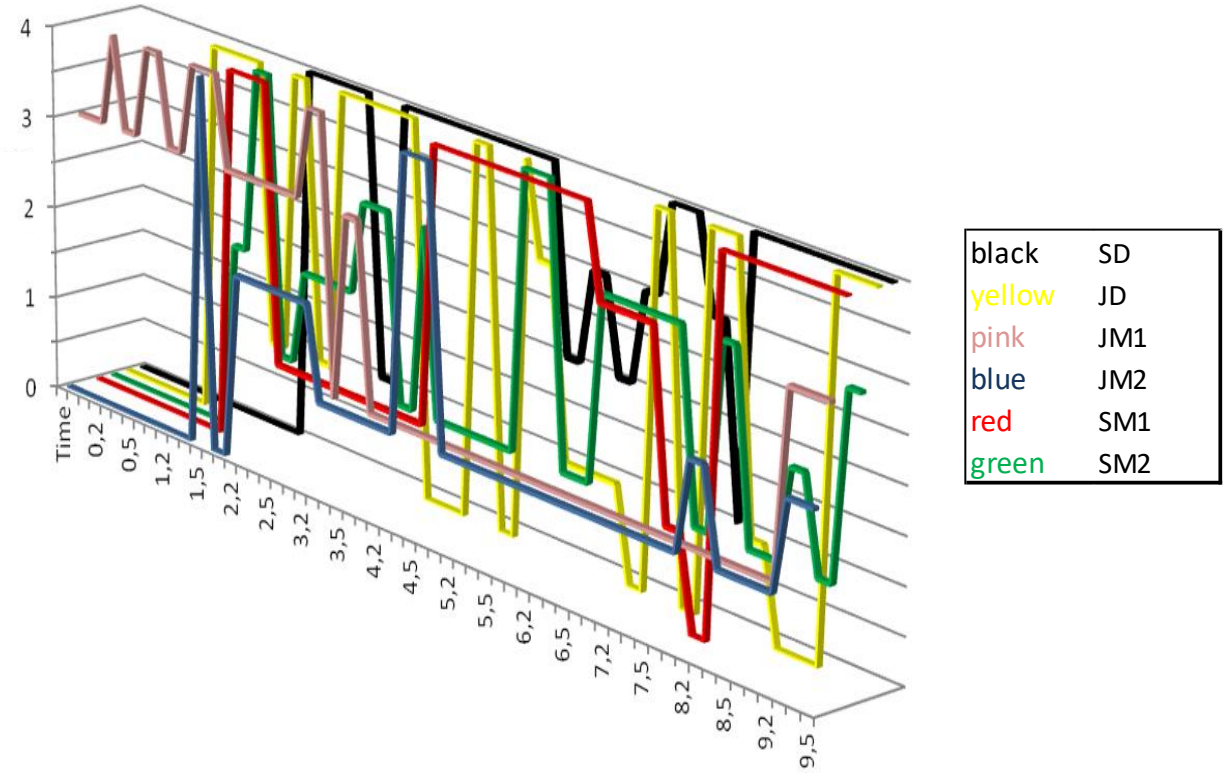


The horizontal axis shows the exact time staff members' positions were monitored, while the vertical axis represents the material zones: 0 for out of the room, 1 for the equipment table, 2 for the foot of the bed, 3 for the right bedside and 4 for the left bedside. Finally, the different colours of the lines stand for the different professional roles (see the key next to Figure 5.5). In Figure 5.5, the junior doctor, in yellow, appears at the left bedside (zone 4) throughout the episode. Similarly, senior midwife 2 (purple line) and the senior doctor (orange line) appear static at the right bedside (zone 3). The senior midwife 1, shown in green, is found at the foot of the bed (zone 2), while junior midwife 1, marked in red, is positioned at the equipment table (zone 1). Finally, junior midwife 2, in blue, is depicted here as out of the room (zone 0).

Figure 5.6 below is the final product for Case 6 and, in what follows, I provide a brief description for ease of reading. Case 6. has a good clinical performance (magnesium administered in 5-6 minutes; Table 4.2) and is one of the teams I draw on in Chapter 7 to illustrate patterns of effective leadership and team leaders' control over the team.

Figure 5.6. Visual representation of movements in Case 6.

Zones [vertical axis]: 0: out of the room; 1: equipment table; 2: foot of the bed; 3: right bedside; 4: left bedside

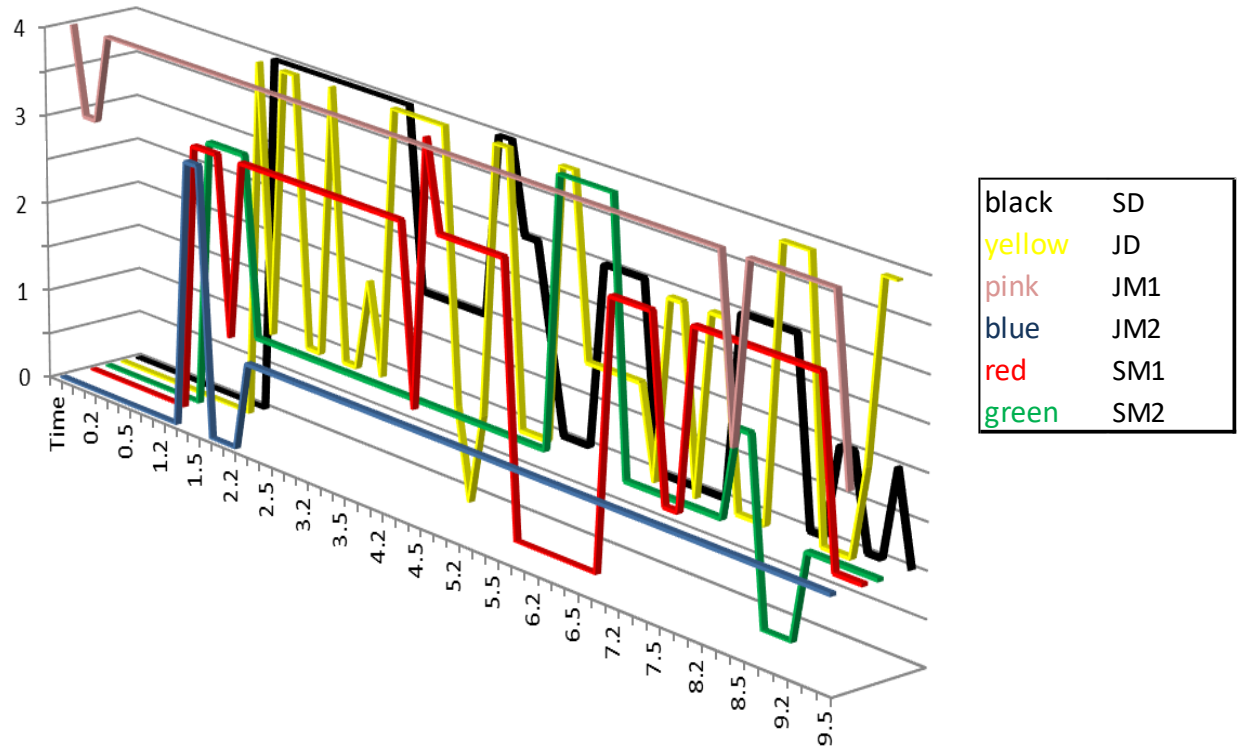


A close reading of Figure 5.6 shows that the senior doctor (shown in black) appears quite static at the left bedside (position 4). She also moves to the foot of the bed (position 2) twice (mins 6.2, 7.2), remaining around the bed. The senior doctor never exits the room (position 0) and briefly shifts to the equipment table (position 1) only twice (min 4.2 & 8.5). On the contrary, the junior doctor (shown in yellow) is very mobile, shifting to different material zones and often visiting the equipment table (position 1; mins 2.2, 3.2, 6.2, 9.2). She also exits the room five times (mins 4.5, 5.5, 7.2, 8.2, 9.2). Continuing with the other roles, the junior midwife 1 (shown in pink) seems to be more mobile at the beginning, moving from the right bedside (position 3) to the left bedside (position 4) and back, and then she stabilises self at the equipment table (position 1) from minute 3.5 and for most of the remaining episode. The junior midwife 2 (shown in blue) spends most of the episode at the equipment table (position 1), with three brief visits to the foot of the bed (position 2) and one to the left bedside (position 4, min. 4.2). The senior midwife 1 (shown in red) also appears quite static, spending most of her time at the left bedside (position 4), as she visits the equipment table (position 1, min 2.5) and exits the room (position 0; min. 8.2) only once. Comparing to her, the senior midwife 2 (shown in

green) is more mobile, as she shifts twice to the left bedside (position 4, mins. 2.2 & 5.5), four times at the right bedside (position 3, mins. 3.5, 6.5, 8.2, 9.5), and six times to the equipment table, where see spends most of her time in the excerpt above (position 1, mins. 2.5, 4.2, 4.5, 6.2, 8.2, 8.5, 9.5). Case 6 is illustrative of the patterns that emerged in relation to the use of the material zones, which I visualise in Figure 5.8. Before that, however, I discuss below Figure 5.7 – and its differences with Figure 5.6 –, which is drawn from Case 5 to show the senior doctor's marked behaviour in relation to the identified patterns. The team's interactional performance is, again, analysed in Chapter 7, where I illustrate the senior doctor's uncertain performance and the ways this uncertainty 'filters through' the rest of the team (see also Bristowe et al., 2012, for leader ideals).

Figure 5.7. Visual representation of movements in Case 5.

Zones [vertical axis]: 0: out of the room; 1: equipment table; 2: foot of the bed; 3: right bedside; 4: left bedside



Zooming in on the senior doctor (the assigned team leader) in Figure 5.7 (in black), his movement in the material space is marked compared to Figure 5.6, where the senior doctor spent most of the episode at the left bedside (position 4) and the foot of the bed (position 2), maintaining a central position around the bed, shifting only twice to the equipment table (position 1). In Figure 5.7, however, the senior doctor moves much more frequently to the

equipment table, far away from the bed (position 1, mins. 5.5, 7.2, 8.5, 9.2, 9.5). The junior midwife 2 (shown in blue) also keeps some physical distance from the bed, remaining entirely static at the equipment table throughout the episode (position 1), while the junior midwife 1 (in pink) is also very static at the left bedside, shifting only once to the right bedside (position 3, upon entry in the room) and twice to the foot of the bed (position 2, mins. 8.2 and 9.2). That the junior midwives are so static is also marked in the obstetric context, as part of their role is retrieving things from the equipment table and out of the room; by being so static someone else has to step in and perform their tasks. The junior doctor is again, in Case 5., the most mobile role, as it was also in Case 6 (total number of junior doctors' movements 22 and 18 respectively).Taken the above observations together, Case 5 is marked in relation to the interactants' use of the material zones compared to the rest of my data. As I will illustrate later in my analysis (Chapter 7), Case 5 is also marked in relation to the team's interactional performance, as there is evident interactional trouble throughout the episode and a chaotic atmosphere, while more junior professional roles try to step in and compensate for the disruption; this is reflected in – and is the result of – the ways team members utilise the material zones. The consistency of the patterns and my reading of the marked cases are provided in the following chapters.

The 30-second window may make my figures seem complex (and indeed there has been some vivid debate over those during my PhD years) and undoubtedly slowed down the process, but it allowed me to develop a rich understanding of the members' use of material space, capturing most of their movements in the emergency room, even if they were, for instance, brief visits to the equipment table or quick shifts to different parts of the bed. As soon as I became familiar with creating and reading those figures, I could quickly identify cases that were marked – that stood out as deviating from the norm (Figure 5.7 is a case in point). I discuss, in Chapter 7, how the investigation of 'abnormal' cases can shed light on the normal (Goffman, 1967) and is a valuable tool of IS for identifying interaction rituals in each setting (see Chapters 7 and 8 for some of the identified rituals and routines in my context).

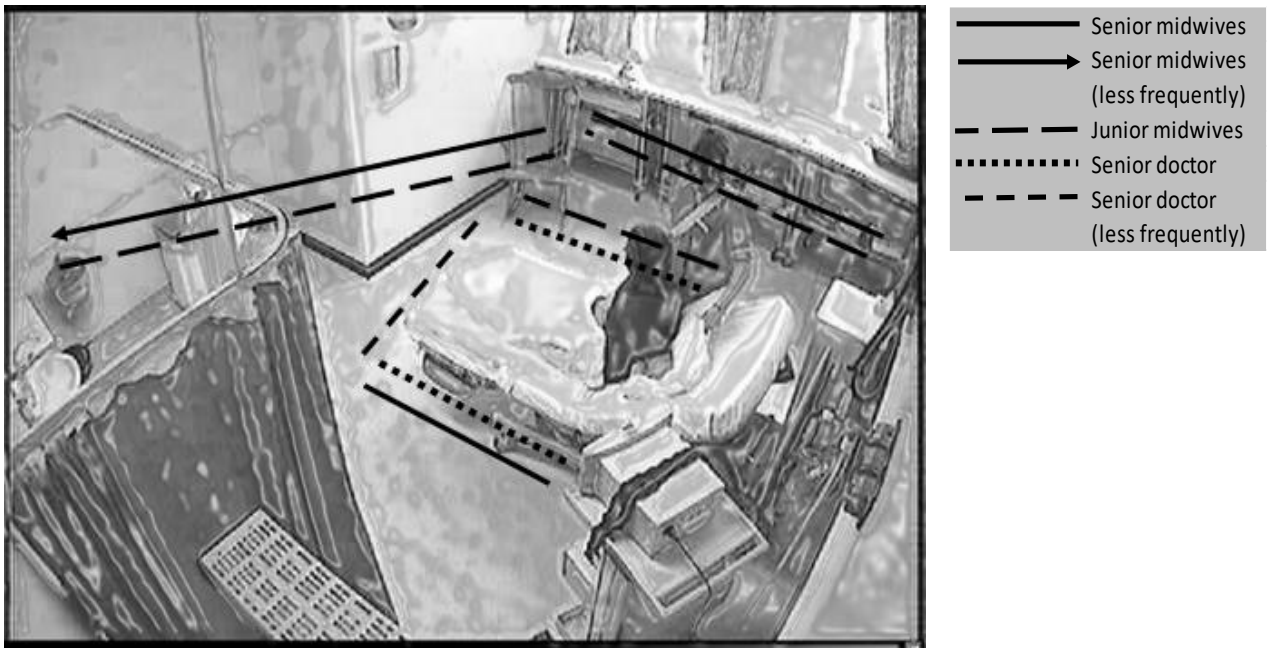
Comparing to the earlier way of representing space, in Figure 5.4, Figures 5.6 and 5.7 have the drawback of lacking the verbal transcript, isolating the information about positioning in the material space when those two (and others, not discussed here) work in tandem. It was precisely their abstractness, though, that helped me identify the patterns shown in Figure 5.8 below, while I always had also the verbal transcript at hand. Following the above analytical process for each case I created graphs like Figures 5.6 and 5.7. I then compared the ones from cases

with good clinical performance to the teams with poor clinical performance; my findings are summarised in turn below.

5.3.1.3. *Mapping professional roles on the SaFE material zones*

Figure 5.8 summarises the identified patterns in the use of the material space by the different professional roles (see also Mesinioti et al., 2020).

Figure 5.8. Mapping professional roles with the material zones of the *SaFE* room.



I have used lines, arrows and dashes to demarcate staff members' preferred material zones. The reason why junior doctors are not depicted in Figure 5.8 is that in the data analysed up to now, they exhibit great variability in their multimodal performance and no patterns have emerged; see, for instance, how mobile they are in Figures 5.6 and 5.7, covering all zones, with the junior doctor in Figure 5.8 exiting the room five times. As shown in Figure 5.8, the senior doctors position self around the bed, and mostly at the bedsides, marking, in this way, the zones closer to the patient as their zones of expertise. By positioning self at the centre of the room and close to the patient, they also position self at the centre of action. One of the senior midwives mostly stands at one bedside and the other positions self at the equipment table, while they less frequently exit the room. Moving on to the junior midwives' performance, one of them occupies the one bedside, being the staff member who talks to the patient, while the other shows a clear tendency to stay close to the equipment table. Junior midwives are also the ones exiting the room more frequently, to retrieve things required for the performance of the tasks (e.g., the magnesium sulfate, pumps, needles etc.).

The identified patterns are consistent across cases with good clinical performance. In the next chapters, I argue that positioning in the zones constitutes part of a role-claiming act and works in tandem with the verbal data, focusing particularly on the senior doctors' discursive strategies for task allocation.

I now turn to exploring the material space in the *TeamLeader* study following a similar methodological and analytical process.

5.3.2. *TeamLeader* Data

5.3.2.1. *Identifying key material zones*

Although the *TeamLeader* dataset did not include video recordings, I used my experience with movement analysis with the *SaFE* data to design the study of space through audio recordings and my real-life observations. The systematic analysis of the *SaFE* data and my approach for monitoring material space, which has been preceded the *TeamLeader* data collection, has directly benefited my later work both in informing the process of collection and defining the units of analysis. Specifically, by the time I conducted real-life observations in the resus, I was already familiar with what I was looking for regarding the professionals' use of material zones and the ways I could monitor it. More importantly, though, even without video recording, the fact that I had the opportunity to observe the trauma teams in real life repeatedly, gave me a rich insight into not only the resus but also the room where multidisciplinary meetings take place, the staff members' rooms, etc., contributing to a more holistic understanding of how teams work. I created the material zones in line with the process I described for the *SaFE* data as I was studying the core positions during observations.

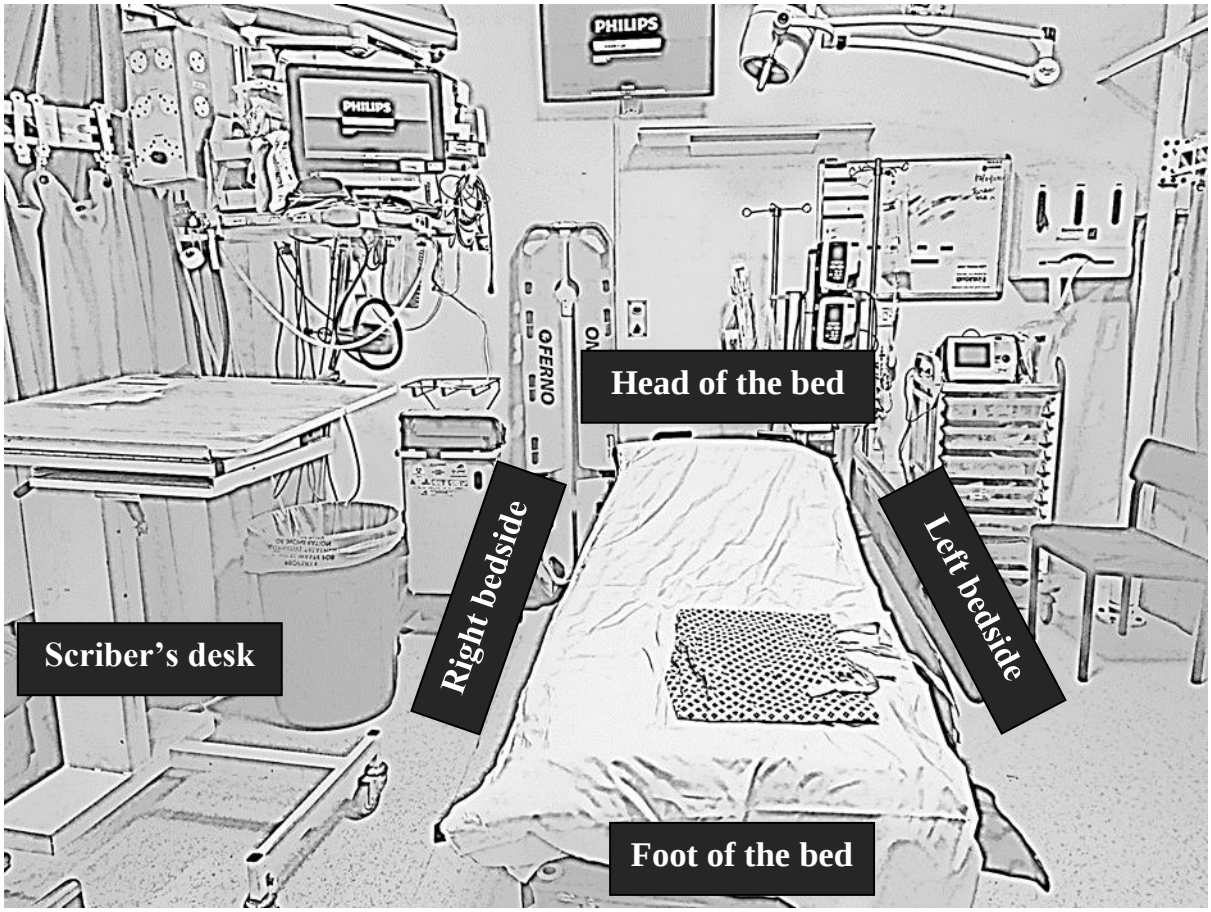
Further, the analysis of the *SaFE* video recordings set the basis for the identification of the key zones in the resus. I have already shown, in the description of the contexts (Chapter 4) the layout of the resus. In Figure 5.9 below I illustrate the resus bay, the space where my participants gather in trauma calls, before turning to discussing the similarities and differences between the material setup of the two contexts.

Figure 5.9. The resus bay.

The common ground across contexts is the patient's bed, which is the main artefact in both rooms, and bears symbolic meaning as the centre of all action. The following material zones around the bed, identified from the *SaFE* data, were thus relevant in the *TeamLeader* data too: left bedside; right bedside; foot of the bed. Note, however, that in the resus the head of the bed is also accessible by the staff members, in contrast to the obstetric room where the bed is attached to the wall. Continuing with the two contexts' differences, the space where the trauma staff members operate is much more confined; although they use the workstation, their main unit of action is the resus bay, rather than the whole room as is the case in the *SaFE* data. As a result, the trauma staff members remain around the bed for most of the time and rarely exit the room in my data; partly because of the protocols in place, and possibly partly because of the more pressing urgency of real-life trauma cases, things that need to be retrieved from outside of the room in the *TeamLeader* data (e.g., plasma, blood) are brought to the team by external staff members. In analysing the *TeamLeader* data, another artefact, not available in the *SaFE* data, emerged as significant; the scriber's desk (highlighted in Figure 5.9). The key

TeamLeader material zones are shown in Figure 5.10 (cf. Figure 5.2 for the *SaFE* zones), before I turn into presenting the way I monitored those.

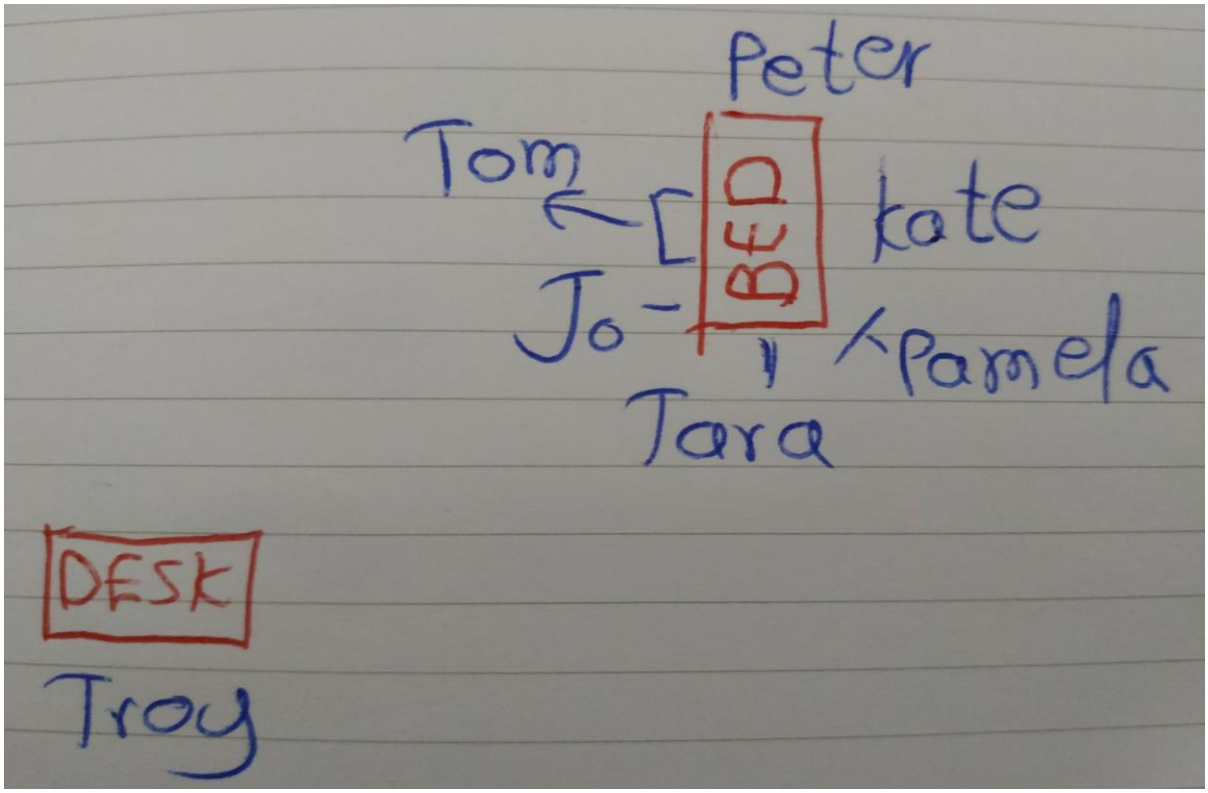
Figure 5.10. Key material zones in the resus bay.



5.3.2.2. *Monitoring the TeamLeader material zones*

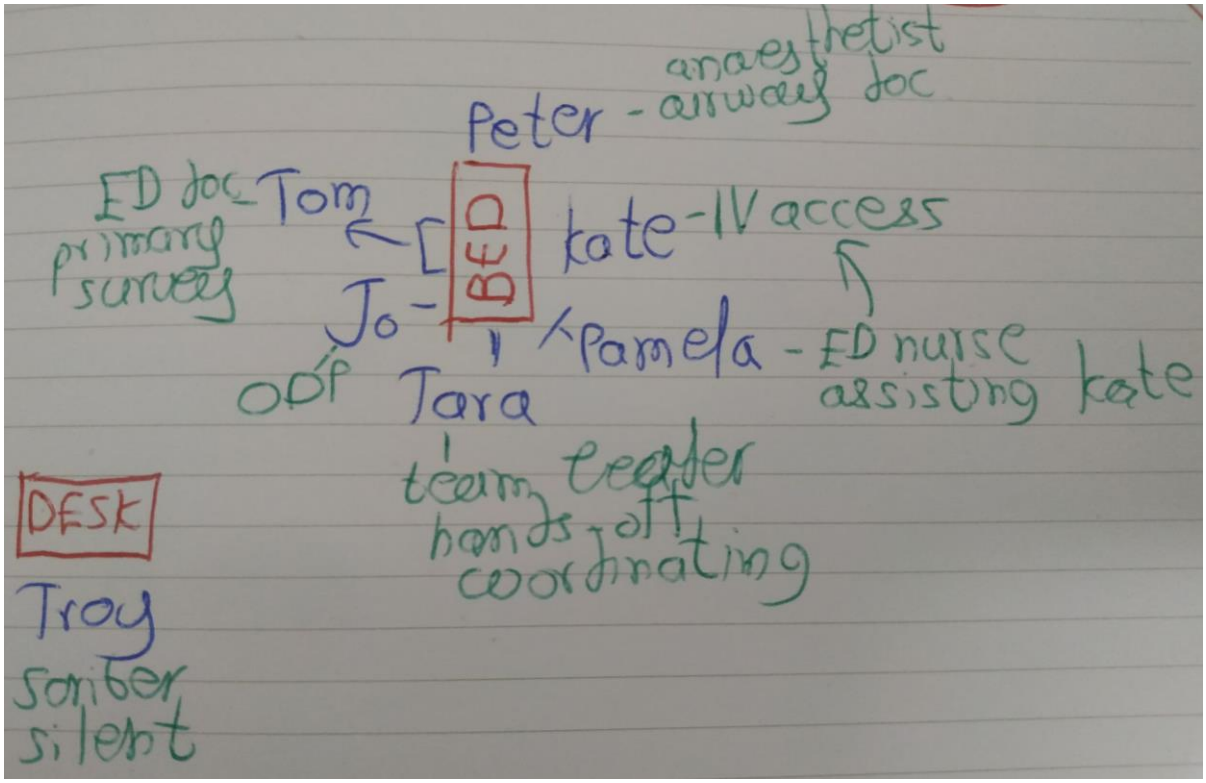
To monitor the positions of staff members during the trauma incidents, I did quick sketches such as the one shown in Figure 5.11 below. As I did not want to be seen taking notes (for a discussion see Section 4.5.3), I minimised the time spending on notetaking in the following way: the 'desk' and 'bed' zones in red were already prepared in ethnographic logs prior to my observation, with the date and the number of the recording on them. When in the field, and as soon as members positioned in the resus, I noted down the names (shown in blue). As I used my participants' real names in the fieldnotes, the following figures are a reproduction of the originals for anonymity reasons.

Figure 5.11. Example of my ethnographic logs on staff members' positions in the resus bay (all names are pseudonyms).



The use of staff members' first names, rather than their roles, in my sketches solved the practical issue that, very often, particularly during the first weeks, I did not know the staff's professional roles. Their names were more easily accessible to me both from their name tags and their own introductions during the pre-briefing (and the fact that they would normally introduce their role during the pre-briefing, even though this was not always the case). I was then adding quick notes separately on their professional role and task at hand as shown in Figure 5.12 (in green for reasons of illustration), which I retrieved either from their introductions, my observations of the case, or the staffing board which was renewed in every shift stating who is who. As it was important for my analysis to identify everyone, in instances where I could not recognise some members' roles, I asked my gatekeeper or staff members with whom I have developed a closer relationship over time during post-event conversations.

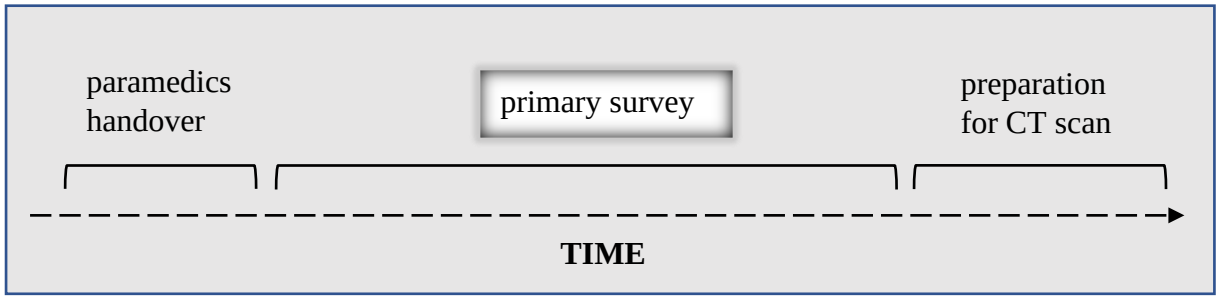
Figure 5.12. Example of my fieldnotes on staff members' positioning, role and task performance (all names are pseudonyms).



As illustrated above, I have noted down my participants' position in the resus bay, their professional role and the tasks/responsibilities they had on that specific incident. In the case above, Peter, the anaesthetic registrar, stands at the head of the bed and is responsible for the airway. Tara, the ED consultant, and team leader, is found at the foot of the bed and maintains a hands-off role, coordinating the team. Figure 5.12 also gives me access to Pamela's responsibilities on that day, who is an ED nurse. ED nurses do not usually have assigned responsibilities in trauma calls but assist with any required procedures; in this case Pamela stands close to Kate assisting her with the IV access. Other than those quick sketches, my fieldnotes included more detailed information about what was going on in the episodes.

Figures 5.11 and 5.12 depict only an instance of the whole case and in this sense, they are much more static than Figures 5.6 and 5.7 which capture the whole journey in obstetric emergencies. Drawing on my experience from the *SaFE* data, however, I identified early on my fieldwork key stages where staff members' changed positions in the room consistently. I summarise those in Figure 5.13 and continue with discussing how I monitored those.

Figure 5.13. Key stages in relation to staff members' positioning in the resus.

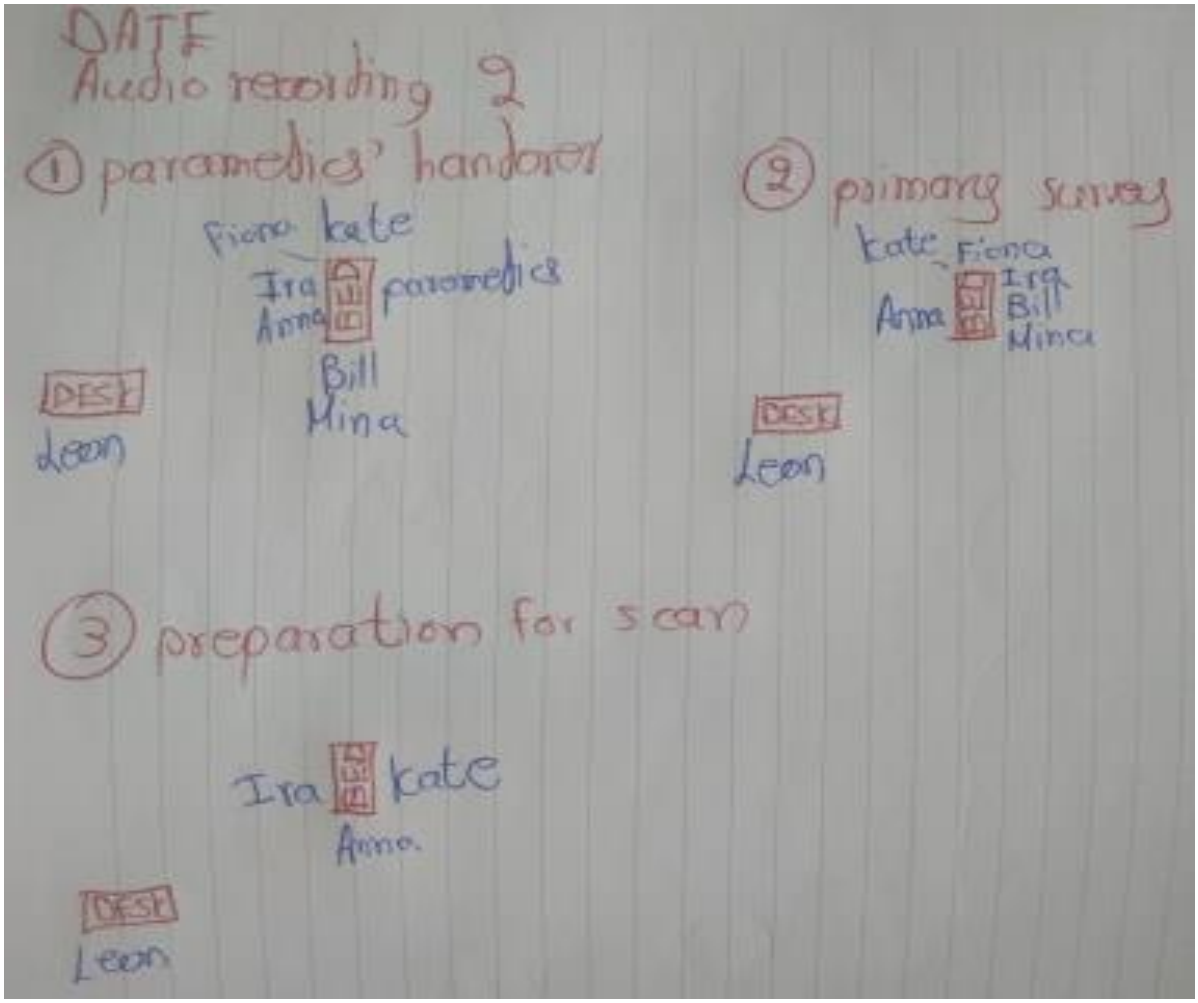


As shown in Figure 13, the first stage consists of the paramedics' handover to the trauma team. Upon entry in the resus, paramedics always position themselves at the left bedside for the handover, letting the trauma team operate in the rest of the resus bay. As soon as paramedics leave, some of the trauma members shift to other material zones, filling the left bedside too, to perform/assist with the primary survey, which, as shown above, is the longer phase in my data in terms of time. Finally, upon completion of the primary survey, staff members move in the material space again; some of them leave, as they are no longer needed, while other members, such as the ODP, are responsible for getting the patient ready for the scan (undress them, remove any jewelleries, wrapping them in the special equipment for the CT scan etc.) and thus get closer to them. The stages shown above are linear; the primary survey does not begin before the paramedics complete the handover and leave the room, and the preparation for sending the patient into scan only starts when the team decides what kind of scan is needed, upon completion of the primary survey.

As soon as I identified these key stages, I advanced my ethnographic logs to capture at least these two major shifts (from the paramedics' handover to the primary survey; and from the primary survey to the preparation for scan), as illustrated in Figure 5.14. This is not to say that throughout each of these stages staff members remained still; it goes without saying that fieldnotes can never capture the level of complexity the video recordings do when researching material space. Identifying the key stages provided me with a good starting point, however, and gave me an insight into the ways certain material zones are associated with the performance of certain tasks (see, for instance, the way the team works in Figure 5.12).

Figure 5.14. Example of ethnographic log illustrating professionals' position in the key stages (all names are pseudonyms).

Key for participants: Leon: ED consultant; Kate: ODP; Ira: ED doctor, Anna & Mina: ED nurses; Fiona: anaesthetic registrar; Bill: surgical registrar



For the first stage the left bedside is occupied by the paramedics who have just brought the patient in, with the trauma team gathering around them to listen to the handover. Note that Kate, the ODP, stands at the head of the bed and close to the paramedics at that stage; transferring the patient to the resus bay is part of the ODPs' responsibilities so Kate positions self in a material zone which will allow her to coordinate the patient's transfer. The team's arrangement in space changes in instance 2, when paramedics exit the room. The team orients now towards the performance of the main tasks in this stage: Kate, by moving to the top right corner frees up the head of the bed for Fiona, the anesthetic registrar, who is responsible for the airway. Kate remains, however, next to Fiona, as part of the ODPs' role is assisting with the airway management. Ira, the ED doctor, shifts to the left bedside occupying now a central

position close to the patient, as she will perform the primary survey. Bill, the surgical registrar, also moves to the left bedside to perform the IV access, while Mina, an ED nurse, stays close to Bill as she is the one who will assist with the IV access. For the last part of the episode, when the primary survey is completed, there is again a change in interactants' arrangements in space. Kate now moves to the left bedside, close to the patient, as she is one of the main roles preparing the patient to go into scan. Ira, the ED doctor, also remains around the bed together with Anna, an ED nurse, who also stays close (but not as close to the patient as the other two – at the foot of the bed). Other members have left as they are no longer needed. Bill, for instance, who was responsible for taking bloods, has now shifted to the work station (not shown in Figure 5.14) to arrange those. Finally Leon, the team leader, is stable at the scriber's desk throughout the three main stages; this is not the case for all team leaders in my data and I return to this in Chapters 6 and 7.

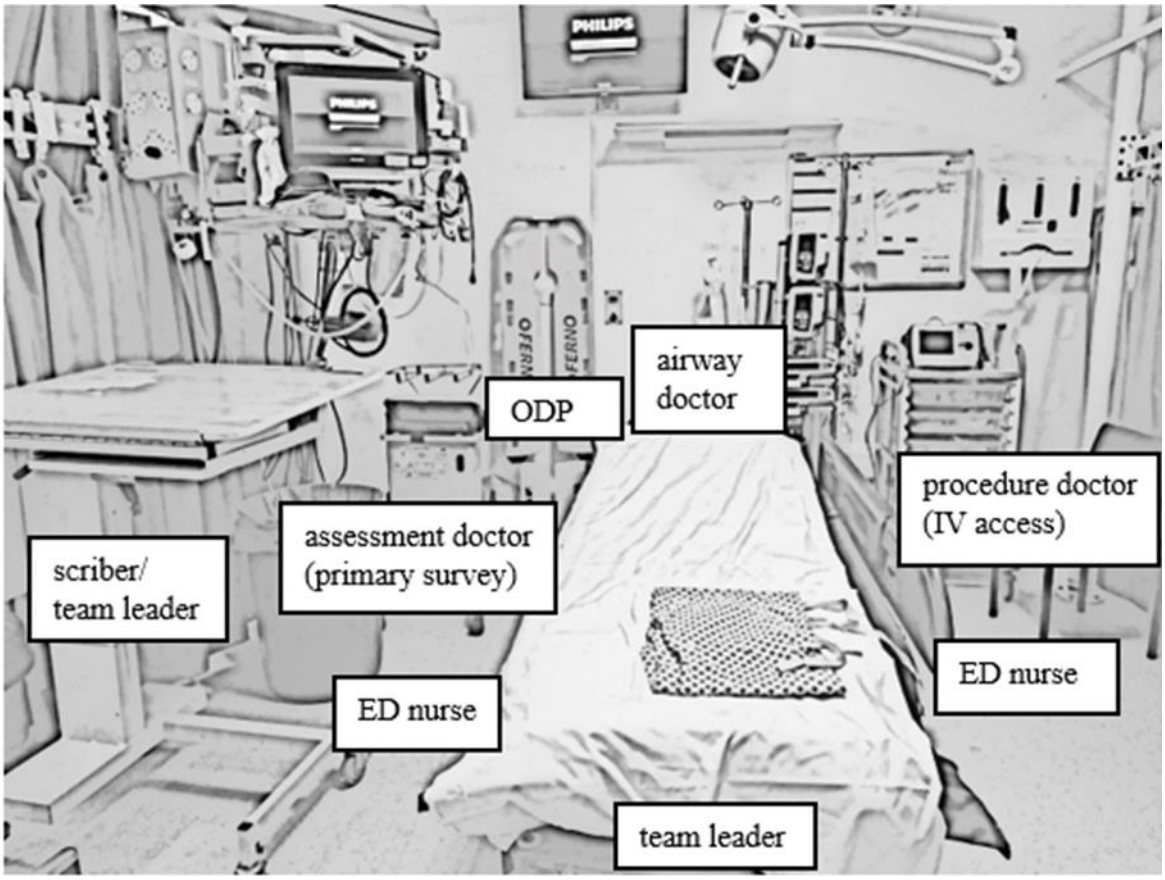
I also included in my fieldnotes shifts within those key stages, either by creating more logs as the one shown above, or by keeping quick notes, e.g. 'Anna shifts to the left bedside to talk to Martin'; 'Priya doesn't approach the bed throughout the case'; 'Leon stays static at the scriber's desk throughout'. In contrast to the video recordings, which offer the playback opportunity in order to decide what is important (and in which the researcher can always go back if they identify new areas of interest), in real-life observations this is not possible. I could not capture everytthing that was going on in those emergency situations (note also the complexity added by the emotional state of the researcher in major incidents; I touch upon this in section 4.5.3). My fieldnotes are thus already the first layer of my analysis in relation to the material space as they capture only what I considered important at that point; without the earlier experience from the *SaFE* data and the development of my analytical framework, I would not be able to filter through all this information during the initial stages of my fieldwork. Angouri (2018) argues that 'good ethnography gets sharper and more focused the more the researcher ''unlocks'' different doors' (p. 101). And indeed as time passed by, things got easier as I was reflecting on my observations and fieldnotes before returning to the field, identifying ommissions and pieces of the puzzle that were still missing.

For the last section of this chapter, I turn to the mapping of professional roles with the *TeamLeader* material zones.

5.3.2.3. *Mapping professional roles with the TeamLeader material zones*

Following the same analytical process with the *SaFE* figures, I compared my sketches from each trauma incident and identified patterns in the use of the material zones by certain professional roles, which are summarised in Figure 5.15. The Figure visualises the professionals' positioning in the room during the primary survey, which is the main stage I focus on, as I am interested in the ways leadership is enacted within the whole trauma team.

Figure 5.15. Visual representation of professionals' material zones in the *TeamLeader* data.



The identified material zone of team leaders is the scriber's desk, when there is no scriber in the room, which is the case in all the recorded cases in my data except for two. In those two cases, in which a professional who has the role of the scriber is present, they occupy the scriber's desk and the team leaders position selves at the foot of the bed (Figure 5.12). Both positions provide the team leaders with the flexibility to oversee the whole team. At one bedside, usually the right one, is the doctor performing the primary survey, while at the left is the doctor performing the IV access. The left bedside is the default zone for obtaining IV access in trauma calls and part of the teams' training; although the performance of other key actions (e.g., primary survey) exhibits variation in my data, I have not recorded any cases where the IV access is performed from the right bedside, unless there is a medical reason for that. At the

head of the bed I always find the airway doctor, assisted by the ODP. Depending on the case, usually one or two ED nurses are positioned at the bedsides but close to the bottom corners of those, not occupying a central position as other roles do. Focusing primarily on the team leaders, I illustrate, in Chapters 6-7, the ways staff members stick to or deviate from the identified patterns, and the impact this has on leadership and control.

In what follows, I briefly summarise the main points I raised above.

5.4. Conclusion

In this chapter I have argued in favour of understanding space as integral to social action, in line with CA work, and conceptualised positioning in the material zones of the emergency room as contextualisation cues under an IS approach. Drawing on the *SaFE* video recordings, I detailed my methodological framework for identifying the main material zones and monitoring their use by the different professional roles. I then applied my framework to the *TeamLeader* real-life observations to again identify and monitor the professionals' material zones. In discussing the different datasets (video recordings and the playback function in the *SaFE* data; my real-life observations in the challenging setting of the *TeamLeader* study), I have drawn attention to the ways in which the study of space can be operationalised across datasets which come with different affordances and limitations. Different levels of access call for different ways of representing space and I have illustrated in detail alternative ways of marking down information about positioning in space even without video recordings.

The analysis illustrates that positioning in the material space is part of claiming roles and responsibilities. Focusing on the role of the team leader, I have shown the ways they position self in central material zones which allow them to maintain control over the team. I thus understand positioning in a central material zone – and in the centre of the action – as a discursive strategy for *doing* leadership; this goes hand in hand with other discursive strategies which I discuss in the next chapters. I argue that the consistent patterns identified across the two contexts and their different material spaces underline the relevance of the two settings and make a case for the potential applicability of my framework for investigating material space in other emergency healthcare contexts.

In the following chapters, I bring together the ways team leaders position self in the material space and some of the verbal discursive strategies they use, namely, directives and questions, in order to shed light on what it means to *do* leadership in this context.

Chapter 6: Directive strategies and task allocation for *doing* leadership

6.1. Introduction

In this chapter I explore how team leaders enact leadership discursively in my data through the use of directive strategies and positioning in the material space of the emergency room.

I have discussed, in the description of the teams' composition (Chapter 4), the core role of the institutionally defined team leaders in my highly hierarchical contexts, with the ultimate responsibility for the patient lying with them for medicolegal purposes. I thus zoom in here on the role of the designated team leader. This, however, does not imply that the designated team leaders (or only them) *do* leadership across my data; I return to the ways other professional roles step into the team leader's position discursively in the next two chapters (Sections 7.6.2 and 8.5).

I identify the directive strategies used by team leaders in my data, which I organise in a typology from the most to the least forceful. In examining those, I pay attention to the use of the material space and illustrate the ways those two are intertwined discursive strategies for doing leadership and control. My analysis illustrates that senior doctors consistently draw on not only well-studied directive strategies, such as imperatives and declaratives, but also structures less discussed in the literature, such as conditionals. Questions stand out as the most frequent strategy in my data, which is the reason I decided to examine those separately in the next chapter. All directive strategies discussed here are consistently found across datasets, illustrating the commonalities among ad hoc emergency teams and robustness of the patterns.

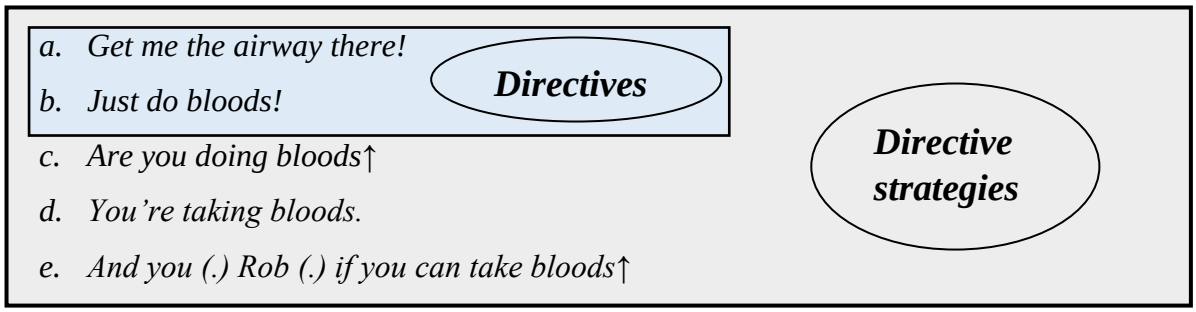
The chapter is organised as follows: I begin by briefly discussing directives as prototypical control acts and then zoom in on two excerpts to illustrate the use of team leaders' directive strategies in my datasets, paying attention to the ways those are multimodally achieved in the emergency room. I then bring the two contexts together and present the emerged typology of directive strategies, organised in a directness spectrum. For the last part of the chapter, I theorise on (non)directness in the emergency context and discuss research areas future studies need to address.

6.2. Functions of directive strategies and issues of terminology

To start unpacking the ways team leaders *do* leadership, I explore here directives due to their tight connection with (conversational) control and thus, leadership (Section 3.6 for a discussion). As prototypical 'control acts' (Vine, 2001), directives are intended to get someone to do something and are frequent in instructions from superiors to subordinates, typically concerning routine tasks (Holmes and Stubbe, 2015).

As illustrated in Figure 6.1, in my analysis I label all strategies which are broadly intended to get someone to do something as *directive strategies*, including not only the prototypical *directives* (sentences in imperative), such as examples a and b below, but also other sentence structures including questions (example c), declaratives (example d), conditionals (example e), and so on. Although imperative sentences are the prototypical way of issuing a directive, such structures are only a part of the broader directive strategies mobilised in my data.

Figure 6.1. Defining 'directives' and 'directive strategies'.



Directive strategies are one of team leaders' core strategies in both my contexts, where there are significant power asymmetries between the team leader and the rest of the team, and teams are heavily oriented towards performing the required tasks in a short time window (see section 4.6.1 for the time constraints in both contexts). To give an illustration of what a big part of my data the broadly defined directive strategies are, I provide, in Table 6.1, the total number of the directive strategies found in two cases (one 15-minute case from each dataset). I have included, in Table 6.1, the number of directives in imperative found in those two episodes, and also counted separately the directive strategies used by the team leader and the rest of the team. The table is used here for illustrative purposes, rather than its statistical significance; the cases I draw on, however, are representative of my datasets and nicely summarise how frequent such strategies are in the emergency context. I explain the distribution below.

Table 6.1. Directive strategies in two cases (one from each dataset).

	***TeamLeader* case**			***SaFE* case**		
	Leader	*Other*	*Total*	*Leader*	*Other*	*Total*
Directive strategies (other than imperatives)	22	8	*30*	9	12	*21*
Imperatives	5	3	*8*	3	1	*4*
Total	*27*	*11*	***38***	*12*	*13*[6]	***25***

As illustrated in Table 6.1, imperative structures constitute only a part of the directive strategies used for allocating tasks in my data; this is the case in both contexts, with the *TeamLeader* case including 8 imperatives in the total of 38 identified directive strategies, while in the *SaFE* data the imperatives are only 4 out of the 25 directive strategies (21% and 16% respectively). The directive strategies used by the team leader are much more frequent than those used by the rest of the team members. This pattern is easily spotted in the *TeamLeader* case, with the team leader issuing the 27 out of the 38 directives (71%). A first reading of the *SaFE*'s numbers does not confirm this pattern, with only 12 out of 25 directive strategies issued by the team leader. This is the case, however, because I took into account all directive strategies from the beginning of the episode for reasons of consistency. With the senior doctor in the *SaFE* data being the last one to arrive, the team members that are already in the room and perform the initial tasks issue directives to one each other. I further elaborate on the main agents at the early stages of the drills in Chapter 8. As soon as the senior doctor steps in, they become the main agents allocating tasks; a count of the directive strategies used upon the senior doctor's entrance in the room confirms that they are the ones primarily using directive strategies, as the total of the whole team's directive strategies with the senior doctor in the room are only 6 over the senior doctor's 12.

[6] 7 of these are before the team leader's entrance in the room; as soon as the senior doctor enters the room, the directives raised by other staff members are only 6.

Turning to the function of directive strategies, I find those employed by staff members primarily for direct task allocation (e.g., *you're doing the primary survey*), and task recruitment (e.g., *can we do a blood pressure*↑). As both structures are aiming at task execution, I treat them both as task allocation strategies and argue that the choice of the one over the other has implications for the forcefulness of the request; I thus do not separate direct task allocation and task recruitment in my analysis and typology. Less frequently, I find directive strategies used for non-task-related requests; these are mostly related to next steps and action plan (e.g., *we'll stop (.) we'll pause (.) we'll do the handover befo:re we go across*).

To start addressing RQ2, I now turn to the data to illustrate the ways in which team leaders use directive strategies across my contexts to allocate tasks, paying particular attention to their positioning in the material room. In doing so, I am also interested in the teams' uptake and the ways staff members orient towards executing the allocated tasks.

6.3. Team leaders' directive strategies in the data

6.3.1. *SaFE* data[7,8]

Excerpt 6.1 is from the *SaFE* data, from a team that scored high in the clinical performance ranking scheme (Case 8, magnesium administration within 5–6 minutes; Table 4.2 for the clinical ranking). The excerpt is drawn from a moment where the whole team is in the room, after the senior doctor's entrance, when the team is oriented towards the task of oxygen administration. Oxygen administration is critical in this context, as it is one of the three main tasks to be performed in eclampsia emergencies (the other two are the IV access and the magnesium preparation and administration; Section 8.3 for a discussion). I zoom in on the ways the senior doctor draws on a range of directive strategies to allocate the oxygen task.

[7] Transcription conventions are found in the Appendix.
[8] All names in the excerpts and the discussion are pseudonyms.

Excerpt 6.1

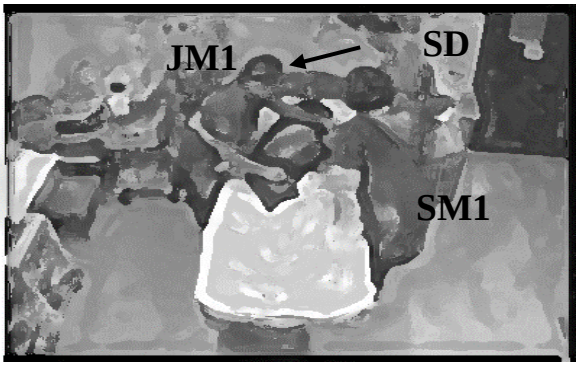
Instance 1

1	JM1	105
2	SD	(fine) (.) **I need the oxygen** **-direct**

Instance 2

3	JM1	(oh here you are)
4	SD	**NO can you give me**
5		**the [box?** **+direct**
6	SM1	[8 mils
7	JM1	oh! (.) sorry

Instance 3[9]



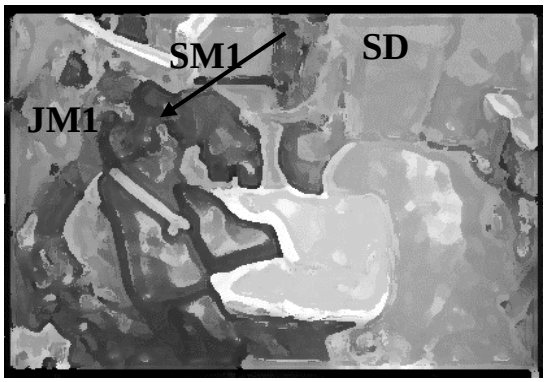
8		((several lines omitted))
9	JM1	((the JM1 updates the team
10		on the patient's condition))
11	SD	**-GET the oxygen get an**
12		**airway** **+direct**

Instance 4

13	JM1	yeah [OK
14	SM1	**[let's get her an**
15		**airway** **-direct**

[9] The line arrows in the excerpts indicate gaze direction.

Instance 5



16	SD	we have the baby↑
17	JM1	(no) she's into spontaneous
18		labour so [indec
19	SD	**[OK get me the**
20		**airway there** **+direct**
21	JM1	ye:ah

In line 2 the SD takes the floor, beginning his utterance with a response token (*fine* – for the functions of 'small' interactional response tokens see McCarthy, 2003). The response token followed by a pause marks a topical boundary, as he moves from the blood pressure reading to issuing a directive. In this case the senior doctor uses an indirect form, a declarative stating his need without targeting verbally a specific member: *I need the oxygen*. The utterance lacks imperative forms and personal pronouns or other linguistic cues that would indicate the potential addressee of the directive, which is the reason why I consider it belonging in the indirect edge of the directness spectrum. The potential addressee is marked, however, in an embodied way; the senior doctor stands next to junior midwife 1 and directly looks at her, steering her actions. This embodied behaviour is successful in opening the floor to junior midwife 1, since in the next turn (instance 2) she is the only one who attempts to respond; in doing so, however, she simply points to the equipment trolley in line 3. The senior doctor's responsive turn is marked with a turn-initial *no,* followed by another directive. *No*-prefacing utterances as disagreement acts are generally considered threatening for the recipient's face and are often accompanied by mitigation strategies. In my data, *no*-prefacing utterances are more frequently used by senior members, indicating that status differences may impact on team members' discursive strategies and further illustrating the distinctiveness of the emergency context in relation to the ideal of non-directiveness. This time, the senior doctor shifts towards

the direct edge of the spectrum of directives (Figure 6.4 for the spectrum), using a modal interrogative (***Can*** *you give me the box?*). Indirect speech acts, such as interrogatives, are a common substitute for imperatives functioning as less direct – and more polite – directives (Brown and Levinson, 1987; Searle, 1969). As is the case in line 3, such structures often contain modal auxiliaries such as *can* or *could*, which are more indirect and less forceful (Vine, 2009). I discuss below how, later in the excerpt, the senior doctor employs more forceful directives, further intensifying his request.

These findings on the senior doctors' directiveness contradict Chałupnik and Atkins (2020), who, as I discussed in the literature review (p. 48), have also explored questions and found indirectness and mitigation strategies to be more effective in simulated obstetric emergencies, as the ones I discuss here. One possible explanation for this discrepancy could be the difference of the main agents' institutional roles (trainee doctors [junior] vs senior doctors and ED consultants [senior]); the senior doctors in the obstetric emergencies and the ED consultants in the trauma emergencies are at the top of the professional hierarchy (Chapter 4), and are the most direct in my data. Less senior members, however, tend indeed to use softening strategies in both datasets (see in Section 6.4 for some examples); this points to the necessity of taking into account the professionals' institutional role, which comes with certain professional ideals and ways of *doing*. I expand on the impact of directiveness in my context in section 6.5.

Moving forward, in lines 11-12 (instance 3) the senior doctor moves to the left bedside, still maintaining a central position close to the patient, and interrupts junior midwife 1 who updates the team, taking over the floor with a directive: *GET the oxygen get an airway*. In doing so, he briefly raises his voice's volume, while targeting the junior midwife 1 as the potential addressee by directly looking at her. Raising the volume when interrupting is a common turn-claiming act amongst team leaders in my data; talk louder in volume or higher in pitch can be seen as competitive, a 'fight for the floor […] by a show of acoustic force' (Schegloff, 2000, p. 12); even though not my primary units of analysis, raises of volume emerged as significant across the datasets and I thus monitored such marked instances systematically throughout my analysis (Section 4.10 for the contextualisation cues). I position canonical forms of imperatives at the direct edge of the spectrum, as they serve as less polite directives (Van Olmen and Heinold, 2017) and 'basically encode directivity' (Jary and Kissine, 2014); such directives are ordinarily raised by team leaders or team members that step into the team leaders' role, while less senior members utilise less forceful directive strategies. The senior doctor's strategy for claiming the floor and targeting the directive's recipient here is successful, as the junior midwife quits her

turn and aligns with the senior doctor, responding in the affirmative (line 13) and instantly orients self towards the equipment table, in order to perform the task of getting an airway.

The senior doctor's interruption in line 11 aims allocate a task, re-introducing the topic of oxygen. Interruptions have been widely analysed from a CA perspective as speakers' means to demonstrate power, dominance and control; in my analysis I consider repeated interruptions and overlaps which delay the team as indicators of interactional trouble and thus, lack of conversational control (see Belgrimet, 2020, and Section 3.7 for a discussion). Note, however, that interruptions and overlaps have been also shown to function as a tool for conveying rapport and cooperation with the other speaker (Goldberg, 1990); Tannen (2005), for instance, has shown that overlaps are acceptable and even desired in certain contexts, and 'a possible legitimate way of governing speaker switches and of conveying certain functions' (Köktürk and Öztürk, 2012, p. 565; and also Angouri and Locher, 2012, for a discussion). I have also discussed cooperative functions of interruptions in Section 3.7; this however is not the case here.

Continuing with the excerpt, the significance of the oxygen-related task is linguistically indexed by the senior doctor through the use of a canonical form of directives in imperative, which has been identified by Holmes and Stubbe (2015) as a discursive strategy frequently used in instructions issued from superiors to subordinates typically concerning routine tasks. To further intensify the directive, the senior doctor paraphrases it here (*GET the oxygen get an airway*), repeating the verb *get* – a verb prototypically used for issuing directives, which has even higher degree of force exertion due to the rising volume. Repetition is a useful strategy for intensifying directives (Holmes and Stubbe, 2015). It is interesting to note that in lines 14-15, even though the senior midwife 1 merely echoes the senior doctor's directive (*let's get her an airway*), she employs a less forceful speaker-inclusive imperative which is not addressed to a specific team member. This discursive 'softening' of a directive is a consistent pattern found across my datasets, where less senior members tend to mitigate their directives (see also junior members' questions aiming to issue a directive, which again, tend not to target specific members as team leaders do).

In lines 19-20 the senior doctor briefly overlaps with the junior midwife and then gains the floor, repeating the directive of the previous instance (*get me the airway*), again in direct and explicit form, and allocating the task to her by directly looking at her direction. This time, the senior doctor also accompanies his utterance with a gesture that defines the spatial deixis of *there*, addressing the junior midwife with verbal and gestural resources. Team members in my

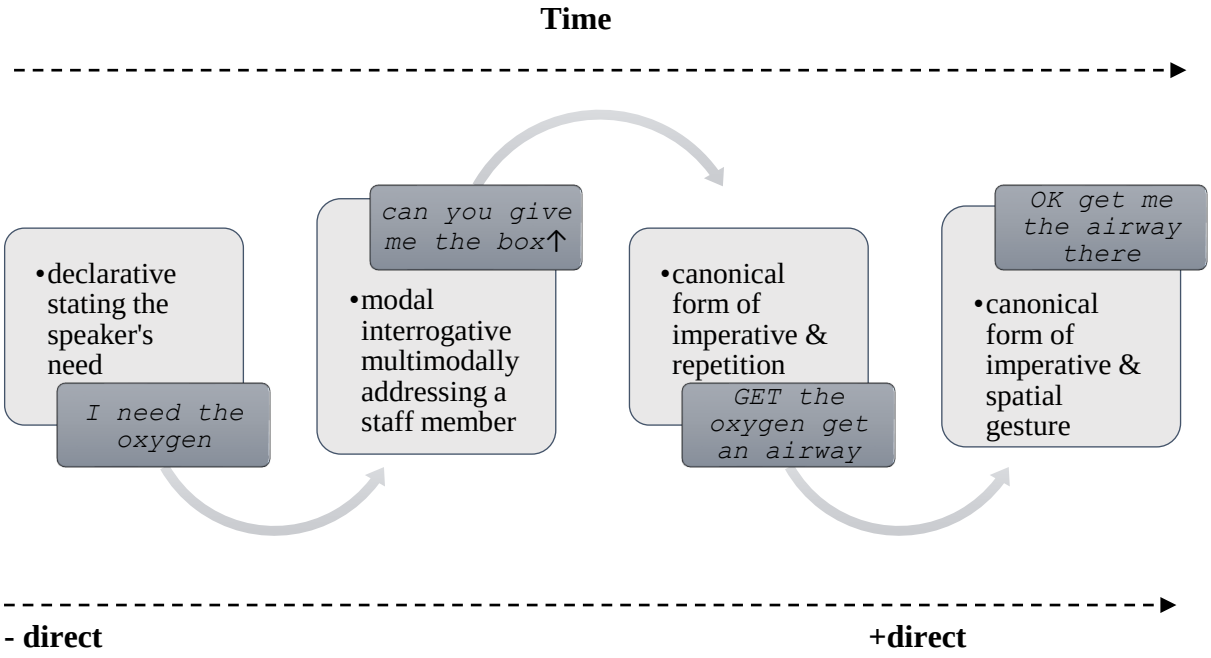
data consistently use gaze direction as a tool for indicating the next floor holder, in agreement with previous research which has discussed gazing as a means for floor management and control (Chen et al, 2006; Mondada, 2011). By shifting closer to the junior midwife and making the gesture, the senior doctor coordinates talk with body movements in order to create interactionally shared space with respect to the projected activity (Mondada, 2009). Once again, the junior midwife acknowledges senior doctor's dominance, as she immediately performs the task while using affirmation in line 21; a prolonged *ye:ah* which marks agreement.

Instance 5 also captures team members' positioning in their identified material zones (Chapter 5 on the identified material zones). The senior doctor and one of the senior midwives (SM1) are in the bedside, maintaining a central zone close to the patient, while the other senior midwife (SM2) is found at the equipment table (not shown in the picture). Midwife 1 is shifting from the equipment table to the bedside, and back, to perform the tasks requested by the senior doctor, while the other junior midwife is out of the room; as shown in Figure 5.8, junior midwives are the ones more often exiting the room in the data, distancing self from the centre of the action and thus, the responsibility that comes with it.

Bringing together the discursive strategies on which the senior doctor draws for allocating the oxygen task, I have shown above how he holds the agenda tightly using directive strategies (lines 2, 4-5, 11-12, and 19-20) while maintaining a central position close to the patient, at one of the bedsides, demarcating a central position as his material zone of expertise. Excerpt 6.1 sheds light to the range of directive strategies used for the same task, demonstrating how the senior doctor structures them from a –direct to a +direct spectrum over time (visualised in Figure 6.2 below). This includes directives stating the speaker's need without addressing a staff member (line 2), speaker-inclusive directives (lines 14-15) interrogatives (lines 4-5), and canonical forms of imperatives (lines 11-12 and 19-20). The analysis also illustrates the multimodal accomplishment of the directives, with the senior doctor using body and gaze direction and body movement to indicate the next possible turn-taker or recipient of a task. The senior doctor constructs a confident persona in this episode (see unmitigated, forceful directives, his interruptions of and competitive overlaps with other team members, raising voice volume and positioning self at a central material zone); according to the team's uptake the mobilised discursive strategies are successful, with the targeted team members aligning with him and swiftly corresponding to his requests. No interactional trouble is evident, not only in excerpt 6.1, but throughout the incident.

Overall, Excerpt 6.1 is a good illustration of the ways senior doctors control the conversational floor and hold the agenda tightly by using unmitigated, +direct directives for task allocation, which also intensify over time. This verbal behaviour is intertwined with positioning self in a central material zone, the bedsides, which my analysis of space indicates as the team leaders' main zone in the *SaFE* data (see previous chapter on the identified material zones). In doing so, team leaders achieve control and enact leadership, with the rest of the team aligning with them and multimodally performing/confirming the allocated tasks.

Figure 6.2. Intensification of the senior doctor's requests regarding the oxygen task over time.



In the next section I turn to the *TeamLeader* data, focusing again on how the team leader employs directive strategies and positions self in the material space of the emergency room.

6.3.2. *TeamLeader* data

Excerpt 6.2 is from the *TeamLeader* study and captures the beginning of the formal pre-briefing prior to the patient's arrival, a critical stage in the trauma incidents where tasks and responsibilities are allocated to the team members (for the significance of the pre-briefing stage see also Mesinioti et al., fc.). In analysing the excerpt below, I will skip, for now, lines 19-21 and 29-35, as they mainly include conditionals which I discuss separately in Section 6.3.2.1.

Excerpt 6.2

Key for participants: Jack: orthopedic registrar; Leon: ED consultant; Lisa: ED registrar; Maria: ITU registrar. [Not shown in the excerpt: Kira: ODP practitioner; Mona: medical student]

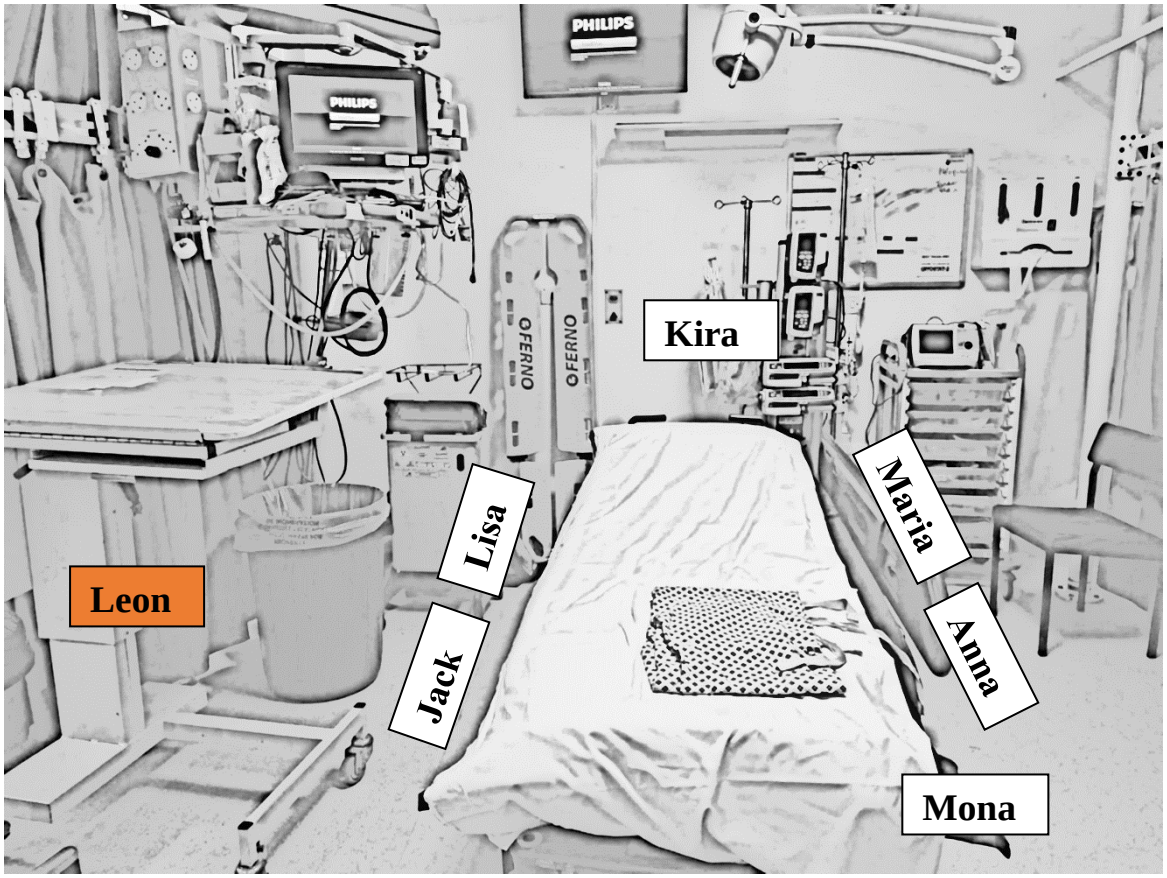
			interrogative + speaker inclusive
1.	Leon	OK YOU ALL (1.0) can we (.) possibly step in and just	
2.		pre-brief ((makes a gesture showing the space around him	
3.		and the team stops the parallel conversations and gather	
4.		around him))	
5.		((few lines omitted))	
6.		so (.) my name is Leon Smith (.) I'm the trauma team	
7.		leader (.) (1.0) ((he looks directly at Lisa and makes a	
8.		gesture to address her as the next turn-taker))	**imperative gesture**
9.	Lisa	my name is Lisa: (.) I'm the: ED registrar (1.0)	
10.	Leon	you're doing [the primary survey	**declarative**
11.	Lisa	[and I'll be doing the primary survey (1.0)	
12.	Leon	you can also introduce yourself Polina	**declarative + modal modifier**
13.	Polina	yes I'm Polina (.) I will just be observing	
14.	Maria	Mari:a (.) ITU=	
15.	Leon	=IT -IV access [Maria↑ (.) you're good with	
16.		that↑	**interrogative**
17.	Maria	[yes	
18.	Jack	Jack (.) ortho reg (2.0)	**incomplete conditional**
19.	Leon	Jack (.) if you (.) if you're happy to hang around and help	
20.		over↑**=**	
21.	Jack	=of course↑	
22.	Leon	((a few lines omitted))	
23.	Leon	so these guys ((the paramedics)) are gonna arrive in the	
24.		next few minutes (.) they're gonna: (.) come in we'll stop	
25.	**declarative**	(.) we'll pause (.) we'll do the handover befo:re we go	
26.		across (.)e:hm (.) which will give Jane actually a small	
27.		chance to get here as well (.)	
28.	Lisa	Mhm	**complete conditional**
29.	Leon	ehm (.) unless somebody says we need to come in (.) if they	
30.		say we need to come over we'll just come over that's not a	
31.		discussion (.) we'll go across we'll talk about what we	
32.		have to do afterwards [but that (.) if someone asks us that	
33.		that's what we need to do	**complete conditional**
34.	Lisa	[mhm	
35.	Maria	yeah	

In Excerpt 6.2 Leon, the ED consultant and designated team leader, holds the conversational floor tightly and maintains control of the situation using a series of direct and indirect directives to allocate tasks and positioning self in the team leaders' material zone. Once again, his discursive strategies for doing control succeed as no interactional trouble is evident in the excerpt, with staff members aligning with him, mostly responding in the affirmative or echoing him.

Leon, in his opening floor-claiming utterance (lines 1-2), employs similar turn-taking mechanisms with the team leader from excerpt 6.1: a. a few words louder than surrounding speech (*OK YOU ALL*), followed by a directive in interrogative form (*can we possibly step in and pre-brief*). As was also the case in excerpt 6.1 (lines 4, 11), by raising his voice's volume over the rest of the team, Leon fights for – and wins – the floor by a show of acoustic force (Schegloff, 2000), with all the team members immediately stopping the parallel conversations. In the directness spectrum of directives, this modal interrogative speaker-inclusive directive is found at the -direct edge, as it is mitigated in the following ways: a) the interrogative structure functions as a less direct directive; b) the speaker-inclusive *we* displays team membership and further softens the directive; c) a series of modifiers further 'softening' the directive (for ways of softening a directive see Holmes and Major, 2002). Here the modifiers employed by Leon are the modal modifier *can* and the adverbial modifiers *just* and *possibly*. Finally, the directive is multimodally achieved with a relevant gesture, as Leon marks the material space around him as the place where the team members should 'step in'; in doing so, once again the team leader creates interactionally shared space with the rest of the team.

The team leader's multimodal directive is successful as the team members instantly gather around him for the pre-briefing; in doing so, they comply both with his verbal as well as embodied request (his gesture indicating the right material space). In relation to the material space, I have discussed earlier the identified material zones of expertise which are consistent in the data; in the *TeamLeader* data, the team leader's material zone is the scriber's desk, when there is no scriber in the room, or the foot of the bed, when there is a scriber at the scriber's desk (Figure 5.15). As shown in Figure 6.3, Leon, in Excerpt 6.2, not only places himself at the material zone of the team leader, at the scriber's desk (marked in orange), but invites the team members in it; that the team immediately gathers around him is not only an indication of the members' familiarity with the material zones of expertise, but also a proof that they identify Leon as the person who has the right to be in the team leader's material zone.

Figure 6.3. Team leader's material zone in Excerpt 6.2.



In lines 6-8, Leon introduces himself and then looks directly at Lisa and makes a gesture opening the floor to her. Previous research has shown that imperative acts do not need to involve language (e.g., Rossi, 2014, on requests made through gestures) and indeed there is no evidence that the gesture is insufficient for issuing a directive, as in the next turn Lisa introduces herself as requested. Although not the prototypical strategy for issuing directives in my data, verbless imperative gestures are amongst the multimodal resources employed only by senior members, perhaps because they are quite marked in the +direct edge of the directness spectrum. As soon as Lisa introduces herself, Leon allocates a task with a directive in the canonical form of declaratives, in line 10 (*you're doing the primary survey*), with Lisa echoing him in line 11 to show her agreement. Leon holds the floor tightly and issues a request to me with another directive, in line 12; this is again in declarative form but softened with a modal modifier (*you **can** also introduce yourself Polina*), and soon after returns to task allocation with a directive, this time in elliptical interrogative form (lines 15-16: *IV access Maria↑ (.) you're good with that↑*). In the analysis of the directives in my data, interrogative structures have been

identified as one of the most common discursive strategies used by all professionals for various pragmatic functions; I thus decided to zoom in on those strategies in the next section.

The last remaining directive strategies found in excerpt 6.2 are speaker-inclusive declaratives in lines 24-25; *we'll stop (.) we'll pause (.) we'll do the handover befo:re we go across*. These are directives not targeted to a specific staff member; the speaker-inclusive *we* displays team membership and softens the directive in form, while at the same time leaves no doubt that the request targets all staff members. I have placed speaker-inclusive directives at the -direct edge of the directness spectrum, considering that the use of the collective pronoun *we*, which aims to establish a shared identity, moderates the force of the directive; within the group of directives not addressing a specific staff member, however, I understand speaker-inclusive declaratives that target the whole team as the most direct (Figure 6.4), as a) they leave no doubt to team members that they are addressees of the request, and b) as discussed before, declaratives serve as less polite (and thus more direct) directives, particularly when they lack any modal or other modifiers, as is the case in lines 24-25.

I now turn to the discussion of conditionals in my data, as their analysis showed consistent patterns in their use by team leaders for doing leadership.

6.3.2.1 Use of conditionals

Excerpt 6.2 is a good illustration of the use of conditionals as directive strategies in my data, which I discuss briefly here. In lines 19-20, Leon continues allocating tasks, this time to Jack in the form of a semantically incomplete conditional containing only the conditional (hypothesis) but not the main clause (conclusion): *if you're happy to hang around and help over*; semantically incomplete conditionals are often used in situations where no completion is required for meaning recovery (e.g., Elder and Savva, 2018). In terms of their pragmatic function, these structures have the effect of softened directives, rather than true conditionals; in the example above, for instance, the 'if you're happy to hang around and help over' is not a condition, thus not requiring a main clause to make sense. The teams' uptake throughout the data indicates that staff members have no difficulties in identifying them as directive structures (see Jack's swift response in the affirmative in line 21). This is in line with previous work that has illustrated how conditional clauses function as complete directives without any main clauses, with addressees treating them as such, responding to the directive as soon as the insubordinate clause is produced (Lindström et al., 2016). Previous research on nurses' talk has shown how *if* functions as a softener like *now* or *just* rather than as a conditional conjunction (ssee the LWP team who investigated interactions in a New Zealand hospital); this modifying

use of *if* could be a reason why semantically incomplete conditionals are most of the times correctly interpreted as directives. Later in the excerpt, Leon also uses two semantically complete conditionals, this time for issuing requests (lines 29-33).

In my data conditional structures for task allocations and requests are mainly employed by team leaders. Irrespective of whether they are (in)complete, in situations where they are targeted – and interpreted – as directives, their form is always the first conditional, indicating a future situation that is likely to occur, as shown in the examples in Table 6.2 below. Junior team members also use conditionals sometimes, but not for allocating tasks; as shown in the table, while team leaders use conditionals as *less direct directives* issued to the team members, junior members use them as *polite ways of requesting permission* to do something (for the use of conditionals by junior members in requesting permission see the last two rows of the table). The table includes also examples from the *SaFE* data (not shown in the excerpts above) in order to show the consistency in the use of conditionals by the team leaders across my settings. The use of conditionals in issuing directives is something that could be explored in detail in future research.

Table 6.2. Examples of team leaders' use of conditionals for issuing directives.

Type of conditional	Conditional clause	Main clause
• **semantically incomplete** • **no true condition here** • **less direct directive**	*if you're happy to hang around and help over*	*(…it would be great)*
• **semantically complete** • **future scenario likely to occur**	*if they say we need to come over*	*we'll just come over*
• **semantically complete** • **future scenario likely to occur**	*if someone asks us that*	*that's what we need to do*
Examples from the SaFE study [not shown in the excerpts above]		
• **semantically incomplete** • **no true condition here** • **less direct directive**	*if you could start drawing the infusion* (team leader)	*(…it would be great)*

• **semantically complete** • **future scenario likely to occur**	*if you keep tight* (team leader)	*we'll be able to do it*
• **semantically complete** • **polite request for permission to do something**	*if that's alright* (junior midwife)	*I'm gonna actually get a doctor to come and see you*
• **semantically incomplete** • **polite request for permission to do something**	*If I can check those* (senior midwife)	*(…it would be great)*

Overall, as was also the case in excerpt 6.1, in excerpt 6.2 the team leader also holds the floor tightly and maintains control of the situation with directives and positioning in the team leader's preferred material zone. Excerpt 6.2 is rich in directive strategies, illustrating how conditionals, declaratives, interrogatives, and imperative gestures, are all mobilised by the team leader to coordinate the team in the initial stages of the episode, during the pre-briefing, allocating tasks and making requests. Again, no interactional trouble is manifested throughout the episode, with team members immediately corresponding to the directives and performing the tasks. This is not the case, however, throughout the datasets; in Section 7.6, I bring in questions, too, and discuss how staff members can also deviate from the observed patterns, with the lack of directives contributing to disruption and interactional trouble.

I have thus illustrated, in Excerpts 6.1 and 6.2, the consistent patterns across datasets in relation to the ways in which team leaders mobilise similar directive strategies for allocating tasks and making requests, as well as the similar effect on the teams' uptake. This systematicity seconds the earlier claims on the similarities of the two contexts (Section 4.6) and illustrates the potential applicability of the findings to other emergency contexts, too; I thus bring the two contexts together below for the emerged typology of directives and return to this point in the overall discussion, in Chapter 9.

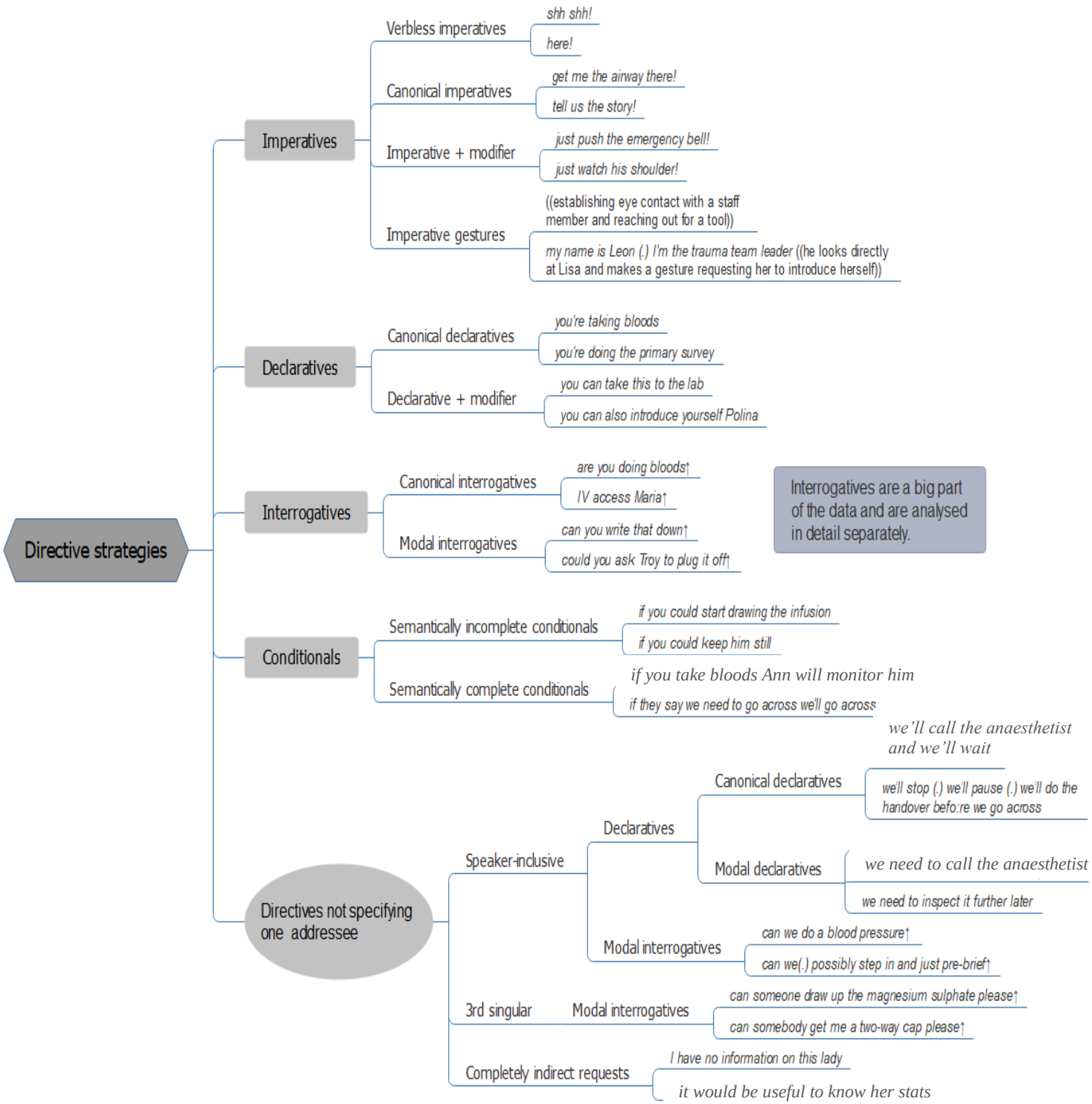
6.4. Bringing the two contexts together; the emerged typology of directive strategies

As illustrated in the previous sections, I identified a rich body of directive strategies in the data, ranging from -direct to +direct and employed by different professional roles. In Figure 6.4, I provide the full typology of directives I developed based on sentence structure and other features, presented in a directness spectrum. This includes the strategies on which I elaborated

in excerpts 6.1 and 6.2 but also other strategies not shown above due to limitations of space. I have included examples for each strategy, with the first drawn from the *SaFE* data and the second from the *TeamLeader* data.

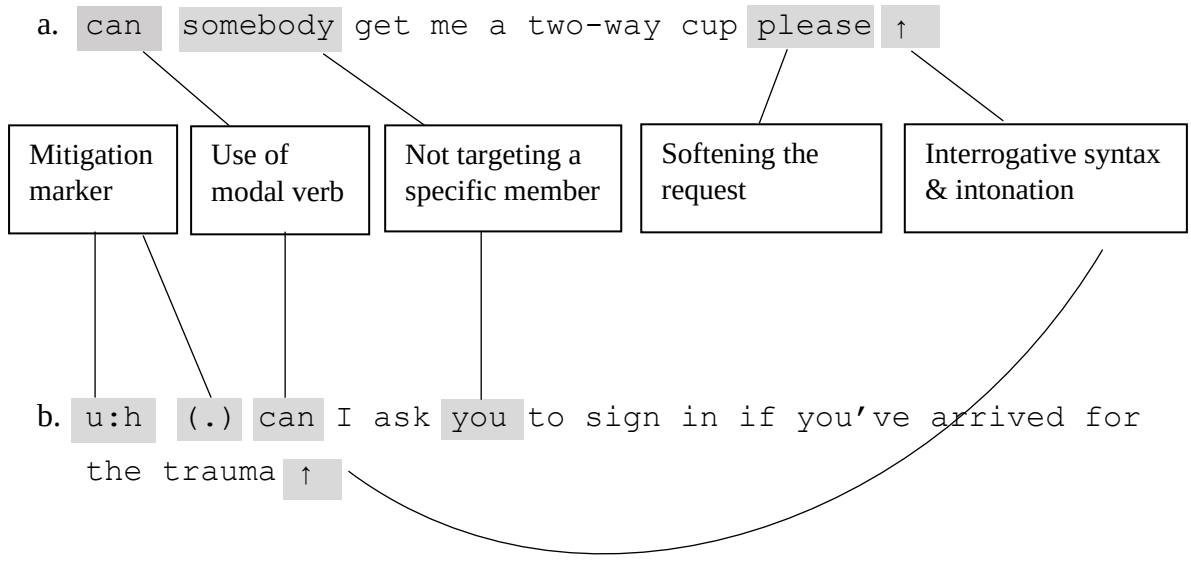
Figure 6.4. Identified directive strategies in a directness spectrum.

Figure 6.4 is read vertically from the most (+direct) to the least (-direct) forceful directive strategy. There were not found types of directives only present in one of the datasets, which further confirms the similarities in the professionals' discursive strategies across contexts.



Turning to tracing the main agents of the directive strategies, some of the directive strategies shown in Figure 6.4 are canonically associated with certain roles in my data. I have already discussed in Excerpt 6.2, for instance, the ways conditionals are only issued by team leaders for issuing directives. In the same vein, in my data, verbless imperatives and imperative gestures are primarily mobilised by the team leaders; as they are found in the most direct end of the spectrum, they might be considered too forceful by other staff members. Imperatives are generally forceful directives and are not used by junior members, who prefer milder strategies for requests, such as interrogatives; see, for instance, the similar strategies employed by more junior members to soften their requests in examples a. and b. below, with the first example drawn from a senior midwife in the *SaFE* data and the second example drawn from an ED doctor in the *TeamLeader* data. I do not expand on this as my focus is on team leaders; other research, however, including the LWP team, has addressed the linguistic strategies employed by nurses for softening a directive (e.g., Holmes and Major, 2002), while Chałupnik and Atkins (2020) analyse the indirectness and mitigation strategies of specialist trainee doctors in requests.

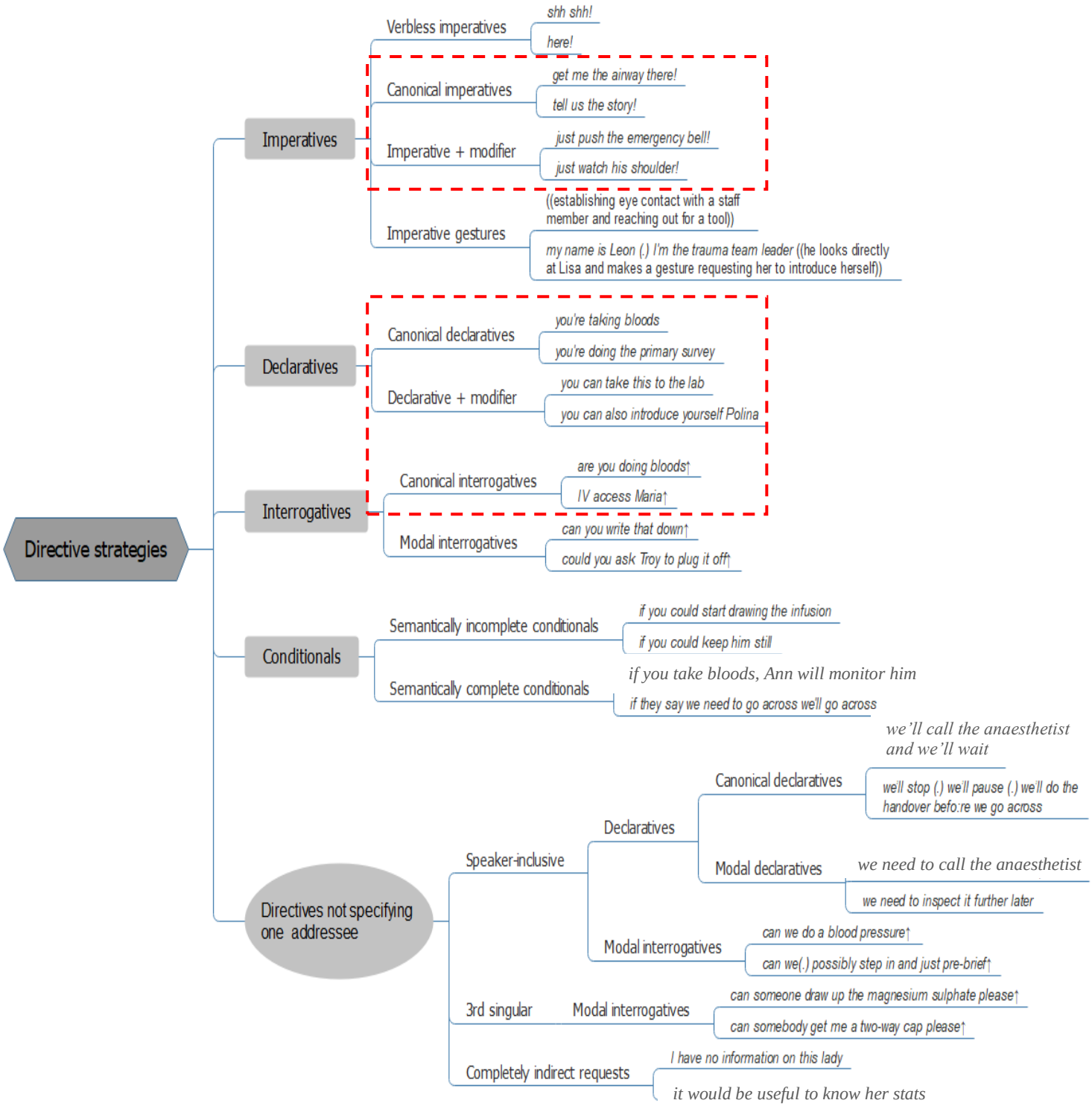
Examples from more junior roles' requests.



Even when more junior roles do use forceful directives, however, they seek to address roles lower in the professional hierarchy, e.g., a senior midwife would normally issue a directive in imperative to a junior midwife, but not to a senior doctor. Similarly, an ED doctor would issue an imperative to an OPD practitioner but not to the team leader, an ODP practitioner would use an imperative towards a nurse but not towards an ED doctor and so on.

To illustrate the team leaders' preference for certain types of directives, in Figure 6.5 below I have marked in red the imperative strategies that I consistently observe in team leaders' sets of discursive strategies. Note that this does not suggest that the identified strategies are only used by ED consultants in the *TeamLeader* data and senior doctors in the *SaFE* data; in the next two chapters I illustrate how other team roles step into senior doctors' and ED consultants' roles when those are not present or do not manage to maintain control of the situation, employing similar discursive strategies for doing leadership. I thus argue that the following strategies are the ones preferred by the discursively emerged team leaders, who, in the highly hierarchical contexts I investigate, typically coincide with the institutionally defined team leaders; I elaborate more on this in Chapter 8.

Figure 6.5. Team leaders' preferred directive strategies across contexts.



As highlighted in Figure 6.5, the directive strategies mobilised more frequently by team leaders are the ones placed towards the direct end of the spectrum (imperatives, declaratives, and some interrogatives); this brings me to the next section, in which I theorise the concept of

directiveness in the emergency context. In reading Figure 6.5, it is evident that from the imperative structures, the verbless ones are not so frequent; this might be relevant to the fact that such structures can be considered too direct, even in this high-pressure context. The same is observed in relation to imperative gestures; these might not be preferred by team leaders as they require the establishment of mutual attention to work, e.g., direct eye contact with the addressee of the gesture.

Canonical imperatives and imperatives accompanied by a modifier are amongst the preferred strategies; this is not surprising, as these are the prototypical way of issuing directives, as discussed in Section 3.6. Moving away from the most direct end of the spectrum, declaratives, also an established way for issuing directives and exerting control, are also mobilised widely by team leaders. Finally, the last of the most frequently used directive strategies is the interrogatives; from those, team leaders in my data tend to rely more on canonical interrogatives. I illustrate their use in Chapter 7 in detail.

6.5. How direct is too direct? Questioning the ideal of non-directiveness in the emergency context

Throughout the chapter, I talked about 'directness' and 'forcefulness' of directives, and intentionally avoided using terminology related to politeness. I do acknowledge the relationship between directness and (im)politeness; whether and how staff members employ politeness strategies, however, is not my focus here. There is a rich body of literature illustrating that the most direct the strategy is (e.g., requesting; using the imperative form), the more face-threatening and aggressive the act is; see, for instance, Brown and Levinson (1987) and Pearson (1988). The vast literature in politeness is not relevant here; a positioning in relation to my reading of directness in the data context, however, is provided in this section. Under this framework, many of the prototypical directives in imperative in my data, such as a and b in Figure 6.1, would be considered face-threatening acts (FTAs) and fall under the 'bald on-record' strategies. Brown and Levinson argue that 'whenever S wants to do the FTA with maximum efficiency more than he (*sic*) wants to satisfy H's face, even to any degree, he (*sic*) will choose the bald on-record strategy' (1987, p. 95).

Although this literature has attracted criticism and debate over the years and is still open to negotiation between scholars (see, for instance, Angouri and Locher, 2012, on disagreement in meetings), it typically refers to non-emergency contexts. In this sense, the high-risk, high-pressure medical emergencies on which I draw here are not normative environments for *doing*

politeness. The distinctiveness of my context lies in the fact that the aforementioned aim for maximum efficiency is the default mode for emergency teams. With significant time pressure and the patient's life at stake, staff members can – and do – ignore many of the conversational norms that would be considered appropriate in any other professional environment. Despite the ideal of non-directiveness in many professional contexts (e.g. in academic talk, Limberg, 2010; and in counselling/coaching interactions, Sarangi and Clarke, 2002), and the generally dispreferred nature of many directive actions (Lindström et al., 2016), the analysis of my data here (and in the next chapter) reveals that forceful directive strategies are not dispreferred at all in this context (see, for instance, the frequent use of imperatives and declaratives in excerpts 6.1 and 6.2). On the contrary, post-event conversations with staff members following the trauma incidents revealed that staff members perceive direct instructions as an effective way of doing things and 'exactly what you need', as quoted by an ODP in the *TeamLeader* data; I elaborate more on staff members' perceptions and leadership ideals in the next chapter.

I thus argue that the 15-minute emergency encounters in which patients' lives are at stake might not be an appropriate place and time for non-directiveness, which could be a reason why the directiveness illustrated in excerpts 6.1 and 6.2 seems to be consistently acceptable by the participants. This is not to say, however, that healthcare professionals do not need/use softening strategies to 'save face' at all; on the contrary, my observations in the *TeamLeader* study suggest that staff members have many other opportunities to bond and save face, as they spend together 12-hour shifts in which they take breaks, eat and drink coffee, make jokes, participate in meetings and social events and so on. Those other spaces (e.g., hospital's cafeteria; meeting rooms; staff rooms; corridors; the hospital's yard; and even the resus when it is not busy) and events constitute a more appropriate environment for *doing* politeness and staff members do use those to maintain social aspects of their relationship. Finally, some structures, such as repeated imperative gestures, may also be dispreferred, indicating the need for a *continuum of directness* (Figure 6.4).

The idea that non-directiveness is not applicable, or even desirable, in all contexts, is not new in medical literature. Although with a focus on doctor-patient interactions, earlier work has also questioned the ideal of non-directiveness. In the context of genetic counselling, there is ample evidence in regard to why non-directiveness is insufficient, with healthcare professionals debating the desirability of adopting a non-directive stance and recognising the difficulty of applying this ideal in practice (Petersen, 1999). Williams et al. (2002) focus on the difficulties health practitioners encountered when attempting to work under a non-directive approach in

antenatal screening and testing, with some of the reasons for their directiveness being patients' explicit requests for more directive counselling (i.e. *What would you do?*) and a close relationship between the patient and the practitioner. More recently, Rehmann-Sutter (2009) discussed some of the ethical arguments that contradict the non-directiveness principle, such as that non-directiveness might be against the patient's best interests and that erroneously assumes patient responsibility hiding the shared responsibility of other social actors, and made a case for remodelling genetic dialogue in the 'post-non-directiveness era' (for the post-non-directive era see also Weil, 2003). In a different clinical context, that of language therapy sessions with pre-schoolers, Drew (1995) examined the 'directive' vs 'non-directive' construct and made a point that clinical practice 'may not necessarily fall under the non-directive end of the directiveness construct' (p. 564).

I thus argue that the appropriateness of directiveness is negotiated in situ in the emergency context, in line with other medical settings. Taking into account the significant time pressure, the teams' need to perform multiple tasks simultaneously, and the fact that staff members operate in a highly hierarchical context in which the overall responsibility of the patient lies with the team leader for medicolegal purposes, it might be the case that the leader's directiveness is a contributing factor in effective team coordination and quick task progress, without a negative impact on the team. This could be a significant area for future research to look at and develop theoretically.

6.6. Concluding remarks

In this chapter I examined team leaders' directive strategies for allocating tasks and making requests while positioning in the material space. I started by providing an overview of the frequency of such strategies in the emergency context and discussed issues of terminology, illustrating that the prototypical *directives* in imperative only account for a part of the total body of *directive strategies*.

I then proceeded to examining those strategies in both datasets. My analysis illustrates that team leaders employ a rich body of directive strategies which range from less to more forceful. The set of discursive strategies I identified includes well-researched ways of issuing requests, such as imperatives and declaratives, but also less discussed mechanisms such as pseudo-conditionals and gestures. Team leaders hold the floor tightly by consistently using direct directive strategies which can also be intensified over time. Some of those strategies, such as most of the imperatives and declaratives (Figure 6.5), are primarily employed by team leaders

and work in tandem with positioning self in the team leader's material zone, resulting in the team members' swift uptake of the tasks and no evident interactional trouble; they thus can be realised as effective ways of *doing* leadership. The consistency of the patterns is significant and provides further support to the claims put forward. In the emerged typology, questions have arisen as the most frequent strategy employed by team leaders; I focus on questions in the next chapter.

Finally, drawing on my data, which exhibit consistent patterns of +direct directive strategies, I questioned the ideal of non-directiveness, arguing that although it is considered the norm in other contexts (e.g., academic talk; counselling talk; business meetings), it might be the case that it is not applicable, or even desirable, in the high-pressure, fast-paced emergency context.

In the following chapter, I zoom in on questions to unpack their functions and shed light to why they are so frequent in the data. The shift from 'interrogatives' to 'questions' is intentional and exemplified at the start of Chapter 7.

Chapter 7. *CAN you write that down*↑; doing leadership and control through questioning strategies

7.1. Introduction

In the previous chapter I focused on team leaders' directive strategies for exerting control over the team and the situation, with interrogatives standing out as the most common strategy mobilised in my data. I thus zoom in on questioning strategies in this chapter, but argue against a narrow definition of those based on morpho/syntactic criteria (the prototypical interrogatives) which might limit our understanding of how questioning schemes work in context, and broaden my scope to accommodate various forms of questions. I investigate team leaders' questions as discursive strategies for managing the floor and ultimately doing leadership, exploring the full range of questions' pragmatic functions in the data.

I am particularly interested in questions' spatiotemporal dimensions, considering the time and space in which a question is uttered part and parcel of its pragmatic function, rather than the context of it. I have already argued in chapter 5 that positioning in the material space is inherent to the enactment of interactants' professional roles; I examine here questioning strategies in relation to positioning and shifting in and out of the main material zones and the impact of team leaders' delivery of key actions 'within a stabilized and immobilized interactional space' (Mondada 2016, p. 354) on the teams' uptake. For the second part of the chapter, I turn to marked cases with evident interactional trouble, bringing in the discussion the sociological concept of *interaction rituals* (e.g., Collins, 2014) and broaden my lens beyond linguistic strategies. Interaction rituals are relevantly stable elements which constitute interactional norms easily identified by insiders of any context; I show how those create interactional trouble and disruption when they break, forcing some of the other professional roles to step in and compensate for the team leader's 'loss'.

7.2. The role of questioning in *doing* control and leadership

I already detailed, in the literature review, a rich body of work looking at questions as control devices in the workplace (Holmes and Chiles, 2010) and as mechanisms to establish leadership and 'direct team members, seize the floor, and influence decision making' (Aritz et al., 2017, p. 161). I investigate below the range of team leaders' questions found in my data and their spatiotemporal dimensions to provide a more holistic account of the ways they are mobilised for doing leadership and control. I intentionally use the term 'dimensions' to refer to the spatial and temporal aspects of the questions' interactional accomplishment, suggesting that questions

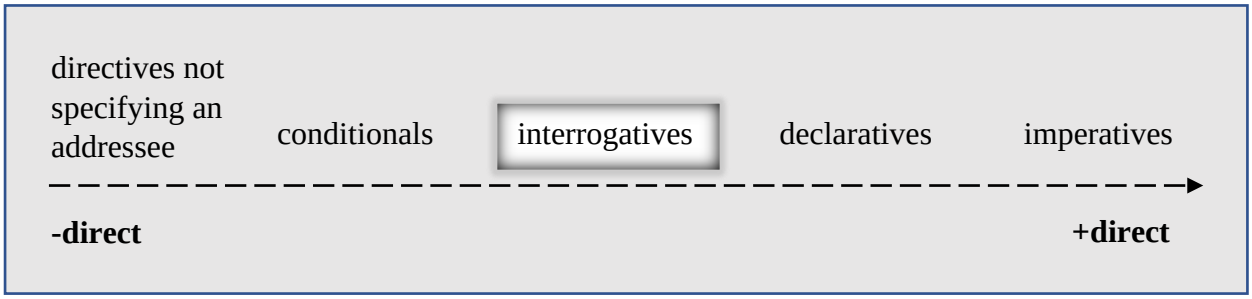
are multidimensional; I consider such spatial and temporal aspects integral parts of the question itself, rather than the *context* in which a question is uttered.

7.2.1. Why questions? Healthcare professionals' *modus operandi*

Before turning to the analysis of questions as discursive strategies for exerting control, I reflect on the reason why questions have been found to be the most frequent mechanism for issuing directives across my datasets, even though the performance of directive speech acts is the prototypical function of the imperative (see, amongst others, Jary and Kissine, 2016).

Looking back to Figure 6.4, in which I have positioned all the identified strategies for making requests in a directness spectrum, interrogatives were found in the middle of that spectrum; this is shown in Figure 7.1 below, which is a simplified version of Figure 6.4.

Figure 7.1. Interrogatives in the directness spectrum of strategies for making requests.



The position of the interrogatives in the middle of the directness spectrum, without tilting towards the indirect edge of the spectrum, which would run the risk of directives not reaching their target, could be a reason why interrogatives are frequently found in the data. This is particularly true in the healthcare context, which overall allows for more directness as discussed in the previous chapter, with indirectness often being associated with uncertainty – for examples of completely indirect or heavily mitigated requests not taken upon/ignored by the team see excerpts 7.3-7.5 below. That questions are also not placed at the direct end of the spectrum (cf. imperatives) could be also an explanation of their frequency; although, as argued in Section 6.5, this context allows for directiveness, with most of the encounter centred around allocating tasks and making requests (see, for Instance, Table 6.1, where the team leader issues 27 directives in only one trauma case), a string of utterances in imperative could be perceived as too aggressive or 'bossy'. This is in line with classic work which has already provided ample evidence on the fact that, with requests being themselves a prototypical face-threatening act (Holtgraves, 1992), interactants tend to avoid the imperative when making them (Ervin-Tripp, 1976). Note that directive strategies are not reserved exclusively for the designated team

leaders in the data (Table 6.1); given the power asymmetries, interrogatives could be a tool for other roles to issue directives, too, without challenging more senior members' authority.

Importantly, another reason why questions are so dominant in my data is that healthcare professionals are already familiar with – and heavily rely on – questioning techniques mobilised for various purposes in certain temporal points (I discuss questions' spatiotemporal dimensions in Section 7.5). Medical encounters have been identified already in the 70s as questioning/answering schemes (Byrne and Long, 1976), with most medical visits containing a significant number of physicians' information gathering (Heritage, 2010). The shift to patient-centered care in the last twenty years put further emphasis on questioning in physician-patient interaction (Section 3.5 for a discussion), leaving a gap, however, in regard to intra-team questions, that my study aims to address. As such, I understand questions as a core way healthcare professionals *do* things and very well embedded in their professional identity.

7.2.2. Defining the 'question'

To be consistent with the rest of the directives' taxonomy (Figure 6.4), which was based on syntactic criteria (most often referred to as *sentence* or *clause* structure), I referred, in Chapter 6, to 'interrogatives'; I intentionally shift to 'questioning strategies' from here onwards broadening the scope of my units of analysis. I discuss below why English interrogatives – the prototypical *questions* – only account for a limited number of questions(cf. *directive strategies*/*directives* in Figure 6.1).

Although the *typical* format of questioning strategies in English is still considered to be the interrogative syntactic structure, it is now well documented in the field that non-interrogative forms can function as questions; Clayman (2010), for instance, discusses how forms other than interrogatives, such as b-event statements and rising intonation are also canonically associated with questioning.[10] Equally, not all interrogatives perform the pragmatic function of questioning; Rohde (2006) sees rhetorical questions as redundant interrogatives, while Fareh and Moussa (2008) identify more than 35 pragmatic functions of interrogatives, including expressing surprise/disbelief, asserting/confirming, and initiating/maintaining conversation; my work also illustrates a wide range of functions.

[10] B-event statements are statements made by speaker A concerning speaker B, referring to events over which speaker A has epistemic authority; such utterances are usually perceived as a request for confirmation (Labov and Fanshel, 1977).

Earlier CA work has looked at questions departing from their *formal* – mainly morphosyntactic – properties; [11] notable examples include the study of declarative questions (Deppermann and Spranz-Fogasy, 2011; Sidnell, 2012), tag questions (Stivers, 2010; Tomaselli and Gatt, 2015), polar questions (Bolinger, 1978; Heritage and Raymond, 2012), and *wh*-questions (Fox and Thompson, 2010; Schegloff and Lerner, 2009). Already back in 1957, however, Bolinger argued that no single linguistic criterion is either sufficient or necessary to define a question, echoed by Weber (1993), according to whom 'it is not a single factor, in itself, which determines question function; rather, the interpretation of question function is sensitive to the interaction of morphosyntactic form, intonation, sequential position and information accessibility' (p. 212).

Following this line of thought, I selected my units of analysis in a broader way to encompass all utterances that do *questioning*; I did not only rely on morphosyntactic criteria (e.g. interrogative syntax/inverted word order, *wh*-words), but also intonation (utterances with rising intonation have been included in the analysis even without bearing the morphosyntax of a question) and, more importantly, the team's uptake; I treated as questioning strategies all utterances that *do* questioning as manifested in interactants' orientation towards producing some sort of response, even if the utterances did not fulfil the morphosyntactic and/or intonational criteria of a canonical question.

I again adopt a broad definition of what counts as a *response*, diverging from the CA line of thought which differentiates a question/answer adjacency pair type from a request/grant or denial pair, for instance. In my analysis, a request/grant or denial adjacency pair type would still produce an utterance that requires a response and thus would be considered a question. Although this conceptualisation of what counts as a question is broader than that of core CA work – and not as common –, it is not new; for Bolinger (1957), no matter its form, a question is readily recognisable by the speakers, while Weber (1989) lists, in her selectional criteria for utterances doing questioning, 'linguistic utterances of any syntactic form which can be shown to be interpretable as doing questioning in the interaction' (p. 29-30). It is evident that both pay particular attention to the interactants' interpretation to decide whether an utterance constitutes a question.

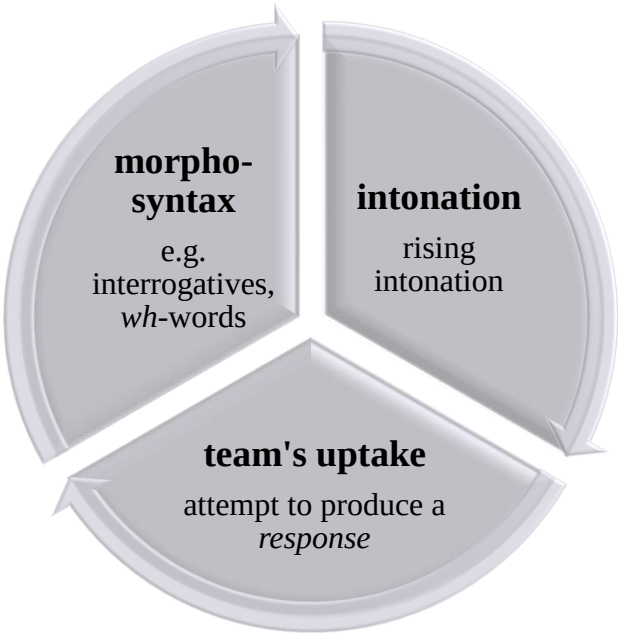
Although I drew above on the CA tradition, for its rich body of work on questions, the way I prioritise context and the team's uptake in defining an utterance as a question/response is

[11] By using the term 'formal' I refer to morphosyntactic, phonological, and lexical properties.

influenced by the IS thinking; this further points to the ways in which these two approaches can be brought together for bridging micro-structures with the context, which I also discuss in Chapter 9.

The factors I considered for deciding whether an utterance constitutes a questioning strategy are summarised in Figure 7.2 below. These did not have to co-exist in an utterance for that to be considered a question; utterances fulfilling even one of those criteria have been included in the analysis.

Figure 7.2. Defining the 'question'.



In what follows, I provide the full typology of questions that emerged on the basis of the above criteria, before zooming in on team leaders' questions.

7.3. Emerged typology of questioning strategies

Although my focus here is on the team leaders' questions as strategies for *doing* leadership, I start with providing the whole typology that emerged in my data, including all professional roles. This not only provides an insight into the bigger picture and the multifunctional role of questions, but also demonstrates that different types of questions are systematically employed by different professional roles.

This consistent difference in the type of questions between team leaders and other roles is the reason why I consider team leaders' questions as one of their discursive strategies for *doing* leadership. I argue that by raising those (in combination with other strategies; see Chapter 5 on

positioning and Chapter 6 on directives), team leaders *do* leadership and control; and by avoiding those (and preferring others), more junior professional roles avoid the responsibility that comes with leadership.

Table 7.1 below depicts the full typology of questions, including the main role raising those questions and examples from both datasets. The typology has been developed on the basis of the questions' pragmatic functions as perceived by the interactants, shown by the uptake in the data (and my interpretation), rather than their formal properties. Table 7.1 builds on and expands earlier work on leadership in the *SaFE* data (Mesinioti et al., 2020).

Table 7.1. Emerged typology of questioning strategies across datasets.

Pragmatic function		***Examples***		***Main role***
		TeamLeader data	***SaFE data***	
seeking advice/guidance on how to perform the task		*purple or green*↑ (referring to which syringe they need)) (ED nurse)	*do I need a thingy*↑ (junior midwife)	junior professional roles
requesting information		*have they given paracetamol*↑ ((the paramedics))	*have we called for any extra help at a:ll*↑	
diagnostic questions/ assessing patient's condition within the team		*are we happy with the airway*↑	*what's the blood pressure now*↑	
offering assistance		*guys do you need a hand with the cannula or you're OK*↑ (ED doctor)	*do you want me to take over*↑ (senior doctor)	senior professional roles
task allocation & confirmation	**not targeting a specific staff member**	*shall we get some oxygen on please*↑	*can somebody get me a two way cap please*↑ (senior midwife)	team leader but also less senior roles
	addressing a specific staff member	*can I get you to do access and then you to do the primary*↑ (ED consultant)	*okay can you write that (.) can you write that down mag sulf*↑ (senior doctor)	team leader
setting the topical agenda		*can we (.) possibly step in and just pre-brief* (ED consultant)	*mag sulf*↑ *(.) getting there*↑ (senior doctor)	team leader

seeking confirmation	*you're OK if I just tell them to leave*↑ ((some members of the team that are not needed anymore)) (ED consultant)	*you're going to draw the mag sulf aren't you*↑ (senior doctor)	team leader

In the left column of Table 7.1, l have listed the identified pragmatic functions, while the two middle columns include examples from the *TeamLeader* data and the *SaFE* data respectively, and the right column details the main professional roles associated with those questions. For the cells that are empty in the right column no particular role has been identified at that stage; all professional roles were found to raise questions requesting information, for instance. I return to this later in my analysis and illustrate how I identified the main agents for those pragmatic functions, too, when considering the spatiotemporal context.

I have marked, in dark grey, the questions that are primarily raised by team leaders. The most frequent pragmatic function of team leaders' questions is allocating (and confirming) tasks. Those can be raised while targeting a specific member (e.g., *can I get you to do access and then you to do the primary*↑) or not (see lighter grey in Table 7.1, e.g., *can somebody get me a two way cap please*↑). The latter is used not only by the team leader but also other less senior roles; the former is primarily associated with team leaders (I return to the issue of questions directly targeting someone – or not – later on). This is in line with previous work which argues that questions issuing directives signal that the speaker positions self as possessing the authority for uttering them (Schultze-Bernt, 2017). Other questions raised by team leaders include setting the topical agenda and seeking confirmation.

The rest of the questions that are not marked in grey are questions broadly aiming at requesting information and offering assistance (e.g., *do you want me to take over*↑). Some of those questions, such as questions seeking guidance on how to perform a task, are consistently raised in our data by junior professional roles only (e.g., ED nurses, junior midwives); those can be understood as junior members' discursive ways of resisting responsibility. Finally, I have also identified some types of questions raised to the patients (e.g., symptoms-related questions and questions investigating medical history); those are not shown in Table 7.1 as my focus here is on intra-team interactions.

Drawing on examples from both datasets, I show below that the identified questions and their use are again consistent across the datasets; no question type was identified in only one of the datasets nor did I observe different patterns in relation to the main professional roles raising

those. The consistency across the datasets highlights the common ground between the two contexts and their potential relevance of the typology to other high-risk, emergency healthcare contexts; I return to this point in Chapter 9, where I discuss the methodological contribution of my work.

I now turn to the analysis of team leaders' questions in my data, illustrating the ways they raise questions to direct the team controlling the floor and, ultimately, do leadership.

7.4. Team leaders' questions as control mechanisms

In examining team leaders' questions in both contexts below, I zoom in on how they also position themselves in the material space, as I have already discussed how positioning in the material space is part and parcel of the participants' enactment of their professional role. I also pay attention to finer interactional cues canonically associated with managing the floor in the literature, such as interruptions, and the raise of the voice's volume as a 'fight for the floor […] by a show of acoustic force' (Schegloff 2000, p. 12).

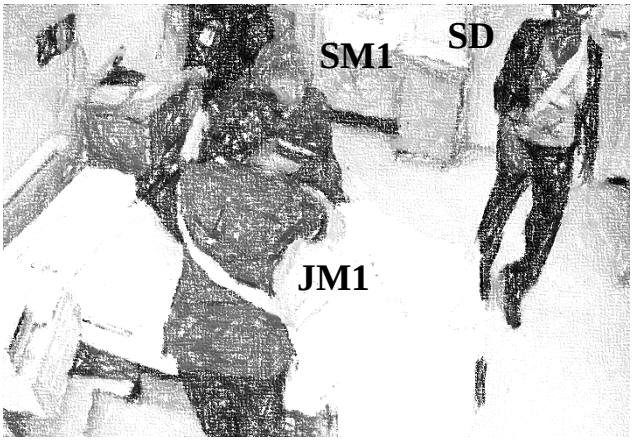
Excerpts 7.1 and 7.2 below are drawn from temporal points that have been identified as core in my data for team leaders' obtaining of control, early in the cases; for the *SaFE* study, this is the moment the senior leader enters in the room, while excerpt 7.2, drawn from the *TeamLeader* data, begins with the patient's arrival. The discussion then follows the chronological order of the excerpts.

7.4.1. *SaFE* data

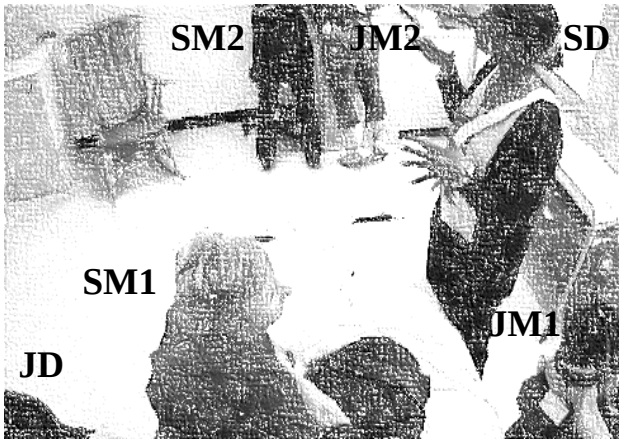
Excerpt 7.1 is drawn from the *SaFE* dataset and a team that scores high in clinical performance (Case 6, magnesium administered in 5-6 minutes; see section 4.4.3 for the clinical assessment of the *SaFE* teams). The senior doctor has just entered the emergency room, where the rest of the team members are already trying to handle the emergency. The room is very noisy at that moment.

Excerpt 7.1[12]

Instance 1

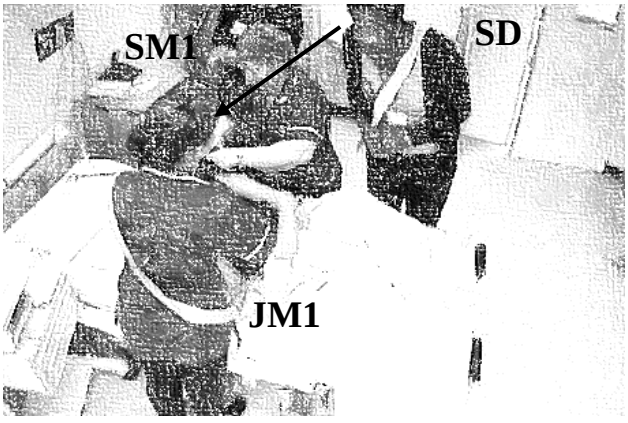


Instance 2

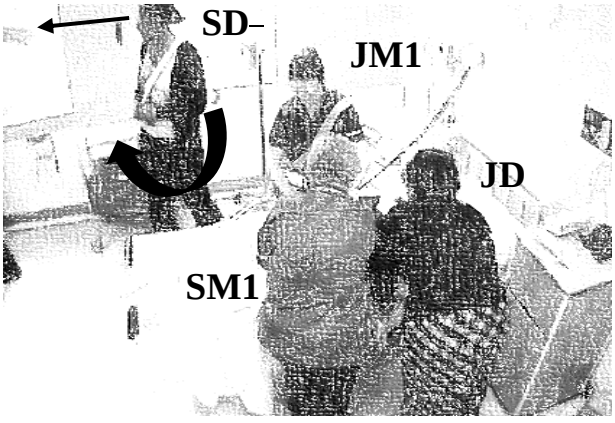


1	SD	hello [everyone	5	SD	shh shh ((hushes team))
2	JD	[can I have a blood	6		WHAT'S GOING ON↑ **assessment question**
3		pressure done please↑	7	JM1	this is Lucy (.)
4		((3.0 multiple overlaps))			

Instance 3



Instance 4

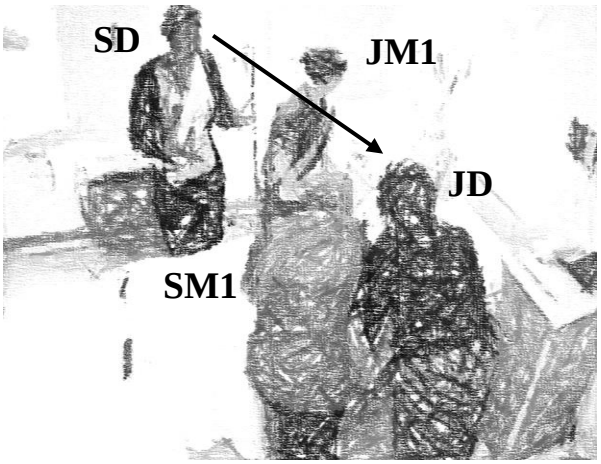


8	JM1	she's gone into spontane-	12	SD	okay blood pressure now↑ are we
9	JD	ous labour ((continues with	13		getting the mag sulf sorted
10		the medical update))	14		out↑ **task confirmation**
11		((several lines omitted))	15	SM2	[mag sulf's being drawn up now

[12] The line arrows in the excerpts indicate gaze direction while the curved arrows mark turn of the torso.

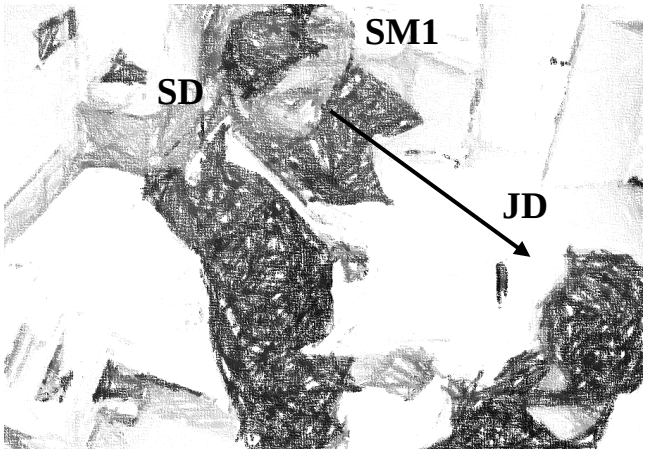
16 (.) it'll be ready in a couple
17 of minutes
18 JM2 [yeah (.) it's being drawn up

Instance 5



19 SD are you gonna put the
20 magnesium sulfate off THERE
21 are you↑ **task allocation**
22 JD -ye:ah **information request**
23 SD great (.) have we called for
24 any extra help at a:ll
25 JD [the anaesthetist
26 SM2 [we have (.) anaesthetist's
27 coming

Instance 6



28 ((several lines omitted))
29 SM2 right (.) mag sulf is [going in
30 now (.) okay↑
31 JD [o- (.)
32 what [was the O2 stats↑
33 SD [OK can you write [that↑
34 JD **task allocation** [what
35 was the-
36 SD -CAN you write that down
37 (.) mag sulf↑ **task allocation**
38 JD right

Excerpt 7.1 begins with the senior doctor's entrance in the emergency room; the moment of the team leader's entrance in the room is a significant stage of the encounter during which team leaders must do interactional work to claim the floor, seek to be updated, and coordinate the team; whether these will be achieved early on sets the tone for the rest of the episode, as I illustrate in the excerpts. The senior doctor enters the room and greets the team (line 1) without any reaction from the team, when she is interrupted by the junior doctor, who requests a blood pressure reading by raising a question (lines 2-3). In doing so, she does not address a specific member of the team (*can I have a blood pressure please*↑); this is a consistent pattern across

my data, where less senior members use the collective pronoun *we* and avoid direct task allocation, perhaps as a way of mitigating their request. Team leaders, on the other hand, directly address specific members when allocating a task either verbally or in an embodied way. In any case, the junior doctor's attempt is not successful, as none of the team members, who continue overlapping, respond.

The senior doctor mobilises a series of resources to claim control of the floor and the situation; as shown in Instance 2, she swiftly shifts to a central material zone, that of the right bedside; I have already shown how the bedsides are the team leaders' professional material zones. Upon completion of her transition to the centre of the action, the senior doctor hushes the team using a verbless imperative (line 5), accompanied by an imperative gesture (instance 2); both the verbless imperative and the imperative gesture are direct forms of issuing directives as discussed in the previous chapter. The senior doctor raises this opening question upon completing her transition into the team leaders' material zone. I monitor the ways in which team leaders raise questions upon completing their transition into a material zone throughout the excerpts and elaborate more on this in Section 7.7, where I discuss the spatiomaterial accomplishment of questions. I expand on the theoretical and methodological implications of these findings in Chapter 9.

On top of the aforementioned strategies, the senior doctor raises her voice's volume while raising a question in interrogative in line 6: (*WHAT'S GOING ON*↑). Talk louder in volume or higher in pitch can be seen as competition for the floor, as discussed earlier, and in my data it is a common strategy across team leaders in floor-claiming turns. All these contribute to an effective floor-claiming utterance with team members acknowledging the senior doctor's presence and orienting towards answering her question (lines 7-10). The senior doctor's assessment question in line 6 is a good illustration of the ways questions requesting information can also function as mechanisms of control at certain temporal points; such questions are raised by team leaders in my data only at the initial stages of the teams' interactions across datasets. At those early stages requests for information are legitimised as part of a short *diagnostic window*, a stage central to the decision-making process. Overall, questions have spatial and temporal dimensions (Sarangi, 2010c) and are subject to professional routines which need to be considered in order to decipher their pragmatic function in the situated interaction.

Moving forward, in lines 12-14 the senior doctor raises a polar question, this time to allocate/confirm a task (*are we getting the mag sulf sorted out*↑). Although the senior doctor uses the collective pronoun *we*, she addresses certain staff members multimodally, as shown in

Instance 4: while maintaining a central material zone at the right bedside, as she raises the question, she turns her torso to the right and looks directly at the equipment table which is the designated material space for the preparation of the magnesium sulfate; junior midwife 2 and senior midwife 2 are the only members standing there (not shown in instance 4). Note also that the use of polar questions is one of the team leaders' common strategies for issuing directives in my data, as polar questions tend to restrict the exercise of respondents' epistemic rights (Heritage and Raymond, 2012); to deviate from the senior doctor's directive here, staff members would have to produce a *no*-prefaced dispreferred response. Based on the team's uptake, the senior doctor's multimodal behaviour successfully opens the floor to those two members without evident interactional trouble, as in lines 15-18, junior midwife 2 and senior midwife 2 are the only members responding in the affirmative.

As soon as the senior doctor confirms the magnesium's preparation in the equipment table, she continues holding the floor tightly and issues another directive raising, again, a polar question, this time relevant to the administration of the magnesium: *are you gonna put the magnesium sulfate off THERE are you*↑ (lines 19-22). As shown in Instance 5, this time the senior doctor looks directly at the junior doctor, addressing her as the only addressee, while repeating part of the question. Repetition is a useful strategy for intensifying directives, as I discussed in detail in Chapter 6. Once again, the management of the floor is successful as, in the next turn, only the junior doctor responds with a prolonged *ye:ah*. In lines 23-24, the senior doctor reclaims the floor and raises a question serving the pragmatic function of requesting information about earlier interventions; as we are still early in the episode, those questions are legitimised as part of the team leader's attempt to retrieve core information and obtain control of the situation. With 'core information' I refer to structurally significant information which is part of the *AMPLE* history, used for obtaining a quick, focused history. *AMPLE* stands for Allergy, Medications, Previous medical history or illness/pregnancy, Last Meal, and Events/environment related to injury; all of this information is ordinarily obtained very early in the emergency. That the question has no rising intonation does not seem to hinder the team's interpretation of the utterance as a question, as in lines 25-27 both the junior doctor and the senior midwife 2 produce a *response* (see earlier discussion on the definition of my units of analysis).

Moving on, Instance 6 is an illustrative case of power negotiation between the junior and the senior doctor. Competition in my data is usually observed between professional roles that are close in the hierarchy scale; it is rare, for instance, junior midwives or ED nurses to claim

power and control over team leaders, but it is more frequent for junior doctors and senior midwives to step into the team leader's role (I return to this in excerpts 7.4 and 7.5). In the case above, in lines 32-33 the junior doctor and senior doctor overlap as the first raises an information-seeking question about the oxygen saturation while the latter asks junior doctor to write down the magnesium sulfate count using a polar question to allocate the task. Based on the uptake, I consider this overlap competitive, as neither of them quits her turn and the two utterances do not complement each other in any way; although the junior doctor continues fighting for the floor and attempts to re-introduce the topic of oxygen saturation with another incomplete question (lines 34-35), the senior doctor interrupts her again repeating her question (lines 36-37). This time, she also raises her voice's volume (*CAN you write that down (.) mag sulf*↑) while she maintains eye contact with her and makes a relevant gesture pointing to the equipment table where the junior doctor should right down the count; a brief raise in the volume is a turn-taking mechanism consistently mobilised by team leaders in my data. The interruption, the polar question which restricts the addressee's epistemic rights, the raised volume as a show of acoustic force, the repetition as a way of intensifying the directive, the eye contact and the pointing gesture, all contribute to the senior doctor winning the 'fight' as the junior doctor finally quits her turn responding in the affirmative and acknowledging the team leader's right to talk.

The questions used here by the team leader serve the pragmatic function of issuing directives to the rest of the team and gaining control of the situation, rather than requesting information. The team leader holds the floor tightly with questions that primarily allocate (lines 19-21, 33, 36-37) and confirm tasks (lines 12-14), but also request information at early stages as part of the diagnostic window (line 6, 23-24).

Overall, what is significant in excerpt 7.1 is that the senior doctor employs a set of strategies similar to the ones identified in the directives' chapter, in order to allocate tasks and turns: she raises a series of questions, consistently employing higher volume to 'fight' for the floor when required (lines 6, 36), and repetition to intensify the directives issued in the form of questions (line 19-21, 33-37). In doing so, she positions self at the bedsides, the team leader's identified material zone (see Instances 2-6). The team's uptake throughout the excerpt illustrates that team members recognise and re-affirm the senior doctor's positioning as the leader, as they swiftly correspond, addressing her requests (lines 7, 15-18, 22, 38) without evident interactional trouble.

I now turn to discussing the use of questioning strategies for exerting control and doing leadership in the *TeamLeader* data.

7.4.2. *TeamLeader* data

Excerpt 7.2 is from the same *TeamLeader* team that I drew on in Excerpt 6.2 (Chapter 6). I have shown there how the team leader used a series of directives at the initial stage of the pre-briefing, coordinating the team and setting the tone for the whole episode. I draw here from a later stage, the moment paramedics enter the room with the patient. As was the senior doctor's entrance in the room in excerpt 7.1, the paramedics' entrance is again a critical stage of the encounter which forces the ED consultant to quickly obtain control of the situation.

Excerpt 7.2

Key for participants: Jack: orthopedic registrar; Kira: trauma ODP; Leon: ED consultant; Lisa: ED registrar; Par 1: paramedic 1; Par 2: paramedic 2; [present members not shown in the excerpt: Anna: ED nurse; Maria: ITU registrar; Mona: medical student]

1. Leon OK (.) so (1.0) as if by magic (.) here comes the crew (.) are
2. you happy to be in charge of transfer↑ **responsibility assignment**
3. Kira yeah ((paramedics with the patient enter the room))
4. Leon hey guys
5. Par 1 [heya
6. Par 2 [hey there
7. Leon is he stable↑ **assessment question**
8. Par 1 yea:h yea:h
9. Leon OK
10. ((several lines omitted – paramedics do the handover and the
11. team starts working. Lisa performs the primary survey))
12. Leon Lisa: really sorry I missed a little bit (.) do you mind if
13. (.) I take it back a little bit **setting the topical agenda**
14. Lisa yep sure so airway [I'm ha-
15. Leon [so chest (.) any chest (or abdomen)
16. problems↑ **info request**
17. Lisa so left si- left chest side has some tenderness however he
thinks it's mainly from his (indec)=
18. Leon =any bruising↑ **info request**
19. Lisa a:h (.) (mild) bruisi:ng (.) there is (.) flattening deformity
20. of the left shoulder
21. Leon any:: (indec) **info request**
22. Lisa no (.) and e:h [(breath) out (indec) yeah
23. Leon thank you
24. ((several lines omitted – the team continues working))
25. Leon so: (1.0) can I just (.) go back to:=
26. Lisa =yeah sure=
27. Leon =primary survey
28. staff-
29. Lisa -so: (.) la:rge central forehead (injury)-
30. Leon -you're OK if I
31. just tell them to leave↑ **seeking confirmation**
32. Lisa no problem
33. Leon Jack are you happy to be in charge to go into the scan↑
34. Jack yep no problem **responsibility assignment**

setting the topical agenda

diagnostic window

```
35.          ((several lines omitted))
36. Leon     right (.) we're good↑ seeking confirmation
37. Kira     yeah
38. Leon     you guys are happy to: (.) get him into transfer↑
39. Kira?    yes                                    task allocation
```

Excerpt 7.2 begins with Leon, the ED consultant and designated team leader, raising a polar question addressed to Kira, as he looks directly at her; *are you happy to be in charge of transfer*↑ (lines 1-2). The question here aims at assigning a responsibility, that of transferring the patient from the stretcher to the resus bay. Leon asks Kira if she is *happy* to take over the responsibility; both the micro- and macro-context, however, favour a positive response. In the micro-context, Leon's direct eye contact with Kira targets her as the only potential addressee, while his polar question restricts, in a way, Kira's epistemic rights and would require her to produce a dispreferred *no*-prefaced response to deny the responsibility. Note also that Leon embodies a confident persona in the in situ interaction throughout the episode (remember also Excerpt 6.2); no hesitation markers are noticeable while he holds the floor tightly with a series of directives and questions, all while holding the material zone of the scriber's desk, which has been identified as the team leaders' material zone (Figure 5.15). As for the macro-context, Leon is the most senior member in a highly hierarchical context and the overall responsibility for the patient lies with him for medicolegal reasons. Indeed, Kira responses positively, in line 3, taking over the responsibility. The same pattern is noticed in line 33, where Leon assigns the responsibility of transferring the patient into scan to Jack (*Jack are you happy to be in charge to go into the scan*↑). The *are you happy to…* structure is very frequent in my data in both settings, seemingly giving agency to the addressee, mitigating the request, while at the same time restricting the addressee's options to deny the responsibility. Leon mobilises here similar discursive strategies with the senior doctor from excerpt 7.1, such as using a polar question serving the pragmatic function of assigning a responsibility, addressing directly a staff member etc.; once again his turn is successful as in line 34 Jack is the only one responding in the affirmative and accepting the responsibility. Although task allocations are frequent in both datasets (see, for instance, lines 19-21 and 32-37 in Excerpt 7.1; line 38 in Excerpt 7.2) explicit assignments of responsibilities are not; Leon is one of the few leaders that, by raising such questions, makes sure that staff members know not only what tasks they need to perform, but also which to coordinate.

I have discussed, in the methodology (Section 4.5.3.3), how post-event conversations can provide a valuable insight into staff members' expectations on role performance,

complementing the interactional data. As an illustration, the follow-up of the above encounter with staff members of Leon's team revealed that staff members are comfortable with knowing exactly what they are expected to do, as shown in quotes 7.1 and 7.2 below.

Quote 7.1

> *Leon is really good this is why it was so quick,* ***because everyone knew what they were doing****.*
>
> (ODP)

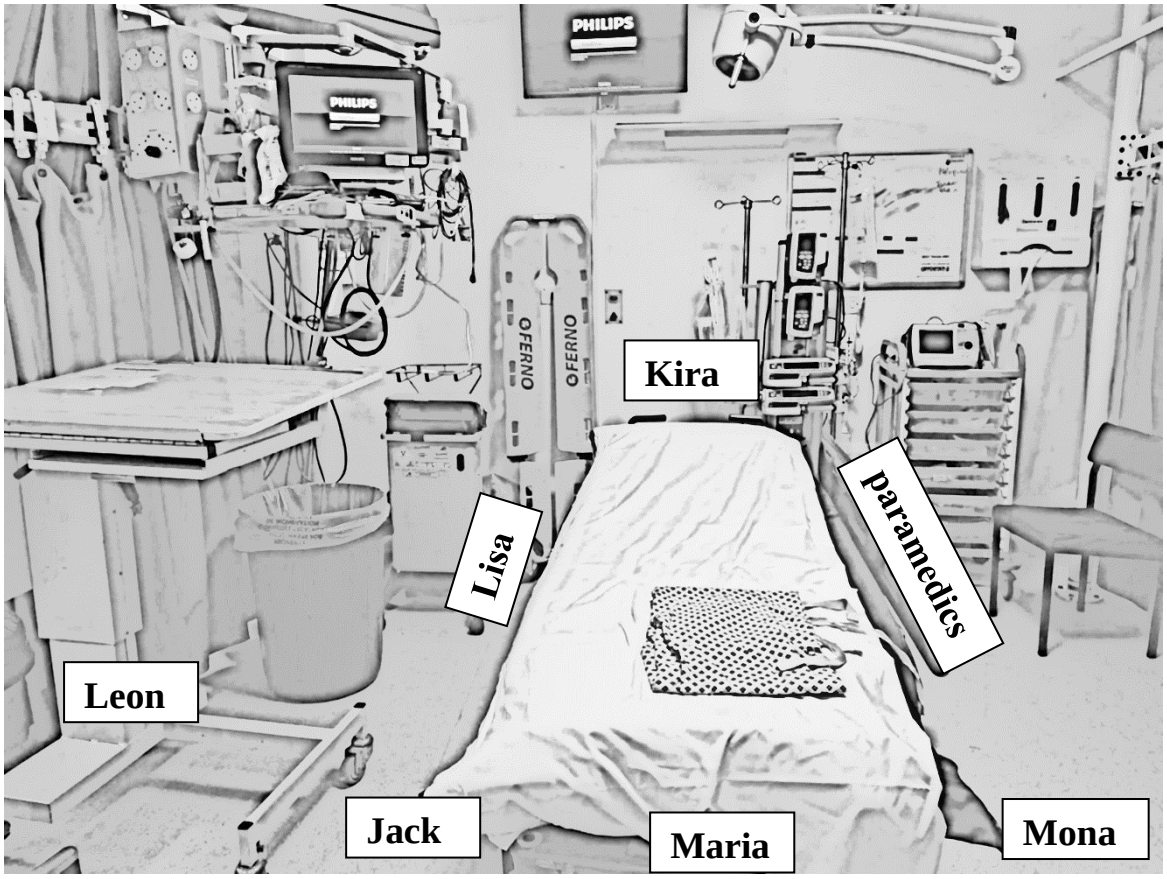
Quote 7.2

> *This is what you need* ***- someone to act as the leader****.*
>
> (ED nurse)

Moving forward, line 7 is the opening question that gives the team leader and the team an initial opportunity to assess the situation; functionally, the question serves a pragmatic function similar to the senior doctor's in excerpt 7.1 (*WHAT'S GOING ON*↑). The team leaders in the two contexts have a different starting point: the *TeamLeader* team leaders know what to expect, whereas *SaFE* team leaders enter the room without a briefing (see the discussion of the contexts in Chapter 4). What is important here is that they both raise an information-seeking question very early on as an attempt to quickly assess – and thus gain control – of the situation, which is also embodied in a similar way; I have shown, in excerpt 7.1, how the senior doctor raises the question upon completing her transition into a central material zone (right bedside), after she has been stabilised, in Instance 4. Similarly, in excerpt 7.2, paramedics have just entered the emergency room and positioned selves in their assigned material zone, at the left bedside, according to the protocol (see Figure 7.3 below for the present members' exact position in the room); upon paramedics' stabilisation, Leon raises the opening question in line 7. I discuss in excerpts 7.3-7.5 how leaders often fail to raise those assessment questions at an early stage and face difficulties in controlling the team.

Figure 7.3. Staff members' position upon paramedics' entry (lines 1-9 in excerpt 7.2).

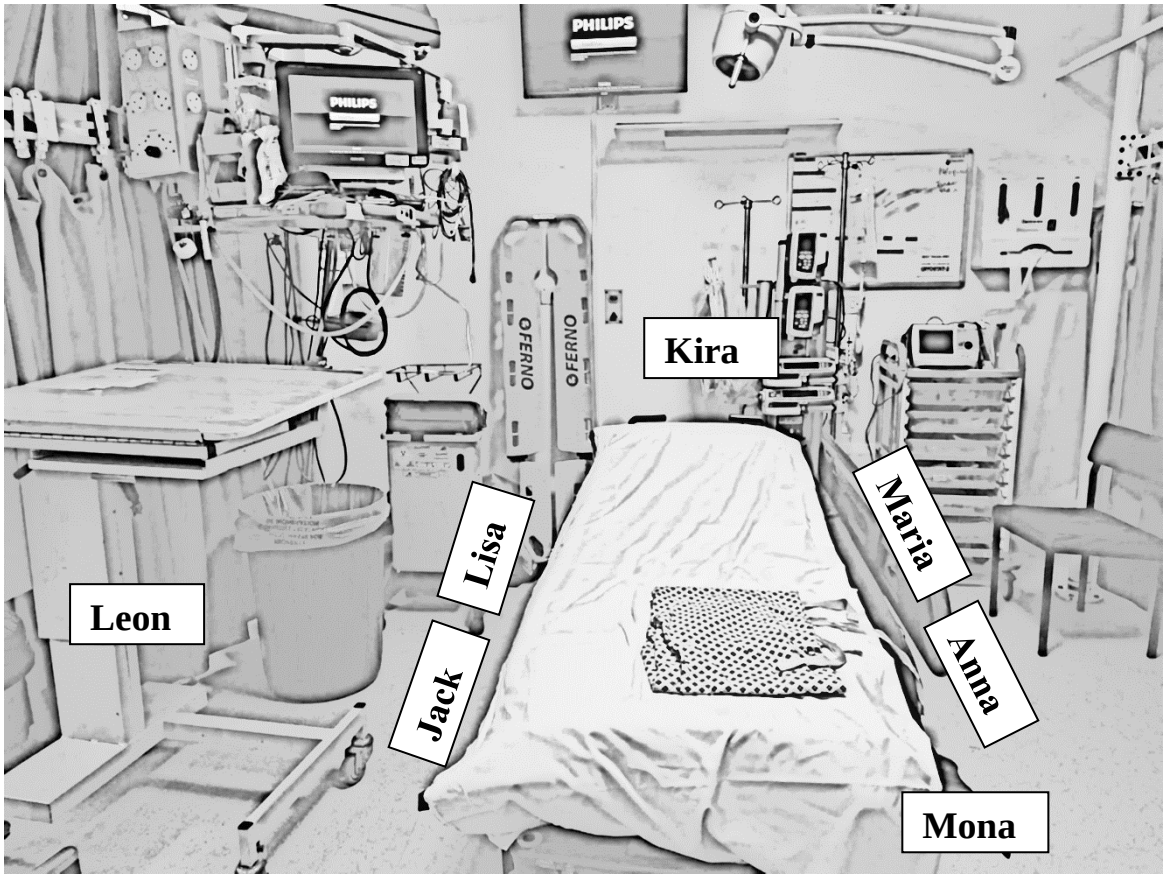
[**Reminder of the key for participants**: Jack: orthopedic registrar; Kira: trauma ODP; Leon: ED consultant; Lisa: ED registrar; Par 1: paramedic 1; Par 2: paramedic 2; Maria: ITU registrar; Mona: medical student]



As shown in Figure 7.3, the team members position selves in their respective material zones of expertise, as identified in chapter 5 (Figure 5.15): Leon, the ED consultant, marks, as his material zone the scriber's desk (identified as the team leader's material zone in Figure 5.8) and remains there static for the primary survey. Kira, the ODP, positions self at the top of the bed; this is again, the ODP's expected material zone in order to assist with the airway. More, Kira occupies here a position close to the paramedics, as she has taken over the responsibility of being in charge of the patient's transfer (lines 1-3). Lisa, the ED registrar, is found in a central position, at the right bedside; this gives her easy access to the patient in order to perform the primary survey and supervise the other members' individual tasks. Jack, the orthopedic registrar, does not have certain tasks to perform at the initial stages of the primary survey, and

therefore occupies a rather peripheral material zone, at the foot of the bed. This is also the case for Mona, who is found in an even more peripheral zone, keeping some physical distance from the bed; Mona, as a medical student, does not have assigned responsibilities; she is there to learn and to assist other team members, if needed. By staying quiet throughout the excerpt and by keeping physical distance from the centre of the action (the bed), Mona resists responsibility discursively; note also that it is only her second week working in the ED resus. With all members being familiar with the institutional roles and the responsibilities that come with those, this information is easily accessible, as no one asks Mona to perform a task. The only member found in an unexpected position in Figure 7.3 is Maria, the ITU registrar, who has been assigned by Leon the responsibility to perform the IV access (not shown in the excerpt below); the typical material zone for this is the left bedside as the IV line is canonically put into the patient's left hand in trauma. I will argue in Chapter 8, however, that the professional routines are sensitive to space and time; in the above figure the paramedics are still present and the left bedside is strictly their material zone for transferring the patient, so Maria complies to the spatial routine clearing that zone for. As in a well-orchestrated 'choreography coordinating the positions, movements, actions and responsibilities of materials and participants, moment by moment' (Goodwin 2007, p. 263), as soon as paramedics leave, Maria shifts to the left bedside to fill the gap and perform her task, exhibiting her familiarity not only with hers, but also the others' spatiotemporal routines (see Figure 7.4). As was the case with paramedics' occupation of a stationary position, Maria's shift in space also creates a 'stabilized and immobilized interactional space' (Mondada 2016, p. 354), which marks here also the shift from the paramedics' handover to the performance of the primary survey; this is the reason why Anna, the ED nurse, also shifts to the left bedside to assist Maria with passing on the equipment, while Jack shifts to the right bedside, to assist Lisa with the primary survey, if required.

Figure 7.4. Staff members' position during the primary survey (lines 10 onwards in excerpt 7.2).



Continuing the reading of the excerpt, another pragmatic function served through team leaders' questions is that of setting the topical agenda, as is the case in lines 12-13 and 25-28. In lines 12-13, Leon interrupts the team to shift the topic (*do you mind if (.) I take it back a little bit*). Setting and shifting the topical agenda through questions is common in both datasets and is canonically associated with team leaders. Overall, questions setting the topical agenda have been identified in the literature as a way of controlling the floor (the relevant discussion in Section 3.5). In line 14, Lisa, the ED registrar aligns with Leon and attempts to summarise the results of the primary survey. After briefly overlapping with her, however, Leon claims the floor in a *so*-prefaced utterance in line 15, continuing managing the topical agenda; the use of the discourse marker *so* in a turn-initial position also contributes to shifting the topic, 'advancing [the speaker's] interactional agenda' (Boden, 2009, p. 974). In terms of the question's format, in contrast to questions in lines 30-31 and 36, for instance, which exhibit rising intonation, but not interrogative syntax (e.g. *you're OK if I just tell them to leave*↑), this

one (and the question in lines 25-28) is uttered in an interrogative syntax but no rising intonation (on the ways non-interrogative forms can function as questions see Clayman, 2010, and Weber, 1993; on the myth of rising intonation in polar questions see Geluykens, 1988). Taken together, those (and other) questions are illustrative of why merely looking for interrogative syntax or rising intonation cannot account for the rich body of questioning strategies in my data.

The questions raised by Leon in lines 30-31 and 36 (*you're OK if I just tell them to leave*↑; *we're good*↑) aim at seeking confirmation. In my data, those questions' morphosyntax consistently supports their pragmatic function, as canonical confirmation-seeking questions usually display declarative syntax in many languages (see Seuren and Huiskes, 2017, for English; Englert, 2010, for Dutch; Vanrell et al., 2010, for Catalan), as is the case above (***you're*** *OK*…; ***we're*** *good*). The team leader's choice of declarative syntax in those lines is not random; with the most likely response to a declarative question being agreement/confirmation, the senior doctor employs here discursive strategies that contribute to minimising team members' opportunities for disagreement, as was the case with the use of polar questions earlier; in such high-risk emergency settings where time is of essence, this helps with the interactional flow and makes the teams perform the required tasks quicker (see, for instance, Excerpt 7.3 where the team leader uses almost exclusively open questions; the team struggles to confirm and perform tasks and there is interactional trouble throughout the excerpt). Indeed, the team's uptake is the anticipated one, as in lines 32 and 37, Lisa and Kira, respectively, respond in the affirmative. Note also that the two confirmation-seeking questions are found at a late stage of the incident, where the team is close to completing the required tasks (primary survey, AMPLE history and early interventions) and almost ready to send the patient into scan; although such questions can sporadically occur at any stage, strings of confirmation-seeking questions consistently appear at late stages in both contexts, where the task allocation has already been completed.

It is thus evident from the above that there is systematicity not only in regard to the types of questions team leaders raise, but also to the stage of the encounter they do so and the material zone in which they position self. I elaborate on this in the next section.

7.5. Positioning questions in their spatiotemporal context

In Excerpt 7.2, lines 15-16, 18, and 21, Leon raises a series of elliptical questions requesting information regarding the results of the primary survey that the team performed (e.g., *any chest (or abdomen) problems*↑; *any bruising*↑); as discussed in Excerpt 7.1, when such questions are part of the diagnosis, they emerge at an early stage of the encounter, as is the case here. Even though information-seeking questions are not the default way team leaders *do* control throughout the episodes, they constitute a core part of a short diagnostic window, essential to the decision-making process; as such, they effectively contribute to claiming control and doing leadership.

There is a rich body of research illustrating that questions are multifunctional (Aritz et al., 2017; Freed and Ehrlich, 2010), which I also illustrate in my data; more importantly, though, I argue that questions have certain spatiotemporal dimensions that need to be taken into account for a more holistic understanding of their impact on team leaders' claims of control and, more generally, teams' interactions; even within a body of questions serving the same pragmatic function (in the example above, requesting information), the temporal point of the utterance, as well as the material zone from which the utterance is produced, are contributing factors in their impact on the in situ interaction in my data. Lines 15-21 in excerpt 7.2 contain a string of legitimised information-seeking questions as the team leader attempts to gain control of the situation and make sure that all information is available to himself and the team at an early stage; I illustrate in excerpts 7.3 and 7.5 how, in other stages of the encounter, the team leaders' information-seeking questions are interpreted as a way to deny responsibility, causing interactional trouble throughout the incidents and, ultimately, upset the structure of the interactional event. I summarise the temporal dimensions of team leaders' questions in Figure 7.5 below.

Figure 7.5. Pragmatic functions of team leaders' questions and their accomplishment over time.

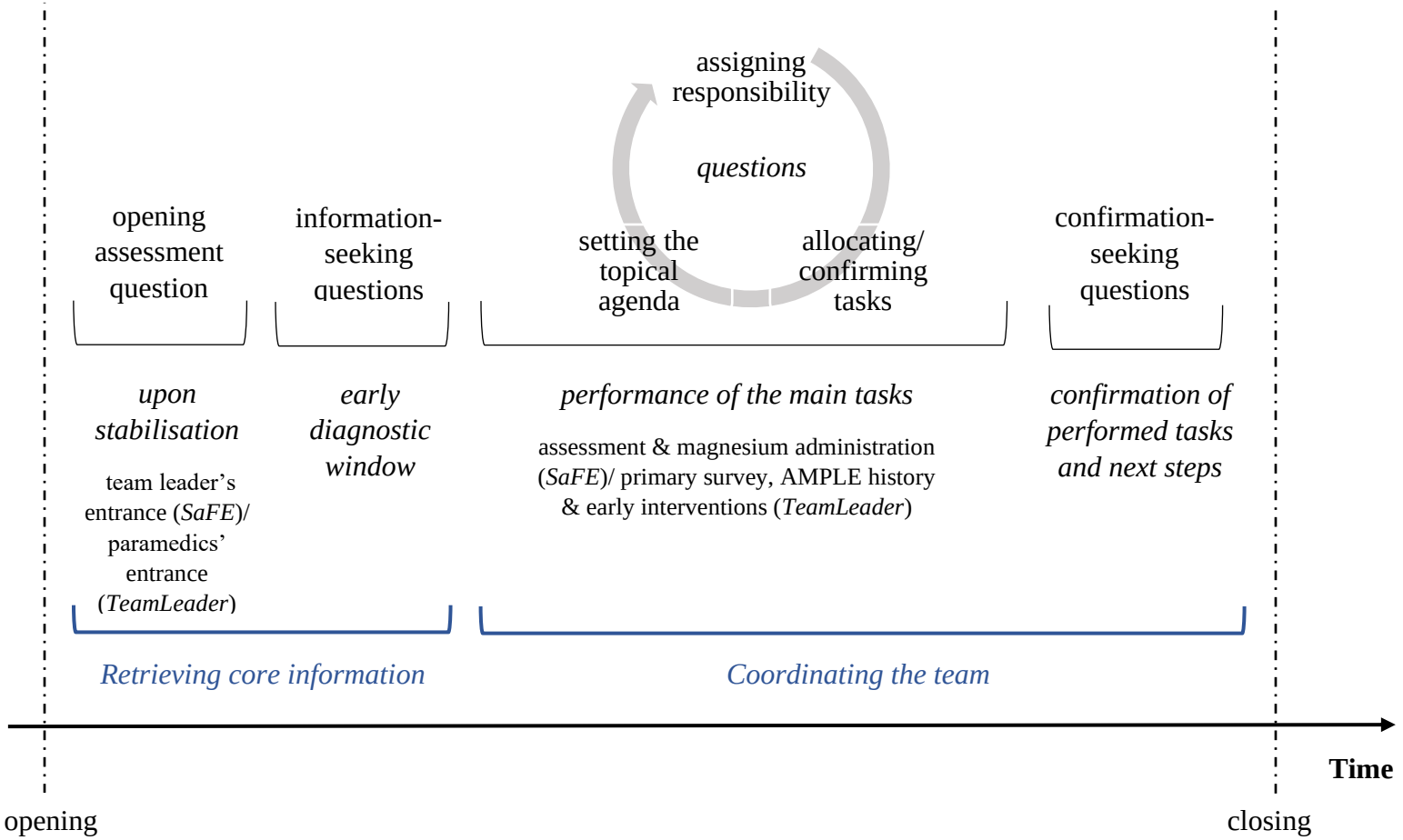

assigning responsibility
questions
opening assessment question
information-seeking questions
setting the topical agenda
allocating/ confirming tasks
confirmation-seeking questions
upon stabilisation
team leader's entrance (SaFE)/ paramedics' entrance (TeamLeader)
early diagnostic window
performance of the main tasks
assessment & magnesium administration (SaFE)/ primary survey, AMPLE history & early interventions (TeamLeader)
confirmation of performed tasks and next steps
Retrieving core information
Coordinating the team
Time
opening
closing

Figure 7.5 summarises the pragmatic functions of team leaders' questions found in both datasets, visualising their temporal dimensions. As shown in excerpts 7.1 and 7.2, the first attempt for gaining control occurs very early in the incidents, usually upon the senior doctor's entry in the emergency room and their stabilisation in one of the bedsides in the *SaFE* data (see line 6 in excerpt 7.1: *WHAT'S GOING ON*↑), while for the *TeamLeader* data this is usually upon paramedics' entry in the emergency room and their stabilisation, again, at the left bedside (see line 7 in excerpt 7.2: *is he stable*↑). This is followed by a short diagnostic window, where the team leaders raise information-seeking questions; although not the leaders' default discursive strategy for doing control and leadership, such questions are legitimised at an early stage of the encounter, as, taken together with the opening assessment question, they provide the team leader with an opportunity to retrieve core information and set the tone for the rest of the episode.

As shown in Figure 7.5, for the longer part of my episodes in both datasets the teams are task-oriented, which is partially accomplished through questions assigning responsibilities, setting the topical agenda, and allocating/confirming tasks; as these three pragmatic functions are intertwined and do not occur linearly over time, I have depicted them in a circle. Finally, for a short window towards the end of the episode, team leaders tend to raise confirmation-seeking questions, making sure that the required tasks have been performed and that team members know what to do in the next steps. Taken together, the performance of the required tasks and the confirmation of past tasks and future actions are part of team leaders' attempt to coordinate the team; to be successful, this stage must follow the stage of retrieving core information. The above figure is only a deduction of the dynamic interactions in my data and visualises the patterns regularly found across teams and contexts, bridging together two datasets and a number of ad hoc teams; it does not suggest that confirmation-seeking questions, for instance, never occur at early stages, or that team leaders' information-seeking questions were never found in my data at late stages. I have not identified, however, any pattern alternative to what is proposed here.

Turning to the questions' spatial dimensions, the team leaders in excerpts 7.1 and 7.2 make appropriate use of the material space (by 'appropriate use' I mean that they are in line with the patterns summarised in Chapter 5), raising the opening assessment question as soon as they complete their transition into central material zones, upon theirs and/or the team's stabilisation (see line 6 in Excerpt 7.1 and line 7 in excerpt 7.2). As shown earlier, the team leaders' material zones vary across my contexts (bedsides in the *SaFE* data; scriber's desk or foot of the bed in

the *TeamLeader* data); what is important for the discussion here is that a) all the identified team leaders' material zones provide team leaders with the flexibility to oversee the whole team and the performance of individual tasks, and b) those zones are clearly marked as the team leaders' material space and contribute to their claiming of control and doing leadership (see the impact of standing and acting in peripheral material zones on team interaction in excerpts 7.3 and 7.5 below). More, team leaders accomplish their questions in a multimodal way; see, for instance, Instance 4 in excerpt 7.1, where the team leader turns her torso and gaze direction to the equipment table to raise a question relevant to the preparation of the magnesium, which is canonically taking place at the equipment table, and in doing so she successfully opens the floor only to members standing there.

In this section I zoomed in on questions, a core discursive strategy in my data, exploring the ways they are used by team leaders for exerting control and, ultimately, doing leadership. Drawing on excerpts 7.1 and 7.2, I identified the pragmatic functions of team leaders' questions in cases with good interactional flow and/or good clinical performance and have made a case for how the questions' verbal accomplishment is intertwined with their positioning in time and space. The analysis illustrates that, in an attempt to lead the team, the team leaders use questions primarily issuing directives, which are raised upon stabilisation in central material zones or material zones relevant to the task at hand; in doing so, they employ all the resources available to them to control the floor, such as gaze and body direction, movement in space, and higher voice volume. Regarding their temporal dimensions, questions issuing directives are primarily found in a later stage, when performing the main tasks; these follow team leaders' initial assessment and information-seeking questions during an early diagnostic window (see Figure 7.5).

This, however, is not the only possible scenario in my data; in what follows, I draw on examples where the designated team leaders draw on questions and the material space in very different ways. I introduce the concept of interaction rituals and illustrate how the lack of the identified discursive strategies by team leaders results in broken interaction rituals, which come with lack of leadership and coordination (excerpt 7.3), or the team members' use of the aforementioned strategies for stepping into team leaders' role and compensating for their 'loss' (excerpts 7.4-7.5). To link with chapter 6 on directives, in discussing the way interaction rituals break and the resulted interactional trouble, I also bring into the discussion the lack of directives, which I have identified earlier as another core strategy for maintaining control and doing leadership.

7.6. Broken interaction rituals and lack of leadership

I elaborated in this chapter on the team leaders' questions spatiotemporal dimensions (see also Chapter 8 for the spatiotemporal professional routines in the *SaFE* data). In this section, I draw on examples from cases with problems in the interactional flow to illustrate how questions raised in peripheral material zones and/or not performed multimodally are indicative of – and result in – interactional trouble and loss of control, even when they serve pragmatic functions associated with team leaders, such as task allocation. I also provide examples of how questions raised within those teams deviate from the temporal routines that I identified earlier, such as team leaders' information-seeking questions throughout the episodes and not only during an early diagnostic window. As they deviate significantly from the relevantly stable, throughout my data, spatiotemporal routines, I treat such instances as broken 'interaction rituals'. I discuss this below.

7.6.1. The concept of interaction rituals

Before turning to the data, I briefly introduce here the concept of *interaction rituals* and I reflect on why I employ a sociological concept at the end of this section. Interaction rituals are broadly defined by Clarke and Waring (2018) as 'a form of social interaction with relatively stable elements through which symbolic meanings and norms are transmitted and reinforced, shared identities are fostered, and a sense of belonging promoted', and are 'sociologically significant because they represent an interactive medium that link individual agents to wider social and cultural structures' (p. 1278).

I identify instances where those 'relatively stable elements' are missing as broken interaction rituals; these are cases where general interactional rules (e.g., 'complete an utterance'; 'target someone as the potential addressee of the request') – but also context-specific rules (e.g., 'raise information-seeking questions during the diagnostic window') are broken, as I illustrate in excerpts 7.3-7.5 below. The concept of interaction rituals here is also useful as a bridge to the concept of professional routines, which I discuss in Chapter 8, as the latter one refers to larger patterns situated in space and time, encompassing the rituals. This entails that broken interaction rituals generate – and result in – disruption of the professional routines; I discuss this further below and in Section 8.2 and show how, together, rituals and routines, provide a set of concepts that future health sociolinguistic research can build on (Chapter 9).

Although someone could argue that broken interaction rituals are 'extremes' in my data, as they deviate from the norm shown earlier in excerpts 7.1 and 7.2, broken interaction rituals and the interactional trouble that comes with those are not rare in both my datasets and exhibit

similar patterns as shown below, indicating that there are noticeable patterns in those cases too. Besides, even if we consider them outliers, the investigation of marked cases can shed light on the normal (Goffman, 1967); a close reading of what is the result of the missing patterns in excerpts 7.3-7.5 provides us further insight into their functionality and effect on interaction in excerpts 7.1 and 7.2 (and the broader dataset).

In the macro-context, interaction rituals are traced back to Durkheim (2008 [1912]), who identifies ritual attitudes as the foundation of all belief systems, which 'are the permanent elements which constitute that which is permanent and human in religion' (p. 13); these elements may take different forms but maintain the same significance and functions everywhere. In the micro-context, Goffman was the first to use the term *interaction ritual* (1959, 1967), identifying ceremonial acts in mundane everyday interactions. I have made a case in the methodology section for how research on face-to-face interaction should move beyond a focus on verbal cues, treating any other cues as supplementary to verbal. Indeed, for Goffman (1967), the 'natural units of interaction' are 'the glances, gestures, positionings, and verbal statements that people continuously feed into the situation, whether intended or not' (p. 1). In more detail, according to Goffman (p. 55), the acts or events that carry ceremonial messages can be:

- linguistic (here with the meaning of *verbal*[13])
- gestural
- spatial
- task embedded ('as when an individual accepts a task graciously and performs it in the presence of others with aplomb and dexterity')
- part of the communication structure (e.g., when one of the interactants speaks more frequently than the others)

In my data, the team leader's opening assessment question early in the case carries such a ceremonial message, functioning as an opening act which shows who is (or attempts to be) in control of the situation. This claim of control, however, is not achieved only through the utterance of the question (the *linguistic* component, in Goffman's words); that the team leader raises the question only after stabilisation in a central spatial zone (*spatial* component) also carries a symbolic meaning, easily accessible by all staff members. The senior doctor's gaze

[13] For a discussion on the reasons why I consider the interpretation of 'linguistic' as 'verbal' problematic see Section 2.2.

towards specific actors and material zones also carries a ceremonial meaning, that of opening the floor to them; this is the *gestural* component. These cues, however, and others which I do not discuss here (e.g., touch, face expression), work in tandem. An opening assessment question, for instance, uttered by a team leader standing in a peripheral material zone without maintaining eye contact with anyone would not succeed in conveying the ceremonial message. As such, any attempt for a rigid distinction between verbal/non-verbal or linguistic/paralinguistic cues is artificial.

More recently, interaction rituals have been picked up by Collins (2014), who, adopting again a micro-lens, considers as his starting point the dynamics of situations (rather than the individual): 'from this we can derive almost everything that we want to know about individuals, as a moving precipitate across situations' (p. 4). For Collins, rituals involve social actors interacting together within a shared spatial and temporal situation, in which there is a boundary to legitimate participation. Collins' emphasis on the rituals' embodied experience has been particularly useful for my understanding of the concept as it allowed me to accommodate spatiotemporal dimensions in the identified chains of events (Figure 7.5 for temporal dimensions and Figure 8.2 for material dimensions). In his own words,

> 'society is above all an embodied activity. […] When human bodies are together in the same place […] (they) are paying attention to each other, whether at first there is any great conscious awareness of it or not. This bodily inter-orientation is the starting point for what happens next' (p. 34).

Although consisting of relatively stable elements, interaction rituals emerge in here-and-now face-to-face interaction, and, as such, they are unpredictable and their outcome uncertain (Fixsen et al., 2015). I will draw next on excerpts 7.3-7.5, to illustrate how this is also the case in my data; although staff members are familiar with the identified professional routines, there are instances in which those are disrupted, resulting in broken interaction rituals.

I bring in here a sociological concept which I find relevant to my research in the ways summarised below. The various disciplines are often, even today, academic silos restricting the flow of information and thus minimising our research's potential. With a background in theoretical linguistics, I am also inclined to stick with linguistic concepts which I see as my comfort zone. Disciplinary boundaries, however, are more often than not artificial. Luckily, there are now more voices calling for breaking academic silos down (see, for instance, Martschenko, 2019). Turning to the ways this concept fits nicely with my analysis, I view the

identified professional routines in chapter 8 as larger practices in a certain space and time, which are easily identified by local agents, and include the smaller interactional rules – the interaction rituals. This explains the consistency across contexts and different team formations as well as the disruption in the professional routines, caused by broken interaction rituals, as shown in the next section. The realisation of spatiotemporal dimensions as inherent to interaction rituals – rather than the context of it – is also significant in my data. Overall, sociologists have acknowledged the importance of the body and embedded it in their analyses already in the 90s (see, for instance, the work of Turner, 1996). More, in the highly hierarchical contexts I examine, rituals sit well as a concept in which people are 'stratified into "insiders" and "outsiders" and, within the ritual, into leaders and ritual followers' (Fixsen et al. 2015, p. 2); I show below how the interaction rituals break when this stratification is not the case anymore, leading, for instance, to situations where staff members lower in seniority (e.g. midwives) step into the team leader's role (see excerpt 7.4).

A difference in the way I adapted the concept could be considered my lack of emphasis on emotions and emotional energy, which is central in the original discussion; Collins (2014), for instance, puts emphasis on participants' shared sense of purpose and *emotional experience* (emphasis mine; for a discussion on the role of emotions on interaction rituals see Clarke and Waring, 2018). From my linguistic lens, how my participants *feel* is not the question at hand and the tools provided by my methodological approach are not meant to answer such questions. Although I do not engage at all with the psychological aspect of emotions, I do take into account their linguistic manifestations as they emerge in the here-and-now interaction and the team's uptake. However, this is not a one-to-one correspondence. I discuss throughout, for instance, how team leaders construct a confident (e.g., through calm voice; direct task allocation; unmitigated utterances) or an uncertain persona (e.g., through pauses; mitigation markers; dispreferred openings) both verbally and in an embodied way without placing emphasis in the emotional implications per se.

I now turn to discussing such cases in my data where the identified professional routines are disrupted, resulting in broken interaction rituals.

7.6.2. Broken interaction rituals in the data

7.6.2.1. *Team leader's deviation from the interaction rituals and lack of leadership*

To illustrate the marked in relation to the patterns I have shown in section 7.4, I draw below on excerpt 7.3 from the *TeamLeader* dataset. What the analysis shows is that there is not an easily identified team leader here; although Mike, the ED consultant (the default team leader, according to the pre-defined institutional hierarchy) is present, he performs here the primary survey, rather than adopting a hands-off role as expected. Mike seems to grant the leadership role to Laura, an ED registrar who is the one being hands-off, allocating responsibilities and supervising the team. At the beginning of the episode (not shown in the excerpt), Laura introduces herself to the team in the following way:

I'm Laura (.) I'll be leading the team along with Mike

In post-event conversations with staff members, I have been told that 'it is just not possible to have two leaders'. This is one of the few instances in my data where the team roles are not easily accessed; already from the pre-briefing, the interaction ritual dictating that there is only one staff member leading the team breaks, which can be a factor contributing to the interactional trouble evident throughout the excerpt. More, although the team had some time before the patient's arrival, there was not a structured pre-briefing where the whole team introduced themselves, nor a distinctive diagnostic window as identified in excerpts 7.1 and 7.2. I thus show below that by breaking the interaction ritual of a short diagnostic window as shown in Figure 7.5, and by skipping the phase of retrieving core information early on, the team struggles throughout the case to compensate for this loss, upsetting the overall structure even at late stages.

Excerpt 7.3 below is drawn from a later stage of the episode, where the paramedics have completed the handover and left, while the whole team works for some time now on the patient, having already performed most of the primary survey.

Excerpt 7.3

Key for participants: Mike: ED consultant; Laura: ED registrar; Andy: his role is not mentioned for anonymity reasons; Mora: anaesthetist; Jarett: doctor; [not shown in the excerpt: Paul: cardiologist; Magda: trauma ODP; Louisa: trauma ODP]

1.	Mike	so how he was running- **info request**	**core info not retrieved**
2.	Laura	-so he's hit by the left-	
3.	Mike	-but (.)	
4.		but before that (.) before he got hit the [running (.)	
5.		was that deliberate↑ **info request**	
6.	Laura	[(indec)-	
7.	Andy	-his	
8.		friend (.) he said that his friend (indec)	
9.	Mike	his friend (.) his friend (.) his friend was ready and-	
10.		((multiple interruptions and overlaps))	
11.	Laura	oh so he saw-	
12.	Mike	-we could call him and ask because (.)	
13.		that's the thing in the handover I wasn't quite sure if	
14.		it [happened or not (.)	
15.	?	[deliberately	
16.	?	[(indec)	
17.	Mora	it sounded like he run against the green light (.) but	
18.		that was-	
19.	Laura	-it was just (.) not paying attention o::r↑-	
20.	Mora	**info request** -	
21.		yeah	
22.		((several lines omitted))	
23.	Laura	hm:: so Mike are you gonna take the: (.) **unclear function**	
24.	Mike	I'm just waiting for these guys to get with the bloods	**string of abandoned questions**
25.		(done) and then I'm e:h (2.0) (indec)	
26.	Mike	is he booked in↑ (indec) CT scan where we can-	
27.	Laura	**info request** -we don't	
28.		know his (name) I don't have-	
29.	Mike	-of course not	
30.		((a few lines omitted))	
31.	Laura	are you: taki:ng- **unclear function**	
32.	Mike	-I will I just e:h (indec)	
33.	Laura	and you:: a::re↑ **unclear function**	
34.	Mora	(happy) doing the IV	
35.	Laura	Paula is↑- **unclear function**	
36.	Mora	-no he is [(indec)((pointing at Harry))	
37.	Laura	[you are (.) OK (.) I don't know	
38.		your name I'm sorry	**core info not retrieved**
39.	Jarett	I'm Jarett	
40.	Laura	Barett	
41.	Jarett	Jarett	

In lines 1 and 3-5, Mike, the ED consultant, raises two information-seeking questions about how the patient has been injured; this is in itself a broken interaction ritual, as we are already late in the episode for information-seeking questions that aim to reconstruct the time and way of injury. The ED consultant also does not construct a confident persona throughout the episode; not only he raises only information-seeking questions, which, as shown in excerpts

7,1 and 7.2, is not the default discursive strategy of team leaders, but his utterances also include noticeable hesitation markers throughout the episode. The *but*-prefaced utterance, the brief pauses, and the repetitions (*but (.) but before that (.) before he got hit the running (.)*) in lines 3-4, and the multiple repetitions and short pauses in line 9 (*his friend (.) his friend (.) his friend was ready and-*), indicate Mike's struggle to claim the floor and result in his interruption by several team members in line 10.

Lines 1-21 nicely capture all the effort the team puts into retrieving core information to reconstruct the accident, which canonically takes place in the onset of the case, as was the case in excerpts 7.1 and 7.2. All questions raised in lines 1-21 attempt to retrieve information regarding the Events/environment related to injury; going back to Figure 7.5, this is not the canonical stage of the encounter in which the team leader raises information-seeking questions. As those questions have not been raised during the early diagnostic window, they now delay the team significantly and create uncertainty, evident in both the repeated questions (lines 1, 3-5, 19) and the mitigation throughout the excerpt (e.g. lines 7-9).

Later in the episode, Laura, the ED registrar, raises a series of questions in lines 23 and 31-37, all of which are relevant to the tasks team members are performing (e.g. *are you gonna take the:*, line 23; *are you: taki:ng*↑, line 31; *and you:: a::re*↑, line 33; *Paula is*↑, line 35); it is unclear, however, whether Laura seeks confirmation or requests information even at this late stage of the episode, as all of her questions are left incomplete. 'Abandoned' (syntactically and prosodically incomplete) utterances have been mostly associated with information-seeking functions or initiating repair (Persson, 2017); the latter is not the case here. Note also that incomplete utterances are negatively marked in the medical context, where part of staff members' formal training on the operationalisation of effective communication patterns emphasises the significance of closed-loop communication (see, for instance, the 2017 Royal College of Physicians resource on improving teams in healthcare and specifically Resource 3 on team communication). Thus, in leaving most of her utterances incomplete, Laura misaligns with team leaders' questioning mechanisms both in terms of the questions' pragmatic functions (in the excerpt above she does not manage to allocate/confirm tasks or set the topical agenda) but also in their format; her questions are left incomplete, include hesitation markers (see prolonged vowels in lines 31 and 33), and do not privilege agreement or confirmation responses as did the team leaders' questions in excerpts 7.1 and 7.2 (see declarative syntax, polar questions, lack of rising intonation etc.).

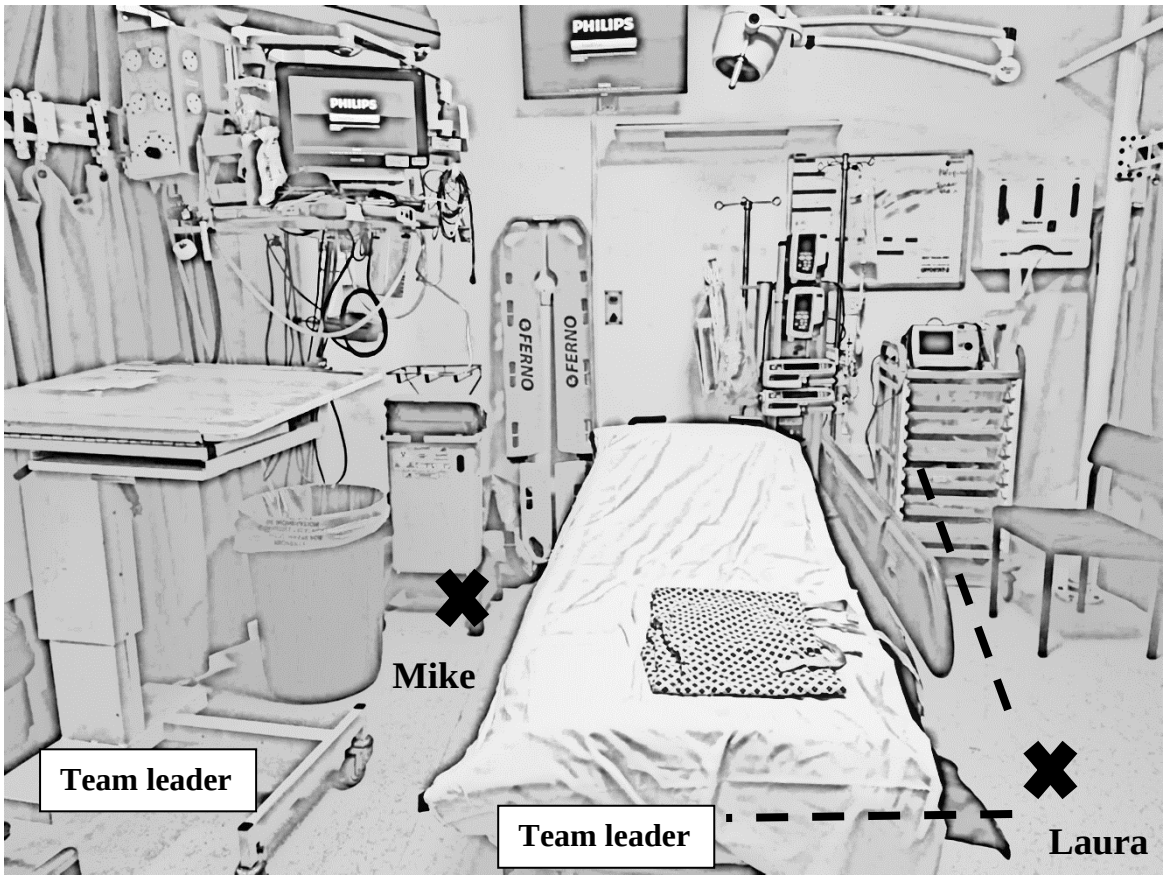
Mike, the, designated (co-)leader, is mostly silent not only in this excerpt but throughout the episode, with most of his contributions not being relevant to issuing directives or controlling the floor in any way. With the lack of the identified question mechanisms regularly used by team leaders also comes interactional trouble, evident in the team's uptake; team members, including Mike, frequently overlap and interrupt Laura repeatedly; see, for instance, Laura's interruption by Mora's *no*-prefaced utterance in line 36. Overall, Laura and Mike, in doing leadership, do not raise questions that aim to allocate tasks and set the topical agenda. When Laura raises questions, it is unclear whether she attempts to claim epistemic primacy or simply requests information; she also fails to privilege confirmation or agreement responses and does not address specific staff members.

Bringing together the directives from the previous chapter and the questions from this one, both of which have been identified as core strategies for doing leadership, Excerpt 7.3 is illustrative of the interconnection between those strategies. In excerpt 7.3, where the team leader(s) fail to do leadership, directives are completely absent. This is a consistent pattern across episodes with interactional trouble; directives and questions allocating tasks and turns are intertwined mechanisms for claiming power and doing leadership. I do not find any instances where team leaders do good use of directives but do not raise questions aiming to make requests and vice versa. This suggests that leadership is *done* in and through a set of discursive strategies (including, but not limiting to, directives, questions, and the use of the material space), rather than a single discursive strategy.

Turning to the positioning in the material zones, Laura and Mike are constantly found outside the team leader's material zone throughout the episode, occupying peripheral material zones and appearing unsynchronised. In doing so, they fail to control the floor, and thus the situation, as manifested in the team's uptake, which includes interruptions, overlaps, and dispreferred responses. I consider the identified material zones the 'stable elements' of the interaction rituals, as they are the team leaders' locus consistently in teams with good clinical performance and/or no interactional trouble. I have already mentioned, however, that interaction rituals rely on the here-and-now interaction and are thus unpredictable (Fixsen et al., 2015). As illustrated in Figure 5.15, the team leaders' material zone in the *TeamLeader* study is the scriber's desk or the foot of the bed while the expected embodied way of doing leadership is a total hands-off supervision; this is also what I illustrated in Leon's case (excerpt 7.1). In excerpt 7.3 Mike, the designated leader, stands in the right bedside having a heavily hands-on role in the episode, as he is performing the primary survey; this leaves him no space for supervising the team.

Laura, on the other hand, has indeed a hands-off role and is the one supervising/coordinating the team; in doing so, however, she mainly stands at the bottom-left corner of the bed, moving to the left bedside and the foot of the bed (see Figure 7.6 below). Again, her positioning in the material space does not match the team leaders' material zone; rather, she is found in a peripheral material zone, in-between the team leader's zone at the foot of the bed and the bottom-left corner of the bed which is far from the patient. It is evident here that the much needed 'demarcation of the specialist's territory and its distinction from the territories of other medical specialists' (Sarangi and Clarke, 2002, p. 118) is not accomplished, which could be one of the factors contributing to the interactional trouble throughout the episode. Going back to the importance of delivering key actions from a stationary position, Laura moves back and forth from the foot of the bed to the corner and the right bedside, failing to create the immobilised interactional space that would mark key actions; in fact, key actions are difficult to be identified throughout the excerpt as most utterances remain incomplete and contain a vast number of hesitation markers. Mike's and Laura's zones are illustrated in Figure 7.6; I have retained their expected material zones to make visible the two members' deviation from those.

Figure 7.6. Mike's and Laura's deviation from the leaders' spatiotemporal interaction ritual.



Overall, that the interaction rituals are broken in excerpt 7.3 is manifested in the following ways: Laura's and Mike's co-leadership is unexpected and marked in this context, where the team members identify only one team leader; this is the one with whom the overall responsibility lies for medicolegal purposes. They both fail to employ team leaders' core discursive strategies, such as raising questions which serve the pragmatic function of making requests and target specific addressees, as well as issuing directives. At the same time, they deviate from the temporal interaction rituals, with the lack of an early diagnostic window resulting in team uncertainty and delays later on. Finally, Laura and Mike position selves in peripheral or unexpected material spaces, deviating from the team leaders' identified material zones. All the above result in interactional trouble which is indexed verbally (overlaps and interruptions, hesitation markers, repetitions and strings of abandoned utterances), spatially (unexpected use of the material zones), and in the disruption of the identified interaction rituals (see also Section 3.7 for interactional trouble).

The way the team leaders' lack of the identified discursive strategies (directives; questions; position in space and time) results in broken interaction rituals is consistent across my two datasets. In some cases, this comes with interactional trouble while it is evident that the team leader's position remains unfilled; this is the case in excerpt 7.3, where none of the team members step into the leader's role. In other instances, however, other staff members identify the disruption and step into the leader's role, employing similar discursive strategies to claim control of the situation. For the last section of this chapter, I turn to the *SaFE* data, illustrating the senior doctor's failing to do leadership and the interactional work of the rest of the team in order to fill that gap.

7.6.2.2. *Team's compensation strategies for the broken interaction rituals*

Excerpt 7.4 is drawn from a team at the lowest end of good clinical performance (Case 5; staff administered magnesium in more than six minutes). I purposefully chose to illustrate a team which is found in the spectrum of good clinical performance, even though the team leader does not enact leadership in the normative way, to shed light on the discursive strategies mobilised by the other team members to account for the team leader's 'loss'. That the team manages to administer magnesium could be related to the ways in which other staff members step in, as I will discuss in turn below. Even in this case, however, leadership is not enacted in the prototypical way; this could be a reason why the team does not score as high as others (c.f. Cases 6, 7). Overall, although I examined teams from the whole spectrum of clinical efficacy in the *SaFE* data (cf. Table 4.2), it was at the 'good' end of the spectrum that patterns emerged,

which is why I draw on these to demonstrate my findings throughout this thesis. In team with poor clinical performance, there was a lack of systematicity in relation to positioning in space and the use of questions and directives; this, combined with the lower sound quality due to long overlaps, interruptions, and a much noisier environment, are the reasons why I do not discuss in detail excerpts from teams with poor clinical performance. The fact that teams with poor clinical performance do not exhibit similar patterns regarding the identified discursive strategies and are noisier, indicating interactional trouble, strengthens my argument that good medical performance is inseparable from 'good' leadership and the teams' interactional performance. This makes a convincing case for feeding the results of health sociolinguistic research into medical training; I expand on this in Chapter 9.

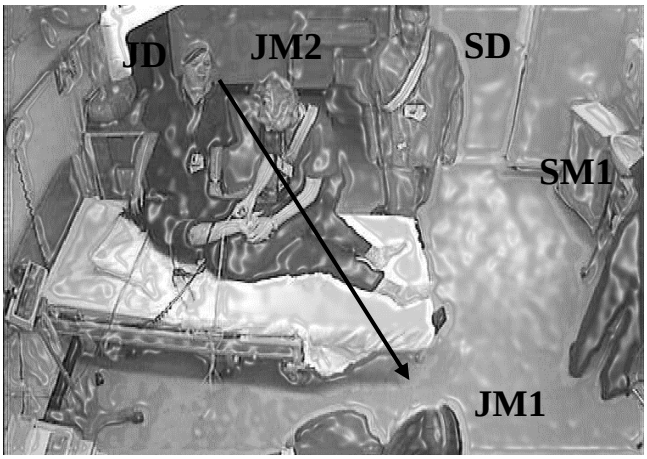
Moving on to Excerpt 7.4 below, similarly to the team in Excerpt 7.3, the team here is marked in the dataset, as there is not an identifiable early diagnostic window, nor does the team leader succeeds in retrieving core information.

The excerpt follows the chronological order of events; I show the senior doctor's entrance in the room and the early stage upon arrival which is marked compared to excerpts 7.1 and 7.2. I then draw on a later stage of the case to examine the impact this has on the team.

Excerpt 7.4

Instance 1

Instance 2



1		((SD enters the room))	9		((SM1 moves to equipment trolley
2	JD	a:lright (.) we're just taking	10		and JM1 moves to equipment table))
3		some bloods from you	11		[((3.0 multiple overlaps))
4		((2.0 multiple overlaps))	12	JD	[(term and high blood pressure)
5	JD	HEARTBEAT one sixty	13	SM1	should have more of [them

6	JM2	gonna pop in a canula alright↑	14	JD	**information request** [HOW many (.)
7	SD	right (.) what (.) **assessment question**	15		how many weeks is she↑
8	JD	yeah (.) this is Lucy	16	JM1	she's term plus four

In excerpt 7.4, the senior doctor enters the room and, as shown in instance 1, places self at the bottom left corner and stays silent in lines 2-6. His positioning in a peripheral material zone (Figure 5.8 for the identified material zones), in-between the left bedside (the senior doctors' zone) and the foot of the bed (the junior midwives' zone), as well as the fact that he stays silent while the rest of the team members, who do not seem to notice him, overlap (line 4), is not the normative way of enacting leadership; see, for instance, the way team leaders stabilise themselves within the team leaders' material zone and raise the opening assessment question early on in excerpts 7.1 and 7.2. The senior doctor here also attempts to raise this assessment question in line 7, exhibiting familiarity with the interaction rituals shown in Figure 7.5; in doing so, however, he does not construct a confident persona, as his brief turn, prefaced by the discourse marker *right*, used here as a marker to introduce a new topic (for this and other uses of *right* with a falling intonation see Othman, 2010), includes two brief pauses and is left incomplete, similar to the ED consultant's abandoned questions in Excerpt 7.3.

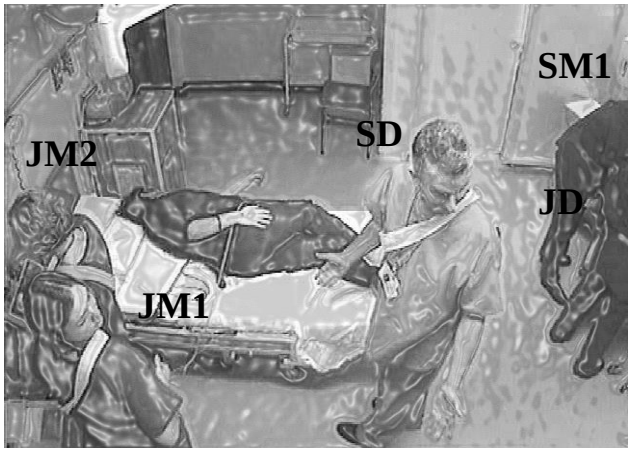
What stands out in the above excerpt is the junior doctor's behaviour. In line 5, she raises her voice's volume to gain the floor, following the team's multiple overlaps. I have already discussed in excerpts 7.1 and 7.2 how raising the voice's volume is a common strategy for team leaders in floor-claiming turns as a show of acoustic force. The junior doctor raises again her voice in line 14, briefly overlapping with the senior midwife, who quickly quits her turn acknowledging the junior doctor's right to talk. The junior doctor raises then an information-seeking question regarding the patient's pregnancy stage (lines 14-15), which aligns with the team leaders' questioning mechanisms shown in Figure 7.5, as we are still in the first stage of retrieving core information. In raising her question, she establishes direct eye contact with the junior midwife 1 (instance 2), who is the only one having received the briefing and thus holds this information. Indeed, the junior doctor's management of the floor is successful, as in the next turn, the junior midwife 1 is the only one attempting to respond, providing the requested information (line 16). Taken together, all the above indicate that the junior doctor employs the discursive strategies normatively associated with the team leader.

Turning to the use of the material space, the junior doctor holds a central position throughout excerpt 7.4, at the left bedside, which is the material zone associated with team leaders in the

SaFE data, while the senior doctor maintains the peripheral (for senior doctors) zone at the corner of the bed. Overall, junior doctors' performance in the *SaFE* dataset exhibits great variability, ranging from quite inactive and silent junior doctors to more active, as is the case here. In a previous work, we have provided as a possible explanation for this fluidity the fact that junior doctors do not have fixed responsibilities and are thus more flexible in the ways they perform their role (Mesinioti et al., 2020); this also allows them to adapt their behaviour in relation to that of the senior doctors, compensating for their lack of leadership as is attempted here. In what follows, I continue with an excerpt from a later stage of the same case.

Excerpt 7.5

Instance 1



Instance 2

1		((JM1 & JM2 talk to each
2		other))
3	SD	OK↑ (3.0) and he's got↑ (.)
4		[(indec)
5		[((2.0 multiple overlaps))
6	SD	do we know (.) the situation for
7		theatre↑
8		(3.0)

Instance 3

9	SM2	(we) HAVE to decide what's
10		going on [(indec)
11		[NO REPLY
12	SM2	[(doesn't say)
13	SD	[thank you (.) excellent (.)
14		[okay (.)
15	SM2	[next day-

Instance 4

16	SD	-so that's(.) what↑-
17		((7.0 multiple overlaps))
18	JD	-we'll have to make a decision
19		here((several lines omitted))

Instance 5

20	SD	so who's got the (0.5) I have
21		no information on this [lady
22	SM2	[no
23	SD	can I just↑=
24	JD	=yeah

Instance 6

25	SD	here ((he looks at the chart))
26	JM2	[are you alright there love↑
27	SD	[who did all of these
28	JD	this was (.) u:m (.) Jenny who did
29		it before I arrived
30	SD	OK

31	JD	the last l (.) um=
32	SD	=and what↑-
33	JD	-time
34	SD	we haven't got a time (0.5) what
35		time did the VE happen↑
36	SM2	[(we (.) u::m (.) we haven't been
37		obviously been here (.) haven't
38		actually u::m
39		((4 lines omitted))
44	JD	recently
45	SM2	we presume this is when we were
46		when we were called in

As the team works some time now in excerpt 7.5, according to the temporal dimensions shown in Figure 7.5, the team is in the stage of performing the main tasks, where the leader would normatively employ questions assigning responsibility, allocating/confirming tasks, and setting the topical agenda. This is not the case, however. In line 3, the senior doctor raises a question that is left incomplete: *OK↑ (3.0) and he's got↑ (.)*. As was the case with Laura in excerpt 7.3, again here it is unclear whether the question aims at requesting information at this late stage of the episode or is an attempt to allocate a task to someone. In raising the question, the senior doctor makes a hand gesture which can be read as indicating uncertainty while looking at the equipment table (see instance 1), where the senior midwife 2 works, without establishing eye contact with her (the senior midwife is not visible in Instance 1). The senior doctor's hand gesture and the abandoned question, which also follows an unusually long 3-second pause, in combination with the lack of an indication of the addressee, result in multiple overlaps (line 5). In Instance 2, the senior doctor raises another question: *do we know (.) the situation for theatre*↑. The question serves the pragmatic function of requesting information, rather than allocating tasks and turns, breaking, once again, the identified interaction rituals. This time the senior doctor moves to the equipment table, establishing eye contact with the senior midwife 2; it is not clear, however, if she is the one responsible for this, as the senior doctor's utterance, with the inclusive *we* and the lack of any embodied resources' mobilisation, fails to target a staff member as the potential addressee. As a result, in the next turn (line 8), none of the team attempts to answer, resulting in a 3-second pause. Note also that the senior doctor raises the question while approaching the equipment table, failing to stabilise self before delivering a key action, which could be a reason why the senior doctor fails to catch staff members' attention.

The senior doctor, however, is not the only one making unexpected use of the material space in excerpt 7.5; as shown in instances 1-6, all members except for the junior midwife 2 maintain some physical distance from the patient and cluster around the equipment table and the equipment trolley for the largest part of the episode. This can be both an indicator for and a result of the lack of control in the episode; team members, with the broken interaction rituals which result in no clear task and responsibility allocation, distance themselves from the epicentre of action (the patient's bed), also distancing themselves from claiming responsibility for the tasks at hand.

Overall, such long overlaps (e.g. line 5) and long pauses (e.g. line 8) are only present in my data in teams where team leaders fail to utilise the identified core discursive strategies (directives; questions allocating tasks and turns; positioning self in the team leaders' material zones) and are marked in these fast-paced contexts, particularly when following team leaders' questions, as they create gaps in the interactional flow and significantly delay the teams. In the healthcare context, problems in communication and information flow, including frequent interruptions, have been proved to have a negative impact on team performance and clinical outcomes (e.g., UK Essays, 2018), making a case for the need for further research and targeted recommendations in the field.

Moving forward, even though not including many questions, instances 3 and 4 are included here to illustrate the lack of control manifested in the team's uptake and the staff members' attempts to compensate for this. While the senior doctor moves again from the equipment table to the bedside (instance 3) and back to the equipment table (instance 4) while remaining silent and not performing/coordinating any tasks related to those material zones, the senior midwife 2 realises the disruption and perhaps, the delay in handling the emergency, and verbalises the need to take a decision (lines 9-10); in doing so, she mobilises the, by now well discussed, strategy of briefly raising her voice to gain the floor and uses the forceful modal verb *have to* as an intensifier: (*we) HAVE to decide what's going on*. She and the senior doctor then keep overlapping with each other for a few lines (lines 12-15), until the senior doctor briefly manages to take the floor with an interruption and attempts to raise a question in line 16: *-so that's(.) what*↑-. Following the pattern noted earlier and in excerpt 7.3, however, his question is again an attempt to retrieve information, rather than the anticipated coordination of the main tasks, and is left incomplete with long multiple overlaps by the team in line 17. In lines 18-19, the junior doctor manages to claim the floor with an interruption and again, the use of the forceful modal verb *have to*: *-we'll have to make a decision here*. The senior midwife's turn in lines 9-

10 and the junior doctor's in lines 18-19 are similar not only content-wise, as they shift the topical agenda to the need for a decision to be made, but also format-wise, as they employ team leaders' core strategies for fighting for the floor (i.e., interruptions, use of the intensifier *have to*).

Such explicit discussions regarding decision-making processes are not common in my contexts which require quick action and the team is more oriented towards task performance. What happens canonically in my data is that the team leader holds the role of the central decision maker, as the ultimate responsibility relies with them for medicolegal purposes. However, this is not the case here, where the team leader fails to control the team and do leadership as expected, in this case through questions with certain pragmatic functions accomplished in time and space (the so-called stable elements of the identified interaction rituals). The resulted interactional trouble throughout the excerpt may be the reason why team members feel the need to step in and explicitly verbalise the need for a decision, and this stepping in might contribute to the fact that the team manages to score high in the clinical assessment. That the team members that attempt to fill the team leader's gap are the junior doctor and the senior midwife is not random; I have discussed in the contexts' description (Figure 4.3), the way the junior doctor and the senior midwives are the roles following the senior doctor's in the institutional hierarchy and often overlap, as, depending on the team, senior midwives can play a major role in the event.

In the last part of Excerpt 7.5, the senior doctor moves again from the equipment table *towards* the right bedside (but not *at* the right bedside; see earlier discussions about team leaders' positioning in peripheral material zones in cases with interactional trouble). While still moving (no stationary position), and making again a hand gesture indicating uncertainty (Instance 5), he raises a question seeking information, even at that late stage, around 5 minutes before the end of the scenario: *so who's got the (0.5). I have no information on this [lady* (lines 20-21). Continuing the pattern of incomplete questions he abandons his utterance and, making a brief pause, he continues with the most indirect form of directives I identified in Chapter 6, directives open to the team stating indirectly the speaker's need (for the whole directness spectrum of directives see Figure 6.4); I argued earlier in the chapter that questions are the preferred *modus operandi* as they are in the middle of the directness spectrum, while directive mechanisms tilting towards the indirect end to the spectrum run the risk of being ignored. Instance 5 is one of those cases, as the only answer to the senior doctor's admittedly mild directive is answered by the senior midwife 2, who simply responds with negation (*no*, line 22). Also note that, as

was the case in excerpt 7.3, directives are generally absent in excerpts 7.4 and 7.5 too, illustrating the overall team leaders' struggles to exert control and do leadership.

With the team not orienting towards performing the – subtly – requested task (to provide him with the patient's information), the senior doctor shifts to the equipment trolley to read the chart while raising another incomplete question: *can I just*↑. He is then found in a dispreferred material zone for senior doctors, far away from the patient, as are also most of the other team members. The string of information-seeking questions continues, as in line 27 the senior doctor asks the team who completed the patient's chart, while in lines 32 and 34-35 he requests information regarding the time the vaginal examination (VE in the excerpt) happened. All these questions attempt to reconstruct the main event and obtain core information, disrupting the (relevant) linearity that dictates that so late in the episode the team leader coordinates the team by allocating and confirming tasks, rather than retrieving core information (Figure 7.5). The team is also uncertain about the VE's time, as in lines 36-46 they struggle to answer the question; eventually, the senior midwife's response in lines 45-46 is more of a guess, rather than an answer; *we **presume** this is when we were when we were called in.*

Overall, excerpts 7.3-7.5 are a good example of how the identified interaction rituals, even with identifiable stable elements (see, for instance, the senior doctor's attempt to raise the canonical assessment question early in the diagnostic window, in excerpt 7.4), remain uncertain. The excerpts show how team leaders sometimes fail to use common discursive strategies for doing leadership, such as raising primarily questions aiming to allocate and coordinate tasks, targeting the potential addressee multimodally, marking the team leaders' material zone, and delivering key actions upon stabilisation.

More interestingly, though, excerpts 7.4-7.5 are illustrative of the flexibility allowed within the interaction rituals, and the way professionals negotiate and/or challenge the stratification into leaders and team followers within the interaction ritual (Fixsen et al., 2015). Despite senior doctors being at the top of the institutional hierarchy, they are not the only possible leaders in my contexts. In the case above, I have discussed how roles other than the designated team leader step in, 'echoing' the team leaders' discursive strategies in an attempt to compensate for the team leader's gap. A justifiable reading of some of those performances can be that the training context of the simulations may be relevant to some of the more marked behaviours – either junior members stepping up more or senior members engaging less than they would do in real-life emergencies. This, however, is not the core issue here; the consistency of the patterns noted in the data is robust, and the mobilisation of strategies remains systematic across

teams with good clinical performance and, importantly, across datasets. Hence when the designated team leader breaks the conventional use of strategies, the uptake indicates interactional trouble, with other staff members stepping in, drawing on the discussed strategies. This is a reason why I argued, in Section 4.4.4, that simulations are appropriate contexts for conducting interactional analysis.

I summarise the key points of this chapter in turn below.

7.7. Questions and their spatiotemporal accomplishment in doing leadership

This chapter has been concerned with the use of questions in high-risk emergency contexts, conceptualising them as a core way healthcare professionals *do* things and very well embedded in their professional identity. Zooming in on the role of the team leader, I examined the range of questions' pragmatic functions across my contexts and identified as the most common types of questions those assigning responsibility, setting the topical agenda and allocating/confirming tasks.

Although previous literature has unpacked in detail the multifunctional role of questions, other aspects of those, such as the significance of their utterance in certain temporal and spatial points, has been neglected. I started addressing this gap, arguing that the questions' verbal accomplishment is intertwined with their positioning in time and space. I propose a methodological framework under which we identify the key temporal points in any interactional event (that is, the main stages and events as time passes by) and look closely at the discursive strategy of interest (in this case, questions) in each of these stages as well as the main agents in each key event. One of my main findings discussed above is that questions that serve pragmatic functions not normatively associated with leadership, such as information requests, can be a powerful tool for setting the tone and doing control in certain temporal points (in my case, an early diagnostic window).

As for space, my analysis consistently illustrates that the accomplishment of questions in a given material space is part and parcel of their function. By raising questions upon stabilisation in central material zones or zones relevant to the task at hand, the team leaders manage to maintain a good interactional flow, doing leadership and control. This finding is in line with Mondada (2016), who argues that group leaders' key actions are delivered 'within a stabilized and immobilized interactional space' (p. 354). I have shown in my analysis how in cases with high clinical performance (*SaFE* data) and/or good interactional flow (*SaFE* and *TeamLeader* data), team leaders' requests are marked by their 'stationary position' in a material zone

relevant to the request (e.g., stabilising in the bedside as is the case in Excerpt 7.1, instance 2, or transitioning to the equipment table to make a request about the preparation of the magnesium sulfate which takes place there). On the contrary, in teams with evident interactional trouble such 'static' moments in central material zones, and the execution of correspondent actions upon stabilisation, are not the norm; in those cases team leaders tend to 'float' all around the room – and sometimes, even out of the room – with their requests not being engrained accordingly in the material space as I have shown in excerpts 7.4 and 7.5, with the senior doctor going back and forth and placing himself in-between the identified material zones. The consistency of this pattern in both datasets and its relationship with effective team performance could be something to further test and consider for future staff training. I elaborate on the potential training applications of my work and provide a model for the holistic analysis of discursive strategies in Chapter 9.

Finally, my analysis illustrates that the institutionally assigned leaders do not always – and are not the only ones – enacting leadership in this context, which often results in disruption, interactional trouble and/or poor clinical performance. The broken interaction rituals may force other professional roles to step into the team leaders' role. In doing so, they perpetuate team leaders' core macro- and micro-discursive strategies to compensate for the team leader's 'loss', shedding light on the ways leadership is interactionally claimed, negotiated, and challenged in here-and-now interaction.

Chapter 8: *Professional routines*; an insight into other professional roles

8.1. Introduction

In the last section of Chapter 7, I have touched upon the situated and emergent nature of leadership in medical emergencies, illustrating how more junior members compensate for the 'loss' of the team leader. I thus argued that the enactment of leadership does not necessarily go hand in hand with the predefined institutional hierarchy. So far, however, I primarily focused on the role of the senior doctors and ED consultants, as they are the ones more frequently claiming – and being given – a leadership role, as they are also institutionally positioned in overall responsibility of medical teams in health care emergency settings. I have identified discursive strategies systematically mobilised and shown the consistency across datasets. To complete the discussion, I show how the same strategies are also used *across* roles in the context, addressing RQ3. In detail, for the last part of my analysis, and drawing only on the *SaFE* video data (I have already discussed in Chapter 4 how the *SaFE* dataset functions as my reference dataset), I zoom out of the designated team leaders and turn to the ways in which other team members *do* leadership, in order to provide a more holistic account of how ad hoc teams orient towards the same strategies consistently and mitigate when breakdowns occur. In doing so, I aim to show how leadership is negotiated and distributed across roles, depending on the stage of the encounter.

In Section 7.6, I introduced interaction rituals as general and context-specific interactional rules with which insiders to a context – in my case, staff members – appear familiar. Here, I extend this discussion and employ the concept of *professional routines* to examine the manifestation of task-related routines in space and time. I understand the last ones as larger practices which are again easily identified by insiders and also encompass the interaction rituals; I elaborate more on this in the overview of the concept below. As I am concerned here with task-related routines, I start with briefly expanding on the core tasks that need to be performed in the management of eclampsia (see Section 4.4 for overall description). I then present the task-related spatiotemporal routines that emerged in the data, and move on to illustrate how professional roles other than the senior doctor mobilise similar discursive strategies to claim a leadership role in different spatiotemporal points. Having shown instances of the interactional work staff members do to maintain the routines, I continue with cases in which those routines are disrupted, and illustrate how staff members step into the leader's role and compensate for

the deviation from the routines. I summarise the discussion on the routines in Section 8.6, before bringing all the chapters together in the next and last chapter of the thesis.

8.2. *Professional routines*; an overview

Previous research in the workplace has drawn on the concept of *professional routines* (also found as *work/ workplace/ organisational routines*), recognising those as an important element of organisational behaviour (Feldman, 2003) and drawing attention to their interactional accomplishment. The concept draws heavily on organisational research, although other disciplines have also picked up on the term, particularly sociology (see also section 7.6.1 for the sociological interaction rituals; I understand those and routines as conceptually related terms).

For a definition of professional routines, I draw on Feldman and Pentland (2003), who define those as 'a repetitive, recognizable pattern of interdependent actions, involving multiple actors' (p. 95). In employing the concept of routines, I am particularly interested in the intersection of those multiprofessional actions, in order to shed light on the factors affecting teamwork. Whalen et al. (2002) draw attention to the local achievement of the routines, arguing that 'the traditional topics of ''work routines'' and ''routinization'' need to be respecified in order to take into account how any ''routine'' is a contingently produced result' (p. 239). Scholars working on organisational routines have also pointed to the co-existence of multiple routines, which overlap with other routines, and are rarely performed in a vacuum (Becker, 2004; Narduzzo et al., 2001).

The concept of routines has also caught conversation analysts' attention already in the 1980s, with Schegloff's (1986) seminal work on everyday interactions. Looking at beginnings of telephone conversations, Schegloff argued that '''routine'' openings in which ''nothing happens'' need to be understood as achievements arrived at out of a welter of possibilities for preemptive moves or claims, rather than a mechanical or automatic playing out of pre-scripted routines' (p. 117). This adds a more dynamic layer to Feldman's and Pentland's (2003) 'repetitive patterns', which is also conceptually closer to how I understood and used the concept of routines in my work; the idea that routine encounters are interactional achievements is further unpacked below in light of the data.

On the interface of CA/IS, Angouri and Mondada (2017) shed light to the ways interactants guard or claim power through maintaining or challenging established routines and ways of being in the business context. In a more recent work, Angouri (2018) illustrated how the various

actors negotiate the status quo in their daily work routine, arguing that 'it is through everyday routines and practices that meaning is constructed and ways of doing and behaving are accepted, rejected, or modified' (p. 36); I also show in my data below the ways in which staff members of various professional roles maintain, challenge, or negotiate the established routines.

Zooming in on healthcare settings, Hindmarsh and Pilnick (2007) are concerned with embodiment in the workplace and demonstrate the ongoing and interactional accomplishment of the professional routines, with a focus on organisational members' practical orientations to the body. In exploring routine sequences of action in the anaesthetic room, they, argue against the idea that these routines are 'fixed'. In the same vein, Greenhalgh (2008) investigates the role of organisational routines in collaborative work in healthcare organisations, indicating their flexible and emergent nature. In line with this literature, I also make a case for the flexibility of the routines in light of the *SaFE* data below, where I also show this flexibility in teams with good clinical performance; team members (particularly senior midwives and junior doctors) find ways to compensate and adapt when routines are disrupted. According to Greenhalgh (2008), 'one purpose of routines in organisations is to reduce uncertainty (and hence, cognitive dissonance and stress)' (p. 1269). I discuss this manifestation (or lack) of uncertainty in the light of the data later on.

Another strand of work concerned with professional routines has drawn connections with the concept of *awareness*, a widely discussed topic in healthcare research. Situational awareness is classified under the umbrella term of *human factors* in the healthcare sector. The term refers to 'the *perception* of elements of the environment within a volume of time and space, the *comprehension* of their meaning and the *projection* of their status in the near future' (Endsley, 1988), and is considered one of the main 'nontechnical' skills for healthcare professionals, with significant implications for optimum clinical performance and increased patient safety (Green et al., 2017; Schulz et al., 2013).

Bringing together the concepts of awareness and routines, Heath et al. (2002) make a case that the practical production of awareness is intertwined with organisational routine and practice, being systematically accomplished within work settings, primarily centres of coordination (e.g., police operation rooms, traffic control centres, ORs). Such contexts are particularly interesting, as interactants rely in various ways on resources embedded in the material environment. In the same vein, Schmidt (2002) also looks at the concept of awareness, arguing that 'competent practitioners are able to align and integrate their activities because they know

the setting, they are not acting in abstract space but in a material environment which is infinitely rich in cues' (p. 292). This line of work further supports my focus on embodied resources and, particularly, the relevance of the material space, in the process of meaning-making.

Building on this body of work, and following Hindmarsh and Pilnick (2007), who highlight the 'inadequacy of existing models of coordination for other similar ad hoc or ephemeral organizational ''teams''' (p. 1414), I zoom in on the *SaFE* data in order to identify the professional routines relevant to this specific context and their impact on teamwork. Rawls (2005) views actions as situated occurrences that have material, sequential, and temporal dimensions; I have also illustrated, throughout this thesis, the importance of space and time in the emergency contexts, and I elaborate more on this below focusing on the *SaFE* data.

Overall, I have discussed in this section the concept of professional routines in the workplace, illustrating their interactional and flexible achievement and the ways material space (and time) is intertwined with the routines. Taking into account that healthcare professionals coordinate their work in a routine fashion, acting in a given material space and being familiar with the various stages of the particular emergencies, I turn to the data in turn below to examine the professional routines in the *SaFE* context.

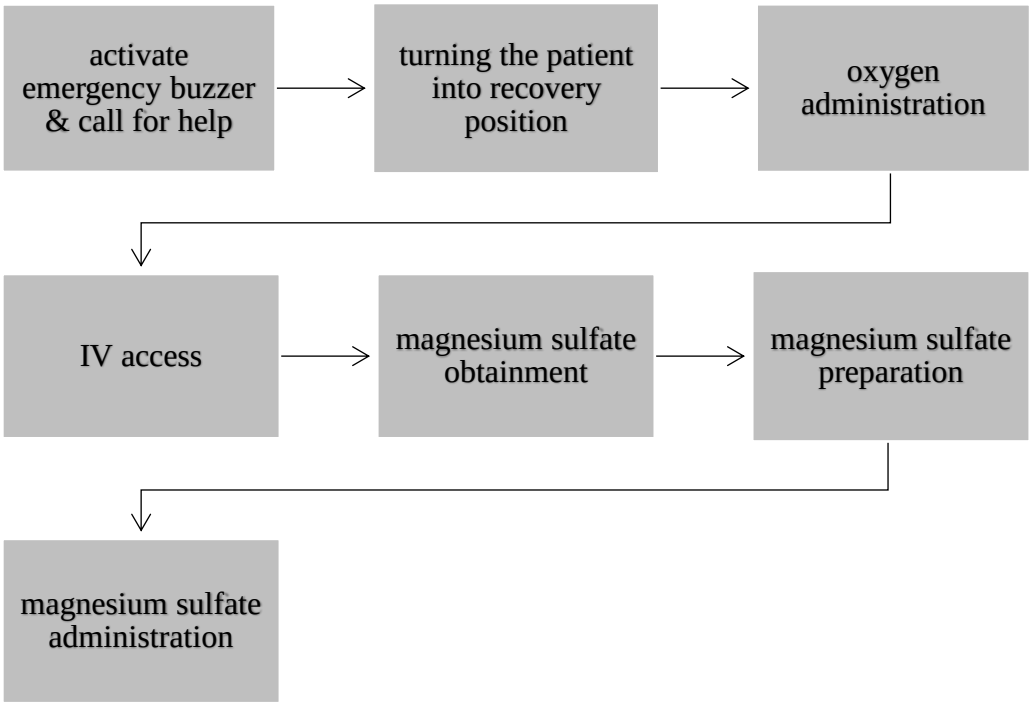
8.3. Core tasks in the *SaFE* data

In describing the *SaFE* context, I argued that the effective management of eclampsia requires the performance of multiple tasks simultaneously (Section 4.6.1.). Previous work has identified task allocation as a leadership function linked to performance (e.g., Fernandez Castelao et al., 2011; Tschan et al., 2011); following this body of work, I focus here on task initiation, allocation and execution, considering them key processes in the emergency event, and unpack the ways in which professionals other than the senior doctor enact their role. In doing so, I draw on Angouri (2018), who argues that 'by taking on and allocating tasks the interactants also successfully construct their team membership, reaffirm their position in the team and its practices for managing routine activities' (p. 172) and that 'task allocation is related to the way an organisation manages its routine and nonroutine activities and the way hierarchies are enacted or resisted' (p. 170).

The main actions that need to be performed upon the patient's seizure are the activation of the emergency buzzer to call for help and the turn of the patient into the recovery position. Once these are performed and the whole team is present, the three main tasks to be executed are the following: administration of oxygen, IV access, and the magnesium sulfate-related task; see

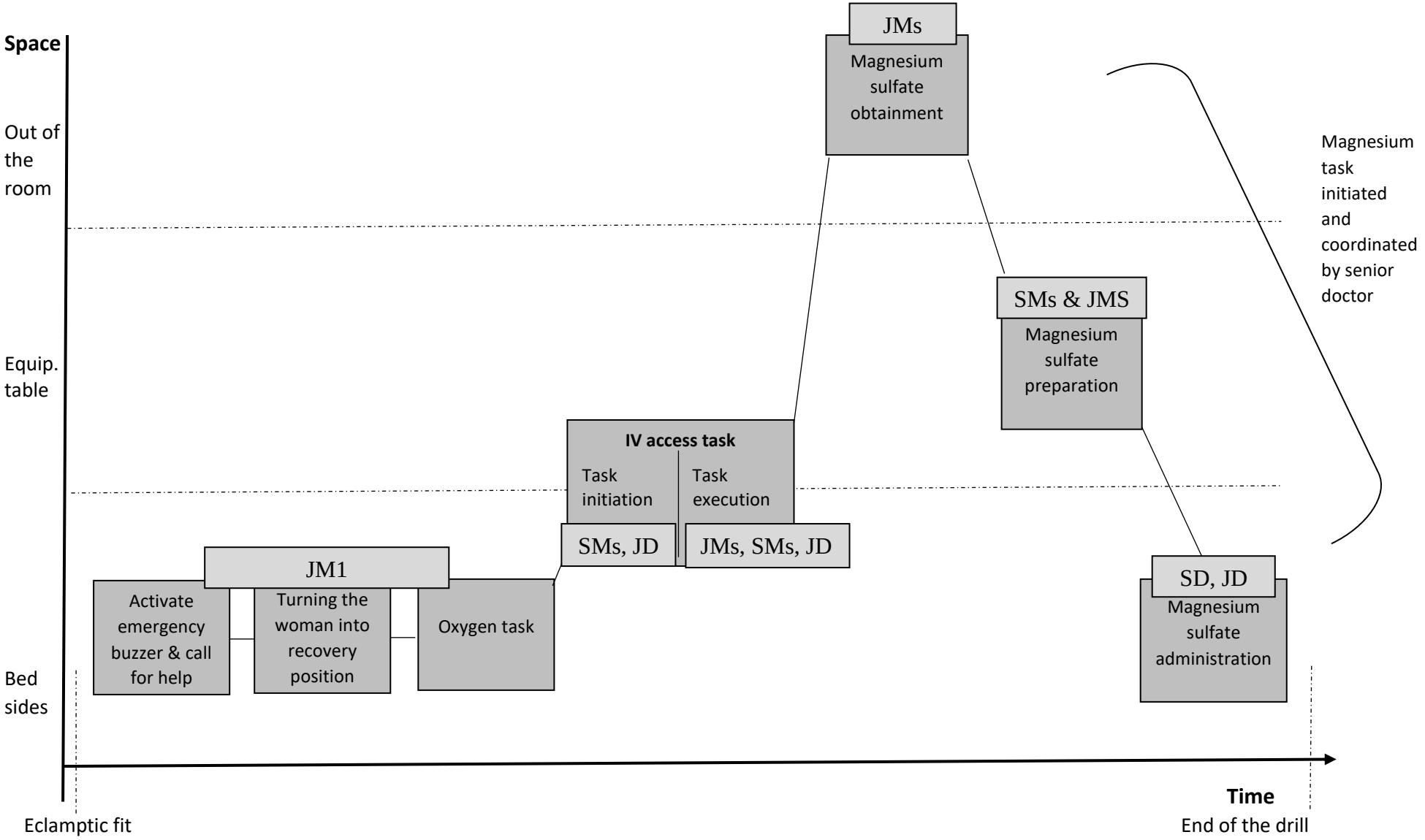
Siassakos et al. 2011). The latter consists of three phases: magnesium obtainment, preparation, and administration. Figure 8.1 below sunnarises the sequence of the main actions and tasks that need to be performed upon patient's seizure.

Figure 8.1. Sequence of main tasks upon seizure.



To obtain a more holistic insight into how teams work, I monitored the key agents allocating and executing the above tasks, paying attention to their spatiotemporal dimensions (e.g., from where they are issued; where they are executed; and at what stage, following the methodology already discussed earlier). Figure 8.2 below depicts the task-related routines I identified in the *SaFE* dataset. To illustrate their spatiotemporal dimensions, I have placed the required tasks (shown in dark grey) on a horizontal axis representing the time from the eclamptic fit to the end of the scenario, while the vertical axis stands for the main material zones of the emergency room (see Chapter 5). Figure 8.2 also includes the main agents identified for each task (shown in lighter grey). Finally, Figure 8.2 and the discussion throughout the chapter differentiates, where required, between task initiation and task execution (see, for instance, the IV access); the difference between performing a task and being accountable for it is pointed out by Goodwin (2009) and is a pattern found across the *SaFE* data.

Figure 8.2. Spatiotemporal task-related routines in the *SaFE* data.


Space
Out of the room
Equip. table
Bed sides
JMs
Magnesium sulfate obtainment
SMs & JMS
Magnesium sulfate preparation
SD, JD
Magnesium sulfate administration
Magnesium task initiated and coordinated by senior doctor
IV access task
Task initiation
Task execution
SMs, JD
JMs, SMs, JD
JM1
Activate emergency buzzer & call for help
Turning the woman into recovery position
Oxygen task
Time
Eclamptic fit
End of the drill

To link back to the interaction rituals I discussed in Chapter 7 in the light of Figure 8.2, the professional routines depicted above refer to a more abstract level comparing to the rituals, thus encompassing the specific behaviours I considered rituals (see Section 7.6). If, for instance, returning to the example I provided in Section 7.6, the act of specifying an addressee when making a request is an interaction ritual, the professional routine would contextualise this behaviour as part of a larger practice; this would entail that for a junior midwife to make a request that would have the desired uptake, it would not only be required to specify an addressee, but to do so while standing at the bedside at the stage of the oxygen administration, for which she has been identified as the main agent (see Figure 8.2), and while also maintaining other interaction rituals, too. Similarly, Laura's difficulty to claim a leadership role, in Excerpt 7.3, is not only the result of leaving most of her utterances incomplete, which I have discussed as a broken interaction ritual; this is only a part of her deviation of the professional routines. To maintain the professional routines, Laura would have to position in a different material zone, claim a more silent/verbal role in different stages of the encounter, not 'share' leadership with Mike, as I discussed in that excerpt, and so on; I return to the relationship between these two concepts and how they can be brought together to increase our understanding of complex settings in Chapter 9.

I now turn to discuss my core observations in relation to the two main tasks (oxygen administration and IV access) in light of the data.

8.4. Maintenance of professional routines in teams with good clinical performance

8.4.1. Initial actions and oxygen task

The first part of the emergency drills is straightforward, without exhibiting great variation, at least in teams that managed to administer magnesium within the given time window ('good' clinical performance; cf. Table 4.2). A possible explanation for this pattern is that this stage does not require collaboration among multiple actors. This is in line with previous work which provides ample evidence on the fact that variation occurs in teamwork rather than the knowledge and skills of individual actors (e.g., Siassakos et al., 2010). To provide a bit of context, upon the eclamptic fit, a junior midwife (JM1) is always in the room; this is the only staff member who has been provided with the simulation script (see Section 4.4.1). The junior midwife present at the seizure is expected to activate the emergency buzzer and call for help, stating whom they need; after that,

she is expected to turn the woman into recovery position and perform the first task, which is the administration of oxygen.[14]

Next, I turn to the beginning of Case 9 (one of the teams with the best clinical performance, where magnesium administered in less than 5 minutes; Table 4.2). This case is particularly interesting, as the junior doctor enters the room quite early, at the onset of the seizure. Thus, the episode provides an insight into the ways in which the junior doctor and the junior midwife work together, maintaining the professional routine according to which the midwife is responsible for the initial tasks.

Excerpt 8.1. Activation of the emergency buzzer & oxygen task

Instance 1

1		((patient starts fitting))
2	JM1	can I get a senior doctor
3		and a midwife please↑ (.)
4		LUCY stay on your side

Instance 2

5		((JD enters the room))
6	JD	oh (.) hi-
7	JM1	-can I have a (bell)
8		plea:se↑-

[14] I use female pronouns here because all the midwives in the *SaFE* dataset are females.

Instance 3

9 JD yes-
10 JM1 -CALL an emergency-

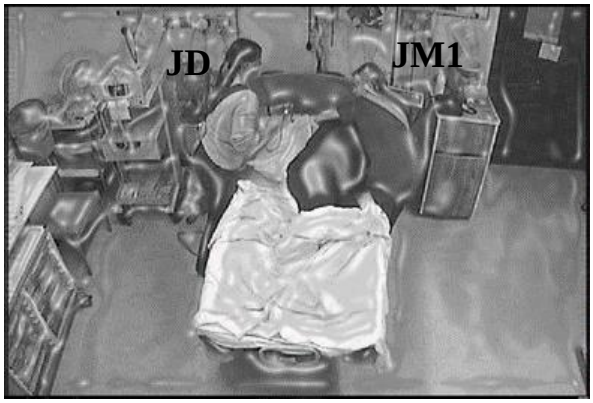
Instance 4

11 JD -I'm pressing the emergency
12 buzzer↑ (0.5) can I get some
13 extra help↑

Instance 5

21 (lines 14-20 are omitted)
22 JD fine [(indec)
23 JM1 [it just started
24 ((the fit)) literally as
25 you walked through the
26 door
27 JD OK fine

Instance 6



28 JM1 can you pass me the airway:
29 JD ((she passes the tool))
30 that's it
31 JM1 lovely
32 JD yeah

The patient starts fitting when the junior midwife 1 is the only staff member present (Instance 1), in line with the scenario, but almost immediately the junior doctor also enters the room (Instance 2). In line 7, the junior midwife interrupts the junior doctor, raising a question aiming to issue a directive relevant to the activation of the emergency buzzer (lines 7-8). Although the junior doctor

aligns with her, answering in the affirmative (line 9), the junior midwife illustrates the urgency of the situation through the repetition of her directive, in line 10: -*CALL an emergency*. This time, the directive is uttered in its prototypical form, in imperative, while the raise of volume at the beginning of the utterance further intensifies the directive. The junior midwife here mobilises the exact strategies that have been identified earlier as the team leaders' ways of intensifying a directive (Chapter 6): repetition; raise of volume; shifting to more direct forms of directives over time (Figure 6.4). Note, also, that the junior midwife also controls the floor in similar ways with the senior doctors; turn-competitive interruptions (lines 7, 10), and raise of volume as a brief illustration of acoustic force (line 10).

In cases in which the junior midwife is the only member present during the eclamptic fit, the midwife would normally activate the emergency buzzer and call for help. With an extra member in the room, the junior midwife does not have to leave the patient's side, marking the left bedside as her zone; she is the one, however, initiating the required actions, maintaining the professional routine shown in Figure 8.2, even though this entails issuing directives to a more senior role (in this case, the junior doctor), which is not the norm in the data (see also Chapter 6).

As the episode progresses, the junior midwife updates the junior doctor about the time of the fit (Instance 5), and then proceeds to the task of oxygen administration, managing the topical agenda. To do so, she issues a directive in modal interrogative form: *can you pass me the airway:* (line 28; cf. Chapter 7 for the ways senior doctors manage the topical agenda in similar ways). What is significant in Instance 6 is that the junior doctor has already taken the object relevant to the task to be executed (the oxygen mask) and, by the time the junior midwife raises the question, the junior doctor already projects her hand in a gesture aiming at passing the mask. In doing so, the two members successfully coordinate talk with body movements in order to create interactionally shared space with respect to the projected activity (Mondada, 2009), demonstrating their familiarisation with the professional routines.

Excerpt 8.1 provides a good insight into the ways staff members maintain the professional routine indicating that the junior midwife is in the lead of this part. The junior midwife mobilises the exact strategies identified in the previous chapters for doing leadership; she controls the floor with interruptions and brief raise of volume, and issues directives which are intensified over time through repetition and more forceful formations; all these while positioning self in a central

material zone, at the left bedside. The junior doctor, on the other hand, although more senior in professional hierarchy, validates the junior midwife as the key agent of this stage in the following ways: she instantly orients towards the midwife's directives and executes the requested tasks, while providing an affirmative response (line 9) and minimal attentional cues (lines 27, 32) as indicators of active listenership (Bennett and Jarvis, 1991).

Overall, by sticking to the professional routine even though the dynamic has changed with the junior doctor's early entrance in the room, the two team members collaborate well, and no stress indicators are observable in the episode. This is in line with earlier work, which has shown that the maintenance of routines in organisations reduces uncertainty and stress (e.g., Greenhalgh, 2008).

Having discussed the oxygen-related routine, I now move on to the second task required in handling eclampsia, the IV access.

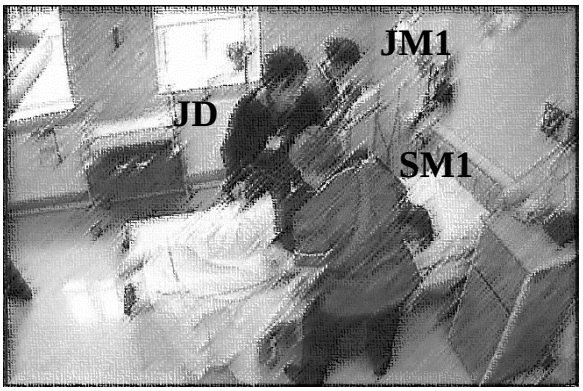
8.4.2. IV access task

To demonstrate that the variability in who claims a leadership role can be attributed to the identified spatiomaterial routines shown in Figure 8.2, rather than being the result of different teams' ways of working, I follow the same team through the oxygen task, too.

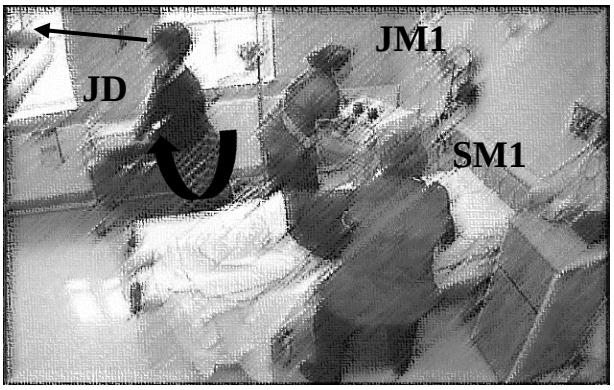
The IV access is the first task that needs to be executed after the whole team has entered the room. In the examined cases, a senior midwife or the junior doctor are the ones initiating/allocating the task, claiming responsibility of this task. The task's execution, however, varies across the data, with possible staff members performing the IV access including senior midwives, junior doctors, and junior midwives.

Excerpt 8.2. IV access task

Instance 1

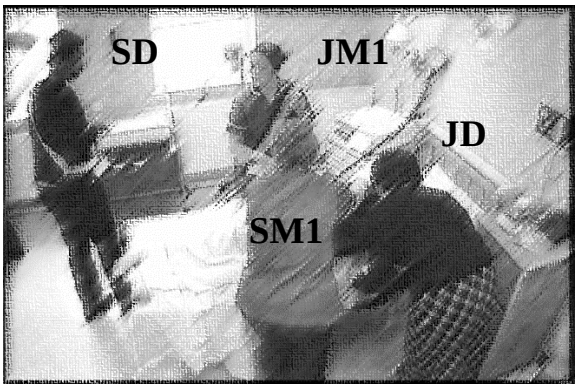


Instance 2



1	SM1	OK you're doing fine (.)
2		[you're doing fine
3	JD	[have we got any IV access↑
4	SM1	no
5	JD	no (.) OK (.) IV access we
6		need an IV canula and
7		bloods plea:se

Instance 3



32		((lines omitted))
33	JD	alright my dea::r↑ I'm just
34		gonna put (.) put a venflon
35		in (.) you're just gonna
36		feel a sharp scratch

In Instance 1, the junior doctor stands at the left bedside and overlaps with the senior midwife when introducing the IV access task by raising a question in line 3 (*have we got any IV access*↑). In managing the topical agenda, she uses the collective pronoun *we* to establish a collective identity with the rest of the team and formats her utterance as an information-seeking question; I have

provided examples of senior doctors using collective pronouns earlier (Excerpt 7.1). Possibly interpreting the junior doctor's question as an original information-seeking request, the team does not take responsibility for the execution of the IV task, as in line 4, the senior midwife briefly responds with a negative particle (*no*). The junior doctor continues negotiating the IV access in lines 5-7; this time, she shifts from the information-seeking question to a canonical declarative (see Figure 6.2): *we need an IV canula and bloods plea:se*. The choice of a directive not specifying an addressee and the collective pronoun *we*, combined with a prolonged *please*, are all strategies for softening a directive (see examples in Section 6.4). Employing strategies to mitigate/soften a request is a pattern frequently found across datasets in staff members other than the designated team leaders; this is not the case with team leaders, who, as I discussed extensively in Section 6.5, tend to be more direct, particularly in high-risk moments and/or as time passes by.

Turning to the use of material space, the junior doctor' transition from the bedside to the equipment table in Instance 2 (see turn of body torso and eye direction) illustrates her familiarisation with the identified spatiotemporal routines (Figure 8.2); the IV access is prepared at the equipment table and is executed from the bedsides. The team works on tasks non-related to the IV for some time (these are the omitted lines), and, later in the episode, in Instance 3, the junior doctor shifts back to a central zone, this time at the left bedside; her transition from one material zone to another marks also the transition from the IV preparation (at the equipment table) to its execution (at the bedside). Upon the transition's completion, the junior doctor is the one performing the task while updating the patient, in lines 33-36.

Significant for the discussion here is that, in Instance 3, the senior doctor is also present; although the designated team leader, she positions self in a rather peripheral material zone, at the bottom-right corner of the bed, while staying silent, acknowledging junior doctor's authority to coordinate the IV task. As shown in Figure 8.2, the IV access task allocation/execution is not a task for which the senior doctor is the main agent in the *SaFE* dataset; the senior doctor's familiarisation and compliance with this routine is manifested verbally and is also inscribed in the material space (cf. team leader's central position in Excerpt 7.1).

Overall, in Excerpt 8.2 the junior doctor claims responsibility of the IV access mobilising similar strategies with the team leaders as did the junior midwife in Excerpt 8.1; the junior doctor manages the topical agenda and issues directives (although milder in form, perhaps because of their

institutional roles), while maintaining a central material zone. The senior doctor, while present in the room, validates the junior doctor's leadership role at this stage of the event, by remaining silent and taking some physical distance from the bed; once again, the maintenance of the professional routine seems to work effectively, as the task is executed quickly without any noticeable interactional problems.

The third, and last task after the oxygen administration and IV access in handling eclampsia, is the administration of the magnesium; although this constitutes the largest part of the *SaFE* drills I do not elaborate here on this, as, as shown in Figure 8.2, the staff member leading this task is the senior doctor and I have covered the ways senior doctors *do* leadership in all the previous analysis chapters (Chapters 5-7). In the next section, I turn to discussing cases in which the identified professional routines are disrupted, and the compensation strategies mobilised by staff members.

8.5. Disruption of professional routines and compensation strategies

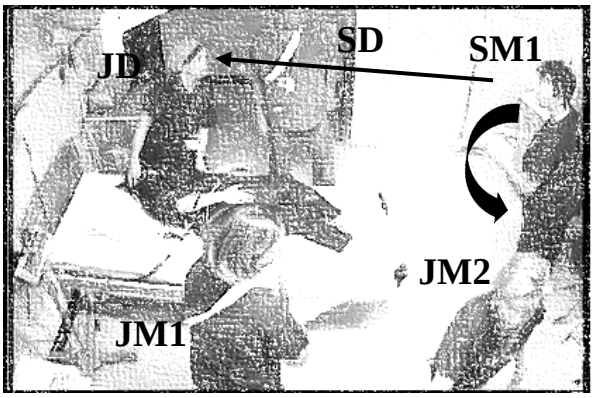
Previous work has indicated the flexible and emergent nature of routines (Greenhalgh, 2008; Schegloff, 1986); this section is concerned with cases in which the routines are disrupted in the *SaFE* dataset. I begin with looking at such disruptions related to the task of the magnesium's initiation.

8.5.1. Initiation of magnesium

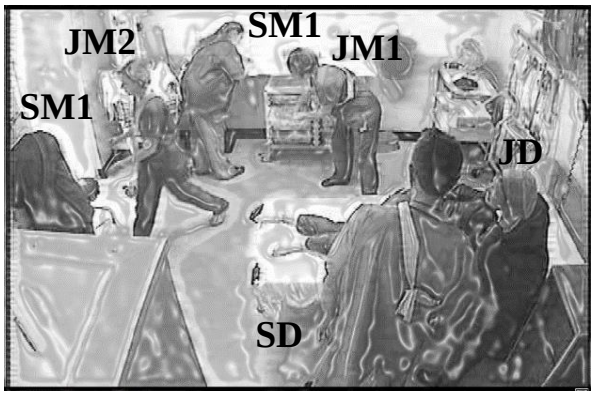
I have already discussed in Chapter 7 Case 5 as a case in which the senior doctor deviated from the expected leadership behaviour, breaking the interaction ritual; I draw below on the same team in order to unpack how staff members adjust to the team leader's deviation in relation to the magnesium task. That Excerpt 8.3 is from the same team I discussed in Excerpt 7.5 as an example of broken interaction rituals, also illuminates the relationship between rituals and routines, illustrating how professional routines can be understood as encompassing the rituals; having shown how the senior doctor breaks the identified interaction rituals in Excerpt 7.5, I discuss, below, the disruption which is evident also in the larger patterns related to main agents, space, and time – the routines.

Excerpt 8.3. Initiation of the magnesium task

Instance 1



Instance 2



1	SM1	-do you wa:nt the (1.0)	4	((3.0 mumbled overlaps))
2		[magnesium started off		
3	JD	[yeah mag sulf		

Instance 3

5	JD	she's waking now (.) little
6		bit of a (indec) (.) YOU OK
7		LUCY you hearing me OK↑
8		((patient sighs))
9		fine (.) well done
10	JM1	she was five centimetres half
11		an [hour ago u:m
12	JM2	[mag sulf (.) fifty percent
13		(.) two (indec) and seven

In Excerpt 8.3, the team discusses about the patient's age figure (not shown in the excerpt) when the senior midwife 1, who works at the equipment table, turns her torso and sets the agenda by introducing the topic of the magnesium (Instance 1, lines 1-2). What is important here is that the

magnesium task is normally initiated by the senior doctor, and then is executed by other team members (cf. Figure 8.2). This is not the case here, however, as the senior doctor appears silent for large parts of the episode (see also excerpt 7.4 in chapter 7). To compensate for the disruption, the senior midwife 1 steps into the senior doctor's role and claims the floor with an interruption, raising a question relevant to the task (lines 1-2); both the interruption for claiming the floor and the question for setting the topical agenda are well documented leadership strategies in the previous chapters. It is also worth noting that, in Instance 1, the senior midwife addresses the question to the junior doctor, establishing direct eye contact with her, although the senior doctor is also present. The other team members also align to this; the junior doctor's uptake is instant and confirms the senior midwife (line 3), while the senior doctor remains silent and a bit further from the bed, taking on a peripheral role and acknowledging junior doctor's right to talk.

In the second instance, the junior midwife 2 maintains the professional routine indicating that the preparation of the magnesium sulfate is a shared responsibility between a junior and a senior midwife and as soon as the need for the magnesium sulfate is confirmed, she corresponds in an embodied way, turning her torso and immediately shifting to the preferred locus for this task –the equipment table. The team works on other issues in lines 5-11, until the junior midwife 2 re-introduces the topic of the magnesium, updating the senior midwife who stands next to her, at the equipment table.

Overall, Excerpt 8.3 is indicative of how the junior doctor and senior midwives led the magnesium initiation, a task canonically associated with senior doctors in the dataset, while the senior doctor remained silent and in a peripheral material zone. To compensate for this disruption, the team shared the task amongst them (senior midwife 1; junior doctor; see also junior midwife 2), adopting the leadership strategies identified in the previous chapters: marking central material zones/zones relevant to the task at hand; interruptions for controlling the floor; raising questions for setting the topical agenda. That other team members step in the senior doctor's role drawing on the same discursive strategies could be a reason why the team manages to administer magnesium early, scoring high in the clinical ranking.

I illustrated above the ways in which the junior doctor and the senior midwives claim a leadership role in relation to the magnesium's initiation, which is canonically associated with the role of the

senior doctor in the data; to illustrate the consistency of my observations, I draw on a different team below.

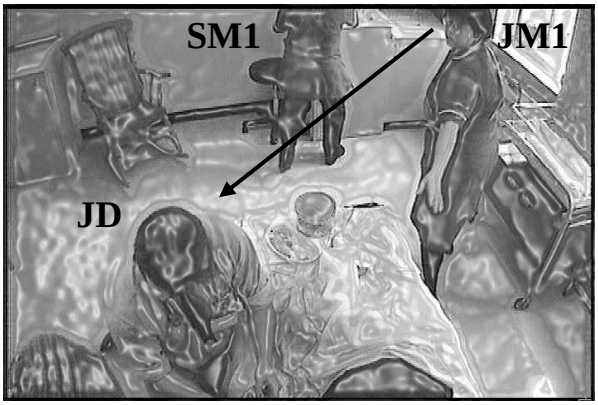
8.5.2. Administration of magnesium

I draw below on Case 7, in which the team has, again, a good clinical performance (magnesium administered in 5-6 minutes; Table 4.2). This is a team I have not discussed in the previous chapters in which I focused on senior doctors' ways of *doing* leadership as, as I will illustrate below, the senior doctor here does not claim a leadership role. The junior doctor also remains more oriented towards the patient and is not involved in the magnesium task, in contrast to the junior doctor in Excerpt 8.3.

Excerpt 8.4. Magnesium initiation and administration

Instance 1

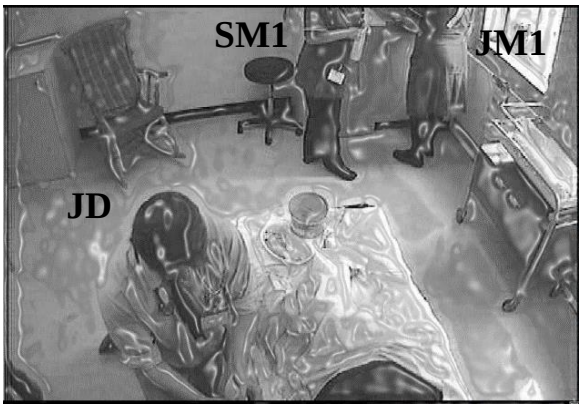
Instance 2



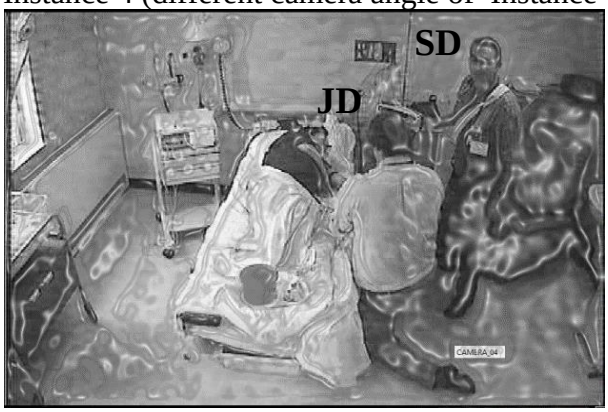
1	SD	((talking to the patient))	11	JM1	((talking to the patient))
2		alright (.) OK (.) it seems	12		well done (1.0) MAGNESIUM↑
3		you've had a convulsion[15] due	13	SD	yeah (.) can we get four
4		to your blood pressure	14		grams of magnesium sulfate
5		a:lright↑ (1.0) so we're just	15		(IV) (.) running every
6		gonna give you some medicine	16		twenty minutes through the
7		to prevent it from happening	17		vein here↑
8		again a:lright↑ (.) OK↑ (.)	18		(4.0)
9		e:hm (.)			
10		((he looks around the room))			

[15] The term *convulsion* is used interchangeably with *seizure*.

Instance 3



Instance 4 (different camera angle of Instance 3)

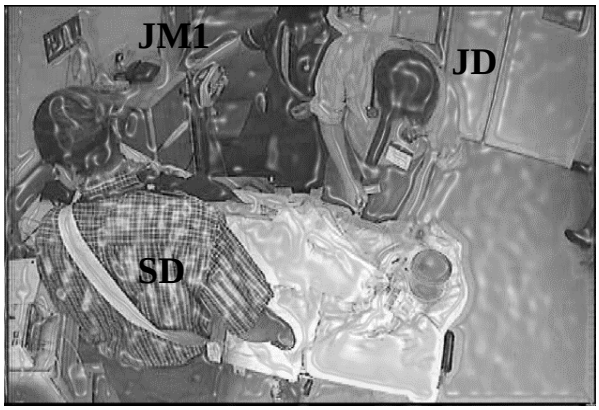


19	SM1	should we call the
20		anaesthetists
21	SD	[yeah
22	JM1	[I ca:lled (.) I did ask for
23		them earlier when I walked
24		in

Instance 5

25		((lines are omitted))
26	SM2	mag sulf↑

Instance 6



27	JM1	magnesium sulfate is
28		(indec) [sixteen
29	SD	[e:hm-
30	JM1	-mils an [hour
31	SD	[OK
32	SM2	sixteen mils an hour (.) yep

We join the team in Excerpt 8.4 when the senior doctor updates the patient on the eclamptic fit; although he informs her about the need of medication (*we're just gonna give you some medicine*, lines 5-6), he does not attempt to initiate the magnesium task or allocate it to any of the team

members. His utterance in lines 1-9 also contains the following string of mitigation markers: several brief pauses; pragmatic markers *OK* and *alright* which seem to have a gap-filling function in line 2 (for a discussion on the multiple functions of such pragmatic markers see Gaines, 2011; Huddlestone and Fairhurst, 2013); and a prolonged hedge followed by a brief pause in line 9: *e:hm: (.).* When adding to these the utterance's preface with *it seems* (line 2), the tag questions (lines 5, 8), and the modal adverb *just*, all of which are well documented strategies for softening a directive in the literature (for nurses' softening strategies see Holmes and Major, 2002), it becomes evident that the senior doctor constructs a hesitant persona (cf. with the senior doctor in Excerpt 6.1), and does not claim a leadership role here, disrupting the professional routine which dictates that senior doctors are the ones canonically initiating the magnesium task.

The junior midwife, however, appears familiar with the routine and picks up on what is the next step in line 12: *MAGNESIUM*↑. Her stepping in on the senior doctor's role for the initiation of the task is achieved in the default leaders' ways I identified earlier (Excerpts 6.1 and 7.1); to introduce a new topic, she raises a brief question while raising her voice's volume, and transitions from the bedside to the equipment table (the identified material zone for magnesium preparation), while establishing eye contact with the senior doctor (Instance 2). Note that the junior midwives are overall rather silent in the dataset, particularly in these late stages of the episode, in which senior members are present. Previous work has demonstrated that routines are interrelated and overlap with other routines (e.g., Becker, 2004); the junior midwife's behaviour exhibited here, which is canonically associated with more senior roles, could be related to the fact that the senior doctor's performance is also not the one anticipated, leaving a gap that needs to be filled. Such marked behaviours that are deviating from the norm (see discussion in Section 7.6), are open to interpretation and it could be argued that they are attributed, to a degree, to the simulated nature of the emergencies (less at stake, less sense of urgency and so on); what is significant, however, is the consistency in the team's uptake and the ways in which other staff members compensate for that initial disruption drawing on similar discursive strategies in both the simulated and real-life encounters.

Moving on, in lines 13-17, the senior doctor indeed confirms that the magnesium should be prepared and provides relevant information, which is followed by a four-second pause (line 18). Again, the long pause does not indicate the senior doctor's intention to continue holding the floor; as the senior midwife 1 and the junior midwife 1 stand at the equipment table and prepare the

magnesium, the senior midwife introduces a new topic by raising a question in a speaker-inclusive modal interrogative: *should we call the anaesthetists* (lines 19-20). In doing so, she turns her torso and looks at the senior doctor, targeting him as a possible recipient. As shown in instance 4, which is a different angle of instance 3, the senior doctor establishes eye contact with her and agrees again, in line 21. In doing so, however, he overlaps with the junior midwife 1, who confirms, in lines 22-24, that she has already done that; both the senior midwife introducing the topic and the junior midwife having called the anaesthetist without being requested to do so, are instances of more junior members stepping in and taking initiative when other roles deviate from the norms.

In the lines omitted the team works on unrelated handovers until the need for magnesium is re-introduced again in Instance 5, this time by senior midwife 2: *mag sulf*↑ (line 26). Contrary to the identified professional routines, the only one answering is the junior midwife 1 (lines 27-28), who stands at the left bedside and is the one who administers the magnesium, a task ordinarily completed by the senior or the junior doctor. In line 29 the senior doctor attempts to claim the floor with a prolonged hedge (*e:hm*); the mitigation allows junior midwife 1 to reclaim the floor in line 30.

Overall, in Excerpt 8.4 the senior doctor appears hesitant and does not initiate the magnesium initiation, disrupting the routine shown in Figure 8.2. This might be a contributing factor allowing/pushing junior midwife 1 and senior midwife 1 to claim a central role, leading the magnesium initiation and administration. Although not the norm, particularly for the junior midwife who is at the bottom of the professional hierarchy (Figure 4.2), deviating from a given routine has been discussed elsewhere as a way of claiming power, too; Angouri and Mondada (2017), for instance, draw attention to the ways interactants claim power through challenging established routines and ways of being.

Taken together, excerpts 8.1 and 8.2 provide an insight into the oxygen- and IV access-related routines, and the ways in which staff members collaborate for their maintenance even when changes in the multi-actor system occur. Excerpts 3 and 4, on the other hand, illustrate the flexible and emergent nature of routines, in line with previous literature (Hindmarsh and Pilnick, 2007; Greenhalgh, 2008), and the ways in which the team members in teams with good clinical performance mutually adjust to one another and find ways to compensate when the routines are disrupted. The main roles that exhibit compensation strategies are usually the senior midwives and

the junior doctor (cf. excerpt 8.3), although junior midwives can also claim power, as shown in excerpt 8.4. This adjustability of professional roles results to smooth collaboration, with no evident interactional trouble, and may be relevant to the high clinical performance of the teams.

I wrap up my core observations in the discussion below.

8.6. Discussion

In the previous chapters I was primarily concerned with the role of the senior doctors, as they are the ones more frequently being given and *doing* a leadership role in the data. I have argued, however, that leadership does not necessarily or exclusively come from the designated team leader. To start unpacking this further, in this chapter I shifted my focus to the ways staff members other than the senior doctor *do* their role, employing the concept of professional routines. Drawing on previous work that identified task allocation as a leadership function linked to performance (relevant discussion in Section 3.6), I zoomed in on how tasks are initiated, allocated, and executed across time and space in a routine fashion. To do so, I employed the concept of professional routines, originally stemming from organisation studies, and illustrated how it can be a useful tool for unpacking the nuances of complex healthcare contexts under an IS approach. By bringing in the concepts of interaction rituals in Chapter 7 and professional routines here, I zoomed out of the study of linguistic strategies in and of themselves; operating at this meso level which is line with the IS approach, is not only significant for unpacking the nuances of leadership in the emergency setting, but also builds possible bridges with other disciplines; I return to this point in the discussion (Chapter 9).

A close reading of the data yielded consistent patterns in relation to task performance in space and time, the so-called spatiotemporal routines, while their maintenance (or disruption) has been shown to be an interactional accomplishment shared amongst the team. My findings confirm previous work that has drawn connections between task allocation and leadership (e.g., Fernandez Castelao et al. 2011; Tschan et al. 2011), but, more importantly, illustrate that task allocation is not exclusively reserved for the institutional leader – the senior doctor in the *SaFE* context – (for a discussion see Schmutz et al., 2015). Rather, task allocation (as well as initiation and execution) is situated in time and space and their claim of responsibility is a collaborative behaviour interactionally achieved by various professional roles.

Thus, a leadership role is not always and normatively linked to the senior doctor from the beginning to the end of the emergency drill. Other professional roles claim responsibility for certain tasks, too, and position self as the main agent at certain spatiotemporal points. Further, in line with previous literature (Greenhalgh, 2008; Schegloff, 1986), my analysis demonstrates that routines are flexible but also systematic, and team members develop compensation strategies when the routines are disrupted (e.g., when senior doctors deviate from their leadership role), with the most agile professional roles being the senior midwives and the junior doctor. In such cases more junior members step into the team leader's role, drawing on the same multimodal discursive strategies with the designated team leaders, including the following: directives for allocating tasks which can be intensified or become more direct over time; questions allocating tasks and turns and setting the topical agenda; positioning in central material zones or zones relevant to the task to be executed; and interruptions and raising the voice's volume for controlling the floor (Chapters 5-7 for a discussion).

The fact that professional roles, other than senior doctors, exhibit the exact leadership behaviours that I identified in the previous chapters in a prototypical manner, further strengthens the argument that these are indeed discursive strategies mobilised for *doing* leadership; that other staff members draw on those to challenge the *status quo* and claim a leadership role entails that they recognise, perpetuate through use, and therefore reinforce them as leadership strategies. Further, that junior team members are also able to draw on those strategies in certain spatiotemporal points, such as the start of the drill, but step back entirely at later stages, illustrates the point I raised throughout the previous chapters; this set of discursive strategies is not necessarily tied to the role of senior doctors (i.e., it is not included in their professional training, university curricula and so on), but rather, it is the team leaders' way of *doing*, although the two very often overlap; this further points to the interactional accomplishment of leadership. The discussion expands sociolinguistic leadership studies and provides a useful tool for studies in healthcare but also other emergency settings, illustrating a complexity that is not captured in organisational charts (further in Chapter 9).

In the next and final chapter of this thesis, I bring all my findings together and further open the discussion, paying attention to potential impact and future directions.

Chapter 9: Discussion and Concluding remarks

This final chapter brings all the previous chapters together and draws attention to the potential applicability of my work. I start with providing an overview of the previous chapters, briefly summarising the key findings of the analysis, as well as illustrating how the research aim and questions of this thesis have been addressed. I then turn to discussing the potential contribution of my work, framing the discussion in terms of the theoretical, methodological, and applied implications. I close the chapter by providing recommendations for further research.

9.1 Summary of the thesis

This thesis aimed at shedding light on how leadership is claimed, negotiated, and challenged discursively in ad hoc teams in the context of medical emergencies, with a particular focus on the enactment of professional roles in the material space. It makes a theoretical, methodological, and applied contribution which I am discussing in turn below, following the thesis' overview.

Starting with a review of the core concepts that I draw upon for the theoretical and analytical framing of my work, in Chapter 2, I provided an overview of the field on multimodal interaction addressing issues of terminology and drawing attention to the ways in which the various semiotic resources are interrelated, rather than distinct modes of *doing* (Table 2.1). Zooming in on previous work in the secondary healthcare context, I identified a gap in studies taking into account spatial resources, particularly positioning in the material space, which my research aims to address. I provided a critical reading of the main approaches to multimodal discourse analysis, namely, SFL, MDA, and CA, and placed particular emphasis in sketching the interfaces between those and creating links with IS, which is the approach taken in this thesis (Table 2.3). Although each approach prioritises different meaning-making resources and provides distinct tools, with IS being conceptually closer to CA and MDA, their synthesis brought to the fore the fact that interaction is always multimodal, making a strong case for further research on multimodality.

Moving forward, I examined the multifaceted concept of leadership (Chapter 3), illustrating the discursive approach taken here, and reviewed previous work in healthcare leadership in the secondary context. Paying particular attention to ethnographic approaches, I made a case for multi-method designs that provide us with rich insights into the local environment, increasing the scope of interpretation, and identified a gap in linguistic studies conducted in emergency healthcare

contexts (cf. Slade et al., 2015, and their multi-site, multi-method design for the study of the ED). Turning to the embodied performance of leadership, I drew attention to the fact that studies taking an interactional approach to leadership still tend to prioritise talk over other embodied resources; the literature review illustrated that when it comes to the use of material space, there is almost a complete void of studies, which this thesis aims to address. For the last part of Chapter 3, I framed the core elements of leadership that have been addressed in my research, namely, directives, questions, and the use of the material space, and pointed to their interrelated relationship (Figure 3.1).

Chapter 4 was concerned with my methodological and analytical approach. I illustrated the research design and presented the two emergency contexts under investigation (video data of simulated obstetric emergencies and ethnographic observations and audio recordings of real-life trauma emergencies), as well as the reasons and value added of bringing them together. I exemplified the methodological innovation of combining datasets under the same analytical principles as well as the potential for opening avenues for further research, which I discuss in detail in the methodological contribution below. In illustrating the IS approach, I demonstrated how the different datasets and data analysis methods are woven together under the holistic approach taken here (Figure 4.7). Although IS has not been traditionally used for conducting multimodal discourse analysis (Table 2.3), I made a case for the relevance and the appropriateness of IS as a framework for looking into cues multimodally in dynamic and complex settings where power asymmetries constitute the norm, illustrating how IS operates at the interface of the micro- and macro-level, allowing us to bridge the embodied situated interactions and the institutional context (Figure 4.11).

In Chapter 5 I focused on staff members' ways of positioning in the material space, arguing that this is one of the core strategies for enacting their professional role (Figures 5.8 and 5.15). I laid the theoretical basis for studying space as integral to social action, and have expanded the discussion in linguistic and healthcare leadership studies by adding methodological and analytical tools for studying space. Specifically, I have shown the process by which key material zones were identified and monitored and the ways in which evidence on their consistency can be collected; more on this in the methodological contribution below. Overall, Chapter 5 provided a step-by-step approach for capturing, organising, and visualising professionals' material zones in the two contexts which share core characteristics but are also different. This provides a methodological

framework for studies in other, health and non-healthcare contexts, to landscape the material context in which professional teams operate.

Against this backdrop and with the focus laid primarily on the institutionally defined team leaders, I turned to the use of directives in the data, considering them prototypical discursive strategies for doing control and leadership (Chapter 6). Building on a rich body of work on directives in the workplace (e.g., Vine, 2001; Holmes and Stubbe, 2015), I revised the terminology shifting from 'directives' to 'directive strategies' to encompass not only the prototypical utterances in the imperative, but also other sentence structures that aim at allocating tasks and making requests, including, for instance, questions, conditionals, and gestures. Unlike previous IS healthcare studies on leadership, the multimodal approach adopted here enabled me to show patterns in form as well as function in relation to time and space. My analysis yielded a wide range of patterns which I organised in a spectrum from the most to the least forceful strategy (Figure 6.4). The findings demonstrate that forceful directive strategies (e.g., imperatives, declaratives) are preferred in this emergency context by team leaders, and are consistently intensified over time when they are not addressed immediately (Figure 6.2). In light of this evidence, I questioned the idea that non-directiveness is being applicable, or even desirable, as has been argued in relation to other professional settings, and argued that the appropriateness of directiveness is negotiated in situ in the emergency context. I provided a more nuanced reading of the emergency context and showed the relationship between time and the form and function of directive strategies, with the stage of the encounter crucially affecting the degree of forcefulness.

In the spectrum of directive strategies, interrogatives emerged as the most common strategy mobilised in my data, and I thus turned to examine those structures separately in Chapter 7. Following a similar line of thought with the way I defined directive strategies, I argued against a narrow definition of questions based on morpho/syntactic criteria that would only include the prototypical interrogatives, as this might limit our understanding of how questioning mechanisms work in context. Specifically, I broadened the scope by providing a definition of the 'question' which includes utterances with a rising intonation but no interrogative syntax, and utterances that illustrated teams' attempts to produce a *response*, even when these did not exhibit rising intonation and/or interrogative syntax (Figure 7.2). My findings demonstrate the multifunctional role of questions, which in itself is not new to the (socio)linguistic community; importantly however, the emerged typology of questions (Figure 7.1) demonstrates that the various professional roles

consistently draw on questions aiming at different pragmatic functions, with the most frequent questions raised by team leaders aiming at setting the topical agenda, allocating tasks, and seeking confirmation, all while uttered in a format that tends to elicit a positive response (e.g., polar questions; tag questions), and targeting certain addressees. Further, an original contribution to the existing scholarship is that I started addressing how the questions' verbal accomplishment is intertwined with their positioning in time and space. My analysis consistently illustrates that the accomplishment of questions in a given material space and at a given stage is part and parcel of their function. Key findings in relation to this include the importance of raising a question upon stabilisation in a central material zone, as well as the significance of information-seeking questions during a short diagnostic window; both strategies have been shown to help the team leader embody a leadership role. This expands earlier work on questions that has shed light on their role in claiming power and control (Aritz et al., 2017; Holmes and Chiles, 2010). Figure 7.5 provides a summary and illustration of the unbreakable relationship between questions' pragmatic function and the stage of the encounter.

For the last part of my analysis (Chapter 8), I zoomed out of the role of the institutionally defined, and typically senior, team leaders, in order to provide a more holistic understanding of the ways ad hoc teams consistently mobilise the identified discursive strategies for claiming a leadership role. I drew on a concept used primarily in organisation studies, but also sociology and CA, that of professional routines. Building on the concept of interaction rituals which I discussed in Chapter 7 as relevantly stable interactional rules that are easily identified by those in an insider role (e.g., raise information-seeking questions during the diagnostic window; raise confirmation-seeking questions towards the end of the drill), I employed here the concept of *professional routines*, which I used to refer to larger patterns which are again easily identifiable and employed by insiders in the specific professional context (e.g., who is responsible for what? Where? When?). In this sense, the latter ones include the former ones and, taken together, the two concepts shed light to multiple dimensions of *doing* a professional role. By employing the concept of routines, I identified key stages in the *SaFE* encounters and illustrated that these involve different professional roles as the key agents, with more junior professionals also drawing on directives, questions, and positioning in the material space to position self in a leadership position. I thus argued that leadership is negotiated and distributed across roles, depending on the stage of the encounter, and pushed this argument further by showing the ways in which the core strategies identified in this thesis are

systematically used across teams and datasets. Finally, I drew attention to the flexible but simultaneously robust nature of routines, providing an insight into how some professional roles are more flexible and employ compensation strategies when the routines are disrupted. The significance of this position for studying professional teams is twofold: first, it provides a useful lens for the study of agility (or lack of) of the roles that constitute the 'make up' of a professional team. Second, it paves the way for approaching the situated negotiation of role/responsibility in a dynamic and critical way, shifting away from static understandings of teams and capturing a complexity which is invisible in organisational charts; this is something healthcare institutions could start considering when designing training interventions. More, the relationship between routines' maintenance/disruption and teams' performance constitutes a fertile area for future scholarship to pick up on. I return to the significance of drawing on these two concepts in a linguistic study in future directions.

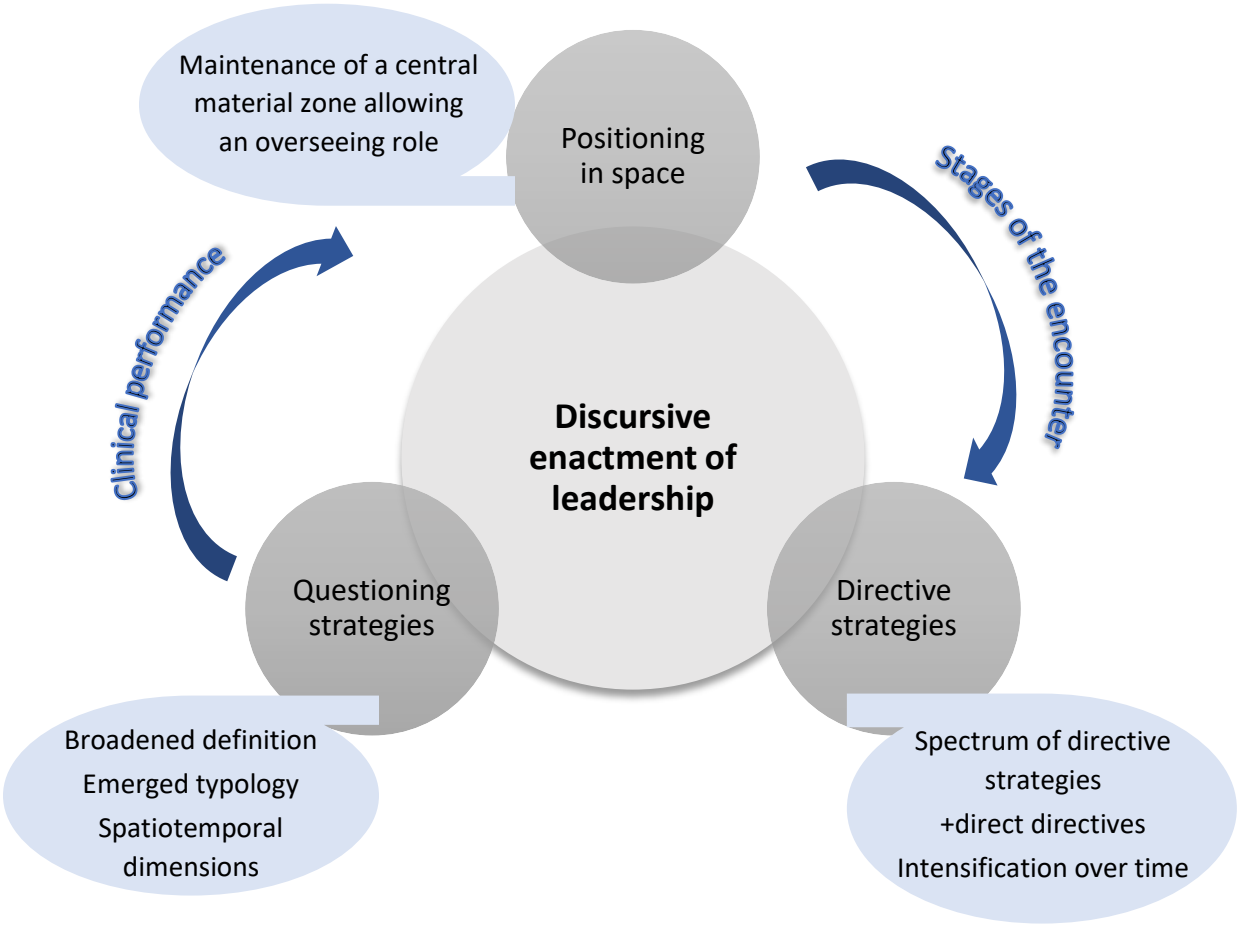
Overall, my study provides a rich linguistic insight into how ad hoc teams *do* leadership in medical emergencies. To the discursive achievement of leadership and its dynamic nature, which are already well established in the literature, the present work adds a detailed analysis of how certain discursive strategies are consistently mobilised for the accomplishment of leadership and control. Importantly, I have demonstrated throughout my analysis that positioning in the material space is part and parcel of claiming a leadership role (or not); and that the stage of the encounter is also an important factor for understanding the nuances of *doing* power.

More, in bringing together different datasets and data collection methods, I illustrated how each dataset can feed into and set the tone for the next one. The patterns identified in Chapters 5-7 are consistent across datasets, even though they differ in regard to team composition, material space, and, more generally, the emergency at hand (i.e., obstetric vs trauma emergencies); the systematicity across the datasets confirms the common ground between the two contexts and points to the potential relevance and applicability of my findings to other high-risk, emergency contexts.

Finally, the linguistic analysis conducted here has yielded consistent patterns between teams' interactional and clinical performance, as discussed in Chapters 5-8. This brings good evidence on how 'talking is doing', a principle widely known in the sociolinguistic community but still debated by the medical community, and points to the translational relevance of linguistic studies for medical training; I elaborate on the potential applied contribution of my work in turn below.

In Figure 9.1 I revise Figure 4.1, bringing together the core findings summarised above and the ways in which they feed into the research questions and holistically address the research aim of unpacking the discursive enactment of leadership. I then turn to discussing the potential applications of my work.

Figure 9.1. A matrix of factors enacting and affecting leadership in medical emergencies.

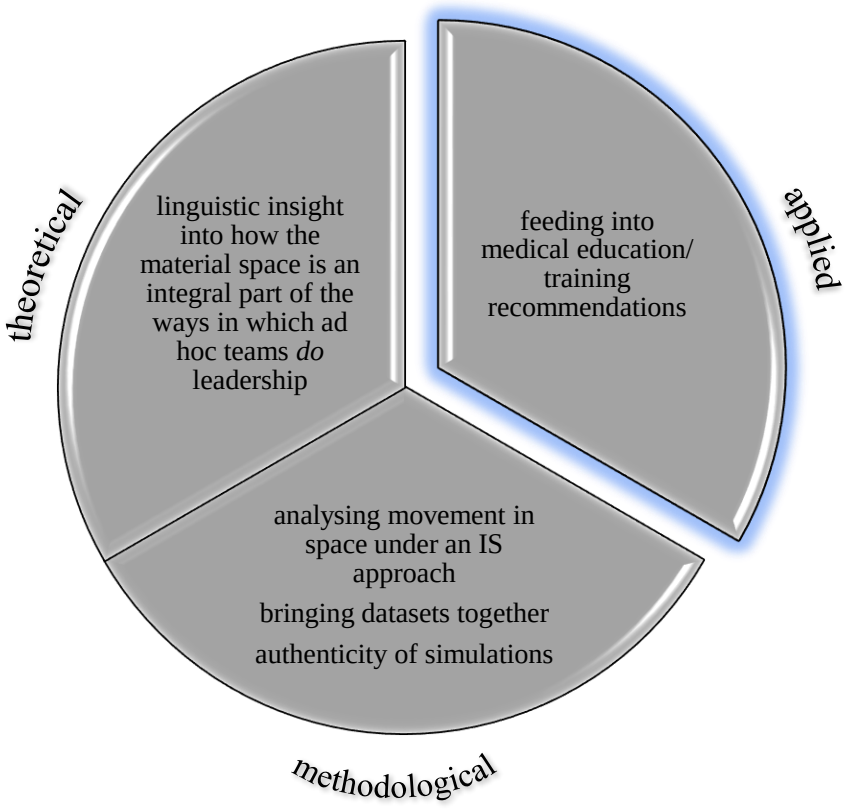


The figure illustrates core findings of the analysis in regard to how leadership is discursively enacted, the dynamic relationship between the identified strategies, and the ways in which they are intertwined with and feed into the clinical performance of the teams in the different stages of the encounter. It can be read as a heuristic for other linguistic studies in emergency healthcare and possibly applicable to other high-risk/high-pressure professional settings.

9.2 Theoretical, methodological, and applied contribution

Having presented my analysis and findings in Chapters 5-8, I now turn to discuss the contribution and potential applicability of my work. I have organised the discussion in terms of the theoretical, methodological, and applied implications; as the theoretical and methodological points have been covered in Chapters 5-8 in more detail, I am particularly concerned here with the implications for training, as illustrated in Figure 9.2 below.

Figure 9.2. Potential contribution of my research.



9.2.1. Theoretical contribution; towards a spatiotemporal understanding of leadership

I have taken here a discursive approach and argued in favour of the emergent nature of leadership in the situated interaction. Previous sociolinguistic work has already provided ample evidence on the multifaceted, distributed, and situated nature of leadership. My findings support and extend these claims, demonstrating that leadership in the emergency context is claimed, negotiated, and challenged discursively. Despite the rising interest in discursive approaches to leadership, the review of the literature indicated that there is relatively little research pinning down the ways in

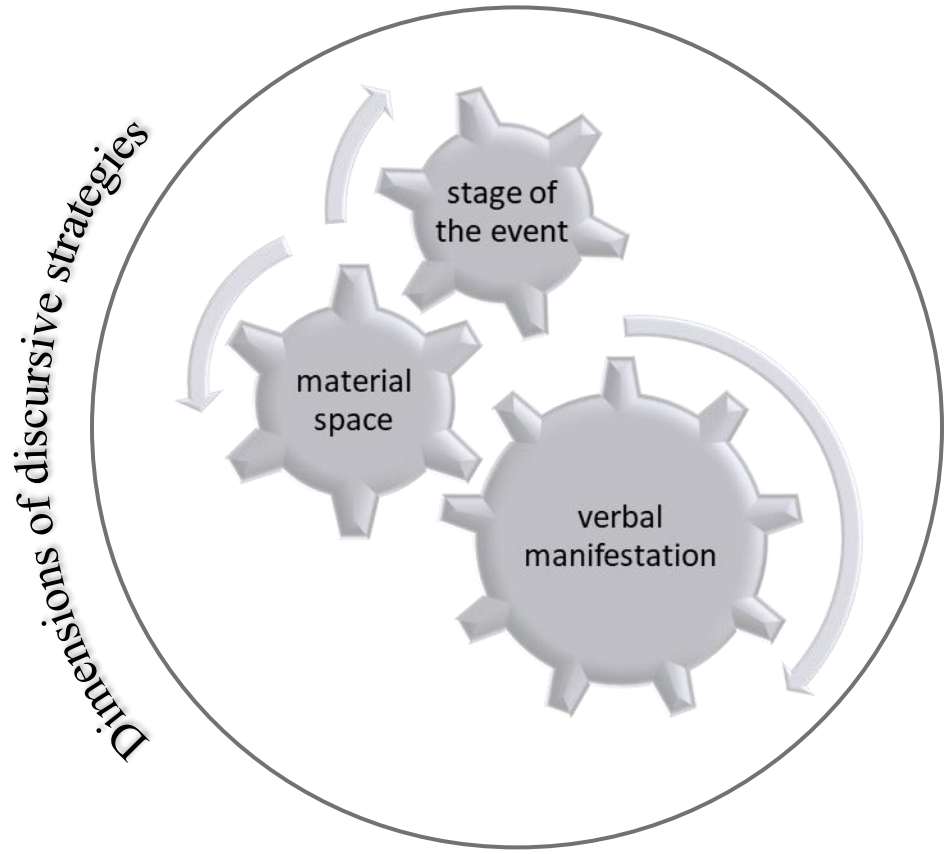
which leadership is interactionally achieved (Clifton, 2012), particularly in healthcare; by examining the same well-established control mechanisms across datasets and providing a close reading of the data, my project provides an original linguistic insight into how healthcare teams *do* leadership in the management of medical emergencies.

Going further, the main contribution of my work to leadership scholarship lies in the evidence it brings on how *doing* leadership is inscribed in the material space and time; my analysis consistently illustrates that staff members position self in certain material zones as part of *doing* their role, with the various stages of the event also impacting on who claims a leadership role and responsibility of each task.

Although the fact that interaction is always multimodal is not new to the sociolinguistic community (and workplace sociolinguists in particular), and multimodality has recently attracted scholars' attention in a more systematic way, there is still the tendency to prioritise gestures and gaze, overlooking spatial arrangements and, particularly, positioning in the material space; my work started addressing this gap, and future sociolinguistic studies could address more consistently role performance in the material space in a broader range of contexts. To that regard, I also illustrated a way for consistently analysing movement in space across contexts, which I discuss in the methodological contribution below.

The way I considered in my analysis multiple layers of meaning-making in the process of doing leadership could be applied to the study of other interactional phenomena, too. Through my analysis I made a case that, in examining certain discursive strategies under an IS approach (questions and directives here is a case in point), we should move beyond a mere focus on their verbal manifestations (e.g., formal characteristics or even pragmatic functions), and towards a multidimensional analytical model which positions them in their spatiotemporal context, allowing for a more holistic understanding of the ways interactants *do* things. This multidimensional approach is visualised in Figure 9.3. This is not to say, however, that I moved beyond verbal enactment; I have briefly discussed, in Chapter 4, how the verbal cues are still privileged and function as the starting point in any linguistic analysis. This prioritisation is also depicted in Figure 9.3, in which the verbal manifestation is more prominent.

Figure 9.3. A model for the holistic analysis of discursive strategies.



My work also makes a case for bringing IS and CA − as I did throughout this thesis − and IS and MDA together in a fruitful dialogue for the analysis of complex settings such as the ones investigated here. That CA and IS can be used in a complementary way and share tools in regard to the sequential organisation of talk and the detailed micro-analysis of interaction has been already pointed out in the literature (Angouri, 2018; Angouri and Mondada, 2017); in positioning my work at the interface of these two approaches, I added to the existing knowledge by shedding light on how the two approaches can be brought together for the study of material space, too. I also briefly pointed to the common ground of IS and MDA, in Section 2.6.2; combining these two for the study of multimodal interaction could be further developed theoretically, contributing to a more holistic and multi-layered analysis of professional contexts.

Next, I move on to the methodological implications of my project.

9.2.2. Methodological contribution; weaving datasets together and analysing positioning in the material space

The methodological contribution of this work is threefold; first, I illustrated a methodology for synthesising different datasets (audio recordings/video recordings; real-life/simulations) and data collection methods (observations; audio recordings; video recordings) for a multi-layered analysis under an IS approach. Video recordings, in particular, constitute an almost non-existent dataset in emergency healthcare contexts for linguistic research; my analysis demonstrates how these can be complemented with and feed into others (in this case, audio recordings). This can lead to more studies cross-tabulating results in novel ways, increasing our understanding of the field. This, in its turn, can lead to stronger partnerships between linguists and healthcare professionals and more joint research in the future.

Second, my work makes a case for the authenticity of simulations in the healthcare context, a previously vividly debated issue. Previous work has already seen simulations as an authentic environment for medical training (see Section 4.4.4); building on and expanding this view, I argue that simulations are also an authentic environment for team interactions, constituting a rich context for linguistic analysis of the situated interaction. That the *SaFE* simulations illustrated consistent patterns with the real-life data from the *TeamLeader* study further supports this claim.

Importantly, since there is currently an almost complete void of sociolinguistic studies paying attention to the use of material space in healthcare contexts, I exemplified in Chapter 5 my methodological framework for monitoring positioning and movement in the material space of the emergency room. Breaking down the emergency room (which can be applied to other material environments) into material zones could be operationalised across datasets and yield significant patterns in regard to what is considered a central/peripheral material zone in any given context. In the healthcare context, the consistent patterns identified across the datasets underline the relevance of the two settings and make a case for the potential applicability of my framework for investigating material space in other emergency healthcare contexts. Finally, I have illustrated in detail alternative ways of monitoring professionals' positioning/shifting in and out of the material zones even without video recordings; the use of ethnographic logs as the ones illustrated in Chapter 5 and my methodology for systematising positioning in space could lay the basis for future studies further exploring ways of representing space. Next, I turn to my work's applied contribution.

9.2.3. Applied contribution; implications for training

I have argued, in Chapter 3, that, although healthcare leadership has been vastly studied, how to *do* leadership in ad hoc teams remains relatively understudied and, in healthcare, largely untouched. In this section I am concerned with the current gap in existing training and the translational relevance of my work.

The potential impact of leadership research in healthcare has been demonstrated by medical associations and researchers, who have been making a convincing case for the critical role of leadership on patient safety and quality of care for quite some time now. Amongst the reported positive outcomes of effective leadership styles are high levels of patient satisfaction and reduced advert effects (Wong and Cummings, 2007), increased patient safety (Richardson and Storr, 2010), lower mortality rates (Cummings et al., 2010), increased staff stability and reduced turnout (Houser, 2003) and higher staff satisfaction (Mosadeghrad and Ferdosi, 2013). The realisation that leadership impacts on patients' and professionals' lived experience and the need to pin down which 'leadership styles' are the most effective is also mirrored in recent literature; Sfantou's et al.'s (2017) systematic review, for instance, pointed to the significance of leadership styles on patient outcomes, health care workforce, and organisational culture, with the most effective leadership style being the transformational one, while in Cumming's et al.'s (2018) review, relational leadership styles were associated with enhanced job satisfaction, retention, and individual productivity.

In light of this evidence, healthcare organisations increasingly invest in developing leadership skills, with much of the regular medical training targeting at improving leaders' 'non-technical' skills/competences (for an overview of the leadership concept in the healthcare sector see Ayeleke et al., 2018). Such training interventions, however, more often than not rely on traditional leadership theories/styles as briefly shown above (e.g., 'servant', 'distributed', 'transformational', 'transactional' leadership; cf. Sfantou et al., 2017, for the main leadership styles), rather than interaction-based evidence, and vary significantly both at a national and an international level. The difficulty in designing training interventions is pointed out by Larsen et al. (2018), who conduct a systematic review of observational and interventional studies on leadership covering the period 1986-2016; in their review, no workable training is identified for the emergency team leader. Rather, most studies focused on leadership taxonomies (e.g., Salas, 2005; *Taxonomy of Trauma*

Leadership Skills, Leenstra et al., 2016), and/or assessment tools (e.g., Surgeon's Leadership Inventory [SLI]; NHS Healthcare leadership model self-assessment tool).

The question of what makes an effective leader in the situated interaction of the emergency context, thus, is yet to be answered. By conducting a detailed linguistic analysis of the teams' interactions, and bringing together their interactional and clinical performance, my work aspires to contribute to this agenda. I consistently illustrated across chapters that certain interactional patterns and the maintenance of the identified professional routines go hand in hand with high clinical performance. My findings are in line with the few linguistic studies already engaging with medical training and/or considering medical applications; notable examples include Slade et al. (2018), who illustrate the value in linguists' and healthcare professionals' teaming up. Specifically, in implementing communication training on nurses, they found a significant improvement in nurses' ability to lead the clinical interactions with patients; this is illustrative of how a dialogue between linguists and healthcare professionals/institutions can yield tangible results. More recently, Semino et al. (2020) conducted a corpus-based examination of the McGill Pain Questionnaire, a tool widely used in the medical field, with their findings illustrating how language-based diagnostic tools can enrich healthcare professionals' understanding of patients' experiences (see also Introduction for a discussion). The above provide good evidence that the time is ripe for medical literature to start acknowledging that talking is doing, a principle widely accepted within the sociolinguistic community, and engage with sociolinguistic literature in a more systematic way.

I acknowledge, of course, that my work is a sociolinguistic study anchored in a micro-analysis of interaction, and as such it is not always applicable to medical training (see also Section 1.1 for a discussion). Educating, for instance, healthcare professionals on the significance of micro-features such as the duration of pauses, intonation patterns, overlapping talk etc., is a complex and not always time-efficient task, particularly when considering the limited training resources. There are, however, discursive strategies linked with high clinical performance, in my work, that could be encompassed in medical training in the form of simple messages and promoted within the given context; equally, there are behaviours that my analysis shows that it would be better to be avoided. In Table 9.1 below I summarise some recommendations emerged from my analysis, focusing specifically on the role of team leaders, as they are the most studied role in my data; future sociolinguistic/applied linguistic studies could look into addressing training implications and refine training recommendations, adding to this work.

I then turn to the last section of this chapter, where I am concerned with potential paths for further research.

Table 9.1. Distilled clinical messages for team leaders emerged from the analysis.

Discursive strategy	Encouraged behaviour	Illustration	Discouraged behaviour	Main chapter
Positioning in the material space	1. Maintain a central position that allows an overseeing role (Figure 9.4 for the *SaFE* and 9.5 for the *TeamLeader* data) unless there is a reason to shift to another space (see below). 2. Consider briefly shifting to the space relevant to the task at hand if you need to coordinate/initiate it.	e.g., equipment table for the preparation of the magnesium	1. Avoid moving around excessively without a reason. 2. Avoid staying long in spaces where you are not visible by the team (e.g., near the door, next to the equipment table, and so on).	Chapter 5
Directives	1. Use direct directive strategies (e.g., imperatives, declaratives). 2. Target a potential addressee (e.g., through the use of names, gaze direction). 3. Repetition and intensification of the directive over time could accelerate the performance of the requested task.	• *You're doing the primary survey* • *Get the oxygen get an airway*	1. Avoid directives that do not specify an addressee, unless they are indeed targeted to the whole team (e.g., *can somebody…?*, *Could we…?*). 2. Avoid indirect requests, as it is easier for those to be left unanswered (e.g., *I have no information on this lady*).	Chapter 6
Questions	1. Allocating a task in a form of a question can elicit instant confirmation (resulting in a form of closed-loop communication). 2. Asking what is going on as soon as you enter the room/the patient arrives can help you quickly gain control of the situation. 3. Target a potential addressee (see in directives). 4. Prefer *yes*/*no* questions where possible.	• *Are you getting the mag sulf sorted out?* • *Are you happy to be in charge of transfer?*	1. Avoid leaving a question 'hanging', as it can be ignored and delay the team (e.g., *are you taking?*, *right, what?* – both examples are left incomplete).	Chapter 7

Table 9.1 draws on all the previous analysis chapters as well as previous work investigating the above discursive strategies, and aims to provide a baseline resource for developing training materials targeted to healthcare professionals. The table includes the discursive strategies that were the primary focus of my analysis, along with the Chapter they were mainly discussed (Columns 1 and 5, respectively), recommendations in regard to encouraged and discouraged behaviours (Columns 2 and 4, respectively), as well as an example of the encouraged behaviour from the data for reasons of illustration (Column 3). The recommendations provided here constitute an example as to how sociolinguistic research can be translated for improving clinical practice; such recommendations can be further refined through the collaboration with healthcare professionals who would be able, as insiders, to advice on the framing and, more generally, on what works best in their context. As these recommendations stem from patterns consistently identified across the two datasets, they could be potentially employed in other high-risk emergency contexts with similar power asymmetries, too. The recommendations included in Table 9.1 are intentionally framed in a way that focuses on communication as a way of performing the role of the team leader, rather than as separate from social practice; in doing so, the Table illustrates an approach to 'talk down' abstract theories.

Figure 9.4. Recommended material zone for *SaFE* team leaders.

Figure 9.5. Recommended material zone for *TeamLeader* team leaders.

My findings demonstrate consistent patterns as to what 'good' leaders do in the material space, which is to occupy certain positions; these are one of the bedsides (*SaFE* data) or the scriber's desk (*TeamLeader* data), as illustrated in Figures 9.4 and 9.5, respectively. Positioning in a certain zone is easily trainable − even easier than some of the behaviours listed in Table 9.1 above − and can be therefore implemented in the existing medical training opportunities easily and without requiring additional resources. This further points to the potential benefit of investigating material space from a sociolinguistic perspective and feeding the findings into the medical community.

Having discussed the potential contribution of my work, I turn next to directions for future research.

9.3 Future directions

I have already pointed, in the previous section, to ways in which future sociolinguistic studies could make a direct contribution to the healthcare sector, by translating key linguistic findings into training interventions. In this section, I draw attention to other paths for further research.

In studying ways of *doing* leadership in this thesis, I primarily focused on questions and directives, and the ways they are also inscribed in the material space. These, however, are only a few of the discursive strategies mobilised by healthcare professionals to *do* leadership; future research could look into the material accomplishment of other discursive strategies, such as (im)politeness (Holmes and Stubbe, 2015), humour (Schnurr, 2008), and giving advice (Vine, 2004), all of which have been also associated with the role of the team leader in earlier work. To that end, I have also started unpacking the role of conditionals (Chapter 6), with my data demonstrating a variety of patterns. The role of conditionals in issuing directives is an under-researched area; further work could zoom in on their formats and functions. Further, there is scope for looking into how power and 'doing being' a leader are communicated through a wider range of interactional features, including overlaps and interruptions and, more generally, turn-competitive interactional cues.

In the same vein, I zoomed in on staff members' positioning in the material space, but this is not the only way multimodal resources come into play in role performance. Future studies could consider other aspects of the material environment, including, for instance, the manipulation of material objects, particularly in this context in which the (lack of) access to certain tools is indicative of power and/or expertise (but see Day and Wagner, 2019, for the use of objects in a range of institutional contexts).

Turning to the staff members' institutional roles, I primarily focused here on the role of the senior doctors (*SaFE* data) and ED consultants (*TeamLeader* data), as they are the ones most frequently expected to – and do – perform a leadership role. Chapters 7 and 8, however, illustrated the situated and emergent nature of leadership in my context, with my findings demonstrating that other roles that can step into a leadership role are senior midwives and junior doctors (*SaFE* data); future work can address the performance of those roles, and even go deeper in the various layers of the same role. The umbrella label of 'junior doctors', for instance, in 2016 included more than 50,000 staff members in the UK, ranging from those fresh out of medical school to staff members with a 10-year experience ('What exactly do junior doctors do?', 2016). This variability is something I did

not take into account in my work, as I did not have access to the *SaFE* participants career trajectories; this could be a reason why I did not identify consistent patterns in regard to junior doctors' performance (for another possible explanation see p. 182). As for the *TeamLeader* data, a key role other than ED consultants is the ED registrars, often characterised as the 'workhorse' of the hospital in the UK context (Royal College of Physicians, 2013); future studies could aim to address the ED registrars' role as 'senior decision-makers and team leaders' (ibid.).

Finally, I employed, in my analysis, the concepts of interaction rituals and professional routines (Chapters 7 and 8, respectively); the first being a sociological concept and the second primarily stemming from organisation studies, these have not been employed in IS work so far. I made a case for including those under an IS approach, illustrating how they allow us to take into account relevantly stable interactional norms easily identified by the insiders of a context (interaction rituals), and larger patterns related to the space and stage of the encounter (professional routines). Bringing those concepts in a sociolinguistic study not only provides us with a more holistic and nuanced understanding of the ways in which professional teams work, but it also makes connections with other disciplines and has the potential to open our work to other audiences. Future IS studies could continue building on and further developing those as theoretical concepts relevant to the study of professional interaction.

In closing, this study adds to and expands the existing body of work on health linguistics, bringing to the fore the significance of professionals' positioning in the material space as part of *doing* leadership and negotiating their professional role. It paves the way for future sociolinguistic research in healthcare, and makes a case for a focus on the material affordances of linguistic analysis. Finally, and despite the challenges, it contributes to a dialogue with medical scholarship and practice which is necessary for feeding the results into medical training and recommendations.

References

‘What exactly do junior doctors do?’. (2016, January 11). BBC News. Available at: https://www.bbc.co.uk/news/health-34798215 (Accessed: 12th November 2020).

Al Zidjaly, N. (2019). Digital activism as nexus analysis: A sociolinguistic example from Arabic Twitter. *Tilburg Papers in Culture Studies*, paper 221.

Andreatta, P. (2010) A typology for health care teams. *Health Care Management Review*, *35*(4), 345–354.

Angouri, J. (2018). *Culture, Discourse, and the Workplace*. London: Routledge.

Angouri, J. (2021). Language, gender, and sexuality; sketching out the field. In Angouri, J., and Baxter, J. (eds.), *The Routledge Handbook of Language, Gender, and Sexuality* (pp. 1–22). London: Routledge.

Angouri, J., and Angelidou, E. (2012). *Managing the director’s views: decision making in a small firm context* (pp. 61–83). In Mada, S., and Saftoiu, R., (eds.), *Professional communication across languages and cultures. Dialogue studies, 17*. Amsterdam: John Benjamins.

Angouri, J. and Locher, M. (2012). Theorising disagreement. *Journal of Pragmatics*, *44*(12), 1549–1553.

Angouri, J., and Machili, I. (2020). Is talking work doing work? In Bauer, L., and Calude, A. (eds.), *Questions About Language: What Everyone Should Know About Language in the 21st Century* (pp. 18–35). London: Routledge.

Angouri, J., and Marra, M. (eds.) (2011a). *Constructing identities at work*. London: Palgrave Macmillan.

Angouri, J., and Marra, M. (2011b). ‘OK one last thing for today then’: Constructing Identities in Corporate Meeting Talk. In *Constructing Identities at Work* (pp. 85–100). London: Palgrave Macmillan.

Angouri, J., Marra, M., and Holmes, J. (eds.) (2017). *Negotiating boundaries at work: Talking and transitions*. Edinburgh: Edinburgh University Press.

Angouri, J., Mesinioti, P., Banatwalla, R., and Dimitriadis, G. (fc.). Intersecting identities in health care research. In Flick, U. (ed.), *The SAGE Handbook of Qualitative Research Design*. London: SAGE.

Angouri, J., and Mondada, L. (2017). Meetings. In Wodak, R., and Forchtner, B. (eds.), *Handbook of Language and Politics* (pp. 468–487). London: Routledge.

Aritz, J., Walker, R., Cardon, P., and Li, Z. (2017). Discourse of leadership: The power of questions in organizational decision making. *International Journal of Business Communication, 54*(2), 161–182.

Asmuß, B., and Svennevig, J. (2009). Meeting talk: An introduction. *Journal of Business Communication, 46*(1), 3–22.

ATLS Subcommittee, American College of Surgeons' Committee on Trauma, & International ATLS working group (2013). Advanced trauma life support (ATLS®): the ninth edition. *The journal of trauma and acute care surgery*, *74*(5), 1363–1366.

Auer, P., and Roberts, C. (2011). Introduction-John Gumperz and the indexicality of language. *Text & Talk*, *31*(4), 381–393.

Ayeleke, R., Dunham, A., North, N., and Wallis, K. (2018). *The concept of leadership in the health care sector* (p. 83–95). In Göker, S. (ed.), *Leadership*. London: InTech.

Barraja-Rohan, A. (2000). Teaching Conversation and Sociocultural Norms with Conversation Analysis. In Liddicoat, A., and Crozet, C. (eds.), *Teaching languages, Teaching Cultures* (pp: 65–77). Melbourne: Applied Linguistics Association of Australia.

Basu, P., and Coleman, S. (2008). Introduction: Migrant Worlds, Material Cultures. *Mobilities, 3*(3), 313–330.

Bateman, J. (2014). *Text and Image: A Critical Introduction to the Verbal/Visual Divide*. London: Routledge.

Bateman, J., Delin, J., and Henschel, R. (2006). Mapping the multimodal genres of traditional and electronic newspapers. In Royce, T., and Bowcher, W. (eds.), *New directions in the analysis of multimodal discourse* (pp. 147–172). Mahwah, NJ: Lawrence Erlbaum.

Baxter, J. (2015). Who Wants to Be the Leader? The Linguistic Construction of Emerging Leadership in Differently Gendered Teams. *International Journal of Business Communication, 52*(4), 427–451.

Becker, M. (2004). Organizational routines: a review of the literature. *Industrial and Corporate Change, 13*, 643–677.

Belgrimet, S. (2020). A Conversation Analysis of Repair Strategies in Communication Breakdowns: A Case Study of Algerian Bilingual Students. *International Journal of English Literature and Social Sciences, 5*(2), 459–468.

Bennett, M., and Jarvis, J. (1991). The communicative function of minimal responses in everyday conversation. *The Journal of Social Psychology*, *131*, 519–523.

Bezemer, J., and Jewitt, C. (2010). Multimodal Analysis: Key issues. In Litosseliti, L. (ed.), *Research Methods in Linguistics* (pp. 180–197). London: Continuum.

Bezemer, J., Murtagh, G., and Cope, A. (2011). 'Scissors, please': The practical accomplishment of surgical work in the operating theater. *Symbolic Interaction*, *34*(3), 398–414.

Bolden, G. (2009). Implementing incipient actions: The discourse marker 'so' in English conversation. *Journal of Pragmatics*, *41*(5), 974–998.

Bolinger, D. (1957). *Interrogative Structures of American English*. Birmingham: University of Alabama Press.

Bolinger, D. (1978). Yes-no questions are not alternative questions. In Hiz, H. (ed.), *Questions* (pp. 87–105). Dordrecht: Reidel .

Booker, M., Shaw, A., Purdy, S., and Barnes, R. (2018). 'Primary care sensitive' situations that result in an ambulance attendance: a conversation analytic study of UK emergency '999' call recordings, *BMJ Open*, *8*, e023727.

Bristowe, K., Siassakos, D., Hambly, H., et al. (2012). Teamwork for clinical emergencies: Interprofessional focus group analysis and triangulation with simulation. *Qualitative Health Research*, *22*, 1383–1394.

Brown, P., and Levinson, S. (1987). *Politeness: Some universals in language usage*. Cambridge: Cambridge University Press.

Bucholtz, M., and Hall, K. (2016). Embodied sociolinguistics. In Coupland, N. (ed.), *Sociolinguistics: Theoretical Debates* (pp. 173–198). Cambridge: Cambridge University Press.

Butler, J. (1990). *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge.

Byrne, P., and Long, B. (1976). *Doctors talking to patients*. London: HMSO.

Büscher, M. (2007). Interaction in motion: Embodied conduct in emergency teamwork. In Mondada, L., and Markaki, V. (eds.), *Proceedings of the 2nd Congress of the international society for gesture studies: Interacting bodies*, 15-18 July 2005. Lyon.

Carrigan, M. (2014). Can we have a 'turn' to end all turns?. *Mark Carrigan - Digital Sociology of Higher Education*, 13 July. Available at: https://markcarrigan.net/2014/07/13/can-we-have-a-turn-to-end-all-turns/ (Accessed: 20th April 2021).

Fernandez Castelao, E., Russo, S., Cremer, S., et al. (2011). Positive impact of crisis resource management training on no-flow time and team member verbalisations during simulated cardiopulmonary resuscitation: A randomised controlled trial. *Resuscitation*, *82*, 1338–1343.

Cekaite, A. (2015). The Coordination of Talk and Touch in Adults' Directives to Children: Touch and Social Control. *Research on Language and Social Interaction*, *48*(2), 152–175.

Černý, M. (2007). On the Function of Speech Acts in Doctor-Patient Communication. *Linguistica ONLINE*, *3*(6), 1–15.

Chałupnik, M., and Atkins, S. (2020). "Everyone happy with what their role is?": A pragmalinguistic evaluation of leadership practices in emergency medicine training. *Journal of Pragmatics*, *160*, 80–96.

Chanlat, J. (2006). Space, organization and management thinking: a socio-historical perspective. In Clegg, S., and Kornberger, M. (eds.). *Space, Organizations and Management Theory* (pp. 17–40). Malmo: Liber and Copenhagen Business School Press.

Chen, L., Harper, M., Franklin, A., et al. (2006). A multimodal analysis of floor control in meetings. In the Proceedings of the Joint Workshop on Machine Learning and Multimodal Interaction (MLMI), Washington, DC, USA, May 2006.

Chia, R. (1996). *Organizational analysis as deconstructive practice*. Berlin, New York: Walter de Gruyter.

Chimbwete-Phiri, R., and Schnurr, S. (2020). Improving HIV/AIDS consultations in Malawi: How interactional sociolinguistics can contribute. In Demjén, Z. (ed.), *Applying Linguistics in Illness and Healthcare Contexts: Contemporary Studies in Linguistics* (pp. 131–158). London: Bloomsbury Academic.

Choi, S., and Schnurr, S. (2014). Exploring distributed leadership: solving disagreements and negotiating consensus in a 'leaderless' team. *Discourse Studies*, *16*(1), 3–24.

Clarke, J., and Waring, J. (2018). The transformative role of interaction rituals within therapeutic communities. *Sociology of health & illness*, *40*(8), 1277–1293.

Clayman, S. (2010). 'Questions in broadcast journalism', in Freed, A., and Ehrlich, S. (eds.), *"Why Do You Ask?": The Function of Questions in Institutional Discourse* (pp. 256–278). Oxford: Oxford University Press.

Clifton, J. (2012). Discursive Approach to Leadership: Doing Assessments and Managing Organizational Meanings. *The Journal of Business Communication*, *49*(2), 148–168.

Clifton, J., Schnurr, S., and Van De Mieroop, D. (2019). *The language of leadership narratives. A social practice perspective.* New York: Routledge.

Clyne, M. (1996). *Inter-cultural communication at work: Cultural values in discourse*. Cambridge: Cambridge University Press.

Collins, R. (2014) *Interaction Ritual Chains* (2nd edn.). Princeton: Princeton University Press.

Cornthwaite, K., Edwards, S., and Siassakos, D. (2013). Reducing risk in maternity by optimising teamwork and leadership: an evidence-based approach to save mothers and babies. *Best Practice & Research Clinical Obstetrics & Gynaecology*, *27*(4), 571–581.

Craven, A, and Potter, J. (2010). Directives: Entitlement and contingency in action. *Discourse Processes*, *12*(4), 419–442.

Crico Strategies (2015). Malpractice Risks in Communication Failures. 2015 Annual Benchmarking Report. Available at: https://www.rmf.harvard.edu/Malpractice-Data/Annual-Benchmark-Reports/Risks-in-Communication-Failures (Accessed: 15th September 2021)

Cummings, G., Midodzi, W., Wong, C., and Estabrooks, C. (2010). The Contribution of Hospital Nursing Leadership Styles to 30-day Patient Mortality. *Nursing Research*, *59*(5), 331–339.

Cummings, G., Tate, K., Lee, S., et al. (2018). Leadership styles and outcome patterns for the nursing workforce and work environment: A systematic review. *International Journal of Nursing Studies*, *85*, 19–60.

D'Agostino, T., Atkinson, T., Latella, L., et al. (2017). Promoting patient participation in healthcare interactions through communication skills training: A systematic review. *Patient education and counseling*, *100*(7), 1247–1257.

Dale, K., and Burrell, G. (2008). *The spaces of organisation and the organisation of space: power, identity and materiality at work*. Basingstoke: Palgrave Macmillan.

Darban, F., Balouchi, A., Narouipour, A., et al. (2016). Effect of Communication Skills Training on the Burnout of Nurses: A Cross-Sectional Study. *Journal of Clinical and Diagnostic Research* (*JCDR*), *10*(4), IC01–IC04.

Day, D., and Wagner, J. (eds.) (2019). *Objects, Bodies and Work Practice*. Bristol, UK: Multilingual Matters.

De Meester, K., Verspuy, M., Monsieurs, K., and Van Bogaert, P. (2013). SBAR improves nurse-physician communication and reduces unexpected death: a pre and post intervention study. *Resuscitation*, *84*(9), 1192–1196.

Dean, M., Gill, R. and Barbour, J. (2016). "Let's sit forward:" Investigating interprofessional communication, collaboration, professional roles, and physical space at EmergiCare. *Health Communication*, *31*(12), 1506–1516.

Demjén, Z. (2020). Introduction. In *Applying Linguistics in Illness and Healthcare Contexts. Contemporary Studies in Linguistics* (pp. 1–14). London; New York: Bloomsbury.

Demjén, Z., Marszalek, A., Semino, E., and Varese, F. (2020). "One gives bad compliments about me, and the other one is telling me to do things" – (Im)Politeness and power in reported interactions between voice-hearers and their voices. In Demjén, Z. (ed.), *Applying Linguistics in Illness and Healthcare Contexts. Contemporary Studies in Linguistics* (pp. 17–43). London; New York: Bloomsbury.

Deppermann, A. (2014). Multimodal participation in simultaneous joint projects: Interpersonal and intrapersonal coordination in paramedic emergency drill. In: Haddington, P., Keisanen, T., Mondada, L., and Nevile, M. (eds.), *Multiactivity in Social Interaction: Beyond multitasking* (pp. 247–282). Amsterdam/Philadelphia: John Benjamins.

Deppermann, A., and Günthner, S. (eds.) (2015). *Temporality in Interaction*. Amsterdam: John Benjamins.

Deppermann, A., and Spranz-Fogasy, T. (2011). Doctors' questions as displays of understanding. *Communication & medicine*, *8*(2), 111–122.

Deppermann, A., and Streeck, J. (2018). The body in interaction: Its multiple modalities and temporalities. In Deppermann, A., and Streeck, J. (eds.), *Time in Embodied Interaction: Synchronicity and sequentiality of multimodal resources* (pp. 1–30). Amsterdam and Philadelphia: John Benjamins.

Dong, J. (2017). Voice making in intercultural communication: the Chinese transcontinental 'commuters'. *Language and Intercultural Communication*, *17*(2), 150–165.

Drew, A. (1995). The issue of directiveness in therapy. *International Journal of Language & Communication Disorders*, *30*, 564–577.

Drew, P., and Heritage, J. (1992). *Talk at Work: Interaction in Institutional Settings*. Cambridge: Cambridge University Press.

Duley, L., Gülmezoglu, A., Henderson-Smart, D., and Chou, D. (2010). Magnesium sulfate and other anticonvulsants for women with pre-eclampsia. *The Cochrane Database of Systematic Reviews*, *10*(11): CD000025.

Durkheim, E. (2008 [1912]) *The Elementary Forms of Religious Life*, translated from the French by Joseph Ward Swain. Mineola, New York: Dover Publications Inc.

Eades, D. (2010). *Sociolinguistics and the Legal Process*. Bristol, Blue Ridge Summit: Multilingual Matters.

Eckert, P., and McConnell-Ginet, S. (2003). *Language and Gender*. Cambridge: Cambridge University Press.

Eggins, S., and Slade, D. (1997). *Analysing casual conversation*. London and New York: Cassell.

Elden, S. (2013). *The birth of territory*. Chicago: The University of Chicago Press.

Elder, C., and Savva, E. (2018). Incomplete conditionals and the syntax–pragmatics interface. *Journal of Pragmatics*, *138*, 45–59.

Ellis, D., Crofts, J., Hunt, L., et al. (2008). Hospital, simulation center, and teamwork training for eclampsia management: a randomized controlled trial. *Obstetrics & Gynecology*, *111*, 723–731.

Emerson, R., Fretz, I., and Shaw, L. (2011). *Writing Ethnographic Fieldnotes* (2nd edn.). Chicago: UCP.

Endacott, R., Bogossian, F., Cooper, S., et al. (2015). Leadership and teamwork in medical emergencies: Performance of nursing students and registered nurses in simulated patient scenarios. *Journal of Clinical Nursing*, *24*(1–2), 90–100.

Endsley, M. (1988). Design and evaluation for situation awareness enhancement. In the Proceedings of the Human Factors Society 32nd Annual Meeting. October 24–28, 1988.

Englert, C. (2010). Questions and responses in Dutch conversations. *Journal of Pragmatics*, *42*(10), 2666–2684.

Ervin-Tripp, S. (1976). Is Sybil There? The Structure of Some American English Directives. *Language in Society*, *5*(1), 25–66.

Faist, T. (2013). The mobility turn: a new paradigm for the social sciences?. *Ethnic and Racial Studies*, *36*(11), 1637–1646.

Fareh, S., and Moussa, M. (2008). Pragmatic Functions of Interrogative Sentences in English: A Corpus-based Study. *International Journal of Arabic-English Studies* (*IJAES*), *9*, 145–164.

Feldman, M. (2003). A performative perspective on stability and change in organizational routines. *Industrial and Corporate Change*, *12*(4), 727–775.

Feldman, M., and Pentland, B. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, *48*(1), 94–118.

Fele, G. (2012). The use of video to document tacit participation in an emergency operations centre. *Qualitative Research*, *12*(3), 280–303.

Fele, G. (2019). Olfactory Objects: Recognizing, Describing and Assessing Smells during Professional Tasting Sessions. In Day, D., and Wagner, J. (eds.), *Objects, Bodies and Work Practice* (pp. 250–284). Bristol, UK: Multilingual Matters.

Findlay, G., Martin, I., Carter, S., et al. (2007). *Trauma: who cares. A report of the national confidential enquiry into patient outcome and death*. Available at: http://www.ncepod.org.uk/2007report2/Downloads/SIP_report.pdf (Accessed: 17th October 2020).

Fine, G., Morrill, C., and Surianarain, S. (2009). Ethnography in organizational settings. In Buchanan, D., and Bryman, A. (eds.), *The Sage handbook of organizational research methods* (pp. 602–619). London: SAGE.

Fixsen, A., Ridge, D., Kirkpatrick, S., and Foot, D. (2015). Interaction Rituals and Jumbled Emotions Among "Relative Strangers": Simulated Patient Work on a Trainee Complementary Therapy Practitioner Program. *SAGE Open*, 5(3), 1–12.

Ford, C. (2008). *Women Speaking Up: Getting and Using Turns in Workplace Meetings*. New York: Palgrave.

Fox, B., and Thompson, S. (2010). Responses to *Wh*-Questions in English Conversation. *Research on Language and Social Interaction*, *43*(2), 133–156.

Frasier, L., Pavuluri Quamme S., Becker, A., et al. (2017). Investigating Teamwork in the Operating Room: Engaging Stakeholders and Setting the Agenda. *JAMA Surgery, 152*(1), 109–111.

Freed, A., and Ehrlich, S. (eds.) (2010.) *"Why Do You Ask?": The Function of Questions in Institutional Discourse.* Oxford: Oxford University Press.

Fritz, P., Kleinhans, A., Kuisle, F., et al. (2017). Medical diagnosis as a linguistic game. *BMC medical informatics and decision making*, *17*(1), 103.

Fukuda, C. (2017). *Gaijin* performing *gaijin* ('A foreigner performing a foreigner'): Co-construction of foreigner stereotypes in a Japanese talk show as a multimodal phenomenon. *Journal of Pragmatics*, *109*, 12–28.

Gaines, P. (2011). The Multifunctionality of Discourse Operator Okay: Evidence from a police interview. *Journal of Pragmatics*, *43*(14), 3291–3315.

Geluykens, R. (1988). On the myth of rising intonation in polar questions. *Journal of Pragmatics, 12*(4), 467-485.

Georgiou, A., and Lockey, D. J. (2010). The performance and assessment of hospital trauma teams. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine, 18*, 66.

Giddings, A., and Williamson, C. (2007). The Leadership and Management of Surgical Teams. London: The Royal College of Surgeons of England. Available at: https://www.rcseng.ac.uk/library-and-publications/rcs-publications/docs/leadership-and-management/ (Accessed: 5th March 2020).

Goffman, E. (1959). *The Presentation of Self in Everyday Life.* New York: Doubleday Anchor.

Goffman, E. (1964). The Neglected Situation. *American Anthropologist, 66*, 133–36.

Goffman, E. (1967). *Interaction Ritual: Essays on Face-to-face Behaviour*. New York: Anchor Books.

Gold, R. (1958). Roles in sociological field observation. *Social Forces*, *36*, 217–223.

Goldberg, J. (1990). Interrupting the Discourse of Interruptions: An Analysis in Terms of Relationally Neutral, Power-and Rapport-Oriented Acts. *Journal of Pragmatics*, *14*(6), 883–903.

Goodarzi, H., Javadzadeh, H., and Hassanpour, K. (2015). Assessing the Physical Environment of Emergency Departments. *Trauma monthly*, *20*(4), e23734.

Goodwin, C. (1979). The interactive construction of a sentence in natural conversation. In: Psathas, G. (ed.), *Everyday Language: Studies in Ethnomethodology* (pp. 97–121). Irvington, New York.

Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, *32*, 1489–1522.

Goodwin, D. (2007). Upsetting the Order of Teamwork: Is `The Same Way Every Time' a Good Aspiration? *Sociology*, *41*(2), 259–275.

Goodwin, C., and Goodwin, M. (1987). Concurrent Operations on Talk: Notes on the Interactive Organization of Assessments. *IPrA Papers in Pragmatics*, *1*(1) 1–55.

Goodwin, C., and Goodwin, M. (1992). Context, Activity and Participation. In Luzio, A., and Auer, P. (eds.), *The Contextualization of Language* (pp. 77–99). Amsterdam: John Benjamins.

Gordon, C. (2011). Gumperz and interactional sociolinguistics. In Wodak, R., Johnstone, B., and Kerswill, P. (eds.), *The SAGE handbook of sociolinguistics* (pp. 67–84). London: SAGE.

Gordon, C. (2013). Beyond the observer's paradox: the audio-recorder as a resource for the display of identity. *Qualitative Research*, *13*(3), 299–317.

Gottmann, J. (1973). *The Significance of territory*. Charlottesville: University of Virginia Press.

Green, B., Parry, D., Oeppen, R., et al. (2017). Situational awareness – what it means for clinicians, its recognition and importance in patient safety. *Oral Diseases*, *23*, 721–725.

Greenhalgh, T. (2008). Role of routines in collaborative work in healthcare organisations. *British Medical Journal*, *337*, 1269–1271.

Gumperz, J. (1964). Linguistic and social interaction in two communities. A*merican Anthropologist*, *66*(6/2), 137–153.

Gumperz, J. (1982). *Language and Social Identity*. Cambridge: Cambridge University Press.

Gumperz, J. (1992). Contextualization and understanding. In Duranti, A., and Goodwin, C. (eds.), *Rethinking Context: Language as an Interactive Phenomenon* (pp. 229–252). Cambridge: Cambridge University Press.

Gumperz, J. (1999). On interactional sociolinguistic method. In Sarangi, S., and Roberts, C. (eds.), *Talk, Work and Institutional Order* (pp. 453–471). Berlin; New York: Mouton de Gruyter.

Gumperz, J. (2001). Interactional sociolinguistics: A personal perspective. In Davies, A., and Elder, C. (eds.), *The handbook of Applied Linguistics* (pp. 215–228). London and New York: Blackwell.

Gumperz, J. (2008). Interactional Sociolinguistics: A personal perspective. In Schriffrin, D., Tannen, D., and Hamilton, H. (eds.), *The Handbook of Discourse Analysis* (pp. 215–228). Malden: Blackwell.

Guo, L. (2004). Multimodality in a Biology Textbook. In. O'Halloran, K. (ed.), *Multimodal Discourse Analysis* (pp. 196–219). London: Continuum.

Haddington, P., Keisanen, T., Mondada, L., and Nevile, M. (eds.) (2014). *Multiactivity in Social Interaction: Beyond multitasking.* Amsterdam/Philadelphia: John Benjamins.

Hall, K., and Davis, J. (2021). Ethnography and the shifting semiotics of gender and sexuality. In Angouri, J., and Baxter, J. (eds.), *The Routledge Handbook of Language, Gender, and Sexuality*. London: Routledge.

Halliday, M. (1978). *Language as Social Semiotic: The Social Interpretation of Language and Meaning*. London: Edward Arnold.

Halliday, M., and Hasan, R. (1985). *Language, Context, and Text: Aspects of Language in a Social-Semiotic Perspective*. Geelong, Victoria: Deakin University Press.

Halverson, A., Walsh, D., and Rikkers, L. (2012). Leadership skills in the OR. Part 1. Communication helps surgeons avoid pitfalls. *Bulletin of the American College of Surgeons (Bull Am Coll Surg), 97*, 8–14.

Halvorsen, K. (2015). Questions as Interactional Resource in Team Decision Making. *International Journal of Business Communication*, *55*(1), 69–93.

Hammersley, M. (2006). Ethnography: problems and prospects. *Ethnography and Education*, *1*(1), 3–14.

Hammersley, M. (2015). Observation, Participant and Non-participant. In Ritzer, G. (ed.), *The Blackwell Encyclopedia of Sociology*. Oxford: John Wiley & Sons.

Hanyok, L., Hellmann, D., Rand, C., and Ziegelstein, R. (2012). Practicing patient-centered care: the questions clinically excellent physicians use to get to know their patients as individuals. *Patient*, *5*(3), 141–145.

Harjunpää, K., Mondada, L., and Svinhufvud, K. (2018). The Coordinated Entry into Service Encounters in Food Shops: Managing Interactional Space, Availability, and Service During Openings. *Research on Language and Social Interaction*, *51*(3), 271–291.

Hausendorf, H. (2013). On the interactive achievement of space – and its possible meanings. In Auer, P., Hilpert, M., Stukenbrock, A., and Szmrecsanyi, B. (eds.). *Space in Language and Linguistics* (pp. 276–303). Berlin, Boston: De Gruyter.

Hawkins, B. (2015). Ship-shape: materializing leadership in the British Royal Navy. *Human Relations*, *68*(6), pp. 951–971.

Hayles, K. (1999). *How We Became Posthumans*. Chicago: University of Chicago.

Heath, C., Luff, P., Sanchez-Svensson, M., and Nicholls, M. (2018). Exchanging implements: the micro-materialities of multidisciplinary work in the operating theatre. *Sociology of Health and Illness*, *40*, 297–313.

Heath, C., Svensson, M., Hindmarsh, J. et al. (2002). Configuring Awareness. *Computer Supported Cooperative Work, 11*, 317–347.

Heritage, J. (2010). Questioning in medicine. In Freed, A., and Ehrlich, S. (eds.), *"Why do you ask?": The function of questions in institutional discourse* (pp. 42–68). Oxford: Oxford University Press.

Hindmarsh, J., and Pilnick, A. (2005). The tacit order of teamwork: collaboration and embodied conduct in anaesthesia. *The Sociological Quarterly*, *43*(2), 139–164.

Hindmarsh, J., and Pilnick, A. (2007). Knowing bodies at work: Embodiment and ephemeral teamwork in anaesthesia. *Organization Studies*, *28*(9), 1395–1416.

Heritage, J., and Raymond, G. (2012). Navigating epistemic landscapes: acquiescence, agency and resistance in responses to polar questions. In de Ruiter, J. (ed.), *Questions: Formal, Functional and Interactional Perspectives* (pp. 179–192). Cambridge: Cambridge University Press.

Hindmarsh, J., Reynolds, P., and Dunne, S. (2011). Exhibiting understanding: The body in apprentices. *Pragmatics*, *43*, 489–503.

Holmes, J. (1999). Managing in style: flexible discourse at work. (ED427545). ERIC. https://files.eric.ed.gov/fulltext/ED427545.pdf

Holmes, J., and Chiles, T. (2010). 'Is that right?' Questions as control devices in workplace meetings. In: Freed, A., and Ehrlich, S. (eds.), *"Why Do You Ask?": The Function of Questions in Institutional Discourse* (pp. 187-210). Oxford: Oxford University Press.

Holmes, J., and Marra, M. (2004). Leadership and managing conflict in meetings. *Pragmatics*, *14*, 439–462.

Holmes, J., Marra, M., and Vine, B. (2011). *Leadership, Discourse, and Ethnicity*. Oxford University Press.

Holmes, J. and Major, G. (2002). "Just flex your arm eh": Communication on the ward. *Staff Matters, Staff Newsletter of Capital and Coast District Health Boards, Capital Coast Health*, *42*(13).

Holmes, J. and Stubbe, M. (2015). *Power and Politeness in the Workplace: A Sociolinguistic Analysis of Talk at Work* (2nd edn.). London: Routledge.

Holtgraves, T. (1992). The linguistic realization of face management: Implications for language production and comprehension, person perception, and cross-cultural communication. *Social Psychology Quarterly*, *55*(2), 141–159.

Houser, J. (2003). A model for evaluating the context of nursing care delivery. *The Journal of Nursing Administration*, *33*(1), 39–47.

Hu, Y., Parker, S., Lipsitz S., et al. (2016). Surgeons' Leadership Styles and Team Behavior in the Operating Room. *Journal of the American College of Surgeons*, *222*(1), 41–51.

Huntington, B., and Kuhn, N. (2003). Communication gaffes: a root cause of malpractice claims. *Proceedings (Baylor University. Medical Center)*, *16*(2), 157–161.

Huddlestone, K., and Fairhurst, M. (2013). The pragmatic markers *anyway*, *okay*, and *shame*: A South African English corpus study. *Stellenbosch Papers in Linguistics Plus*, *42*, 93–110.

Huisman, M. (2001). Decision-Making in Meetings as Talk-in-Interaction. *International Studies of Management & Organization*, *31*(3), 69–90.

Hunziker, S., Tschan, F., Semmer, N., et al. (2009). Hands-on time during cardiopulmonary resuscitation is affected by the process of teambuilding: a prospective randomised simulator based trial. *BMC Emergency Medicine*, *9*(1): 3.

Hunziker, S., Tschan, F., Semmer, N., and Marsch, S. (2013). Importance of leadership in cardiac arrest situations: from simulation to real life and back. *Swiss medical weekly*, *143*, w13774.

Hymes, D. (1962). The Ethnography of Speaking. In Gladwin, T., and Sturtevant, W. (eds.), *Anthropology and Human Behavior* (pp. 13–53). Washington: The Anthropology Society of Washington.

Hymes, D. (l972). On communicative competence. In Pride, J., and Holmes, J. (eds.), *Sociolinguistics: Selected Readings* (pp. 269–293). Harmondsworth: Penguin.

Iedema, R. (2004). Analysing film and television: a social semiotic account of hospital: an unhealthy business. In Van Leeuwen, T., and Jewitt, C. (eds.), *The handbook of visual analysis* (pp. 183–206). London: SAGE.

Ikeda, K. (2011). Enriching Interactional Space Nonverbally: Microanalysis of Teachers' Performance in JFL Classrooms. *Japanese Language and Literature*, *45*(1), 195–226.

Institute of Health, Metrics and Evaluation (IHME) (2012). The Global burden of disease 2010 (GBD 2010). Available at: http://www.healthdata.org/policy-report/global-burden-disease-generating-evidence-guiding-policy (Accessed: 8th November 2020).

Institute of Medicine (2001). *Crossing The Quality Chasm: A New Health System for the 21st Century*. Washington DC: National Academy Press.

Ishida, H. (2006). Learners' perception and interpretation of contextualization cues in spontaneous Japanese conversation: Back-channel cue Uun. *Journal of Pragmatics*, *38*(11), 1943–1981.

Janssen, A. (2017). Social Semiotic Multimodal Analysis of Discourse in Banking. In Mickan, P., and Lopez, E. (eds.), *Text-Based Research and Teaching: A Social Semiotic Perspective on Language in Use* (pp. 75–95). London: Palgrave Macmillan.

Janssens, S., Simon, R., Barwick, S., et al (2020). Leadership sharing in maternity emergency teams: a retrospective cohort study in simulation. *BMJ Simulation and Technology Enhanced Learning, 6***,** 135–139.

Jary, M. and Kissine, M. (2014). *Imperatives*. Cambridge: Cambridge University Press.

Jary, M., and Kissine, M. (2016). When terminology matters: The imperative as a comparative concept. *Linguistics*, *54*(1), 119–148.

Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In Lerner, G. (ed.), *Conversation Analysis: Studies from the First Generation*. (pp. 13–31). Amsterdam: John Benjamins.

Jensen, K., and Crane, J. (2008). Improving patient flow in the emergency department. *Healthc Financ Manage*, *62*(11), 104–106.

Jewitt, C. (2009). *The Routledge Handbook of Multimodal Analysis*. London and New York: Routledge.

Jian, G., and Fairhurst, G. (2017). Leadership in Organizations. In Scott, C., Barker, J., Kuhn, T., et al. (eds.), *The International Encyclopedia of Organizational Communication*.

Jones, R., and Norris, S. (2005). *Discourse in Action: Introducing Mediated Discourse Analysis*. London: Routledge.

Kim, K. (2018). 'This is a problem (.)'; Discursive construction of the organisational 'problems' in a multinational corporate workplace. Unpublished PhD thesis, University of Warwick, Coventry, UK.

Kim, K., and Angouri, J. (2019). 'We don't need to abide by that!': Negotiating professional roles in problem-solving talk at work. *Discourse & Communication*, *13*(2), 172–191.

Kim, J., Park, J., and Shin, S. (2016). Effectiveness of simulation-based nursing education depending on fidelity: a meta-analysis. *BMC medical education*, *16*, 152.

Kissine, M. (2016). Non-assertion speech acts. In Goldberg, S., and Borg, E. (eds.), *Oxford Handbook of Philosophy Online*. Oxford: Oxford University Press.

Kolberg, I. (2012). "What are you doing?": How Improvisational Actors use the Body in the Contextualization of the Imagined Material World. Unpublished Master Thesis, University of Colorado Boulder.

Korkiakangas, T., Weldon, S., Bezemer, J., and Kneebone, R. (2014). Nurse-surgeon object transfer: video analysis of communication and situation awareness in the operating theatre. *International Journal of Nursing Studies*, *51*(9), 1195–1206.

Koutsombogera, M.., and Papageorgiou, H. (2009). Multimodality Issues in Conversation Analysis of Greek TV Interviews. In: Esposito A., Hussain A., Marinaro M., and Martone R. (eds.), *Multimodal Signals: Cognitive and Algorithmic Issues* (pp. 40–46). Berlin, Heidelberg: Springer.

Köktürk, S., and Öztürk, E. (2012). Forms and multifunctionality of interruptions and simultaneous speaking in ordinary talk – proposal of a universal model for the evaluation of interruptive speech sequences. *International Journal of Linguistics*, *4*(3), 551–571.

Kress, G. (2003). *Literacy in the new media age*. London: Routledge.

Kress, G. (2009). *Multimodality: A social semiotic approach to communication*. London: Routledge.

Kress, G., and van Leeuwen, T. (1996). *Reading images: The grammar of visual design*. London: Routledge.

Küpers, W. (2013). Embodied inter-practices of leadership: Phenomenological perspectives on relational and responsive leading and following. *Leadership, 9*(3), 335–357.

Laakso, M. (2014). Aphasia Sufferers' Displays of Affect in Conversation. *Research on Language and Social Interaction, 47*(4), 404–425.

Labov, W., and Fanshel, D. (1977). *Therapeutic Discourse: Psychotherapy as Conversation*. New York: Academic Press.

Lane, P. (2009). Identities in action: a nexus analysis of identity construction and language shift. *Visual Communication, 8*(4), 449–468.

Lane, P. (2014). Nexus Analysis. In Östman, J., and Verschueren, J. (eds.), *Handbook of pragmatics online* (pp. 1–18). John Benjamins.

Larsen, T., Beier-Holgersen, R., Meelby, J., et al. (2018). A search for training of practising leadership in emergency medicine: A systematic review. *Heliyon, 30*(4), e00968.

Lateef, F. (2010). Simulation-based learning: Just like the real thing. *Journal of emergencies, trauma, and shock, 3*(4), 348–352.

Latour, B. (2005). *Reassembling the social: An introduction to actor–network theory*. Oxford: Oxford University Press.

Latour, B. (2007). Can we Get our Materialism Back, Please?. *Isis, 98*(1), 138–142.

Laudel, G. (2006). Conclave in the Tower of Babel: how peers review interdisciplinary research proposals. *Research Evaluation, 15*(1), 57–68.

Lazzaro-Salazar, M., Marra, M., Holmes, J., and Vine, B. (2015). Doing power and negotiating through disagreement in public meetings. *Pragmatics and Society, 6*(3), 444–464.

Leenstra, N., Jung, O., Johnson, A., et al. (2016). Taxonomy of Trauma Leadership Skills. *Academic Medicine, 91*(2), 272–281.

Lefebvre, H. (1991). *The production of space*. Oxford: Blackwell.

Lein, C., and Wills, C. (2007). Using patient-centered interviewing skills to manage complex patient encounters in primary care. *American Academy of Nurse Practitioners, 19*, 215–220.

Li, H. (2001). Cooperative and intrusive interruptions in inter- and intracultural dyadic discourse. *Journal of Language and Social Psychology*, *20*, 259–284.

Limberg, H. (2010). *The Interactional Organization of Academic Talk: Office Hour Consultations*. Amsterdam/Philadelphia: John Benjamins.

Lindström, J., Lindholm, C., and Laury, R. (2016). The interactional emergence of conditional clauses as directives: constructions, trajectories and sequences of actions. *Language Sciences*, 58, 8–21.

Lindström, A., and Mondada, L. (2009). Assessments in Social Interaction: Introduction to the Special Issue. *Research on Language and Social Interaction*, *42*(4), 299–308.

Lomax, H., and Casey, N. (1998). Recording Social Life: Reflexivity and Video Methodology. *Sociological Research Online, 3*(2), 121–146.

McCarthy, M. (2003). Talking Back: "Small" Interactional Response Tokens in Everyday Conversation. *Research on Language and Social Interaction*, *36*(1), 33–63.

Madden, E., Sinclair, M., and Wright, M. (2011). Teamwork in obstetric emergencies. *Evidence Based Midwifery, 9*(3), 95–101.

Manser, T. (2009). Teamwork and patient safety in dynamic domains of healthcare: a review of the literature. *Acta Anaesthesiologica Scandinavica*, *53*(2), 143-151.

Manser, T., Harrison, T., Gaba, D., and Howard, S. (2009). Coordination patterns related to high clinical performance in a simulated anesthetic crisis. *Anesthesia and Analgesia*, *108*, 1606–1615.

Marra, M. (2012). Disagreeing without being disagreeable: Negotiating workplace communities as an outsider. *Journal of Pragmatics*, *44*(12), 1580–1590.

Melina, L., Burgess, G., Falkman, L., and Marturano, A. (eds.) (2013). *The embodiment of leadership: A volume in the international leadership series, Building leadership bridges*. San Francisco, CA: Jossey-Bass.

Mengis, J., Nicolini, D., and Gorli, M. (2018). The Video Production of Space: How Different Recording Practices Matter. *Organizational Research Methods, 21*(2), 288–315.

Mercer, S., Arul, G., Pugh, H., et al. (2014). Performance Improvement Through Best Practice Team Management – Human Factors in Complex Trauma. *Journal of the Royal Army Medical Corps*, *160*, 105–108.

Mercer, S., Park, C., and Tarmey, N. (2015). Human factors in complex trauma, *BJA Education*, *15*(5), 231–236.

Mesinioti, P., Angouri, J., O'Brien, S., et al. (2020). 'Get me the airway there': Negotiating leadership in obstetric emergencies. *Discourse & Communication*, *14*(2), 150–174.

Mesinioti, P., Angouri, J., and Turner, C. (fc.). A language-first approach to health research; sociolinguistic ethnography in hospital settings. In U. Flick, (ed.), *The SAGE Handbook of Qualitative Research Design*. London: SAGE.

Meyer, M., Connors, H., Hou, Q., and Gajewski, B. (2011). The Effect of Simulation on Clinical Performance: A Junior Nursing Student Clinical Comparison Study. *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, *6*(5), 269–277.

Mills, D., and Morton, M. (2013). Being, seeing, writing: the role of fieldnotes. In *Ethnography in education* (pp. 77–93). London: SAGE.

Minehart, R., Foldy, E., Long, J., and Weller, J. (2020). Challenging gender stereotypes and advancing inclusive leadership in the operating theatre. *British Journal of Anaesthesia*, *124*(3), e148-E154.

Mondada L. (2007). Multimodal resources for turn-taking: pointing and the emergence of possible next speakers. *Discourse Studies*, *9*(2), 194–225.

Mondada, L. (2009). Emergent focused interactions in public places: A systematic analysis of the multimodal achievement of a common interactional space. *Journal of Pragmatics*, *41*, 1977–1997.

Mondada, L. (2011). The interactional production of multiple spatialities within a participatory democracy meeting. *Social Semiotics*, *21*(2), 289–316.

Mondada, L. (2013). Interactional space and the study of embodied talk-interaction. In Auer, P., Hilpert, M., Stukenbrock, A., and Szmrecsanyi, B. (eds.), *Space in Language and Linguistics: Geographical, Interactional and Cognitive Perspectives* (pp. 247-275). Berlin: De Gruyter.

Mondada, L. (2014a). Instructions in the operating room: How the surgeon directs their assistant's hands. *Discourse Studies*, *16*(2), 131–161.

Mondada, L. (2014b). The Temporal Orders of Multiactivity: Operating and Demonstrating in the Surgical Theatre. In Haddington, P., Keisanen, T., Mondada, L., and Nevile, M. (eds.),

Multiactivity in Social Interaction: Beyond Multitasking (pp. 33–76). Amsterdam: John Benjamins.

Mondada, L. (2016). Challenges of multimodality: Language and the body in social interaction. *Journal of Sociolinguistics*, *20*(3), 336–366.

Mondada, L. (2019). Contemporary issues in conversation analysis: Embodiment and materiality, multimodality and multisensoriality in social interaction. *Journal of Pragmatics*, *145*, 47–62.

Mondada, L. (2021). Orchestrating Multi-sensoriality in Tasting Sessions: Sensing Bodies, Normativity, and Language. *Symbolic Interaction*, *44*(1), 63–86.

Moore, A., Butt, D., Ellis-Clarke, J., and Cartmill, J. (2010). Linguistic analysis of verbal and non-verbal communication in the operating room. *ANZ Journal of Surgery*, *80*(12), 925–929.

Mortensen, K., and Hazel, S. (2014). Moving into interaction—Social practices for initiating encounters at a help desk. *Journal of Pragmatics*, *62*, 46–67.

Mosadeghrad, A., and Ferdosi, M. (2013). Leadership, job satisfaction and organizational commitment in healthcare sector: proposing and testing a model. *Materia socio-medica*, *25*(2), 121–126.

Murtagh, G., Furber, L., and Thomas, A. (2013). Patient-initiated questions: How can doctors encourage them and improve the consultation process? A qualitative study. *BMJ Open*, *3*, e003112.

Narduzzo, A., Rocco, E., and Warglien, M. (2001). Talking About Routines in the Field: The Emergence of Organizational Capabilities in a New Cellular Phone Network Company. In Dosi, G., Nelson, R., and Winter, S. (eds.), *The Nature and Dynamics of Organizational Capabilities* (pp. 27–50). New York: Oxford University Press.

Nevile, M. (2015). The Embodied Turn in Research on Language and Social Interaction. *Research on Language and Social Interaction*, *48*(2), 121–151.

Ng, S., Brook, M., and Dunne, M. (1995). Interruption and influence in discussion group. *Journal of Language and Social Psychology*, *14*, 369–381.

NHS Lothian (2017). Training and Educational Resources. Available at: https://services.nhslothian.scot/MajorTraumaService/Pages/Training-and-Educational-Resources.aspx (Accessed: 15th February 2021)

Nofsinger, R. (1991). *Everyday conversation*. Newbury Park: SAGE.

Norris, S. (2004). *Analyzing Multimodal Interaction: A Methodological Framework*. London: Routledge.

Oborn, E., Barrett, M., and Dawson, S. (2013). Distributed leadership in policy formulation: A sociomaterial perspective. *Organization Studies*, *34*(2), 253–276.

O'Daniel, M., and Rosenstein, A. (2008). Professional Communication and Team Collaboration. In: Hughes, R. (ed.), *Patient Safety and Quality: An Evidence-Based Handbook for Nurses*. Rockville (MD): Agency for Healthcare Research and Quality (US).

O'Halloran, K. (2004). Visual Semiosis in Film. In O'Halloran, K. (ed.), *Multimodal Discourse Analysis* (pp. 109–130). London: Continuum.

Oredsson, S., Jonsson, H., Rognes, J., et al. (2011). A systematic review of triage-related interventions to improve patient flow in emergency departments. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*, 19, 43.

Othman, Z. (2010). The use of okay, right and yeah in academic lectures by native speaker lecturers: Their 'anticipated' and 'real' meanings. *Discourse Studies*, *12*(5), 665–681.

O'Toole, M. (1994). *The Language of Displayed Art*. London and New York: Routledge.

Pang, K. (2004). Making History in From Colony to Nation: A Multimodal Analysis of a Museum Exhibition in Singapore. In O'Halloran, K. (ed.), *Multimodal Discourse Analysis* (pp. 28–54). London: Continuum.

Parry, R., Pino, M., Faull, C., and Feathers, L. (2016). Acceptability and design of video-based research on healthcare communication: evidence and recommendations. *Patient Education and Counseling*, *99*(8), 1271–1284.

Parush, A., Campbell, C., Hunter, A., et al. (2011). *Situational awareness and patient safety: a primer for physicians*. Ottawa: The Royal College of Physicians and Surgeons of Canada.

Pattni, N., Arzola, C., Malavade, A., et al. (2019). Challenging authority and speaking up in the operating room environment: a narrative synthesis. *British Journal of Anaesthesia*, *122*(2), 233–244.

Pearson, B. (1988). Power and politeness in conversation: Encoding of face-threatening acts at church business meetings. *Anthropological Linguistics*, *30*(1), 68–93.

Pels, D., Hetherington, K., and Vandenberghe, F. (2002). The status of the object: Performances, mediations, and techniques. *Theory, Culture & Society*, *19*(5–6), 1–21.

Penner, L. Orom, H., Albrecht, T., et al. (2007). Camera-Related Behaviors during Video Recorded Medical Interactions. *Journal of Nonverbal Behavior, 31*, 99–111.

Petersen, A. (1999). Counselling the genetically 'at risk': The poetics and politics of 'non-directiveness', *Health, Risk & Society, 1*(3), 253–265.

Pietikäinen, S., Lane, P., Salo, H., and Laihiala-Kankainen, S. (2011). Frozen actions in the Arctic linguistic landscape: a nexus analysis of language processes in visual space. *International Journal of Multilingualism*, *8*(4), 277–298.

Pirini, J. (2017). Approaches to Multimodal Discourse Analysis. *Oxford Bibliographies in Communication.* Oxford University Press.

Pomerantz, A. (1984). Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In Atkinson, J., and Heritage, J. (eds.), *Structures of Social Action: Studies in Conversation Analysis* (pp. 57–101). Cambridge: Cambridge University Press.

Pomerantz, A., and Denvir, P. (2007). Enacting the institutional role of chairperson in upper management meetings: The interactional realization of provisional authority. In Cooren, F. (ed.), *Interacting and organizing. Analyses of a management meeting* (pp. 31–52). London: Lawrence Erlbaum.

Pope, C. (2005). Conducting ethnography in medical settings. *Medical Education, 39*(12), 1180–1187.

Price, M. (2017). Power through Participation: A sociolinguistic approach to identifying leadership in executive education classroom discourse. Unpublished PhD thesis, Georgetown University, Washington DC.

Pride, J., and Holmes, J. (eds.) (1972). *Sociolinguistics: Selected Readings*. Harmondsworth Penguin Books.

Pun, J., Matthiessen, C., Murray, K., and Slade, D. (2015). Factors affecting communication in emergency departments: doctors and nurses' perceptions of communication in a trilingual ED in Hong Kong. *International Journal of Emergency Medicine, 8*(48).

Purwaningsih, N., and Yoga Pratama, A. (2020). Caregivers Experience in Performing Interpersonal Communication and Directive Speech Acts With Elderly in Japan and Bali Nursing Home. *RETORIKA: Jurnal Ilmu Bahasa*, *6*(1), 78–84.

Raclaw, J., and Ford, C. (2015). Meetings as Interactional Achievements: A Conversation Analytic Perspective. In Allen, J., Lehmann-Willenbrock, N., and Rogelberg, S. (eds.), *The Cambridge Handbook of Meeting Science* (Cambridge Handbooks in Psychology, pp. 247–276). Cambridge: Cambridge University Press.

Raelin, J. (ed.) (2016). *Leadership-as-Practice: Theory and Application*. New York: Routledge.

Raelin, J. (2016). Introduction to leadership-as-practice. In *Leadership-as-practice: Theory and Application* (pp. 1–17). New York: Routledge.

Rampton, B. (2017). Interactional sociolinguistics. Tilburg Papers in Culture Studies; No. 175.

Rashid, M., Caine, V., and Goez, H. (2015). The Encounters and Challenges of Ethnography as a Methodology in Health Research. *International Journal of Qualitative Methods, 14*(5), 1–16.

Rawls, A. (2005). Garfinkel's conception of time. *Time & Society*, *14*(2-3), 163–190.

Reader, T., Flin, R., and Cuthbertson, B. (2007). Communication skills and error in the intensive care unit. *Current Opinion in Critical Care, 13,* 732–736.

Rehmann-Sutter, C. (2009). Why Non-Directiveness is Insufficient: Ethics of Genetic Decision Making and a Model of Agency. *Medicine Studies, 1,* 113–129.

Richardson, A., and Storr, J. (2010). Patient safety: a literature review on the impact of nursing empowerment, leadership and collaboration. *International Nursing Review, 57,* 12–21.

Roberts, C. (2013). The Gatekeeping of Babel: Job Interviews and the Linguistic Penalty. In Duchêne, A., Moyer, M., and Roberts, C. (eds.), *Language, Migration and Social Inequalities* (pp. 83–96). Bristol, Blue Ridge Summit: Multilingual Matters.

Roberts, C., and Campbell, S. (2006). Talk on Trial. Job Interviews, Language and Ethnicity. DWP Report 344.

Rohde, H. (2006). Rhetorical questions as redundant interrogatives. S*an Diego Linguistic Papers*, *2*, 134–168.

Ropo, A., and Salovaara, P. (2018). Spacing leadership as an embodied and performative process. *Leadership, 15,* 461–479.

Rossi, G. (2014). When do people not use language to make requests? In Drew, P., and Couper-Kuhlen, E. (eds.), *Requesting in Social Interaction* (pp. 303–334). Amsterdam: John Benjamins.

Royal College of Physicians (2013). The medical registrar: Empowering the unsung heroes of patient care. Available at: https://www.rcplondon.ac.uk/file/medical-registrar-empowering-unsung-heroes-patient-care (Accessed: 2nd January 2020).

Royal College of Physicians (2017). Improving teams in healthcare Resource 3: Team Communication. Available at: https://www.rcplondon.ac.uk/projects/outputs/improving-teams-healthcare-resource-3-team-communication (Accessed: 3rd December 2020)

Royal College of Surgeons of England. (2007). The leadership and management of surgical teams. London. Available at: https://www.rcseng.ac.uk/library-and-publications/rcs-publications/docs/leadership-and-management/ (Accessed: 10th March 2021).

Rystedt, H., and Sjöblom, B. (2012). Realism, authenticity, and learning in healthcare simulations: rules of relevance and irrelevance as interactive achievements. *Instructional Science, 40,* 785–798.

Sacks, H., Schegloff, E., and Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language, 50,* 696–735.

Salas, E., Sims, D., and Burke, C. (2005). Is there a "Big Five" in Teamwork? *Small Group Research, 36*(5), 555–599.

Sarangi, S. (2010a). Practising discourse analysis in healthcare settings. In *The SAGE handbook of qualitative methods in health research* (pp. 397–416). London: SAGE.

Sarangi, S. (2010b). Reconfiguring self/identity/status/role: the case of professional role performance in healthcare encounters. *Journal of Applied Linguistics and Professional Practice, 7*(1), 75–95.

Sarangi, S. (2010c). 'The spatial and temporal dimensions of reflective questions in genetic counselling', in Freed, A. and Ehrlich, S. (eds.) *'Why Do You Ask?': The Function of Questions in Institutional Discourse* (pp. 235–255). Oxford: Oxford University Press.

Sarangi, S. (2019). Communication research ethics and some paradoxes in qualitative inquiry. *Journal of Applied Linguistics and Professional Practice, 12*(1), 94–121.

Sarangi, S. and Clarke, A. (2002). Zones of expertise and the management of uncertainty in genetics risk communication. *Research on Language and Social Interaction, 35*(2), 139–171.

Sarangi, S., and Roberts, C. (1999). *Talk, work and institutional order: discourse in medical, mediation, and management settings*. Berlin; New York: Mouton de Gruyter.

Sarangi, S., and Slembrouck, S. (1996). *Language, bureaucracy and social control*. *Real language series*. London: Longman.

Sarcevic, A., Marsic, I., Waterhouse, L., et al. (2011). Leadership structures in emergency care settings: A study of two trauma centers. *International Journal of Medical Informatics*, *80*(4), 227–238.

Satar, M., and Wigham, C. (2020). Delivering task instructions in multimodal synchronous online language teaching. *ALSIC*, *23*(1).

Scheeres, H., Slade, D., Manidis, M., et al. (2008). Communicating in hospital emergency departments. *Prospect*, *23*(2), 13–22.

Schegloff, E. (1984). On some gestures' relation to talk. In Atkinson, J., and Heritage, J. (eds.), *Structures of Social Action: Studies in Conversation Analysis* (pp. 266–295). Cambridge: Cambridge University Press.

Schegloff, E. (1986). The Routine as Achievement. *Human Studies*, *9*, 111–151.

Schegloff, E. (2000). Overlapping talk and the organization of turn-taking for conversation. *Language in Society*, *29*(1), 1–63.

Schegloff, E. (2007). *Sequence Organization in Interaction: A Primer in Conversation Analysis* (vol 1). Cambridge: Cambridge University Press.

Schegloff, E., and Lerner, G. (2009). Beginning to Respond: Well-Prefaced Responses to Wh-Questions. *Research on Language & Social Interaction*, *42*(2), 91–115.

Schulz, C., Endsley, M., Kochs, E., et al. (2013). Situation awareness in anesthesia: concept and research. *Anesthesiology*, *118*(3), 729–742.

Schmidt, K. (2002). The Problem with 'Awareness'; Introductory Remarks on 'Awareness in CSCW'. *Computer Supported Cooperative Work*, *11*, 285–298.

Schmutz, J., Hoffmann, F., Heimberg, E., and Manser, T. (2015). Effective coordination in medical emergency teams: The moderating role of task type. *European journal of work and organizational psychology*, *24*(5), 761–776.

Schnurr, S. (2008). *Leadership discourse at work: interactions of humour, gender and workplace culture.* Basingstoke, UK: Palgrave Macmillan.

Schmitt, J. (2014, April 29). Multidisciplinary and interdisciplinary research- should departments take a more synergistic approach? *Contemplative Content*. Available at: https://blogs.lt.vt.edu/jdschmitt2/ (Accessed: 23rd July 2021).

Schultze-Berndt, E. (2017). Shared vs. Primary Epistemic Authority in Jaminjung/ Ngaliwurru. *Open Linguistics*, *3*(1), 178–218.

Scollon, R. (2001). *Mediated Discourse Analysis. The nexus of practice*. London and New York: Routledge.

Scollon, R., and Scollon, S. (2004). *Nexus analysis: discourse and the emerging internet*. New York: Routledge.

Searle, J. (1969). *Speech acts: An essay in the philosophy of language* (Vol. 626). Cambridge: University press.

Seligman, B. (1951). *Notes and Queries on Anthropology* (6 edn.). London: Routledge & Kegan Paul.

Semino, E., Hardie, A., and Zakrzewska, J. (2020). Applying Corpus Linguistics to a diagnostic tool for pain. In Demjén, Z. (ed.), *Applying Linguistics in Illness and Healthcare Contexts* (pp. 99–127). (Contemporary Studies in Linguistics). London; New York: Bloomsbury.

Sergi, V. (2016). Who's leading the way? Investigating the contributions of materiality to leadership-as-practice. In Raelin, J. (ed.), *Leadership-as-practice: Theory and Application* (pp. 243–261). New York: Routledge.

Seuren, L., and Huiskes, M. (2017). 'Confirmation or Elaboration: What Do Yes/No Declaratives Want?'. *Research on Language and Social Interaction*, *50*(2), 188–205.

Sfantou, D., Laliotis, A., Patelarou, A., et al. (2017). Importance of Leadership Style towards Quality of Care Measures in Healthcare Settings: A Systematic Review. *Healthcare (Basel)*, *5*(4), 73.

Siassakos, D., Bristowe, K., Draycott, T., et al. (2011). Clinical efficiency in a simulated emergency and relationship to team behaviours: A multisite cross-sectional study. *British Journal of Obstetrics and Gynaecology, 118*, 596–607.

Siassakos, D., Draycott, T., Crofts, J. et al. (2010). More to teamwork than knowledge, skill and attitude. *BJOG, 117*, 1262–1269.

Siassakos, D., Fox, R., Bristowe, K., et al. (2013). What makes maternity teams effective and safe? Lessons from a series of research on teamwork, leadership and team training. *Acta Obstetricia et Gynecologica Scandinavica, 92*, 1239–1243.

Sidnell, J. (2006). Coordinating gesture, talk, and gaze in reenactments. *Research on Language and Social Interaction*, *39*(4), 377–409.

Sidnell, J. (2012). Declaratives, Questioning, Defeasibility. *Research on Language and Social Interaction*, *45*(1), 53–60.

Slade, D., Joyce, H., Nesbitt, C., Solomon, N., and Scheeres, H. (1995). *Effective Communication in the Restructured Workplace*. Canberra: Dept. of Industry, Technology and Regional Development.

Slade, D., Manidis, M., McGregor, J., et al. (2015). *Communicating in Hospital Emergency Departments*. Berlin, Heidelberg: Springer.

Slade, D., Pun, J., Murray, K., and Eggins, S. (2018). Benefits of Health Care Communication Training for Nurses Conducting Bedside Handovers: An Australian Hospital Case Study. *Journal of Continuing Education in Nursing*, *49*(7), 329–336.

Stivers, T. (2010). An overview of the question-response system in American English conversation. *Journal of Pragmatics*, *42*(10), 2772–2781.

Storey, D. (2001) *Territory: the claiming of space*. Harlow: Prentice Hall.

Stubbe, M. (2000). "Just do it...!": Discourse strategies for "getting the message across" in a factory production team. In Henderson, J. (ed.), Proceedings of the 1999 Conference of the Australian Linguistic Society.

Stubbe, M., Dew, K., Macdonald, L., and Dowell, A. (2021). Interactional Sociolinguistics: Tracking Patient-Initiated Questions Across an Episode of Care. In Brookes, G., and Hunt, D. (eds.), *Analysing Health Communication* (pp. 49–80). Cham, Switzerland: Palgrave Macmillan.

Stubbe, M., Lane, C., Hilder, J., et al. (2003). Multiple Discourse Analyses of a Workplace Interaction. *Discourse Studies*, *5*, 351–388.

Stühlinger, M., Schmutz, J., and Grote, G. (2019). I Hear You, but Do I Understand? The Relationship of a Shared Professional Language With Quality of Care and Job Satisfaction. *Frontiers in Psychology*, *10*.

Sydor, D., Bould, M., Naik, V., et al. (2013). Challenging authority during a life-threatening crisis: the effect of operating theatre hierarchy, *British Journal of Anaesthesia*, *110*(3), 463–471.

Tannen, D. (1992). Interactional Sociolinguistics. In Bright, W. (ed.), *Oxford International Encyclopedia of Linguistics, vol. 4* (pp. 9–12). Oxford and New York: Oxford University Press.

Tannen, D. (2005). *Conversational Style: Analyzing Talk among Friends* (2nd edn.). New York and Oxford: Oxford University Press.

Tschan, F., Semmer, N., Hunziker, S., and Marsch, S. (2011). Decisive action vs. joint deliberation: Different medical tasks imply different coordination requirements. In Duffy, V. (ed.), *Advances in human factors and ergonomics in healthcare* (pp. 191–200). Boca Raton, FL: Taylor & Francis.

Tiel Groenestege-Kreb, D., van Maarseveen, O., and Leenen, L. (2014). Trauma Team. *British Journal of Anaesthesia*, *113*(2), 258–265.

Tomaselli, M., and Gatt, A. (2015). Italian tag questions and their conversational functions. *Journal of Pragmatics*, *84*, 54–82.

Trasmundi, S. (2020). *Errors and Interaction: A cognitive ethnography of emergency medicine*. John Benjamins.

Tsuchiya, K., Coffey, F., Timmons, S., et al. (2017). Communicating with gaze in emergency care: a multimodal analysis. *The Journal of the Japanese Association of Health Communication*, *8*(1), 81–90.

Turner, B. (1996). *The Body and Society*. London: SAGE.

Udvardi, A. (2019). The role of linguistics in improving the evidence base of healthcare communication. *Patient Education and Counseling*, *102*(2), 388–393.

UK Essays (2018). Patient Safety - The Impact of Communication in Nursing. Available at: https://www.ukessays.com/essays/nursing/team-communication-and-collaboration-key-factors-in-patient-safety-nursing-essay.php?vref=1 (Accessed: 27th February 2021).

Urry, J. (2000). *Sociology beyond Societies: Mobilities for the Twenty-First Century*. London: Routledge.

Van De Mieroop, D. (2020). A deontic perspective on the collaborative, multimodal accomplishment of leadership. *Leadership*, *16*(5), 592–619.

van Leeuwen, T. (2005). *Introducing Social Semiotics*. London: Routledge.

Van Olmen, D., and Heinold, S. (2017). Imperatives and directive strategies from a functional-typological perspective: an introduction. In *Imperatives and Directive Strategies* (pp. 1–49). (Studies in Language Companion Series; Vol. 184). John Benjamins.

Vanrell, M., Mascaró, I., Torres-Tamarit, F., and Prieto, P. (2010). When intonation plays the main character: information- vs. confirmation-seeking questions in Majorcan Catalan. *Speech Prosody, 100168*, 1-4.

Vermeir, P., Degroote, S., Vandijck, D., et al. (2017). Job Satisfaction in Relation to Communication in Health Care Among Nurses: A Narrative Review and Practical Recommendations. *SAGE Open*, *7*(2).

Verónica, O., Patricia, J., Justine, R., and Erick, A. (2018). Genetic and medical advising information and education tools for the patient and his family. *International Journal of Family and Community Medicine*, *2*(4), 153–156.

Vine, B. (2001). Workplace language and power: Directives, requests and advice. Unpublished PhD thesis, Victoria University of Wellington, Wellington, New Zealand.

Vine, B. (2004). *Getting Things Done at Work: the Discourse of Power in Workplace Interaction.* Amsterdam: John Benjamins.

Vine, B. (2009). Directives at work: Exploring the contextual complexity of workplace directives. *Journal of Pragmatics*, *41*, 1395–1405.

Vine, B., Holmes, J., Marra, M., et al. (2008). Exploring co-leadership talk through interactional sociolinguistics. *Leadership*, *4*(3), 339–360.

visual turn. Oxford Reference. Available at: https://www.oxfordreference.com/view/10.1093/oi/authority.20110803120100782. (Accessed: 12th June 2021).

Vuojärvi, H., and Korva, S. (2020). An ethnographic study on leadership-as-practice in trauma simulation training. *Leadership in Health Services*, *33*(2), 185–200.

Wang, C. (2016). Introduction: The "material turn" in migration studies. *Modern Languages Open.*

Wanzer, M., Booth-Butterfield, M., and Gruber, K. (2004). Perceptions of health care providers' communication: Relationships between patient-centered communication and satisfaction. *Health Care Communication, 16*(3), 363–384.

Weber, E. (1989). Varieties of questions in English conversation: A study of morphosyntax in declarative and nonclausal forms. Unpublished PhD thesis, University of California, Los Angeles, CA.

Weber, E. (1993). *Varieties of Questions in English Conversation*. Amsterdam: Benjamins.

Weil, J. (2003). Psychosocial genetic counseling in the post-non-directive era: A point of view. *Journal of Genetic Counseling*, *12*, 199–211.

Whalen, J., Whalen, M., and Henderson, K. (2002). Improvisational choreography in teleservice work. *British Journal of Sociology*, *53*(2), 239-258.

White, B., Eklund, A., McNeal, T., et al. (2018). Facilitators and barriers to ad hoc team performance. *Proceedings (Baylor University. Medical Center), 31*(3), 380–384.

Whitehead, T. (2004). WHAT IS ETHNOGRAPHY? Methodological, Ontological, and Epistemological Attributes. EICCARS Working Paper. University of Maryland, CuSAG.

Wiklund, M. (2016). Interactional challenges in conversations with autistic preadolescents: The role of prosody and non-verbal communication in other-initiated repairs. *Journal of Pragmatics, 94*, 76–97.

Wodak, R., Kwon, W., and Clarke, I. (2011). 'Getting people on board': Discursive leadership for consensus building in team meetings. *Discourse & Society, 22*(5), 592–644.

Wong, C., and Cummings, G. (2007). The relationship between nursing leadership and patient outcomes: A systematic review. *Journal of Nursing Management, 15*, 508–521.

World Health Organization (WHO) (2012). Topic 4: Being an effective team player. Available at: https://www.who.int/patientsafety/education/curriculum/who_mc_topic-4.pdf (Accessed: 19th February 2021)

Yang, L. (2001). Visualizing spoken discourse: prosodic form and discourse functions of interruptions. In the Proceedings of the Second SIGdial Workshop on Discourse and Dialogue, 1–10.

Yun, S., Faraj, S., and Sims, H. (2005). Contingent Leadership and Effectiveness of Trauma Resuscitation Teams. *Journal of Applied Psychology*, *90*(6), 1288–1296.

Zayts, O., and Lazzaro-Salazar, M. (2020). A sociolinguistic investigation of professional mobility and multicultural healthcare communication. In Demjian, Z (ed.), *Applying Linguistics in Illness and Healthcare Contexts: Contemporary Studies in Linguistics*. London: Bloomsbury Academic.

Zolnierek, K., and Dimatteo, M. (2009). Physician communication and patient adherence to treatment: a meta-analysis. *Medical Care*, *47*(8), 826–834.

Appendix

1. Transcription Conventions

[	Point of overlap onset.
(.)	Pause shorter than 0.5 seconds.
(X.0)	Pause about X seconds.
[…]	Section of transcript omitted.
(( ))	Notes.
-	Interruption.
=	No noticeable pause between the two lines, latching.
:	Sound stretching.
(word)	Uncertain transcription.
↑	Questioning intonation/rise in pitch.
<u>emphasis</u>	Emphatic speech.
LOUDER	Voice volume louder than surrounding speech.

2. List of abbreviations

(In alphabetical order)

AMPLE	Allergy, Medications, Previous medical history, Last Meal, Events
ATLS	Advanced Trauma Life Support
CA	Conversation Analysis
CPR	Cardiopulmonary Resuscitation
CT	Computerised Tomography
ED	Emergency Department
GDPR	General Data Protection Regulation
IS	Interactional Sociolinguistics
IV	Intravenous
JD	Junior Doctor
JM	Junior Midwife
LWP	Language in the Workplace
MDA	Mediated Discourse Analysis
MTC	Major Trauma Centre
ODP	Operating Department Practitioner
OR	Operating Room
PIL	Participant Information Leaflet
R&D	Research & Development
resus	Resuscitation
RQ	Research Question
SaFE	Simulation and Fire-drill Evaluation
SBAR	Situation, Background, Assessment, Recommendation
SD	Senior Doctor
SFL	Systemic Functional Linguistics
SM	Senior Midwife
VE	Vaginal Examination
WHO	World Health Organization