JYU DISSERTATIONS 225

Tuire Oittinen

Coordinating Actions in and across Interactional Spaces in Technology-Mediated Business Meetings

UNIVERSITY OF JYVÄSKYLÄ
FACULTY OF HUMANITIES AND SOCIAL SCIENCES

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ABSTRACT

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This doctoral dissertation investigates how participants in technology-mediated (i.e. distant) meetings coordinate their actions sequentially, temporally and multimodally. Drawing on authentic video-recorded data from an international company and taking conversation analysis as the theoretical and methodological starting point, the study explores the use of verbal and embodied resources in co-constructing and reconfiguring the frames and (pre)conditions of interaction, i.e. the interactional space(s). Distant meetings are presented as joint accomplishments in which one's presence and participation are constantly negotiated on a turn-by-turn basis. The thesis consists of four research articles and this overview. Article I investigates the beginnings of distant meetings, showing a stepwise progression of openings in two stages: 1) entering the meeting space and negotiating one's co-presence and 2) establishing shared focus on the meeting proper. Article II examines moments of interactional trouble with a special focus on the local participants' displays of alignment and affiliation, revealing their preference for transforming the interactional spaces and engaging in community building over making explicit attempts to solve the problem. Article III focuses on the closings of meetings, showing how the fine-grained organization of social actions during crucial moments in the overall closing trajectory has consequences for the ways interactional spaces are reconfigured. Article IV is a case analysis of a video-mediated meeting in which a more enhanced collaborative system is used and shows how, in that particular setting, embodied noticings can occasion the recovery of interactional spaces. It complements the research by highlighting the importance of understanding how different multimodal resources can engender new affordances. This dissertation shows that in organizing the ongoing interaction, the participants of distant meetings make use of various verbal and bodily-visual practices that require a skilful use of the social, material, and linguistic resources that come to play at specific moments in time and space. The research sheds new light on the challenges and affordances of technology-mediated environments and how they are made locally and interactionally relevant.

Keywords: distant meetings, technology, interactional space, workplace interaction, conversation analysis, multimodality, embodiment, coordinated action, social interaction

TIIVISTELMÄ (ABSTRACT IN FINNISH)

Oittinen, Tuire
Toiminnan koordinointi teknologiavälitteisten kokousten vuorovaikutustiloissa
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Tämä artikkeliväitöskirja tarkastelee teknologiavälitteisiä kokouksia ja sitä, miten osallistujat koordinoivat toimintaansa sekventiaalisesti, temporaalisesti ja multimodaalisesti orientoituen useisiin vuorovaikutustiloihin samanaikaisesti. Tutkimuksen teoreettisena ja metodologisena lähtökohtana on keskustelunanalyysi ja aineistona autenttiset yritysmaailmasta kerätyt videonauhoitukset, joiden avulla pyrin osoittamaan, kuinka vuorovaikutustiloista neuvotellaan vuorottelun tasolla niin verbaaleja kuin kehollisia resursseja hyödyntäen. Väitöskirjani koostuu neljästä osatutkimuksesta sekä tästä yhteenvedosta. Artikkeli I tutkii kokousten aloituksia ja vuorovaikutustilojen rakentumista sekä niiden edistämiselle keskeisiä siirtymiä. Artikkeli II keskittyy vuorovaikutuksen etenemisen ongelmiin ja siihen, miten samassa fyysisessä tilassa olevat osallistujat ratkovat niitä samanlinjaisuuden ja samanmielisyyden osoituksilla. Artikkelissa III tarkastellaan kokousten lopetuksia osoittaen, kuinka keskeinen rooli mikrotason siirtymävaiheiden neuvotteluilla on vuorovaikutustilojen purkamisessa. Artikkeli IV on yksittäistapauksen tutkimus aineiston ainoasta videovälitteisestä kokouksesta ja siitä, miten kehollisia huomaamisen osoituksia voidaan käyttää yhteisen vuorovaikutustilan korjaamisessa silloin, kun kaikki osallistujat näkevät toisensa. Tämä väitöstutkimus osoittaa, että etäkokousten osallistujat hyödyntävät vuorovaikutuksellisia keinoja, kuten sosiaalisia, kehollisia ja kielellisiä resursseja sekä näiden erilaisia kombinaatioita, taitavasti toimintansa organisoinnissa. Tutkimukseni tarjoaa uutta tietoa teknologiavälitteisen vuorovaikutuksen mahdollisuuksista ja haasteista sekä auttaa näkemään, kuinka näitä tehdään käytännössä näkyväksi vuorovaikutuksen edetessä.

Avainsanat: etäkokoukset, teknologia, vuorovaikutustilat, työelämän vuorovaikutus, keskustelunanalyysi, multimodaalisuus, kehollisuus, toiminnan koordinointi, sosiaalinen vuorovaikutus

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The journey of writing this doctoral dissertation has been one that I will never forget. It has been an adventure and a wild ride, full of joy and exciting curves. But it has also challenged me in many ways, and often times, I have felt that it is a mountain impossible to climb: a project I cannot finish. However, the past years, have taught me a lot, and more than I could ever anticipate to learn: about work, academia, and life. I have grown both professionally and personally. I have become a researcher, a teacher and quite the multitasker. Importantly, I have had the chance to get to know inspiring people along the way, work on a topic that truly interests me and become a part of an amazing (academic) community that I now also consider my own.

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Jyväskylässä/Vesangan mökillä 30.4.2020

Tuire Oittinen

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1 INTRODUCTION

Connecting with people over distances has never been easier. We make video calls to family members, use instant messaging with friends and colleagues and open a window on our daily lives through sharing pictures on social media. Over the past decades and along with digitalization, global working life, and especially the ways of collaborating, have also changed. Workplace meetings are increasingly arranged between people in different geographical locations and bridging even the longest distance is nothing out of the ordinary. However, research on the ways in which these technology-mediated (i.e. distant) meetings are socially and situationally organized and managed *in situ* continues to be an understudied area. Focusing especially on the interactional practices of participants working in a large globally dispersed company, this study sets out to examine distant meetings from an empirical perspective and zooms into the verbal, embodied and material resources that are used in their organization (e.g. Hutchby 2001, 2014). By drawing on video-recorded data and taking the approach of conversation analysis (CA), I aim to shed light on the dynamic nature of these events and show how various communicative affordances in the sociomaterial and technological environment are utilized to secure the unfolding of interaction and construct a shared interactional space for conducting the actions that constitute meetings (e.g. Mondada 2011a, 2013a). Of primary interest in this study is the sequential and temporal organization of participants' coordinated actions and the ways they are made relevant and oriented to in the moment.

This chapter presents the background of the study, starting with an overview of the conceptual framework and its relevant theoretical and methodological underpinnings. I then move on to discuss the characteristics of technology-mediated meetings and how they can be examined through detailed, micro-level analyses. Finally, I introduce the objectives and organization of this dissertation summary and consider future directions in the field.

1.1 Coordinated actions in interaction

We manage our social lives and relationships through interacting with others in various settings. These interactions are never just about exchanging words and 'doing' talk, but rather, they are activities where we collaborate and mutually orient to the accomplishment of orderly and meaningful communication (Hutcby & Wooffit 2005: 1). The way to manage any encounter requires not only that we know what we are expected to say or do at a specific moment in time, but also why and how to do it. This "communicative competency" involves interactants sharing similar repertoires of knowledge about language, context and the practices that come to play in social interaction (Drew 2005: 75). In this respect, a prerequisite for establishing mutual understanding in any setting is that one knows the "common set of methods or procedures" (Heritage 1984: 241). This is important especially in institutional and workplace settings where one's ability to carry out daily tasks as a member of an organizational culture depends on acknowledging the underlying structures, rules, principles and expectations, and knowing how to behave accordingly. CA takes the notion of communicative competency as its starting point and explores the realisation of these sense-making practices and how they are manifested through the orderliness of interaction (e.g. Pomerantz & Mandelbaum 2005). In the framework of this study, CA is used to examine the fine-grained organization of talk and other social actions, revealing how intersubjective understanding on the unfolding of interaction is achieved through *shared* communicative competencies and their manifestations (cf. Drew 2005). In the context of distant meetings, the role of these mutually recognized competencies is central in that the participants produce and interpret each other's conduct in a specialized, mediated environment. Hence, they need knowledge both on the commonly recognized practices employed to manage the daily business of meetings within their particular professional community, and on the affordances of contemporary technologies. By adopting the rationale of conversation analysis, this study investigates the collaborative processes through which the participants of these complex settings manage their presence and participation. They do this locally and *multimodally* by drawing on various modalities and semiotic resources in the sociomaterial setting.

Traditionally, stemming from its early emphasis on the methodical organization of spoken units in interaction, conversation analysis has been characterized as the study of *talk-in-interaction* (e.g. Sacks 1984; Psathas 1995). However, language has never been the primary focus of CA; this view of CA arose from the fact that scholars had access to materials that were audio recorded. During the past two decades, increasing interest has been shown in the field in looking not just at talk and verbal conduct but also at other ways of conveying meanings *in situ*. This has meant a shift towards documenting and analysing interactional phenomena more comprehensively by taking into consideration multimodal details, such as prosody, lexis, grammar and features of the body and its affordances in the prevailing spatial surroundings. During the present

millennium, much work has been done on the relevance of embodied conduct and the utilization of material objects in the social organization of activities in diverse settings (e.g. Nevile et al. 2014; Goodwin 2000; Goodwin 2007; Hazel & Mortensen 2014; Hazel et al. 2014; Deppermann 2013; Streeck et al. 2011; Streeck 2009; Rasmussen 2014; Keevallik 2018; Heath & Luff 2013a). Nevile (2015) calls this the *embodied turn* in the study of social interaction, referring specifically to attempts to capture how language, gestures, gaze, facial expressions, body posture and movement, along with their different constellations, figure and are intelligibly incorporated into interaction. Mondada (2014a: 138) discusses multimodality as the primary condition of interaction, meaning that there is always a multiplicity of resources *available* for mobilization in interaction. Thus, her approach to CA analysis highlights participants' agency and the need to be selective in an appropriate and meaningful way. Whereas a lot of attention has been paid to multimodal resources in face-to-face institutional contexts such as the educational and workplace domains, the organizational properties of today's increasingly technologized business settings have not been extensively examined (Hutchby 2001, 2014; Heath & Luff 2013a).

1.1.1 Embodying participation: (re)negotiating the interactional space

According to Goffman (1967: 144-145), a focused encounter requires a realm where participants are in each other's immediate presence, accomplish situational focus and mutually monitor the ongoing event. Following this line of thinking, achieving interaction that is both orderly and meaningful depends not only on its sequential environment but also on our ability to understand the relevance of the temporality and *spatiality* of social actions, i.e. actions produced at a specific moment in time and space and via orienting to the set of shared resources available in that particular "participation framework" (Goffman 1963, 1981; see also Goodwin & Goodwin 2004; Goodwin 2007). Kendon's (1990) notion of *F-formation* has been influential in developing understanding of how people manage and coordinate their presence in interaction. It depicts particularly the spatial-orientational relationship that interlocutors cooperate to maintain with their body arrangements, enabling them access to a mutually established "transactional space" and a common focus of attention (Kendon 1990: 211). An F-formation of two participants can be characterized, for instance, by a *vis-à-vis* or side-by-side arrangement, whereas in multiparty conversations it is common to be in a linear, circular or rectangular arrangement. As Kendon (1990) points out, the variation in the spatial patterns of F-formations depends on different factors, such as the number of participants, the setting and the overall purpose of the encounter.

Goodwin (2000: 1490) introduced the concept of "contextual configurations" to describe how the interpretative conditions that configure social interaction are achieved and sustained through the verbal and embodied conduct of participants, being thus a practical problem that one needs to address. This study applies the concept of *interactional space*. Mondada (2013a: 250) elaborates on the aforementioned notions and defines interactional space as

> constituted through the situated, mutually adjusted changing arrangements of the participants' bodies within space, as they are made relevant by the activity they are engaged in, their mutual attention and their common focus of attention, the objects they manipulate and the way in which they coordinate in joint action.

A common interactional space is a social and embodied construct that needs to be mutually established and managed during interaction (Mondada 2009, 2011a, 2013a). At the core are the human body and its affordances and, more specifically, the ways in which bodily-visual practices intertwine in the materiality of the environment and the on-going activity, structuring the frames and (pre)conditions of interaction (Mondada 2011a: 1977). Furthermore, participants can mobilize various verbal, linguistic and embodied resources while positioning themselves as speakers and recipients and orienting to a shared focus point. Previous studies illustrate how even in more constrained or ostensibly "fixed" spaces, practices for shaping and potentially reconfiguring the interactional space vary (e.g. De Stefani 2010; Mondada 2006). For instance, the constellations of sequentially organized talk and body movement during guided tours are likely to be very different from those of instruction-giving activities in mobile settings such as cars (e.g. Mondada 2013a; Haddington 2010; Haddington & Keisanen 2009). What makes these occasions diverse are the normative and social orientations of the participants to the specificities of the setting (Mondada 2013a: 256). In sum, interactional space is a processual, local achievement that can be modified and transformed in the unfolding of talk through subtle changes of bodily displayed alignments.

Previous studies show that there are specific ways in which interactional space is progressively established at the beginning of an encounter, (re)negotiated or transformed in and between activities and dissolved in the moment of departure. The opening phase includes achieving the pre-conditions for interaction: 1) orienting to the emergence of a common interactional space through preparatory activities, such as entering a room and establishing mutual gaze, that constitute a *pre-beginning* (Mondada 2009: 1980; Mortensen & Hazel 2014; see also Schegloff 1979), and 2) stabilizing the interactional space so that the conversational opening can be launched. After its initial construction, the interactional space is particularly susceptible to being redesigned during shifts between activities. This is primarily done through bodily readjustments and changes in interactant's orientation, which involve moving out of one configuration and creating a new one (Deppermann et al. 2010; Robinson & Stivers 2001; Mondada 2013a). In the closings of encounters, mutual orientation to a shared focus point transforms into separate individual trajectories through rearrangement of the bodies present and displays of withdrawal from the situation via other practices, such as verbal closing tokens (e.g. Haddington 2019; Ticca 2012; LeBaron & Jones 2002). Overall, these changes in the spatial organization are dependent on the affordances of the multimodal resources available, and they inform the activities in progress and participants' negotiated identities through mutual realizations. This thesis applies and extends Mondada's (2009: 1995) characterization of the interactional space as "a dynamic, flexible, adjustable realm that is locally and praxeologically configured by the

actions of participants" to technologized environments. The focus is on the ways participants who are not in each other's immediate co-presence construct, transform and reconfigure *multiple interactional spaces* by mobilizing diverse resources.

The notion of a common interactional space is of interest in the framework of this study for three reasons. First, as Goodwin (e.g. 2000, 2003, 2007) has proposed on various occasions, no interactional phenomenon or specific practice can be fully understood in isolation and without taking into consideration all aspects of its organization. Thus, in order to make sense of the practices participants in distant meetings use to coordinate their behaviours and secure the unfolding of interaction, it is important to recognize the relevance of the actions displayed in the different physical locations. This brings us to a deeper understanding of the material and spatial environment(s) as social structures that are both *action-shaping* and *action-shaped* (Mondada 2013a; Hausendorf 2013; Jucker et al. 2018). Second, by focusing on the ways in which the participants orient to each other and the activities at hand through their visibly displayed actions, it is possible to interpret how co-presence is established in given moments and thus elaborate on the spatial dimension of participation frameworks outside face-to-face settings (cf. Goodwin 2000, 2007). Third, perceiving interactional space(s) as actively constituted by the participants in interaction permits us to see the dynamics of these events and especially how the mutually recognized social reality is constantly (re)negotiated and transformed in the unfolding of talk and actions (Mondada 2007b; De Stefani & Mondada 2007).

1.1.2 In focus: interactional space in meetings as a collective and multimodal construct

This thesis takes a multimodal approach to the study of workplace interaction and brings together two central areas of CA research: microanalysis of interaction and workplace studies. In the latter, the social organization of collaborative and work practices have formed a key focus of investigation during the past two decades, especially in relation to the rise of contemporary technologies (e.g. Heath & Luff 2000; Luff et al. 2003; Llewellyn & Hindmarsh 2010). Scholars in both branches have examined dyadic and multiparty meetings, recognizing them as joint accomplishments in which the unfolding of interaction and achievement of task-related goals require the mutual effort of all parties (e.g. Nielsen 2013; Asmuβ & Svennevig 2009). As a bottom-up approach, CA's aspirations go beyond looking into manifestations of pre-allocated roles and agendas; rather the aim is to show how these aspects are subject to contextual contingencies and local negotiations. Recently, various studies have emphasized the special relevance of embodied actions and the utilization of material artefacts for the organization of meetings and co-construction of institutional roles and identities. Investigations adopting a multimodal perspective have looked into various topics, including turn-taking organization (e.g. Mondada 2006; Markaki & Mondada 2012; Ford & Stickle 2012), accomplishment of activities and activity shifts (e.g. Svennevig

2012a; Mondada 2011a; Sakai et al. 2014; Deppermann et al. 2010), disagreements (e.g. Kangasharju 1996, 2002) and interactional trouble (Oloff 2018). In their research on study guidance counselling meetings, Hazel and Mortensen (2014) illustrate how the student and counsellor's finely tuned coordination of verbal and embodied actions, including drawing on specific objects such as writing utensils, become important resources for not only negotiating the steps of the activity-in-progress but also enacting their institutional rights and responsibilities. Mondada (2011a) takes an interactional and praxeological approach to investigating participatory democracy meetings, which involves multiple participants and a range of available objects. Her analysis shows reconfiguration of the interactional space as a dynamic process, requiring mutual orientation to the artefacts in the setting and thus treating them as relevant for collaborative work and the accomplishment of the tasks at hand (Mondada 2011a: 291). In this line of inquiry, conversation analytic studies have come to attest to the significance of artefacts and bodily-conduct-in-interaction in the contemporary workplace, emphasizing meetings as important sites for making these aspects situationally, sequentially and spatially relevant (e.g. Hazel & Mortensen 2014; Nevile 2015; Mondada 2013a).

This research investigates multiparty meetings between business professionals in an international company. The focus is on the ways in which actions are coordinated in an environment with special characteristics: not all participants are in each other's physical co-presence, but instead business is done between distributed parties who collaborate over distances via contemporary technologies. One of the meetings is video-mediated, but in most cases, an audio connection links people in different locations, and materials are shared and manipulated in an on-line workspace during encounters. In all the meetings, the physically co-present participants constitute a local party who have various material objects available, such as pens, notebooks, laptops and mobile phones. These aspects are characterized by specific social, visual and technical constraints, which in turn contribute to the overall conception of distant meetings as *complex interactional environments*. This means that not only is there asymmetric access to interactional resources but also to the overall interpretative framework in which social actions are produced and assessed (cf. Goodwin 2000). In his seminal work on the impacts of technologies on conversational practices, Hutchby (2001) introduced the term "technologized interactions" to describe the postmodern era of technological developments for communication and the potential challenges it poses for the relationship between communicative affordances and normative structures of talk-in-interaction. He refers to *affordances* as anything within "perceptual range" that enable participation and engagement in a given activity and have the potential to shape the conditions of proposing action and positioning oneself within the participation framework (Hutchby 2001; Gibson 1979). However, Hutchby (2001, 2014) also points out that orientation to the situated affordances of technologies can engender new, distinctive forms of participation and sequential organizations of interaction.

Against this backdrop, the dissertation addresses two central aspects: 1) the ways in which communicative affordances can inform participants' behavior and the overall organization of interaction, and 2) the strategies with which participants construct their conversational realities through orienting to the affordances available to them. Given that interactional space is foremost a locally negotiated social construct for which the mutual arrangement of bodies is key, my aim is to show how the practices for "making space" are collectively and reflexively attended to also in contemporary distance environments through participants' situated verbal and embodied behaviours.

1.2 Aims of the study

This doctoral dissertation investigates the ways in which participants in distant meetings coordinate their actions in and across local and distant environments, thereby contributing to the organization of multiple interactional spaces (cf. Mondada 2011a; 2013a). More specifically, the focus is on the sequential and temporal organization of verbal and embodied displays and the affordances with which the participants make aspects of their sociomaterial and technological environment relevant in the ongoing interaction. The data for this study consist of authentic video-recorded meetings in one of the selected company's offices where some of the participants were located. Applying conversation analysis, I explore how the interactional order and meeting-related activities are accomplished via different constellations of multimodal resources within the distributed participation framework (see Goffman 1963; Goodwin 2000). The main research question is:

- How do participants of distant meetings coordinate their actions and co-presence in and across interactional spaces, and what kind of verbal and embodied means do they use?

This question was addressed via a multimodal approach to micro-level processes of social interaction and the results are reported in four research articles. Zooming into the finely tuned coordination of actions and the meeting participants' verbal and embodied conduct at particular moments, I discuss some of the distinctive practices with which mutual orientation and co-presence to accomplish local tasks are achieved and maintained. These practices relate to practical problems faced by participants in distant meetings, namely openings and closings, and solving audio, visual and interactional troubles. In order to address the main research question, the present research seeks answers to the following questions:

1. What kind of multimodal and interactional work goes into the organization of interactional space(s) at the beginning of meetings?

2. What kinds of practices do physically co-present participants draw on when attending to interactional troubles?
3. What kinds of multimodal resources and practices are drawn on when reorganizing interactional space(s) during closings of distant meetings?
4. What is the role of embodied resources in reconfigurations of interactional space(s) when video-mediation is used?

All four articles address the main research question by offering slightly different perspectives on the action coordination and co-construction of interactional space(s). Articles I, II, and III focus on meetings where audio connection is used, affording a perspective on the ways parties who cannot see each other orient to the interpretative framework. Article I addresses research question 1 and examines the openings of distant meetings, during which displays of mutual orientation and co-presence within the technology-mediated meeting space are considered essential prerequisites for accomplishing a coordinated entry into meeting-related talk. Article II addresses research question 2 and explores troubles in interaction with special focus on the ways in which the participants in one local environment organize their verbal and embodied behaviours during these moments. Issues of primary interest are alignment and affiliation and their different manifestations in the ongoing interaction. Article III contributes to understanding the process of reconfiguring interactional spaces during closings of meetings and thus answers research question 3. Article IV is a case analysis of the video-mediated meeting and especially of the ways noticing can occasion distinctive activity-bound recoveries of the interactional space. As an empirical, inductive method, conversation analysis (CA) enables a focus on the details of the interactional order and special procedures with which verbal and embodied displays are made relevant as they appear *in situ*.

This study provides new insights into the micro-level processes and practices of technology-mediated business meetings, revealing the multimodal and interactional work that goes into making social actions both recognizable and intelligible (e.g. Goodwin 2000; Mondada 2013a). In these processes, technology-mediated interaction is accomplished by orienting to the affordances and distinctive features of its immediate sociomaterial environment. Drawing on authentic data and taking a bottom-up approach enable probing into the peculiarities and complexities of these settings. Whereas there is a long-standing tradition in CA of investigating coordinated actions in face-to-face interactions and more recently, the way these actions are sensitive to the uses of material objects and spatial configurations, this dissertation extends the current notion of interactional space to domains outside these settings (cf. Mondada 2011a). This research contributes to the study of technology-driven workplace interaction by increasing knowledge on the emerging practices in contemporary meeting environments from an emic perspective: i.e. through highlighting aspects that the participants themselves treat as relevant for the ongoing interaction (see Schegloff 2007; Arminen et al. 2016). Figure 1 shows the involvements that participants of distant meetings frequently make relevant, illustrating their

orientation to the co-construction of, at least, three interactional spaces: the local space, the overall meeting space and (other) adjoining space(s), such as those established via the use of smartphones. In the framework of this study, interactional spaces are perceived as multi-layered and intertwined in the meeting activities' trajectories, rather than as being somehow distinct from one another or the contingencies. In the figure, they are placed into separate circles merely for the sake of clarify.

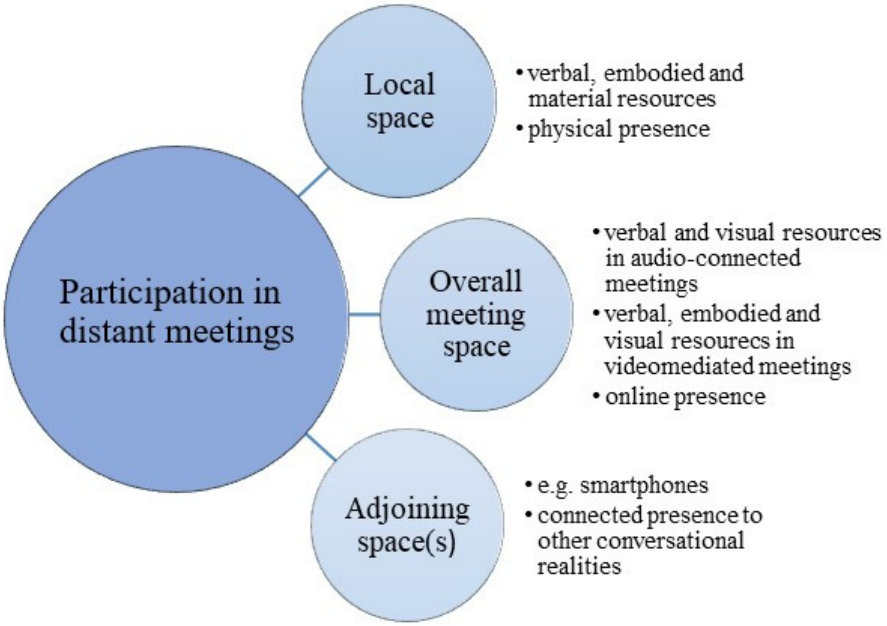

FIGURE 1 Interactional spaces as oriented to by participants.

1.3 Organization of the study

This dissertation consists of four articles and the five chapters of the present overview. Chapter 1 introduces the topic, area of study, and research objectives. In Chapter 2, the theoretical and methodological framework and key concepts are discussed in the light of traditional and contemporary perspectives on CA, meeting research and technologized interaction. Chapter 3 outlines the study approach and evaluates the choices made in the process of data collection and management. Chapter 4 summarizes each article in turn and discusses the main findings in relation to the research questions set for the dissertation and wider discourses in the field. Finally, in Chapter 5, conclusions are drawn and

implications for theory and practice along with recommendations for future studies are made.

The research articles include one co-authored article (Article I) and three individually written papers (Articles II - IV). The first two articles have been published in international peer-reviewed journals, and the last two are appended to this dissertation as submitted manuscripts. Each article represents original empirical research and contributes to understanding multimodal interaction and participants' communicative resources in contemporary, technology-mediated meeting environments.

2 THEORETICAL AND METHODOLOGICAL FRAMEWORK

In this chapter, I present the theoretical and methodological framework and situate the study within the domain of conversation analytic research informed by a multimodal approach. This is done by discussing CA's ideology and key concepts, introducing it as a practical, inductive approach to the study of language and social interaction. First (Section 2.1), I consider the origins of CA as an established research field in the social sciences and introduce the basic principles for applying CA in conducting empirical investigations. Second (Section 2.2), I discuss the literature on meeting research, connecting findings on the structural and social characteristics of meetings to aspects of spatiality. Third (Section 2.3), I focus specifically on "technologized interactions" (Hutchby 2001, 2014), discussing their organizational, social, and spatial properties, as well as their challenges and affordances, as made relevant by participants in these encounters. Furthermore, I reflect on the overall aims of the dissertation when discussing how the communicative affordances and challenges of technology-mediated encounters have been addressed both from practical and theoretical perspectives.

2.1 Conversation analysis as a theory and approach

Social interaction has been under scrutiny in many disciplines, such as linguistics, anthropology, education, cultural studies and sociology, that share an interest in unravelling different aspects of human communication. How people organize their behaviour in the moment-by-moment unfolding of encounters in their everyday lives has traditionally been the concern of conversation analysts (e.g. Hazel et al. 2014). Through a detailed examination of the structural underpinnings of interaction in their natural environment, CA seeks to investigate how interaction between two or more people becomes a mutually recognized, orderly *accomplishment*. CA can be characterized as a qualitative

bottom-up approach, providing foremost an emic perspective on interaction and participants' orientation to its orderliness. In addition, what further separate CA from other observational approaches to the study of language and interaction, such as pragmatics, sociolinguistics, ethnography and discourse analysis, are its theoretical assumptions and data-driven analytical procedure (see e.g. Clift 2016; Haddington et al. 2014). While CA's methods for detecting micro-level phenomena are deployed in diverse areas to complement studies on interaction, CA is foremost an established research field with a long-standing tradition (Sacks et al. 1974; see also Arminen 2005).

2.1.1 The origins of CA

The origins of conversation analysis (CA) date back to the 1960s and the work of Ervin Goffman in sociology and Harold Garfinkel in ethnomethodology. While both scholars shared an interest in creating a theory of social order, their approaches differed. In his work on the ritualistic behaviours of humans with a special focus on 'face' and moral inferences, Goffman (1967) was the first to propose the idea of the interaction order as an "institution in its own right". Garfinkel (1967), in turn, with a background in ethnomethodology, investigated interaction as *a set of practices*, focusing on how people establish common knowledge and practical reasoning. Common to both theorists is the idea that individuals' aspire to belong and be understood in their daily lives through shared sense-making practices and an orientation to the orderliness of interaction. The thinking of Goffman and Garfinkel had a strong influence on the early works of Harvey Sacks, a student of Garfinkel, who became interested in studying social order from a different empirical perspective, namely by analysing audio recordings of authentic interactions. In the 1970s, he introduced CA as an alternative to the existing experimental approaches in sociology, highlighting the importance of a more systematic examination of interactional phenomena as they occur in their natural settings. In collaboration with his colleagues, Gail Jefferson and Emanuel Schegloff, Sacks developed CA, proposing a more established framework for analysis that starts with the mechanical recording of real-life settings or situations and their detailed transcription (see Jefferson 1972). The first papers by Sacks focused primarily on the organization of verbal and linguistic practices, namely the analysis of *talk-in-interaction* during suicide helpline calls. However, with the increasing use of video-recording devices for data collection, interest gradually shifted to more comprehensive analyses of the resources used in interaction, including both verbal displays and embodied conduct such as gaze, movement and gestures (see e.g. Goodwin 1981). Since the millennium, profound interest has been shown in the ways in which the human body, as positioned and mobilized in the sequential and material environment, figures in social interaction (e.g. Goodwin 2000; Mondada 2006, 2014a; Streeck et al. 2011; Hazel & Mortensen 2014).

The theoretical foundations of CA stem from its two basic assumptions: 1) that all interaction, including language use, is orderly, and 2) that interactants orient to this orderliness at all times through their shared sense-making methods

(see Stivers & Sidnell 2005: 2). Thus, the main foci in CA are the structural mechanisms of interaction: how actions and activities are organized, and how they contribute to creating mutual understanding of the unfolding of interaction and its context. A distinctive aspect of CA is the way the concepts of *meaning* and *context* are perceived and how their interconnectedness is realized in interaction (e.g. Heritage 2005). From the perspective of CA, the primary resource for interpreting the meaning of actions is the *sequential context* of their production: what happened before and what comes next. With this basic reasoning technique, also known as the 'next-turn proof procedure' (see Sacks et al. 1974), it is assumed that meanings not only emerge from interaction but are also shaped by it. Furthermore, instead of being a fixed and predetermining aspect governing all behaviour, social context is something that is created in the sequential organization of actions and meaning-production (Heritage 2005: 105). With his notion that there is "order at all points", Sacks (1992: 484) suggests that it is not only the social order of a particular event that is negotiated and managed in interaction but it is also through the machinery of organized actions that the different contexts of our lives and the roles we enact come to be. In short, unlike many other approaches, CA avoids a priori assumptions about the details of talk in response to the surrounding context and instead treats all contributions in interaction as meaningful and above all as sequentially implicative (see e.g. Hutchby & Wooffit 2005 [1998]; Arminen 2005). Thus, what CA analyses show are the ways in which participants orient to the structural properties of *talk-and-bodily-conduct-in-interaction* (see Mondada 2006) and how this orientation manifests their social realities (Drew & Heritage 1992; Arminen 2005). Although CA does not take external factors such as the rules of a specific societal context as a starting point for investigation, it can nevertheless reveal how on the one hand people realize contextual normativity and how on the other contexts and their norms are shaped in and through interaction (see Heritage 1984).

An important principle of CA's enterprise is that it treats any interactional event as an activity in its own right (see e.g. Schegloff 1992). This is fundamental for CA's methodological approach, which has certain key features. First, conversation analysts always start by capturing naturally occurring interactions and data from their real environments, meaning that these events would have taken place regardless of the researcher's presence. Establishing the data collection procedure, i.e. what, when and where to record, depends not only on the topic but also on the decision whether to conduct a collections-based study, aiming to find generalizable patterns in an interactional phenomenon, or an analysis of an individual case. Second, since all preconceptions regarding potential findings should be avoided, CA's initial stage of data analysis is the "unmotivated looking" at recordings that enables noticing an interesting, reoccurring phenomenon (see Sacks 1984: 27). The purpose of this *empirical bite* (Clift 2016) is to emphasize the emic perspective of CA and the fact that the participants' own solutions, i.e. the features or aspects that they themselves make relevant in the course of interaction are placed at the heart of the analysis. The next step is extracting instances of the chosen phenomenon and their sequential

context after transcribing them systematically and in great detail. Third, the value of employing (audio or video) recorded data is that such data can be returned to for redefinition and reanalysis at any point (e.g. Hutchby & Wooffit 2005 [1998]). Moreover, the possibility to go back and forth enables reassessing how and at what exact moment something is said or done, which is important for making valid deductions, especially on embodied displays such as gaze and gestures (see Haddington et al. 2014). It should be emphasized that the detailed descriptions of data extracts constitute the main evidence for proposing reliable arguments in CA. As a methodological approach, CA goes way beyond merely transcribing instances of conversational phenomena; rather it is a *conversation analytic mentality,* including a variety of interpretive skills, that the researcher needs to adopt (see Schenkein 1978).

CA has traditionally focused on two areas of interest: mundane and institutional interaction. Mundane, everyday interactions can be characterized as ordinary encounters that are not restricted to any specialized environment, for instance, casual encounters with friends and family members. Mundane interactions have been considered the "primordial site for human sociality" and also the basis for conducting the "purest" kind of CA research (see e.g. Heritage 1984: 238-240). In this area, conversation itself is treated as an institution with routinized practices instead of being associated with specific frameworks and procedures (Heritage 2005: 104-6). In contrast, institutional interactions are more constrained and take place in settings with specific activity-related goals and institution-relevant identities. This involves orienting to certain institutional practices, such as those characterizing classroom or doctor-patient interaction. As proposed in the literature (Arminen 2005; see also Drew & Heritage 1992), studies on institutional interaction aim to reveal specialized uses of language and other resources, while at the same time tracking down the "fingerprint" of a given institutional practice. This often means investigating how collaboration, tasks and identities are locally and interactionally achieved in the context of their institutional frame. In general, institutional CA has focused on unravelling interactional practices and procedures in courtrooms, classrooms, medical consultations, media and workplace settings (e.g. Heath & Luff 2000; Llewellyn & Hindmarsh 2010; see also Heritage & Clayman 2010; Mondada 2013b, 2013d). This dissertation research, which sets out to study a specific kind of an institutional context, namely business meetings, and how they are managed and "talked into being" thus belongs to the latter strand of CA research (Boden 1994).

It is sometimes said that CA's systematic approach to interaction is so simple that it becomes difficult to understand. Hence, the basic principles and procedures for doing CA are discussed next.

2.1.2 Basic principles of CA for studying the organization of talk and bodily conduct

CA can be viewed as an endeavour to understand the details of interaction through its procedural infrastructure in a given setting (see e.g. ten Have 2007; Hutchby & Wooffit 2005 [1998]). On the one hand, it examines the role and

function of *action* in a *sequence*, i.e. what is said or done, how, by whom and at what moment in time, thus focusing on the *sequential organization* of interaction. A fundamental aspect for both interactants themselves and scholars investigating interaction is to understand the meaning of actions through their composition and positioning, namely the import that the sequential placement of action has on making some prior and/or future action relevant (see e.g. Stivers 2013; Schegloff 2007). The question asked by CA scholars as a guiding principle of their analyses is "Why that now?" (Schegloff & Sacks 1973). On the other hand, what is under scrutiny is *sequence organization*, i.e. how coherently ordered courses of actions or turns contribute to the accomplishment of activities (Schegloff 2007: 2; see also Heritage & Sorjonen 1994). This means investigating not only how participants in an event 'do interaction' but also what turns and their components, or turn-constructional units (TCUs), are doing, then and there (Schegloff 2007; Clift 2016; see also Schegloff 1992). Traditionally, CA has treated spoken utterances as the key vehicles for implementing actions within turns at *talk*, taking the shape of telling, requesting, asking, or announcing; however, CA scholars have recently looked shown increasing interest in the composition and sequential ordering of both verbal and bodily constructed turns and TCUs (Nevile 2015). More specifically, in order to be able to make sense of any single action in the course of interaction, one should treat it as a "knot of intertwined resources" in which no part can fully function without the others (Goodwin 2017). Given that verbal and embodied displays can be produced either consecutively or simultaneously, CA is thus no longer a way of dealing with sequential order only but also of dealing with how actions are *temporally* organized. What this means for CA and its analytic procedures is discussed next.

A pervasively relevant feature in the sequential organization of actions and activities is their adjacent positioning, which is based on the idea of *nextness* (Schegloff 2007). This means that the different parts of a sequence are expected to be relatively ordered and thus "type-connected" (Sacks 1987: 55). It is particularly through this relationship of the adjacency of turns, namely understanding the prior turn and what it makes relevant as the next action, that one is able to make sense of the unfolding of interaction and ensure its contiguity. CA research has identified sequences with conventionalized structures of adjacency organization. These are commonly known as *adjacency pairs,* which represent the kinds of paired actions that are linked together by a commonly recognized pattern or practice. Adjacency pairs typically consist of two turns produced by different speakers: a first turn, or the 'first pair part' (FPP), that initiates a line of action, and a subsequent turn, the 'second pair part' (SPP), that responds to the action proposed by the first turn (Schegloff & Sacks 1973; see also e.g. Sacks 1987; Shegloff 2007). One of the most generic minimal sequences is the summons-answer sequence with which interactants in telephone conversations can secure each other's attention and alignment before the upcoming talk (Schegloff 1968). Other representatives of tightly connected pair types are greeting-greeting, offer-accept/decline, and question-answer, all of which make a particular kind of response relevant. It should be noted here that while

producing the FPP of an adjacency pair provides alternatives for subsequent action and a suitable slot for it to occur, it is ultimately up to the co-participant to decide how to proceed. In this sense, even minimal forms of adjacency organization are not invariant or fixed within sequentially organized courses of action; instead, interactions are rather unpredictable and susceptible to participants' agency and other contingencies of the environment (Heritage 2005). Despite any action's conditional relevance to the previous one, the timing and manner of producing the SPP can vary. The SPP can also be delayed, for instance, because of silence, continuance of the first turn, or the implementation of intervening talk. Other kinds of sequentially organized formations that can elaborate on the action-typed base sequence of adjacency pairs are pre- and post-expansions and "extended tellings" (see Stivers 2013; Schegloff 2007). In formal workplace meetings, understanding the norms and expectations of adjacently organized actions is important for being able to secure the overall contiguity in a structured and appropriate manner.

In addition to the ability to recognize structurally appropriate solutions for next actions, the phenomenon of *nextness* contributes to the construction of intersubjective understanding and establishment of the course of interaction. In CA, a significant amount of work has been done on alternative adjacent responses to FPPs by focusing on whether they are preferred or dispreferred, namely *preference organization* (e.g. Sacks 1987; Schegloff 2007; Pomerantz 1984). The assumption here is that these alternatives are not "symmetrical" or equally valued but instead project different alignments (Schegloff & Sacks 1973: 314; Schegloff 2007). Thus, when one decides on the production of the second pair part, he or she orients to the sequential consequences that the utterance or action *projects* (e.g. Pomerantz 1984; Pomerantz & Heritage 2013). Many studies have shown that in ordinary dyadic and multiparty conversations a clear preference is shown for agreement and contiguity, which can be established by aligning positively with the stance taken in the first part (e.g. Stivers & Robinson 2006). In contrast, dispreferred responses are those that propose negative alignment and have the potential for prolonging the sequence or activity in question (e.g. Schegloff 1992, 2007). For instance, displays of disagreement, disaffiliation and rejection are commonly considered dispreferred, and they are often preceded by delays or other markers of mitigation. What makes studying sequence and preference organization essential in institutional interaction, and business meetings in specific, is that they manifest micro-level decision-making processes that in turn inform wider practices through which progressivity is achieved and goals met. This is by no means a new aspiration in CA; the earlier work by Schegloff (1979) regarding the openings of institutional encounters showed how alignment in the summons-answer sequence has a specific organizational task. The present study extends these notions to settings where contemporary technologies are used.

Another fundamental aspect of CA is the machinery of *turn-taking*. In their foundational paper about the systematics of turn-taking, Sacks et al. (1974) uncovered a set of conversational principles through which interlocutors are

considered to coordinate their participation in ordinary face-to-face conversations. These include one person speaking at a time, waiting for a suitable slot to insert one's talk and avoiding speaking in overlap with others. In their work, Sacks et al. (1974) address turn-taking as an economy that includes the management of resources and acknowledging one's rights and obligations to participate in a conversation (see also Clift 2016: 96-97). They do this by defining two separate components through which participation can be regulated: 'turn-constructional components' and 'turn-allocational components'. The former represent the units that construct a speaker's turn in interaction (the previously mentioned TCUs), such as phrases, lexical items and sentences. This includes making use of syntactic patterns, prosodic and phonetic features, and pragmatic markers, which can have a specific function in different parts of turn-construction, e.g. at turn-beginnings and turn-completions (Clift 2016). The latter, turn-allocational components, are those that inform the potential next speaker(s) when and how to take the floor. This is accomplished either by a current speaker selecting the next speaker or the next speaker self-selecting him or herself. What is known as a 'transition-relevance place' (TRP) is the exact moment in interaction when a prior turn has potentially reached its conclusion and an opportunity to insert another turn unit emerges. This does not always lead to a change in speakership, but the current speaker can also insert another turn, transforming thus the previous one into a 'multiunit turn'. Furthermore, although not addressed in the original model for turn-taking, embodied resources can have specific importance for either signalling relevant junctures or supporting ongoing talk in interaction (e.g. Goodwin 1981; Rossano 2013; Streeck 2009). For instance, producing an open-handed gesture in turn-completion often projects speaker change (Streeck 2009: 175). Overall, turn-taking, just like sequence organization, should be seen through its dynamic evolvement and as a feature that is constantly negotiated by participants to (re)create social order. It is also the recognisability of special turn-taking systems that, in part, give institutional settings their unique character.

Turn-taking and the ways in which participants in interaction design their next actions in relation to the previous ones, also known as *turn design*, are aspects that can make mundane and institutional interactions inherently different (Heritage 2005: 115-132). This is related to the overall structural organization of institutional encounters that entails not only the normatively ordered tasks and activities but also the fact that there usually is an expected order for their accomplishment (e.g. Heritage 2005; Robinson 2013; Zimmermann 1992). Schegloff (1992: 111) calls this "the procedural consequentiality of contexts" that becomes relevant only when oriented to by participants through details of their conduct. In other words, despite the *categories* of persons present in a physical setting such as a classroom, both the characterization of the context and the participants' roles and identities are realized in and through interaction, and more specifically, in the ways actions and activities are accomplished. In his pioneering work, Sacks (1992) discusses how roles and identities should not be understood as predetermining attributes and something we just 'have'; instead,

it is through enacting and recognizing specific *category-bound activities* that make a category relevant. For example, 'being a teacher' and 'being a student' in a classroom are primarily constituted through the actions performed and the style used that can be conventionally associated with those specific roles. It is, then, the moment-by-moment displays of alignment and joint coordination of talk and other actions that cause these behaviours to be mutually recognized and accepted within their institutional frame. In the classroom context, the teacher has special rights to manage turn-taking and the unfolding of events, to which he or she orients at different phases, such as when organizing the class physically and interactionally at the beginning and reorganizing it at the end. What contributes to creating the overall structure, or "supra-sequential coherence" (Robinson 2013), in any institutional encounter is thus the participants' mutual understanding of the interactional rights, obligations and expectations that inhere in the roles they enact.

The sequential unfolding of interaction and progressivity can be compromised and disturbed by problems in hearing, speaking or understanding (Schegloff et al. 1977: 361). Such cases can relate to errors in talk or other mistakes, mishearing or misunderstanding, but are not entirely contingent upon them, since in practice any utterance can become a trouble source (ten Have 1999: 133). Since the beginnings of CA, actions taken to deal with troubles in interaction have been investigated from the point of view of *repair*. In general, a repair sequence can be either 'self-initiated' or 'other-initiated', referring to who takes the first step towards solving the problem. If the one who is currently speaking corrects his or her own mistake, it is called 'self-repair', whereas in cases where someone else corrects the original speaker, it is termed 'other repair' (Schegloff et al. 1977; see also e.g. ten Have 1999). A repair can be directed at a particular point, or 'repairable', in a conversation, or it can be formulated in a way that only the need for repair is made relevant through an 'open-class repair initiator', such as "excuse me" or "pardon" (e.g. Drew 1997). As pointed out by Schegloff (1987), self-repair can be easily established as cut-offs or between units during one's own turn, whereas turn-beginnings are particularly suitable sequential places for other-initiation of repair. A significant basic notion is that whenever the need for repair is recognized, it becomes a 'priority activity' that supersedes the intended next turn (Sacks et al. 1974: 720). In other words, progressivity is halted because of the attempt to sustain or (re)establish mutual understanding, thereby rendering repair an important device for achieving intersubjectivity. Understanding the role and function of repair is crucial in institutional environments, where maintaining intersubjectivity is often key for the local accomplishment of tasks (e.g. Kuroshima 2010). The organization of repair has traditionally been perceived as a verbally established process, although recently more attention has been paid to the contribution of embodied displays in the process (Rasmussen 2014; Oloff 2018; Mortensen 2016; Arminen & Auvinen 2016; Greiffenhagen & Watson 2009).

Recent studies in CA have addressed the complexities of interaction, namely the management of multiple, emerging courses of action, or *multiactivity*

(see Haddington et al. 2014). In multiactivity situations, one's orientation is divided among more than one concurrent activity; this is primarily an organizational practical problem that needs to be negotiated *in situ* via the local management of turns and multiple modalities (Mondada 2014b: 70). Studies on multiactivity have focused on both mundane interactions, such as those between friends and family members (e.g. Helisten 2019; Kamunen 2019), and diverse institutional settings, such as customer service encounters (Raymond & Lerner 2014; Lindström et al. 2017) and surgical operations (Mondada 2014b). A central area of investigation has been in-car interaction and the ways interlocutors attend to locally and environmentally occasioned stimuli (Haddington 2019; Rauniomaa et al. 2018; Keisanen 2012). These studies have all shown that multiactivity can be managed in different ways, such as suspending, upholding, adjusting or abandoning either the competing course(s) of action or the main activity (Haddington et al. 2014; Haddington et al. 2013). In addition, Mondada (2014b) suggests that the strategies adopted to deal with multiactivity depend on whether one is trying to organize the competing trajectories simultaneously or consecutively. In what is called the parallel order, two non-interrelated courses of action run smoothly without any interference with one another, whereas in the embedded order, two interrelated actions need to be mutually adjusted via finely tuned coordination or synchronisation (Mondada 2014b: 50). This readjustment can include minimal bodily-visual displays, such as gaze, or more visible actions, such as suspensions or successive alternations in turns or sequences.

In their study, which in part focuses on 'dual involvements' at the service desk counter, Raymond and Lerner (2014) show how, through their fine-grained moment-by-moment organization of actions, participants make relevant not only the hierarchy of the activities that emerge but also their ability to coordinate two parallel trajectories so that the encounter runs smoothly. The existing body of multiactivity research is important for the present study in that technologized multiparty meetings are environments where the participants' attention is continuously being drawn to diverse features of the setting, a characteristic that may lead to the emergence of competing courses of action within the shared interactional space. Thus, to examine the configurations that constitute the meeting order and keep the meetings "on track" in these settings requires looking into the participants' locally established and interactionally negotiated verbal and embodied practices.

This section has described the fundamentals of CA that underlie the methodology applied in this dissertation. Next, I discuss aspects of meeting research and the way these have been informed by conversation analytic procedures.

2.2 Organization of interaction in meetings

During the past few decades, workplace meetings have drawn the interest of researchers in various fields, such as linguistics, organization and management

studies, discursive psychology and communication. In one of the earliest studies, Schwartzman (1989) investigated meetings from the perspective of anthropology, viewing them as cultural phenomena, as representatives of the organizations in which they function. In organisational communication, the focus has similarly been on finding connections between the organizational context and its manifestations on the linguistic and discursive levels (e.g. Putnam et al. 2009). Boden (1994) was the first to take a social constructivist approach to meetings, characterizing them as the primordial site where organizations are "talked into being". With her detailed analysis of authentic workplace data by which she attempted to understand the social actions through which institutions are created and managed, Boden (1994) laid the foundation for future empirical studies in the area. Since then, research has touched upon a wide range of topics, such as structural aspects of meetings (Mirivel & Tracy 2005; Ford 2008), roles and identities (e.g. Schnurr & Zayts 2011; Angouri & Marra 2011; Clifton 2006; Djordjilovic 2012), problem-solving (e.g. Angouri & Bargiela-Chiappini 2011), power and politeness (Holmes & Marra 2004; Vine 2004; Schnurr 2009; Mullany 2006), the use of humour (Rogerson-Revell 2007), decision-making (Huisman 2001), intercultural aspects (Poncini 2004; Bargiela-Chiappini and Harris, 1997; Spencer-Oatey 2005) and lingua franca practices (e.g. Louhiala-Salminen et al. 2005). With what has been called the "interactional turn" in the study of meetings (Cooren 2007: xii), understanding the organizational details from a micronanalytic perspective has become a prominent domain. Today, a growing body of research is taking a bottom-up approach and investigating meetings as local, interactional accomplishments in which interaction itself is both "context shaped" and "context renewing" (see e.g. Asmuß & Svennevig 2009 for an overview). In interactional sociolinguistics, a field closely related to CA, the focus has typically been on discursive practices, whereas conversation analysts explore the details of meeting participants' verbal and embodied conduct in relation to a given interactional or professional practice. More specifically, CA examines not only the ways the sequential and organizational environment affect the ways turns are constructed, but also how, through the interactional work on a turn-by-turn basis, participants orient to the relevance of the larger organizational context (Asmuß 2015: 279; see also e.g. Duranti & Goodwin 1992; Heritage 1984). A central notion in the field is that the systematic organization of interaction in meetings is distinctive, a feature to which participants with their social actions recognizably orient and contribute (Asmuβ 2015; see also Hutcby & Wooffit 1998).

Meetings come in many shapes and forms, and they can have various institutional and organizational functions. If we narrow the discussion down to the corporate setting alone, we find management meetings, performance appraisals, brainstorming sessions, team meetings and counselling meetings, all of which vary in their level of formality and in their structure and the activities pursued (e.g. Svennevig 2011). In general, an intracorporal meeting can be defined as "a focal interactional site in which the organization's norms and practices are negotiated and co-constructed among employees" (Angouri 2012: 1568). In addition, most meetings have either a retrospective or prospective

orientation, including activities related to the past, present or future (Holmes & Stubbe 2003). The data for this dissertation have been drawn from meetings with diverse overall purposes and orientations, i.e. some could be categorized as informative and orienting to the past, some relate to problems in the present, and some might include multiple aims and thus be hybrids of the first two. For this reason, a more accurate description of the meetings included in the present data would be based on their level of formality. Boden (1994: 84) gives the following definition of a formal meeting:

> it is a planned gathering . . . in which the participants have some perceived (if not guaranteed) role, have some forewarning (either longstanding or quite improvisational) of the event, which has itself some purpose or "reason", a time, place, and, in some general sense, an organizational function.

Formal meetings have special characteristics that relate to both their institutional and organizational contexts. These become manifested in the ways such meetings are arranged and implemented. Meetings are typically considered prescheduled and routine-like events that follow agendas and are restricted to specific timeframes and places (see Asmuß & Svennevig 2009). However, in the CA tradition, meetings are treated primarily as focused, goal-oriented activities where their organization and participant roles are jointly negotiated on a turn-by-turn basis (e.g. Raclaw & Ford 2015; Asmuß 2015). Furthermore, CA allows one to explore how meetings are constituted through participants' orientation to a shared focus point or course of action while concurrently constructing their meeting membership. Thus, despite any predetermined features, such as pre-allocated roles, i.e. the chair and attendees, and any ostensible expectations, CA makes it possible to reveal how these aspects and their interconnection with the meeting environment are realized and modified in and through interaction. Overall, meetings are viewed as key sites for understanding the underlying structures of institutions and "the occasioned expressions of management-in-action" (Boden 1994: 81).

Along with the *embodied turn* in CA, there has been a shift from favouring the verbal mode over other modes to building a more comprehensive image of meetings as being both locally and interactionally achieved (see, e.g. Asmuß 2015). This means that what is increasingly at the core of analyses is the variety of modalities and resources available in the production of actions and accomplishment of meeting-related activities (e.g. Raclaw & Ford 2015). Topics investigated from a multimodal perspective have included the negotiation of topic progression and transitions (Deppermann et al. 2010; Svennevig 2008, 2012; Barnes 2007), turn-taking organization (Ford & Stickle 2012; Markaki & Mondada 2012), constructing the roles of a chair or a leader (Schmitt 2006; Barske 2009; Pomerantz & Denvir 2007), entitlement (Asmuß & Oshima 2012), and alignment and community building (Kangasharju 1996, 2002; Kangasharju & Nikko 2009). A new, emerging research area within meeting research focuses specifically on the ways in which material objects and spatial arrangements figure in the organization of interaction and the establishment of situational and institutional roles (e.g. Hazel & Mortensen 2014). In a particularly influential strand that

analyses professional settings, namely workplace studies, complexities of multiparty meetings are often taken as the starting point while attempting to view how gestures, object manipulations and the use of technological devices and artefacts intertwine and inform the collaborative process of meetings. Being heavily influenced by the analytic orientations of CA and ethnomethodology, workplace studies are distinct in that they represent ethnographically inspired investigations into the activities and practices that make up the organizational environment in the contemporary workplace (see Heath et al. 2004). Some scholars have further elaborated on the distinction between the approaches of traditional or multimodal CA and workplace studies based on the procedures with which data is collected, scrutinized and transcribed (see e.g. Mondada 2013c). The present study falls somewhere in between these areas, as it aspires to examine the details of verbal and embodied conduct in meetings and also the ways technologies feature in their overall progression.

In comparison to the systematic procedures with which interaction is organized outside institutional contexts, meetings are a special case. What this means in relation to the fundamentals of CA; turn-taking, turn design and sequence organization, form the main foci of the following subsections.

2.2.1 Turn-taking and participation in multiparty meetings

The aspects that make meeting interaction recognizably different from ordinary talk and other institutionalized events in the workplace are its organizational and normative characteristics, to which participants orient through the details of their conduct. The most distinctive feature of formal meetings is the special turn-taking system, and more specifically, mediated turn-allocation in which the role of the appointed chair is pivotal: he or she has the formal right and responsibility to manage participation and topic progression (Asmuß & Svennevig 2009; Boden 1994; see also Heritage 2005). What this typically means is that the chair allocates turns and grants other participants access to the floor, and with this behaviour, assumes the role as a "guiding individual" (Heritage & Clayman 2010: 38). However, workplace meetings are dynamic events in which the changes in speakership and recipiency need to be negotiated on a moment-by-moment basis through finely tuned alignments and specialized practices (Ford & Stickle 2012: 12). Understanding the machinery of turn-taking in meetings requires knowledge of the distinctive overall organizational structure of the meeting and the way the meeting order is co-constructed and (re)negotiated in different phases and between the parties present.

How a group of people taking part in a meeting move from ordinary interaction into "being in a meeting" is a practical task that requires a coordinated shift and getting physically and interactionally reorganized (Asmuß & Svennevig 2009; Nielsen 2013; Raclaw & Ford 2015). Although beginnings of formal meetings tend to have some standardized features and conventionalized patterns (see e.g. Heritage 2005; Boden 1994), they are nevertheless contingent on contextual factors and need to be locally and procedurally accomplished. The first step constitutes the *meeting preparatory phase* that usually involves the

participants walking into the meeting room and taking seats, and the chair setting up and/or distributing materials. During this phase, it is common for the participants to engage in pre-meeting talk, which can have various forms and functions (see Mirivel & Tracy 2005). In addition, this phase requires reaching *a critical mass*, i.e. a certain number of people or key participants whose presence is crucial for the meeting to begin (Boden 1994). The second step is to accomplish a clear focus of activity and transition from simultaneous conversations to a different, systematic turn-taking format (Boden 1994; see also Nielsen 2013). This is done by visible and audible collaborative work, including the chair taking control of the floor and participants displaying their alignment via quieting down. According to Boden (1994: 54), the opening is an important phase for "bracketing in… to construct a meeting membership, the interaction order and the organizational tasks at hand". What this means is that in addition to establishing the formal meeting structure via a marked shift in turn-taking, the chair and participants orient to the new "leader-plus-others formation" as well as their altered rights and responsibilities to speak (Ford 2008: 57). The way the chair and participants ensure their participation at the beginning of meetings is thus foremost a multimodal process, involving linguistic resources but also the organization and alignment of bodily behaviours, i.e. constructing an embodied participation framework (cf. Goodwin 2007). Although opening a meeting and moving into the meeting proper require mutual effort for their accomplishment, the role of the chair is pivotal in that he or she is mainly responsible for initiating the relevant junctures verbally and drawing the attention of the others to the main activity (see Nielsen 2013). Overall, the process with which the meeting structure is achieved involves making use of different strategies to jointly accomplish an identifiable shift away from simultaneous exchanges and to a new orientation, the *meeting mode*, through which the specialized rights of the chair are recognized (Asmuß & Svennevig 2009; Nielsen 2013; Raclaw & Ford 2015). As also shown in Article I in this thesis, maintaining co-orientation to the interactional space established at the beginning is crucial for the accomplishment of local tasks.

The details of turn-taking have been studied in the unfolding of both dyadic and multiparty meetings. Instances of the former are consultations, such as in medical and educational settings (e.g. Robinson & Heritage 2005; Robinson & Stivers 2001; Hazel & Mortensen 2014), and feedback meetings, such as performance appraisal interviews (Mikkola & Lehtinen 2014; Asmuß 2008; Clifton 2012). Whereas in dyadic meetings, exhibiting co-operation in relation to constructing the roles of a speaker and recipient is a bilateral process, multiparty meetings involve a specialized speech exchange system in which there is potential competition for attention and the floor (Ford & Stickle 2012; Deppermann et al. 2010). Despite the initially established formation of the parties during openings, the roles of primary and non-primary speakers need to be accomplished interactionally and in a recipient-designed way through self-selection or other-selection. In practice, either the chair can target one of the participants as the next speaker, or an attendee can initiate a new turn by him or

herself. In their study on international democracy meetings, Markaki and Mondada (2012) illustrate specific practices with which the next speaker can be selected: by self/other-categorization or by mentioning a category-bound topic at a sequentially suitable opportunity, thus tacitly addressing a particular member. Their analysis shows how, to accomplish turn-transitions, the chair invokes the national identities of the participants by either mentioning the name of a country or a topic related to the country representatives' knowledge. In these fleeting moments, other co-participants orient to the eligibility of the potential respondent via embodied means, such as re-positioning of bodies and shifting their gaze. When the targeted next speaker takes the floor, the expectations of his or her rights to express epistemic authority on the behalf of the country are met (Markaki & Mondada 2012: 41). What the study foremost shows is the way one's national identity can become an important resource for managing turn-taking and speaker change as well as accomplishing the internationality of the encounter.

Ford and Stickle (2012) similarly show how self-initiated moves towards changes in speakership include making use of various situational and multimodal resources, such as displaying heightened interest in the current speaker's turn completion via shifting one's gaze and/or initiating repair through particular phonetic articulation. This means that securing one's turn and consolidating recipiency in multiparty meetings requires mutual monitoring and a reflexive coordination of actions between the parties present (Ford & Stickle 2012: 26; see also Mondada 2007a, 2013b). Moreover, different constellations of multimodal practices come into play not only when a new turn is launched but already when an incipient speaker projects his or her intent to take the floor. These pre-beginnings, including participants' implementation of pre-turn practices, are consequential not only for the unfolding of turn-transitions but also for the activities-in-progress (Mondada 2007a; Markaki & Mondada 2012; Mondada 2013b). In other words, the success of changing speakership depends on the ways the incipient speaker makes his or her emerging turn visible and how these actions become recognized and identified by the current speaker and other non-primary speakers. The overall progression of both self-initiated and other-initiated turn-transitions is informed by the incipient speaker's skilful, recipient-designed use of the components of turn-taking and the features of the shared interactional space, while at the same time making relevant the situational rights, responsibilities and expectations *to talk and to know* that are claimed or proposed (see Markaki & Mondada 2012).

The accustomed turn-taking format with which the progressivity of multiparty meetings is achieved depends not only on the chair and participants' mutual effort to sustain a shared focus on a single course of action but also on solidarity. This is best depicted via their ability to produce cooperative responses and more specifically, *alignment* and *affiliation* (Steensig 2012; Stivers et al. 2006). Whereas the former refers to functioning on the structural level, facilitating the unfolding of sequences and activities, the latter refers to collaboration on the affective level, as it is closely related to preference organization and stance-taking.

In formal meetings where reaching agreement and making decisions are routine activities, alignment and affiliation are central resources for their accomplishment (Barnes 2007; Huisman 2001; Clifton 2009). Previous studies illustrate the crucial role of specific kinds of alignment displays, namely formulations, which are frequently used to refer retrospectively to actions or discussion points. According to Barnes (2007), while formulations are sequentially consequential in that they can engender topic closure or invoke further discussion, they are also a powerful device through which the chair can influence the final decision. As pointed out by Raclaw & Ford (2015), in meetings, involving activity-oriented assessments, formulations can function as important devices for managing trouble and avoiding conflict. On the other hand, participants in multiparty meetings can also display alignment during disagreements, resulting in the building of alliances and oppositional teams (Kangasharju 1996, 2002; see also Nguyen 2011; Djordjilovic 2012). In her study on institutional committee meetings, Kangasharju (2002) identifies alliances with correcting and controlling functions that are often related to opinions and stance-takings. By looking into the characteristics and structure of these instances, she shows a dynamic, turn-by-turn progression in collective disagreements in which verbally and bodily displayed alignments play a crucial role. Here, an important notion is that an alliance is not only a constellation of particular social actions but also a social activity in its own right, giving some participants power over others at particular moments, such as during decision-making, when moderating a stance or when correcting a prior statement on the basis of one's state of knowledge (Kangasharju 2002: 1468). In another study, focusing on the development of team identity, Djordjilovic (2012: 124) further illustrates how alliances are developed on a microlevel by an orientation to speaking rights and constructing the aligning turns multimodally through displays of "shared accountability in relation to other meeting participants". Whereas it is common in non-institutional multiparty encounters for the turn-taking system to schism into multiple trajectories or conversations, i.e. "schismatic interaction" (Egbert 1997), in formal meetings, orienting to parallel activities and teaming up is risky in a sense that their formation can resist the interactional needs and norms of meeting talk.

While the turn-taking format that enables particular category bound activities and behaviours is established at the beginning of meetings, the chair and participants need to reorganize these social and physical configurations during closings by transitioning back from the turn-taking format for the meeting to multiparty talk (e.g. Nielsen 2013; Schegloff & Sacks 1973). More specifically, they need to re-establish their roles as non-chair and non-participants and bracket out from the meeting mode (Button 1987, 1991; cf. Boden 1994). Like openings, closings are joint accomplishments in which mutual orientation is required. In her study on departmental meetings, Nielsen (2013: 56) suggests that openings and closings mirror each other, manifesting similar coordinated stages but carried out in reverse order. From this perspective, the first step is to recognize closing as the relevant next step and orient to the imminence of closure.

This is called the "meeting preclosing phase" (Nielsen 2013: 50), during which the chair usually performs summaries or makes arrangements for future meetings (see Button 1987). In contrast, participants may perform various physical actions to indicate their readiness to close, such as gazing at their watches and piling up papers. The second step towards achieving a coordinated exit involves preclosing formulations and/or other verbal initiations by the chair with which he or she marks the boundary between meeting talk and the closing phase. Participants' alignment with these closing-relevant actions is crucial, and they often display it via silence and not taking advantage of opportunity spaces for moving out of the closing track by re-initiating meeting-related talk (Button 1991; see also Ticca 2012). Overall, closings are managed multimodally via mutual contributions to the "closing track", unravelling the meeting order in an organized manner. Going back to casual, multiparty talk requires visible conduct by the chair who must also remain attentive to the contingencies and the praxeological reorganization of the interactional space, namely the sequential and social environment of verbal and bodily actions that inform the closing process and, in the end, leave-taking (cf. Ticca 2012; LeBaron & Jones 2002).

The management of turn-taking in different phases of meetings is closely connected to the social relations of the chair with the participants and how the chair claims authority (Svennevig 2011; see also Antaki & Widdicombe 2008). The ways in which leadership is constructed has been a common interest in the fields of interactional sociolinguistics and CA (e.g. Svennevig 2011; Schnurr 2009; Clifton 2006). An essential observation made in both fields is that despite the chair's ostensible authority in meetings, how this role is enacted in practice varies, leading to establishment of diverse leadership styles. In his conversation analytic study on management meetings, Svennevig (2011: 19; cf. 1999) suggests a three-dimensional model for investigating leadership, in which the three dimensions are the epistemic, the normative and the emotional. The epistemic dimension relates to knowledge construction and encompasses shared expertise and familiarity, as manifested in their behaviour, between the chair and attendee(s). The normative dimension refers to the rights and obligations to produce social actions, some of which may derive from the individual's status and position in the organizational hierarchy. The emotional dimension, in turn, is displayed via expressions of positive and negative affect, which have relevance for regulating situational social distance. For instance, in team meetings, communality is often emphasised through displaying interpersonal affect (Svennevig 2011; Kangasharju & Nikko 2009). All three dimensions depict how the chair and participants display their understanding of the symmetries/asymmetries of their relationship, and at the same time, both draw on and constitute the social norms of the encounter. CA research thus reveals how professional identity work is done through the mobilization of verbal and embodied resources and how leadership can be "done" as in situ social practice (Clifton 2006, 2019; Nielsen 2009). Some CA scholars investigating topics related to communicative problems or the construction of leadership, or *leadership-in-interaction*, have presented their findings as having practical value for practitioners seeking to facilitate their

collaborative processes in their daily work (Clifton 2019; Stokoe 2014; see also ten Have 2001).

2.2.2 Artefacts and spaces in the accomplishment of activities and activity shifts

To manage participation and turn-taking during meetings, the chair and participants draw frequently on artefacts in the setting. Such artefacts can be constituents of the spatial, embodied, and material environments of interaction and become central semiotic resources for negotiating progressivity and mutual understanding (see Goodwin 2007, 2017). The accomplishment of actions and activities in meetings frequently involves orienting to the affordances available, such as the overall architecture of the meeting room, furniture, paper documents, pens, whiteboards, slide presentations and computer screens. In addition to work-related artefacts, other physical objects, such as water bottles and coffee cups, may also be present in the room (see Asmuß 2015). Whereas all these artefacts have the potential to shape the unfolding interaction in one way or another, their relevance is always constructed through participants' in situ practices. CA scholars have been instrumental in showing how artefacts can become important structuring resources that elicit, sustain and transform upcoming and ongoing activities (e.g. Mondada 2006, 2007a; Hazel et al. 2014; see also De Stefani & Horlacher 2017).

Previous studies have shown that material objects can become important resources for establishing the meeting structure and the institutionality of encounters. In his study on management and team meetings, Svennevig (2012b) illustrates how a written document listing the items on the agenda is integrated into topic organization and the construction of the chair and participants' situational roles. He describes the emergent character of the meeting structure, identifying specific procedures with which agenda-based topics are introduced. Although announcing a new topic verbally is an important device for the chair to invoke the agenda and instantiate task-related activities, the written document in his hands is oriented to as a normative, structuring element. Furthermore, the agenda has a significant function in the way the chair coordinates his or her embodied actions to facilitate topic progression, speaker selection and, at the same time, participant alignment (Svennevig 2012b: 61-62). In a similar vein, Asmuß and Oshima (2012) examine how participants' orientation to and manipulation of a computer-projected document during a proposal sequence is used as a means to display alignment and affiliation while negotiating either the rejection or acceptance of the proposal and their institutional roles. They conclude that the physical location of the computer and configurations of the participants' bodies furnish the necessary affordances for establishing shared understanding of the temporally and sequentially organized social actions (Asmuß & Oshima 2012: 84).

Material objects can also have special relevance for an individual's ability to perform and contribute to collaborative tasks during organizational activities. This is particularly intrinsic in brainstorming and planning meetings where

developing the course of the activity is a practical accomplishment, involving tangible artefacts that can be verbally referred to and physically manipulated by the participants in the room. However, a mutual orientation towards them as available and usable for interaction is required (Sakai et al. 2014; Nielsen 2012). As pointed out by Heath and Hindmarsh (2000: 554), in object-focussed discussions in the workplace, aspects of the material environment are rendered intelligible only through shared recognition of their purpose and organizing function: understanding objects as "organizational hubs". This view is supported by Nielsen (2013) who, in her study on the facilitator's role during brainstorming sessions, explores the ways artefacts such as sticky notes and whiteboards are used to foster participation and reach joint agreement. Her work highlights how managing topical talk, speaker change, and the progressivity of the activity are collaborative processes accomplished through multimodally constructed turns and coordinated actions in the material environment. Nielsen (2013) suggests that orientation to a shared set of artefacts and affordances is important for stimulating, documenting and communicating cognitive processes as well as socializing the participants into the interaction order and the practices of the community.

In CA research, some work has been done to unravel the procedures through which shifts between activities are accomplished during institutional and organizational meetings (e.g. Mikkola & Lehtinen 2014; Beck Nielsen 2014; Heath & Luff 2013b). These moments, where one sequence ends and another is about to be launched, are not a part of the official agenda and thus pose a practical problem to be solved by the meeting participants (Deppermann et al. 2010). Whereas material objects can have special relevance in the closings of activities, for instance one can place a document onto a past-business pile on the table (Mondada 2006), transitions and taking up the next item on the list need additional interactional work. In this line of thinking, activity shifts in multiparty meetings form places that are potentially susceptible to schismatic interaction and contingent on contextual factors, such as verbal invitations to move on (Hazel et al. 2014; Deppermann et al. 2010). In their investigation on a departmental meeting in an international consultancy, Deppermann et al. (2010) illustrate the emergence of a break-like activity, resulting from a delay in moving onto the next item on the agenda. The analysis shows how despite the chair's verbal announcement not to have a break between two bounded activities, participants initiate trajectories that disalign with the proposed main activity and its participation framework. The chair and participants develop their collective orientation and contribute to upholding a new, inserted activity momentarily via aligning with the "not-work time" of the meeting by various multimodal practices, such as verbally mentioning and gesticulating at the water bottles on the table. The chair's role in reconfiguring the interactional space in the emergence of and during the break is pivotal: she first makes use of the flip-chart in the room along with postural resources, namely "body torque" (Deppermann et al. 2010: 1707; see also Schegloff 1998), to display a *double orientation* towards the activities in question, before shifting to a state of mutual monitoring as a

device to pursue alignment. Other studies have similarly shown how objects can become significant interactional and collaborative resources for constructing the social order and demarcating the boundaries between activities in a subtle but visibly perceivable way (see Hazel et al. 2014).

While various studies have taken a multimodal perspective and provided insights on the interaction between participants of meetings and their artifactual and spatial environment, not many have focused specifically on the configuration of interactional space as a practical achievement (e.g. Mondada 2008, 2011a, 2013). In addition to knowing how artefacts and their affordances affect the preconditions for producing and managing turns, it is important to understand the situated nature of the "architectures-for-interaction" that enable collaborative work. This means taking an interactional and praxeological perspective and forming a more comprehensive picture of how social actions shape and are shaped by the multifarious aspects of the sociomaterial environment (Mondada 2011a, 2011b, 2013b; Jucker et al. 2018; Hausendorf 2013). According to Jucker et al. (2018), physical contexts that are built for the purposes of specific kinds of institutionalized interaction, such as meeting rooms, are heavily structured settings in which practices for interacting and "making space" are at least partly structured. Although not concerned with multiparty meetings or the business domain, Jucker et al. (2018: 88) nonetheless illustrate how ticket counters at a train station, which are informed particularly by the architectural affordances and the spatial design for lining up, invoke the social order and the behaviour of the current and incipient customer. Furthermore, it is their recognition of the expectations and norms proposed by the setting that enables individuals to participate in the activity in question in an appropriate manner. Hence, how interactional space for particular institutional purpose comes to being relates to achieving a "mutually shared *here* for perception, movement, and action" and behaving accordingly (Hausendorf 2013: 277; emphasis in original). While such *situational anchoring*, in which establishing co-orientation, coordination and cooperation are key elements, is a practical task relevant in all encounters, it is considered an essential prerequisite in formal meetings. In the framework of technologized meetings, and the present study in particular, accomplishing the interpretative conditions for collaborative action is considered a complex process in which one has to remain attentive to multiple spatial designs and structures.

Mondada (2011a) elaborates on this conceptualization of interactional space as achievement and resource and investigates the dynamics of space-making in a participatory democracy meeting. On this occasion, the chair invites proposals from work groups and makes lists of the ideas submitted on two boards in the room, which are then to be used to invoke discussion and joint decision-making. Mondada (2011a) introduces spatiality as multi-layered, identifying *multiple spatialities* in the setting: the represented space is the verbal manifestation of spatiality; the interactional space is the spatial distribution of bodies and the participation framework; and the inscriptional space encompasses the way materiality is embedded in the relevant activities, for instance during

writing on the boards (Mondada 2011a: 289-290). The study shows how the orientation of the chair and participants to features in the setting, as these become integrated into their visible and vocal behaviours, affects not only the dynamic shaping of the spaces but also the activities-in-progress. Whereas the represented space is constructed through orienting to the social norms of the setting at particular moments, the interactional space emerges from the embodied behaviour, especially the ways agreement and disagreement are displayed. Furthermore, the chair makes use of various bodily resources, such as gestures and body movement, to construct the source and the audience of the proposals and to adjust the "size" of the interactional space. Finally, the inscriptional space becomes an important resource for organizing the discussion sequentially and negotiating the outcome (Mondada 2011a: 313).

Some important conclusions can be drawn on the basis of Mondada's (2011a) findings: 1) by bodily orienting to changes in the interactional space, participants make relevant their positions and publicly displayed categories; 2) the interactional space is flexibly structured but also sensitive to individual actions and changes in the participation framework; 3) the chair's use of material objects and written lists on the boards functions as a key facilitator of intersubjective understanding on the details and steps of decision-making; and 4) all three spaces are available for situated public (re)design and mutual monitoring, thus essentially contributing to the progression of interaction. Mondada (2006, 2008, 2011a, 2011b, 2013a) provides an in-depth understanding of space-making as locally achieved and collaboratively negotiated through situated practices. For this reason, her conceptualizations lay a solid foundation for studying how space(s) are co-constructed, transformed and dissolved in the physical and virtual domains of distant meeting interaction (see also Jucker et al. 2018).

This section has introduced some of the ways CA and multimodality have informed studies on meetings. Next subsection moves the discussion to technologized interactions in mundane and work settings.

2.3 Interaction in technologized mundane and work settings

Technology has a special role in the tradition of conversation analysis, as shown by the earliest work of the CA scholars, Schegloff (1968, 1979) and Sacks (1992), who addressed the systematics of language use during telephone calls. Since then, the role and function of technologies in both human-human and human-computer interaction (HCI) have engaged the attention of practitioners and scholars working in diverse fields, including workplace studies, computer science, communications design, and applied linguistics. During the past two decades, conversation analytic methods have been used to unravel the organizational aspects of various mundane and institutional settings. Some studies have focused on asynchronous and quasi-synchronous online environments, such as discussion forums, social media and chat rooms (e.g. Herring 2013; Markman 2009), while others have attempted to shed light on the

ways contemporary technological tools, platforms and artefacts affect the production and interpretation of social actions in synchronous collaborative environments (e.g. Rintel 2010, 2013; Hutchby 2001, 2014; Heath & Luff 2000; Arminen et al. 2016). Despite the growing body of empirical investigation on different kinds of technologized work settings, such as control rooms (Heath & Luff 2000; Suchman 1987), operating rooms (Mondada 2007b), service centres (Raymond & Zimmermann 2016), and cars (Haddington 2019), relatively little attention has been paid to the interactive and spatial procedures with which actions are coordinated in formal technology-mediated meetings.

However, one significant issue has been addressed: *medium* and *interaction* cannot be treated as distinct components in the sense that the former enables the latter; instead, they are interconnected, as manifested in and through interactional processes (e.g. Goodwin 2000, 2007; Norris & Luff 2013; Luff et al. 2003). In a special issue, 'Orders of Interaction in Mediated Settings', Arminen et al. (2016: 292) further argue that we should look beyond "technology-as-context" and focus on the practices and organizations that the participants themselves orient to as relevant and accountable in the course of interaction. In this line of thinking, the present dissertation aims to eschew determinism and show how the use of communicative technologies creates possibilities and *affordances* for constructing the special characteristics and institutionality of encounters that participants orient to collaboratively (see Hutchby 2001, 2014). Thus, the core issue here is individuals' ability to manage their communicational endeavours with the tools made available by the material, technological, social and sequential framework of their interaction.

2.3.1 Technologies as structuring resources

Technologies are widely used in professional, educational and mundane settings and have thus become an essential part of our daily lives. There is a growing corpus of CA research on technology-supported interactions, that is, on the way technological objects figure in co-present face-to-face interactions, contributing to the local ecology of social actions and the emerging and ongoing activities. Another increasing body of work is built around technology-mediated asynchronous environments, in which hybrid forms of interaction, including text, sound/voice and images, and the mobility of these settings, are often highlighted. In both areas of study, technology is seen as a structuring resource that interlocutors draw on to organize their conduct and develop the course of interaction and also as a framework within which social actions are interpreted and made situationally intelligible and meaningful (see e.g. Heath & Luff 1992b; Hellermann et al. 2017; cf. Goodwin 2000, 2003). This subsection introduces some of the social and organizational characteristics of interactions and environments that involve accomplishing joint participation via technological devices and platforms but without video-mediation.

A large amount of work has focused on revealing the interactional patterns of telephone calls, partly because of the comprehensive access they provide to the sequential resources of interactants. Schegloff's (1968, 1986, 1979)

investigations on the openings of mundane and institutional calls were the starting point for unravelling how interlocutors who are not in each other's immediate co-presence organize their conduct from the very first minute of a phone ring. He suggests that openings have distinctive forms due to the lack of visual access to bodily resources that are generally used to ratify participation and identify the co-participant in the pre-beginnings of face-to-face encounters (cf. Mondada 2009). Schegloff (1986) describes canonical openings as including the following sequences in this order: 1) summons-answer, 2) identification/recognition, 3) greetings, and 4) initial inquiries. Since these early findings reported by Schegloff, others have also addressed recipient-designed ways of managing telephone openings and the routine-like activities these involve, such as identifications, greetings, and topic introductions, pointing out differences between practices in mundane and institutional settings (e.g. Sacks 1992; Rutter 1989; Houtkoop-Steenstra 1991; Zimmermann 1992; Hutchby 2001). In relation to the latter and specific contexts, such as service and emergency calls, the first two turns after the summons are the call-taker's self-identification and caller's acknowledgment, which result in ratification of the pre-aligned roles that have been determined by the caller's action in dialling the given number (Zimmermann 1992). The situated identities of caller-call–taker and service seeker-service provider are similarly in play during the closings of institutional calls, during which the participants have to reach alignment or misalignment verbally and recognizably to be able to end the call (Raymond & Zimmermann 2016). Overall, studies on telephone calls have revealed how novel ways of interacting have been developed in these specific forms of talk-in-interaction (Hutchby 2001: 80-81). However, it is important to take into consideration here the technological developments and multifarious, practical uses of phones that have substantially modified the customary organizational practices found before the new millennium. For instance, owing to the on-screen caller identification feature of mobile phones that traditional telephones lacked, answers to summonses have become more personally designed.

Changes in the use of phones have been characterized as the "multimodalization of telephony", a term which initially referred to the rise of the text message service, or SMS (Arminen et al. 2016: 300) but which has since been used to describe a variety of communicative platforms made available through mobile phones, such as instant messaging and social media. These radical changes have led to conceptualizing mobile phones both as facilitators of "connected presence" (e.g. Licoppe 2004) and creators of new contexts for action and hybrid patterns of real-time interaction. In the case of the latter, mobile phones can be flexibly drawn on and made relevant in co-located interaction irrespective of the physical location of the interlocutors, and advantage that highlights the availability of various communication networks. For instance, Raclaw et al. (2016) illustrate how the affordance of a mobile phone can be used to provide "expanded epistemic access" during assessment sequences and to manage the co-participants' involvement in a recipient-designed way. By sharing text and images, one can topicalize the material resource, but also invoke

trajectories and procedures toward alignment and affiliation, concurrently negotiating engagement in the activity-in-progress and position within the interactional space. Furthermore, it is suggested that, through the finely tuned coordination of spoken and embodied behaviour during mobile-supported sharing activities, participants not only orient to the additional layer of interpretation but also make relevant and predictable its interactional consequences (Raclaw et al. 2016: 377). In a similar vein, Greiffenhagen and Watson (2009) show how through mutual orientation to the screen, participants in computer-based collaboration form ecological hubs that enable them to identify and correct mistakes through attending to "visual repairables" in an unproblematic manner.

However, in addition to affording an opportunity to display involvement, mobile phones can also be used for the opposite purpose: i.e. to display disengagement or withdrawal (DiDomenico & Boase 2013). This means orienting to the use of one's mobile phone as a primary activity, for instance through intense gaze towards and manipulation of the object while not contributing to what is going on in the physical location. These recent studies draw attention to the way mobile phones can figure in the different constellations of verbal and bodily-visual conduct and how they can be used to (re)negotiate interactional space. Scholars in the area of multiactivity research have further contributed to a deeper understanding of to the ubiquitous use of mobile phones and its effects on managing and coordinating actions in different settings (see e.g. Haddington et al. 2014). The aspect of mobile phones and other types of connected presence are directly addressed in the present study, as they are seen to frequently claim the participants' attention to the adjoining spaces and trajectories that are not necessarily relevant to the unfolding of the meeting.

Another strand of CA has sought to apply conversation analytic procedures to the "new" types of social interactions, namely those taking place online (see Giles et al. 2015 for an introduction). These environments are governed by two unique characteristics. First, the sender and recipient cannot monitor each other's embodied behaviour prior to or during turn-production, thereby restricting the ways available to display orientation to the participation framework. Second, the interaction itself appears linearly on screen and thus has an impact on the adjacent organization of turns and next actions (e.g. Herring 2013; Arminen et al. 2016). Recognition of these unique properties and limitations has led to the development of a modified approach to studying the organizations of online conversation and a shift towards a conceptualization of "digital CA" (Giles et al. 2015: 48). Within this framework, it has been found that while the sequential characteristics and practices of text-based computer-mediated communication (CMC) may be different from those of face-to-face interaction, they involve a similar orientation to maintain intersubjective understanding and progressivity. For instance, Meredith and Stokoe (2014) illustrate how the need for repair is recognized and acted upon in quasi-synchronous chats in a recipient-designed way, highlighting not only the asymmetric access to repair operations but also the emergence of a new form of repair, one that is accomplished through message

construction. In her study on patterns of agreement and disagreement in online discussions, Baym (1996) similarly points out many distinctive aspects of online compared to offline settings, such as an extensive use of quotations, lack of affirming assertions and no clear preference for agreement. Moreover, she concludes that it is not the medium itself that makes for the diversity of negotiations in CMC but rather the contingencies and practices through which interlocutors come to recognize the affordances in these settings and flexibly organize their behaviour (Baym 1996: 37; cf. Hutchby 2001).

Some investigations have focused on quasi-synchronous chat-based meetings and the resources with which participants both structure the encounters and solve interactional troubles. Markman's (2009) study on multiparty virtual team meetings shows a progress-wise orientation to openings and closings that mirror one another, a phenomenon which has also been found peculiar to formal face-to-face encounters (see Section 2.2.1; cf. Nielsen 2013). She reports that the opening phase typically consists of two stages: a 'so'-prefaced turn that invites co-orientation, and an agenda-setting turn, during which the first step becomes ratified (Markman 2009: 157). In contrast, closings comprise a first stage, including a summary formulation or a closing remark that anticipates the imminence of closure, and a second stage that makes future action relevant. Instead of being able to indicate readiness to close via embodied means (cf. Nielsen 2013), leave taking must be accomplished verbally. An important finding is that because of the possibility to write and post messages at the same time and the fact that talk and actions are not tightly coupled, openings and closings of CMC meetings can easily be derailed (Markman 2009: 164). For the same reason, participants in multiparty CMC need to use specialized strategies not only to accomplish the moves in and out of the meeting structure but also to display orientation to the disrupted adjacency and attempt to maintain coherence. This means, for instance, connecting one's own turn to the relevant prior turn by mentioning the topic or addressee directly upon entry. In another study by Markman (2010), she examines the organization of repair during students' online project work, showing participants' tendency to launch self-initiated self-repair sequences very quickly after typos or other errors in writing. This indicates that these corrective turns have a dual purpose. On the one hand, they show a preference for re-establishing intersubjectivity by re-posting the same message in a corrected linguistic form, while on the other, they do "social repair", making relevant the potential social consequences of making a mistake (Markman 2010: 224). In such cases then, practices to organize repair thus become essential resources for developing the social norms of encounters, such as contributing to creating a certain level of informality. In the light of these findings, CMC can both transform and otherwise contribute to traditional tenets of CA, which originally focused on the study of *spoken* interaction. Although the focus of the present study is not on interactions where turns are linearly produced, studies on CMC help us better understand how contemporary environments create new affordances and practices rather than restrict them.

Moving beyond one-way interactions of CMC, we encounter other types of technologized environments in which specialized practices are being developed. Building partly on the ethnomethodological tradition (e.g. Goffman 1963) and taking the perspective of linguistic anthropology, Wasson (2006) studies authentic workplace interactions in a distant meeting setting in which one participant, physically in the recording room, is connected to the other participants via an audio connection and shared screen view. She identifies the participants "being present" in at least two interactional spaces, a local space and a meeting space but also considers the affordances of other available mediating channels, such as email and phone, highlighting the possibility to also be present in the emerging virtual spaces. Compared to the approach taken by Mondada (e.g. 2013a), who perceives interactional space as a fluid social construct that is continuously (re)negotiated in the unfolding of talk and other actions, Wasson's (2006) description of space as static and something that "is" partly overlooks this dynamic and interactive aspect of its accomplishment. However, an important observation in the analyses is that the participants in the setting manage various co-occurring trajectories and maintain dual involvements (cf. Raymond & Lerner 2014) in an unproblematic manner. For instance, Wasson (2006) illustrates how one can monitor the manipulation of material artefacts, namely a PowerPoint presentation on the screen, from a distance while engaging in other tasks in the physical location.

Although some studies on multiparty interactions have found multiactivity situations problematic, often resulting in changes in the sequential organization of events (e.g. Kamunen 2019), in the distant meetings investigated by Wasson (2006), participants' inability to monitor each other's embodied behaviour seems to allow them more room to manoeuvre. Ruhleder and Jordan (2001b) report similar findings in audio-only formal meetings where many participants are present in the same room, such as the local participants' tendency to frequently engage in verbal and non-verbal dialogue, i.e. schismatic interaction, in their respective physical environments (cf. Egbert 1997). Wasson's (2006) findings also differ from those of studies focusing on the use of PowerPoint presentations in face-to-face meetings, where the visual display of the presentation becomes a recognizable feature that informs the coordination of actions and the special ways roles are enacted and participants' professional expertise claimed (see Nissi & Lehtinen 2016). These aspects might lead us to consider the distinctive features of formal technology-mediated meetings and whether institutional and/or organizational structures are "lighter" when there is no visual connection between the attending parties (see also Ruhleder & Jordan 2001b; cf. Jucker et al. 2018). Article II considers this aspect, illustrating how participants in the same physical location are able to draw on a range of embodied resources in their immediate, socio-material environment to engage in local community building, while simultaneously organizing their verbal conduct so that they ostensibly align with the main activity in the overall meeting space.

2.3.2 Verbal and bodily conduct in video-mediated settings

Video-mediated interaction is different from other, simpler forms of technologized interactions, such as telephone conversations, online discussions and virtual workspaces. Devices enabling video-based communication include computers, smartphones, laptops and tablets and the commonly used Skype and Messenger applications, along with other more specialized videoconferencing platforms in work settings. Despite the enhanced possibility of visual access between co-participants and their interactional moves, these environments are still often considered asymmetric because of the constraints they impose on the mutual monitoring of each other's physical domains (Arminen et al. 2016). Over the last three decades, scholars of ethnomethodology and conversation analysis have aspired to examine the effects of emulated co-presence, or "media space", on interactional practices and procedures (Harrison 2009; see also Luff et al. 2016; Norris & Luff 2013; Arminen et al. 2016). The organization of participation, turn-taking and repair has been studied in different private, group and professional settings and has revealed the affordances and challenges of video-based collaborative practice and when producing and interpreting interactional moves via embodied resources (e.g. Hutchby 2001; Rintel 2013; Licoppe 2017; Licoppe et al. 2017).

The communicative affordances of video-mediated encounters and the multimodal resources available to participants are contingent on the system used to arrange them. Some scholars have investigated the organization of "video-in-interaction" in naturally occurring mobile and Skype calls, revealing patterned processes in their accomplishment and some peculiar characteristics (e.g. Licoppe & Morel 2012; Licoppe & Dumoulin 2010). As pointed out by Licoppe and Morel (2012), multiparty Skype calls are governed by participants' practices to alternate between what is called a "talking heads" arrangement and showing parts of the material environment. What affects the configuration of these multimodal orderings is joint orientation to the maxim "Show the face of the current speaker on-screen", making the headshot format a default mode (Licoppe & Morel 2012: 407). In addition, it is presumed that the "talking heads" arrangement is maintained unless there is something else in the physical setting that is relevant for an ongoing activity. In the event of failure to adhere to the maxim at crucial moments, participants hold each other accountable, for instance by verbally commenting on the lack of *gazeworthiness* of the current image. Producing the proper frame may also involve initiating repair or a correction sequence, which makes changing the screen view a collaborative accomplishment (Licoppe & Morel 2012: 414). Another peculiarity of Skype calls is how *joint seeing*, achieved by participants showing objects to one another, can augment face-to-face orientation (Licoppe et al. 2017). This process involves holding and manipulating material artefacts, such as clothes and furniture, in front of the camera lens, providing one's co-participants with a wider view of one's immediate material environment. While this kind of sharing activity shows a recipient-designed manner of inducing specific forms of participation and

experience through the affordance of video, the process itself is susceptible to the ecology of action adopted (Licoppe et al. 2017: 5300). Furthermore, in addition to being a referential activity and an important resource for engaging the other participants' attention effectively via a face-to-face orientation, showing objects occasion topics for talk and help collectively manage the course of interaction.

The unfolding of video-mediated interaction is always sensitive to contextual aspects, such as negotiations over participants' situational roles, predetermined goals and specialized features of the technology used (see Mlýnař et al. 2018 for an introduction). Some studies have found structurally distinctive characteristics, especially in relation to turn-taking and the organization of openings and closings (e.g. Licoppe & Dumoulin 2010). As pointed out by Licoppe and Morel (2012), the "talking heads" arrangement is systematically oriented to and accomplished at the beginning of relational Skype calls to enable a stage of mutual identification and recognition. Studies on institutional video-meditated encounters have also pointed out some distinctive features. Based on a corpus of audio-only and video-mediated meetings between geographically dispersed units of a holding company, Ruhleder and Jordan (2001b) found that openings of remote meetings include a preparatory phase involving specialized practices related to setting up the necessary devices, testing them out and physically positioning oneself in the room. This all takes place prior to establishing the connection to the remote participants and reaching the verbal opening phase. Furthermore, Ruhleder and Jordan (2001b) show how openings and closings lack the "dawn" and "dusk" periods that in face-to-face meetings often comprise sequences of informal and pre-meeting talk (see e.g. Raclaw & Ford 2015; Mirivel & Tracy 2005), thus forming an additional phase within the processes of bracketing in and out of the meeting mode (see also Boden 1994; Section 2.2.1). These findings echo Halbe's (2012) observations in a comparative study on the differences between face-to-face meetings and teleconferences, where she shows in the latter that openings and closings are more abrupt and lack the possibility for parallel non-work conversations to take place. In the light of these inquiries, we may conclude that videoconferences and other technology-mediated meetings can be characterized as more compact and containing less interpersonal communication that is not directly relevant to the business of the meeting.

In the area of workplace studies, there is a longstanding tradition of investigating and creating ways of improving for what is termed computer-supported cooperative work (CSCW). The driving force behind prior and current research initiatives has been to further understanding of the relevance of embodied actions in sequentially organized conduct and the way these manifest in remote collaborative work and videoconferencing (e.g. Heath & Luff 1992a; Luff et al. 2014). In this area, workplace studies have come to both acknowledge the body of work on the microanalysis of visual behaviour ('multimodal' CA; see e.g. Hazel 2014) and contribute to its development. Because most traditional video settings involve distorted or restricted image displays of distant participants, challenges in projecting and accomplishing turns in a recipient-

designed way have emerged, making media spaces "fractured ecologies" (Luff et al. 2003). The term refers particularly to activities that can become *fractured* due to contradiction between the intended meaning of embodied actions and the way they are interpreted in the end, if at all. In their studies on multimedia office environments and control rooms, Heath and Luff (1993, 2000) discuss this phenomenon and argue that embodied displays can sometimes turn into *disembodied conduct*, resulting from asymmetric access to the remote party's visual field. For instance, they show how a hand gesture used to secure recipient alignment fails to serve its purpose due to the co-participant's inability to display face-to-face orientation at the right moment (Heath & Luff 2000). This leads not only to missing the opportunity for shared seeing and taking the floor but also delaying the initiation and predesigned trajectory of the activity. In general, a central topic in CSCW has been to identify practices with which co-orientation can be established and made perceivable in the unfolding of interaction. Such practices are also relevant to the ways space-making and situational anchoring can be achieved (see Hausendorf 2013; Section 2.2.2).

Various studies have examined the function of embodied referencing, such as pointing, which frequently accompanies deictic expressions and is used to achieve mutual orientation to a particular feature or object in videoconferencing. Embodied referencing is a special characteristic found both in traditional 1990s multimedia office environments (Heath & Luff 2000) as well as more recent, enhanced collaborative systems, such as T-room (Luff et al. 2016), Agora (Luff et al. 2014) and CamBlend (Norris & Luff 2013). While the latter three studies were conducted as quasi-naturalistic experiments, their findings primarily inform us about participants' own solutions in dealing with new technologies. For instance, in the setting of CamBlend, which includes various focus windows, participants sought to overcome difficulties they faced in attempting to reference objects via embodied means and ended up creating new ways to pre-empt or repair troubles in interaction (Norris & Luff 2013: 1336). In his study on multiparty videoconferencing in an educational setting, Hjulstad (2016) similarly shows how, in response to the challenge of not being able to gesture towards the right student on the screen via bodily-visual means, the teacher creates a practice of "mapping" to facilitate turn-taking. Along these lines, CA-inspired investigations on videoconferencing have come to increase our understanding of the ways new affordances can create new practices and how these in turn can inform the development of systems that offer their users a richer array of visual resources for referential activity (see also O'Hara et al. 2011; Due et al. 2019).

In addition to challenges in embodied referencing, other kinds of interactional troubles and their consequences in video-mediated environments have been explored. In his study on relational videoconferencing, Rintel (2010) discusses the emergence of network perturbations and how they can be situationally managed via three kinds of strategies: technology-oriented remedies, content-oriented remedies and non-remedial accounts. In the technology-oriented remedies, disrupted continuity is made relevant by verbal means, such as negative evaluations of the audio-connection, and oriented to as

something that can be fixed by manipulating the devices. In the case of content-oriented remedies, the focus on technology as a trouble source is minimized and instead the need for repair concerning prior action is emphasized. The strategy of non-remedial accounts refers to letting audio and/or visual trouble pass, despite displaying having noticed them, especially if the trouble does not disrupt the sequential unfolding of talk. This can lead to making use of trouble to initiate a new sequence of relational talk (Rintel 2010: 310). In addition, other researchers have found that participants in video-mediated conversations orient to lengthy gaps as something that interferes with the contiguity of activities, highlighting how they function as potential "trouble flags" (Ruhleder & Jordan 2001a). Olbertz-Siitonen (2015) further illustrates how participants in a work setting orient to the sequentiality of actions as a precondition for the accomplishment of tasks. Mistimed activities, such as extended overlaps, are often taken as instances of transmission delay, which can be explicitly addressed by taking into account the asymmetrical access to interactional resources (Olbertz-Siitonen 2015: 225-226; see also Rintel 2013).

Multiparty video-conferences have been a focal point in some recent studies and have yielded insights into specific turn-taking procedures and ways to display alignment and affiliation. Muñoz (2016) suggests that the move to the meeting structure consists of accomplishing 1) a technological opening, during which attendance is claimed, 2) an interactional opening, where availability is displayed, and 3) an audiovisual opening, including the establishment of the preconditions as well as confirming this via speaking. The study thus shows a gradual shift from offline to audio-visual interaction, involving a specific kind of object manipulation, namely typing greetings in a chat interface prior to launching the opening audibly. Furthermore, Halvorsen (2016) illustrates how the inability to interpret direct gaze in a multiple-location meeting makes negotiating the transition space between turns and claiming the floor challenging. Participants in this setting use alternative strategies to initiate turns, such as pre-announcements and partial agreements. Nielsen (2019: 260) further argues that gaze alone is not a sufficient resource for participants in video-mediated meetings to display alignment or select the next speaker; instead, other means are needed. For instance, participants can verbalize visuals or raise the visibility of objects or oneself (i.e. one's face) to invite affiliative responses or draw attention to a focal point (Nielsen 2019). These findings are important for the present study in that they have looked closely at current trends in studying the characteristics of these novel settings and recognized some of their methodological and practical limitations.

2.4 Summary

In this section, I summarize the theoretical and methodological underpinnings of this research and the advantages of applying a conversation analytic approach to the study of institutional and technologized interactions.

Conversation analysis has a longstanding tradition in the study of language and social interaction in both mundane and institutional settings (Schegloff 2007; Drew & Heritage 1992; Clift 2016; see also Sacks 1992). Although its methodological procedures are widely used in other relevant areas and disciplines, CA remains a distinctive approach in many ways. There are two aspects that make CA fundamentally different from closely related approaches, such as ethnography, ethnomethodology, interactional (socio)linguistics and discourse analysis: 1) the focus on analysing naturally occurring interactions from a bottom-up perspective and 2) the underlying assumption that all interactions to which participants orient through their conduct and behaviour are orderly (e.g. Stivers & Sidnell 2012; Hutchby & Wooffit 1998[2005]; Schegloff 1992). While the pioneering work of Sacks and Schegloff focused mostly on spoken conduct, the rise of new technologies and the wide availability of video data has prompted interest in investigating not only *what* and *how* something is said, but also via what embodied resources (e.g. Nevile 2015). The foundations of CA are important for understanding how participants in contemporary multiparty encounters take turns and construct their situated roles and identities, and how their bodily arrangements inform the unfolding of interaction and its spatial configurations.

Meeting research forms another important body of literature of relevance to this dissertation study. First, meetings in a business setting can be distinguished from other kinds of meetings by their overall purposes (e.g. Svennevig 2011). This dissertation, for example, investigates the social and structural properties of formal meetings in which everyone has a perceivable role and the meetings themselves follow agendas and have timeframes (Boden 1994). Second, the core interest here is in the ways in which actions and activities during meetings are locally and multimodally accomplished, that is, how abstract and material objects function as structuring elements in meeting interactions (see Svennevig 2012b; Hazel & Mortensen 2014; Deppermann et al. 2010). Third, as interactional space in meetings is seen as a social and embodied construct that participants dynamically and flexibly orient to through the details of their conduct, it is important to understand how actions are made intelligible in a specific sequential and material environment and at particular moments (Mondada 2013a).

The third central research area includes workplace studies that have, during the past two decades, focused on institutional encounters where technologies play an important role, i.e. "technologized interactions" (Hutchby 2001). Some work has been done on asynchronous settings, such as forums and chats, while others have examined the ways the use of technological devices, such as mobile phones and audio and/or video-mediating systems, feature in the unfolding of interaction. Whereas the former has explored technologically mediated text-based environments, leading to the novel concept of "digital CA" (Giles et al. 2015), the latter has aspired to find out how different forms of shared space and additional layers for interpretation inform our interactional practices and processes. These fields of study have focused especially on the use of screens as

resources through which meanings are conveyed and actions and activities are organized, ranging from mundane to various kinds of work settings (e.g. Heath & Luff 2013a). In the present research framework, aspects of both symmetric and asymmetric technologized interactions and the ways they engender new emerging practices are relevant. Furthermore, my research combines aspects of different fields and viewpoints to provide a deeper understanding of the phenomenon of space-making in situations informed by specific institutional and organizational practice.

3 DATA AND RESEARCH PROCESS

This chapter introduces the data collection process and discusses how video-recorded data, observations and multimodal conversation analysis (CA) were used to investigate the interactional practices in distant meetings. First, I present the research setting and the way data were collected. I then describe the process of transcribing and analysing the data in the four articles. I end the chapter by considering the potential challenges and ethical issues involved in studying confidential workplace communications and naturally occurring data where not all participants are in the same physical location.

3.1 The research setting and data

This study targeted the interactional practices of meetings in a large, international engineering company that has contacts all over the world. The data were collected in March 2012 and August 2013 during two visits to one of the company's offices in Central Europe. All the meetings were video-recorded, except for one meeting which was audio-recorded. At the beginning of the process, I had no hypotheses about the meetings or expectations about what I would find in this institutional setting; instead, I took an "open-minded approach" to the object of research (ten Have 2007: 121). One significant realization that emerged was that most of the meetings were organized via the use of contemporary technologies, and this way of working was also an everyday practice in the company. My study was thus carried out from a bottom-up approach and empirical perspective, which guided the work at its different stages. Furthermore, the phenomena documented and analysed in the articles were decided upon during and after the process of watching and transcribing the data, through "unmotivated looking", a typical feature of conversation analysis (see e.g. Clift 2016; Sacks 1992). As my agreement with the company's representatives applied to collecting data in only one of their offices, I was not able to carry out recordings of meetings in the other locations involved.

The data comprise a total of fourteen company internal meetings, of which twelve were technology-mediated, i.e. the participants in different geographical locations are linked via an audio or video connection, and two technology-supported face-to-face meetings. Of the twelve technology-mediated meetings, one was video-mediated (VM). All the meetings in the data can be characterized as formal: they are pre-scheduled events with agendas and predetermined chair and participant roles (e.g. Boden 1994; Asmuβ & Svennevig 2009; Nielsen 2009, 2013). The meetings have different purposes and overall goals, and thus vary in length as well as the number and configuration of participants. The meetings lasted from half an hour to two hours, totalling up to fourteen hours of video-recorded data. While some meetings were set up rather spontaneously at a half-a-day's notice, i.e. when there was a need to discuss a matter, others represented meetings that are more regularly held, for instance, biweekly or bimonthly.

When I started watching the data in the early stages of the process, I noticed not only some interesting organizational patterns of behaviour in the twelve distant meetings but also differences between these meetings and the two face-to-face meetings. These patterns and differences then came to form the main core of my work and analyses. Common to the twelve meetings are the shared practices with which the participants in their respective *distributed* parties managed the unfolding of interaction and the incremental nature of the moves in and between the task-related conversations (cf. Heritage & Clayman 2010). In particular, the resources used to negotiate even pre-specified phases, such as openings, closings and transitions, were distinctive in that the "mediating technologies" had consequential relevance for the interactional order (see Arminen et al. 2016). Another important factor in the twelve distant meetings was the varying location of the chair: he or she was not physically present in the recording room in all cases but instead could be seen from the researcher's and local participants' point of view to represent one of the distant parties. This means that, in addition to structural characteristics, special ways of managing the floor and participation are also available, depending on one's opportunities to produce and observe co-participants' actions. In general, the fact that the recordings took place in one location not only informs the analysis in a significant way but also furthers understanding the co-construction of the interactional spaces as an emergent institutional and collaborative practice from an emic perspective (see Arminen 2005). The twelve distant meetings and their configurations are presented in the following table:

Meeting	Local participants	Distant participants	Distant locations	Location of the chair	Purpose/topic
1	3	8	5	Local	Biweekly meeting
2	2	2	2	Local	Update meeting
3	1	8	6	Local	Update meeting
4 (audio recorded)	2	6		Distant	Weekly meeting
5	12	3 teams	3	Distant	Team meeting (1st)
6	3	2	1	Distant	Weekly meeting
7 (VM)	1	6	2	Distant	Update meeting
8	1	2	1	Local	Update meeting
9	1	2	2	Local	Update meeting
10	2	6	3	Local	Kick-off meeting
11	1	2	2	Distant	Update meeting
12	4	1	1	Local	Program check

TABLE 1 Configurations of distant meetings

The participants in the meetings are employees and managers who speak English as a lingua franca (ELF) to conduct their daily business. English is also one of the official company languages. Whereas communication between the different parties and individuals in the data is fluent, some expressions characteristic of ELF frequently occur. This can also be seen in the transcripts, which the reviewers of the article manuscripts have also commented on. While I do not directly address issues commonly investigated in the areas of ELF or BELF (Business English lingua franca) research, such as the in situ construction of corporate language or the potential procedural relevance of "lingua franca status" (Firth 1996: 5), the findings of this study are informative about how shared understanding is accomplished between non-native speakers of English in business contexts (see Seidlhofer et al. 2006; Räisänen 2013). Furthermore, the micro-level analytical perspective on the interactional practices of business professionals taken here is one that both ELF and BELF scholars could benefit from in the future.

To collaborate over distances, most of the meetings were implemented using Microsoft Live Meeting software, which enables audio-connection and the real-time distribution of relevant materials online, e.g. agendas, charts and files. It also makes it possible for the participants to monitor each other's participation and presence through opening the participant list and observing their use of the mute function. Although the on-screen view is not visible in all of the data recordings, it seemed that muting was not always used: for instance, one can occasionally hear background noise such as speech or the clatter of cutlery in the other locations. Whereas attending the meetings solo from one's own office, despite being in the same building, was common, more than one co-located participant was usually physically present in the same room. During these meetings, the agenda was often projected on a widescreen in the room, enabling everyone to follow and comment on the progression of topics (Figure 2: see also

Table 1). In these cases, the devices and the screen(s) were controlled by one person, usually the chair, except when the chair was participating at a distance.

The one video-mediated meeting in the data was arranged via a different collaborative system, Cisco Telepresence. In this meeting, the layout and architecture of the meeting room differed comparing those of the other meetings, as it is designed to minimize camera distortions and create the sense of an *extended space* (O'Hara et al. 2011). Meetings of this kind take place in special tele-presence rooms on the company's premises, in which participants sit around an oval-shaped table facing three large eye-level screens that show the distant participants in similar rooms (Figure 3). The agenda is displayed on another screen, which is above the three eye-level screens. In general, tele-presence meetings were not used to address daily issues but instead were arranged more sparingly. The meeting in the data concerned managerial topics and only involved departmental managers. Although video-mediation was possible also in the meetings where Microsoft Live Meeting was used, employees generally preferred to not use it.

FIGURE 2 Microsoft Live Meeting

FIGURE 3 Cisco Telepresence

3.1.1 Video recordings

In contemporary CA, which focuses strongly on examining both the verbal and bodily-visual behaviour of participants in their natural settings, video recordings are almost invariably used as the primary data (Mondada 2008; ten Have 1999; Heath et al. 2010; see also Goodwin 1984). The video-recordings for this study were implemented in different places, varying from small two-person cubicles to large conference rooms in the company's offices. Although I had agreed beforehand on the dates of my visits with a contact person in one of the company's sections and with a human resources manager, the exact times and places for the meetings had not been decided on. Instead, my contact person, who also became one of the participants, informed me about the imminence of the meetings. In practice, the data were gathered in one department from among the events that had been scheduled. For the recordings, I used two video cameras

and audio recording devices to ensure that all relevant visual and audible information was captured and that nothing was lost. This was the case in all but one meeting for which there was not enough time to set up the video-recording devices (Meeting 4 in Table 1). Instead of leaving the room prior to the beginning of each meeting, I decided to remain inside, close to the door, to monitor the devices and silently observe the unfolding of events.

3.1.2 Observation and field notes

Given the aim of collecting naturally occurring data and to improve the quality of the analysis, gaining some understanding of the participants' work practices through gathering ethnographic information about the setting and people involved was important (see e.g. Markee 2000; Arminen 2005; Boden 1994). Although my role in the field was foremost that of an observer, I was able to acquire detailed information about the company and its ways of working from my contact person and the other people that I met. On the date of my arrival, I received a visitor's badge and was granted admittance to the company's premises, enabling me to observe daily routines whenever I entered office space. I was also introduced to most of the participants in the data, and I had casual conversations with some of them over coffee or lunch. Overall, making field notes and being able to zoom into the participants' daily business became an important part of the process: familiarizing myself with the work setting, people and organizational practices helped me to gain a solid overall picture of the dynamics of the organization's corporate culture. All of this prepared me to better understand the video-recorded data after the fieldwork, especially in terms of the topics and contents discussed and the institutionally set demands, expectations, and constrains that the participants also make relevant in the unfolding of interaction (see Heritage & Clayman 2010).

3.2 Transcription and analysis

The data collection was followed by the initial stage of the data analysis, i.e. viewing the data and preparing transcriptions of the video-recorded materials. Transcription is considered a central step when conducting conversation analytic research, since it enables transparency of the target interactional phenomenon and helps the building of a collection of generalizable interactional patterns (e.g. ten Have 1999; Hutchby & Wooffit 2005 [1998]; Hepburn & Bolden 2013). However, studies can be based on single cases instead of collections of cases, the aim being to show in detail an interesting or significant phenomenon in a particular setting (Psathas 1995). In this study, Articles I, II and III address recurrent and systematic practices and are grounded in the detailed examination of a larger data sample, namely meetings where video connection is *not* used, whereas Article IV reports on a case analysis, aiming to show variations within

the overall data and in the ways in which different multimodal resources lead to diverse practices in constructing the interactional space(s).

I started the process by carefully perusing the data. The aim of Articles I and III was to increase understanding of two pre-specified phases of the overall structure of the meetings, i.e. openings and closings. Therefore, after the initial transcription of the data, or *raw analysis*, I started work on the openings via repeated viewings/listenings of these specific moments and their immediate subsequent environment, i.e. what happened not only during the beginning stage but also right after it. After examining the whole data set, I selected instances from similar environments for closer investigation; this meant disregarding the two face-to-face meetings, the audio-recorded meeting and the tele-presence meeting. For Article III, closings were approached in a similar manner, and thus ten meetings in total were used to identify and analyse examples of structural patterns and practices during openings and closings. The purpose in following this procedure was to support the validity of the findings. The study process for Article II was different in that the interesting phenomenon, alignment and affiliation in the local space of distant meetings, was "found" through countless viewings of the recordings and after my own understanding of the process itself had developed further. The study for Article IV, which focuses on noticing-occasioned recoveries of the interactional space, was guided by the discovery that an interesting phenomenon was the setting itself. Repeated viewings of the meeting were then carried out to find practices peculiar to that particular environment.

In CA, transcripts are considered a central analytical tool that reveal sequentially organized details of participants' conduct. Moreover, transcripts are not just about describing talk but also making apparent *how* utterances are produced and by whom (ten Have 1999: 94). Thus, words and audible sounds, as well as other relevant features, such as overlap and silences, and prosodic details, like stress, changes in volume, intonation and pitch are all documented. This is to enable the researcher to better grasp the subtleties of the interactional event and make the phenomenon under investigation more accessible to the audience. While transcripts are necessarily selective, i.e. one cannot document everything represented in the data, their primary purpose is to capture the central aspects that support the analysis and overall findings. The symbols and conventions used in the transcriptions made for this dissertation are based on the transcription system developed by Gail Jefferson (e.g. 2004). In addition, to describe embodied conduct and other visually perceivable behaviour, such as changes in screen view, conventions used in other studies on multimodality were adopted (see e.g. Hazel et al. 2014). Lorenza Mondada's (2001, 2018) conventions are selectively used, with adaptations, especially in Articles III and IV. The list of symbols is given in Appendix 1.

Although in CA it is common to start transcribing by rendering the actual words and spoken language, it is also possible to begin with the bodily displayed behaviours of participants and after that look into the sequential and temporal organization of the surrounding talk. For the interactional phenomena

investigated in this dissertation, I started the transcription process with the orally produced turns and units and then added the bodily produced actions. One reason for this was the relevance of the verbally established activity frames that formal meetings involve, and so it seemed logical to begin the analysis with what was actually said and, more specifically, how particular moments were sequentially structured via talk. Another reason was that, at the beginning stage of the study, it felt easier to learn the basic tools of CA by focusing first on the linguistic and verbal elements and only later adding aspects of bodily-visual behaviour (see Mondada 2018). In general, transcriptions in this line of study form the most fundamental evidence upon which recognizable conclusions are drawn and subsequently communicated to an audience. The transcription system applied in this dissertation developed throughout the process, with the result that some differences can be noticed in the ways the extracts are transcribed in the four articles. In the example extracts included in this overview, I done my best to unify these practices. For spoken interaction, the standard conventions developed by Gail Jefferson (see e.g. 2004) were consistently used, whereas finding a suitable system for transcribing the visually perceived behaviour of the participants was more challenging. Mondada's (2004) conventions, with some modifications that suited the aspired overall purpose, were mostly applied.

The analyses of this dissertation draw on the framework of conversation analysis with a special focus on the participants' multimodal conduct, i.e. the way verbal, embodied, and material resources configure in the unfolding of interaction (e.g. Hazel et al. 2014; Streeck et al. 2011; Arminen et al. 2016). The purpose is to show how this particular technologized environment provides the participants with special affordances to coordinate their behaviour and accomplish work-related tasks and activities. In the studies for all four articles, the analysis of embodied actions was an essential part of the process given my objective of providing a comprehensive picture of the ways the participants themselves orient to the co-construction and (re)negotiations of the interactional space(s) via utilization of the affordances and semiotic recourses available (Mondada 2013c; Goodwin 2000, 2007). In previous research as well as in the present study, embodied displays have been considered essential cues with which co-participation and involvement are secured (Goodwin 1981, 1986; Kendon 1990, 2004). Thus, special attention was paid to both *action projection* and *action production* in turn-taking and hence bodily-visual displays were examined with particular care in three sequential positions: 1) in the forefield of turns, 2) in mid-turn positions, and 3) between turns (see e.g. Streeck 2009). The placement of gestures is central for situated meaning-making in that it informs not only the course of the trajectory but also the activity in question. In addition to gestures and body movements, the present analyses highlight the importance of gaze for displaying alignment with activities-in-progress as well as attentiveness to the contingencies in both local and distant environments (e.g. Goodwin 1980; Rossano 2013).

Due to the complexity of the setting: i.e. having multiple participants whose actions take place in various locations, I aspired to find ways to make the transcriptions as clear and informative as possible. Hence, in Articles II, III, and IV, and this dissertation overview, capital letters are used to indicate speakers who are not physically present in the room of recording. This will hopefully help the reader better understand who says and does what and in which location.

3.3 Ethical considerations

This research has adhered to the ethical guidelines of the University of Jyväskylä and the Finnish Advisory Board on Research Integrity both during and after data collection. The data have been stored and managed on the premises of the Department of Language and Communication Studies, and no third parties have had access to them, as is also stated on the written consent form that the company representatives signed.

Gaining access to authentic interactional data in the business domain is not always easy. In my case, having a contact person made for smooth negotiations, since I was able to present the tentative ideas for my research and obtain approval from the company representative well in advance of planning the data collection. Negotiating the details with the official decision-makers was done face-to-face on my first day in the field, and it included acknowledging that the topics discussed in and outside the meetings were confidential. In addition, I signed a non-disclosure agreement, which had been prepared by the company's human resource's manager prior to my arrival. Reciprocally, the same person signed an agreement that I had prepared, confirming that I could collect video-recorded data on the premises and communicate my findings in the shape of research articles and other publications relevant to this thesis.

Understanding the issue of confidentiality from the company's perspective has been a central part of this process. From the very beginning of the data collection I was aware of the delicacy required of me while doing the video-recordings. Since my intention was to obtain the most authentic data as possible while not interrupting the daily tasks performed, I tried my best to reach this goal when being in the field. Throughout the process, I have given careful consideration for protecting the privacy of the individuals and company-related issues and topics. This meant that all participants in the meetings either signed a written consent or orally gave their permission to be recorded before the meetings. Participation in the research was thus optional, and the possibility to opt out during the process was made explicit. When compiling relevant information from the recordings into detailed multimodal transcripts, I used pseudonyms to protect the identities of the participants. Moreover, all the images included in the articles and in this overview have been edited to eliminate all features that could enable identification of the participants and the setting. Furthermore, whenever I have attended conferences, seminars and workshops to present and discuss my research, I have not used the real names of people or the

company in either speech or writing. In the analysed extracts, I have also used the transcription convention of empty parentheses to indicate utterances that contain information about company-specific tools or products, or anything else that could compromise the company's or participants' identities. In addition to these measures taken during the process of writing the dissertation, I have consulted the company representative when necessary and have also shown them the articles I have written prior to submitting them for publication. By these actions, I have complied with the terms of the agreement prepared by the company, dealt with the relevant ethical issues and concerns, and preserved the anonymity of the participants and the company.

4 COORDINATING ACTIONS IN DISTANT MEETINGS

In this chapter, I present and discuss the findings reported in each of the four articles included in the dissertation. First, I consider the implications of each in relation to the relevant theoretical and methodological underpinnings of the research and the overall aims of the dissertation (Section 4.1). Then, I summarize the key findings of the articles and consider their contribution to understanding the factors influencing the interactional processes of technology-mediated environments (Section 4.2).

4.1 Summary of findings

The aim of the study is to investigate how participants in distant meetings coordinate their actions to achieve and sustain a mutual orientation and co-presence in different phases of a meeting and how, by mobilizing verbal, embodied, and material resources in the sociomaterial environment, they negotiate and construct interactional space(s). The four individual studies each address this goal of revealing the organization of the participants' interactional practices from a different perspective. In the first three studies, the data are drawn from the meetings arranged using Microsoft Live Meeting in which the participants were not linked by video. The fourth article reports on a case analysis based on excerpts from the meeting established using Cisco Telepresence. In this dissertation summary, the studies are not presented in a chronological order; instead, they depict a trajectory. Article I focuses on the opening phase with the aim of finding out how the interactional spaces are organized at the beginning of distant meetings. Article II addresses the ways in which alignment and affiliation are used as resources by the local participants to co-construct their interactional space during troubles in interaction. Article III (submitted) focuses on the multimodal practices used to close distant meeting and reorganize the shared interactional space. Article IV (submitted) reports a case analysis of a video-

mediated meeting and the affordances and practices that participants draw on to recover the interactional space after trouble-relevant embodied noticings. Thus, two of the articles focus on transitions between the formal and informal phases of meetings, and two studies focus on other parts of meetings where the communicative affordances of the technological and material setting are utilized to establish or sustain shared understanding and interactional contiguity.

4.1.1 Article I: Openings of distant meetings

Oittinen, T. & A. Piirainen-Marsh. 2015. Openings in technology-mediated business meetings.

Article I focuses on the beginning phase of distant meetings and the verbal and embodied practices that are used to accomplish a coordinated entry into the meeting proper. The paper was co-authored with Arja Piirainen-Marsh, and the process went as follows: the analysis is based on my individual work to collect the data for this thesis and transcribe it, i.e. to do the raw analysis. We discussed the preliminary findings and elaborated them together after which I wrote the first drafts of the manuscript. These were then discussed and collaboratively modified and revised prior to sending the final version of the manuscript for publication. Our aim was to investigate the process through which the chair and participants make their presence known and shift from the preparatory and pre-beginning stages to formal meeting talk (see Boden 1994; Nielsen 2013). Because of the limited access to one another's physical environments and the fact that not all parties can see each other, special strategies for achieving mutual orientation to a shared focus point and organizing the distributed participation framework are required (cf. Goffman 1967). The study highlights openings as emergent, collective accomplishments in which the chair and participants draw on various multimodal resources and utilize the artefacts available in both their local space and the overall meeting space to jointly accomplish the transition.

The data for the paper were selected from the ten meetings utilizing the Microsoft Live Meeting software in the overall data set. Thus, the participants visible on the recordings have an audio-connection to the distant participants in addition to having access to shared materials on their screen(s), such as agendas, Word files and other documents. The participants attending the ten meetings were partially the same; however, the configurations varied a great deal owing to the different purposes of the meetings. For instance, the largest meeting (Table 1; Meeting 5) involved a team of twelve local participants and three distant parties, and its main objective was to share updates on a departmental topic. In contrast, in one of the smaller meetings, comprising two local participants and six distant participants, the event was built around the chair's introduction of a new procedure to people who were tasked with implementing the changes in their respective sections in the company. Article I contributes to the area of research on professional settings that attempts to reveal the structural aspects of contemporary meetings and the ways distributed workgroups are not only "talked into being" (cf. Boden 1994) but also *organized into being* via verbal and

embodied means. While the findings partly confirm those made in earlier studies on face-to-face meetings, the results also further understanding of the applicability of the stepwise model of the openings of intra-organizational meetings (see Nielsen 2013) to technologized meeting environments. In her research on departmental meetings, Nielsen (2013), illustrates the progressive nature of openings, introducing a set of strategies with which the chair and participants jointly accomplish the transition from the preparatory and pre-beginning phases to formal talk (cf. Mondada 2009). This involves verbal and embodied techniques that are made relevant through local negotiations on turn-taking and the shift from one speech exchange system to another (see also Section 2.2.1). For instance, during what Nielsen (2013) calls the *pre-meeting phase*, participants usually display readiness to open by quieting down and gazing at the chair or meeting-related materials. After this, the chair can make use of various verbal techniques, such as producing summaries, boundary markers, declarations and choosing the first speaker, thus making his or her role pivotal in the process of achieving mutual orientation and initiating the meeting (Nielsen 2013: 57).

At the time of writing the paper, not many studies had investigated the temporal and sequential organization of openings outside face-to-face settings. However, Markman (2010) had examined the beginning phase of asynchronous chat-based meetings, introducing a two-step model of openings accomplished in a linear manner. Her work illustrates how the first stage, a 'so'-prefaced turn, becomes ratified as an initiation for transition only after the second stage is reached: a turn where the agenda is set. What precedes these stages is a phase where preconditions are met, namely waiting for everyone to be present in the virtual meeting space. As found in face-to-face meetings, accomplishing a *critical mass* before launching the opening steps is thus considered an essential prerequisite to which the participants of these settings also orient themselves (Markman 2009: 155); see also Boden 1994). Against this backdrop, Article I attempts to answer the call for more empirically based research on the interactional properties of technology-mediated meetings, combining analysis of both the social actions produced in the local environment and those on the screen(s) that the participants make relevant. The article shows how openings are accomplished locally and multimodally by drawing on various verbal and embodied resources with which co-orientation to the overall meeting space is also established and maintained (cf. Mondada 2013a).

The findings of the study reported in Article I show that openings are composed of different steps; these are accomplished by resorting to diverse chair and participant strategies. In addition, this involves verbal and embodied practices and the utilization of technological artefacts. In the preparatory phase, the chair usually makes the imminence of the opening relevant by setting up the devices and establishing a screen view that displays either the agenda or list of participants. What constitutes the first step towards the opening is the establishment of co-presence in the overall meeting space, during which the distributed participation framework is organized. During this process, the local

participants cease other activities and orient to the screen, and the critical mass is achieved through the chair's actions of monitoring the screen and announcing the arrival of distant participants. In turn, the distant participants can produce verbal check-in greetings with which they announce their arrival when entering the online workspace. With this action, they contribute to constructing the meeting community and their own meeting membership. The following example from Article I illustrates how in the large team meeting where the chair, Dietmar, is a distant participant, the critical mass is achieved multimodally and in a recipient-designed way. Dietmar uses a specific strategy, namely addressing the participants as members of a national category based on their current location (see Markaki & Mondada 2012).

Extract 1 (excerpt from Article I, Extract 2)

1 ((multiple participants talk))
2 ( ) (° °)
3 ((two people turn gaze to screen)) Fig. 4

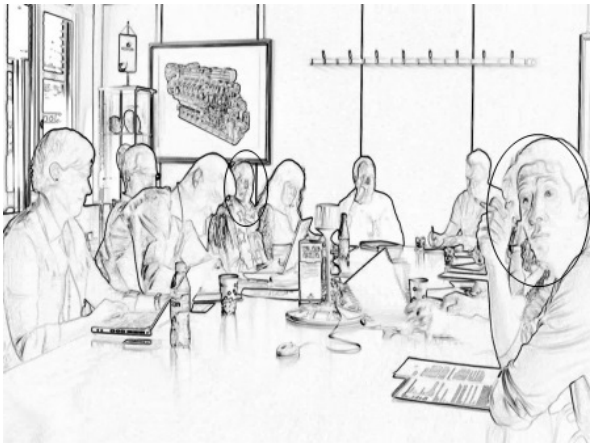

FIGURE 4 Two people turn gaze to screen.

4 DIETMAR good morning girls (.) ohm,

5 Bruno *°£good morning£°
Bruno **gazes towards participants opposite him and then Marja* Fig. 5 & 6

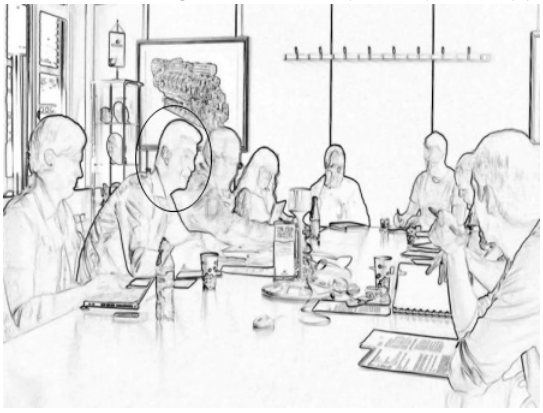

FIGURE 5 Bruno gazes towards colleagues.

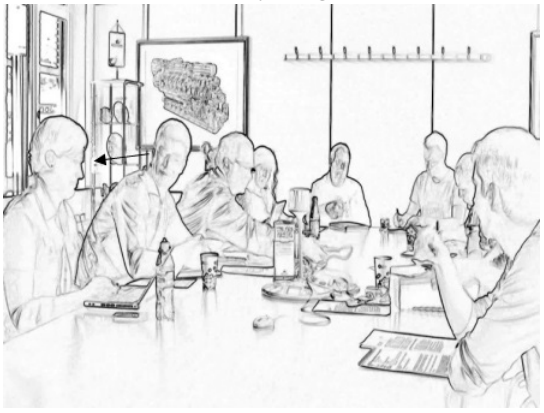

FIGURE 6 Bruno gazes towards Marja.

6 DIETMAR +verify if you can hear me from ↑Finland (0.3)
Hannu +*Hannu picks up loud speaker* Fig. 7

7 DIETMAR +can somebody confirm if you hear us
Hannu +*puts microphone back* Fig. 8

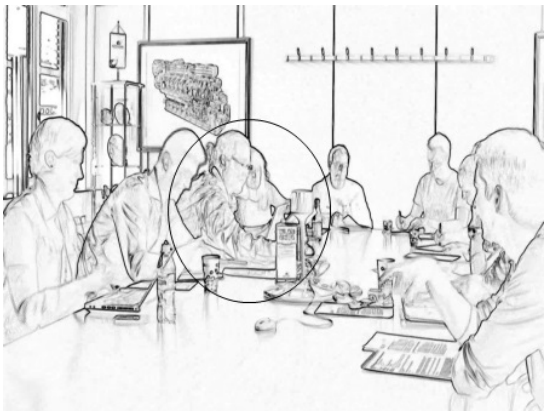

FIGURE 7 Hannu picks up loud speaker.

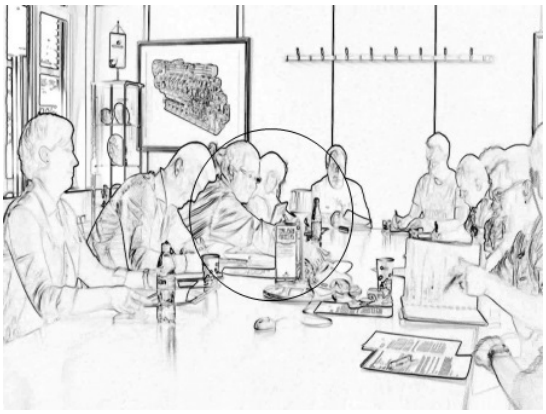

FIGURE 8 Hannu puts speaker on the table.

8 (4.0)
9 Hannu +yes we can hear
Hannu +*leans forward* Fig. 9¨

10 +(1.0)
Hannu +*leans back*
11 ((several people gaze at screen)) Fig. 10

FIGURE 9 Hannu leans forward.

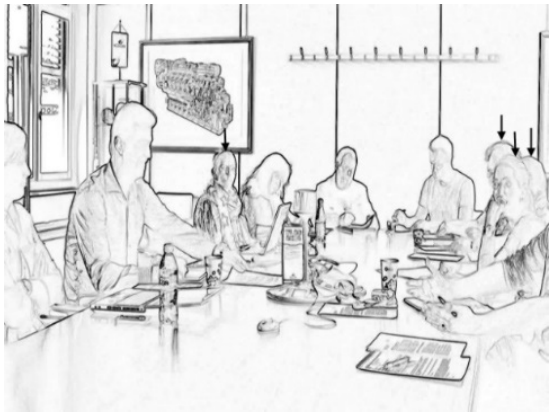

FIGURE 10 Several participants gaze towards screen.

12 DIETMAR and everybody through here (.) okay
13 ((loud background noise from technological devices))
14 DIETMAR do we have also (.) Italy and Netherlands group on board
15 (1.0) ~ (3.8)
Marja ~*flips over brochure on table* Fig. 11

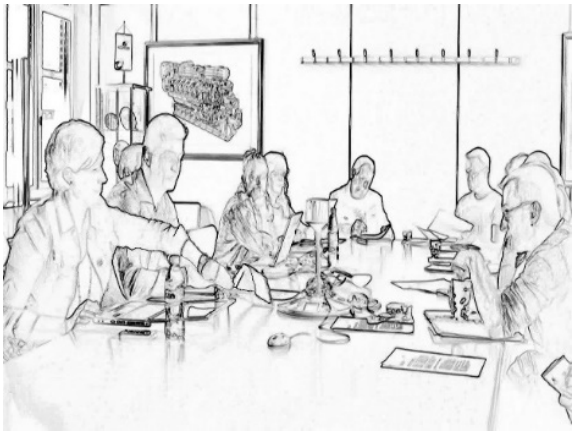

FIGURE 11 Marja handles brochure.

16 DIETMAR (can't reach) (1.0) (or tries)
17 LEONARDO yeah we're currently on board (.)
18 we're just looking for the louder speakers but we are here
19 ( ) (so are we)
20 (1.0)
21 DIETMAR (tack)
22 (1.8)
23 DIETMAR <u>then</u>

In this extract, the local participants first engage in parallel conversations or orient to other activities until their attention is drawn to the imminence of opening by someone's voice on the audio channel (Figure 4). When Dietmar enters the meeting environment, he immediately claims his role as the chair by taking over the floor (line 4). His turn, including a humorously designed check-in greeting, accomplishes the shift to being in a preopening phase. He then addresses all parties separately with a request to confirm that he is being heard (lines 6-7). The sound quality is poor, and one of the local participants, Hannu, orients to this by manipulating the loud speaker and leaning forward before responding (Figures 7, 8, and 9). After Dietmar has made sure that all parties are present and available for the meeting, referring to them by their physical location and mentioning the name of their respective countries (line 14), a long silence ensues. A comment from one of the distant parties (line 18) indicates that a similar technology-oriented activity is ongoing in their local environment as well. With these moves, shared orientation to 'being in a meeting' and co-presence are multimodally established (cf. Nielsen 2013).

After the distributed participation framework has been co-constructed, the second step is to accomplish the transition to the meeting proper and a mutual orientation to the agenda. This requires verbal initiation by the chair and that the participants indicate their readiness to proceed by other means, namely remaining silent during moments of potential opportunities to take the floor. The following extract from a meeting with two local participants, one of whom is the chair (Hans), shows how the shift into agenda-related talk can be accomplished

in an unproblematic and straightforward manner through verbal and bodily-visual conduct.

Extract 2 (excerpt from Article I, Extract 4)

1 +~(2.0)
Hans +*leans to table, looks at his computer screen* *--->>
Marja ~ *towards wide screen* *---> Fig. 12

2 Hans good. (0.3) +↑alright good
Hans +*corrects his posture*
3 (0.8)

4 Hans uhm (.) what is it all about ~it's about purchasing in uh to
Marja ~*turns gaze to Hans* *--> Fig. 13

FIGURE 12 Marja gazes towards wide screen.

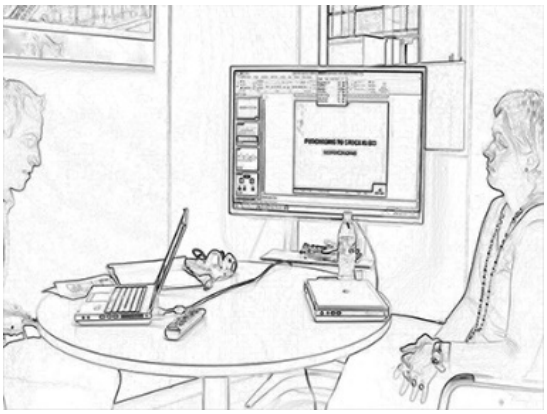

FIGURE 13 Marja gazes towards Hans.

5 Hans into the management work e:r work shop (0.4)
6 and the respective stocks
7 I have been signing out the material
8 already the (.) by ~end of- of last week
Marja ~*turns gaze to screen* *--->> Fig. 14

FIGURE 14 Marja turns gaze to screen.

9 Hans don't know whether everybody had (.) has had a
10 chance to: to go through it (0.3) nevertheless this,
11 uh the topic --

The interactional work done here by the chair and local and distant participants to transition from pre-meeting activities to meeting talk involves verbal contributions as well as bodily actions. At the beginning of the extract, Marja already visibly orients to the overall meeting space and the opening activity by gazing at the wide screen. Hans establishes the relevant juncture between the pre-meeting phase and initiating the meeting proper verbally with a boundary marker, 'alright good', using a rising intonation, and by correcting his posture (line 2). After the others pass the opportunity to talk and remain silent during a pause (line 3), Hans continues with a topic marker, 'uhm', and a multiunit turn (line 4). In addition, Marja affirms her orientation to the meeting-related business and Hans's turn by looking at him for a while (lines 4-8; Figure 13). With these actions, the local and distant participants display their transition into a meeting mode (cf. Boden 1994). The analysis of the extract shows a smooth progression of the opening and stabilization of the interactional space (see Mondada 2011a).

Article I contributes to answering the call for more practice-based research on contemporary meeting environments and the diverse affordances with which attention is drawn to the initial moments of interaction (e.g. Hutchby 2014; Heath & Luff 2000). The analysis shows how, on the one hand, the organization of the opening phase in distant meetings is susceptible to changes in co-orientation and the ways in which a shared focus is established and maintained. On the other hand, the chair and participants also need to be highly sensitive to these contingencies in the local and overall meeting space and to the details of their own and co-participants' embodied conduct.

4.1.2 Article II: Alignment and affiliation in the local space

Oittinen, T. 2018. Multimodal accomplishment of alignment and affiliation in the local space of distant meetings.

The second article addresses alignment and affiliation in the local space of distant meetings during moments of interactional trouble. In these situations, the physically co-present participants frequently engage in activities which the distant participants cannot see or hear. The aim of the study was to examine the way mutually recognized problems in interaction result in the turn-taking format for the meeting breaking down into parallel conversations: i.e. schismatic interaction (Egbert 1997). By using all the meetings as a starting point for identifying the phenomenon, the analyses were built on the fine-grained organization of embodied, verbal and linguistic displays that the local participants used to co-construct alliances during task-related activities (see Kangasharju 2002; Nguyen 2011). This meant scrutinizing the ways in which the local participants deal with problems and negotiate their involvement in and between two interactional spaces: the local space and the overall meeting space

(Mondada 2006; see also Rintel 2013). The study shows how alliance and community building are progressively established when problems with hearing, speaking, and understanding emerge and describes the multimodal procedures through which orientation to the main activity is restored. Article II also illustrates how interactional spaces in distant meetings are dynamically transformed and actively (re)constructed by the participants, which diverges clearly from the earlier findings of Wasson (2006; see Section 2.3.1).

The article draws on the concepts of alignment and affiliation, which are understood as forms of cooperation (e.g. Steensig 2012; Stivers et al. 2006). Whereas alignment is about projecting mutual understanding on the unfolding of interaction and thus functions on the structural level of interaction, affiliation relates to taking a supportive stance towards a prior action or talk, and thus manifesting behaviour on the affective level (Stivers et al. 2006; see also Section 2.2.1). Both levels of cooperation are, in turn, highly relevant resources for establishing progressivity and intersubjectivity, especially in the framework of formal meetings where certain time limits for completing tasks and achieving goals prevail. However, in technologized meetings where participants are not able to see one another, the unequal display of cooperative responses and minimal aligning cues presents challenges (e.g. Heath & Luff 2000; Rintel 2010, 2013). Article 2 illustrates how local participants attend to these issues while remaining sensitive to contingencies in the overall meeting space. The following schematic image from Article II (p. 2) depicts interactional spaces and the resources available in Microsoft Live Meetings where visual access to the distant environments is missing.

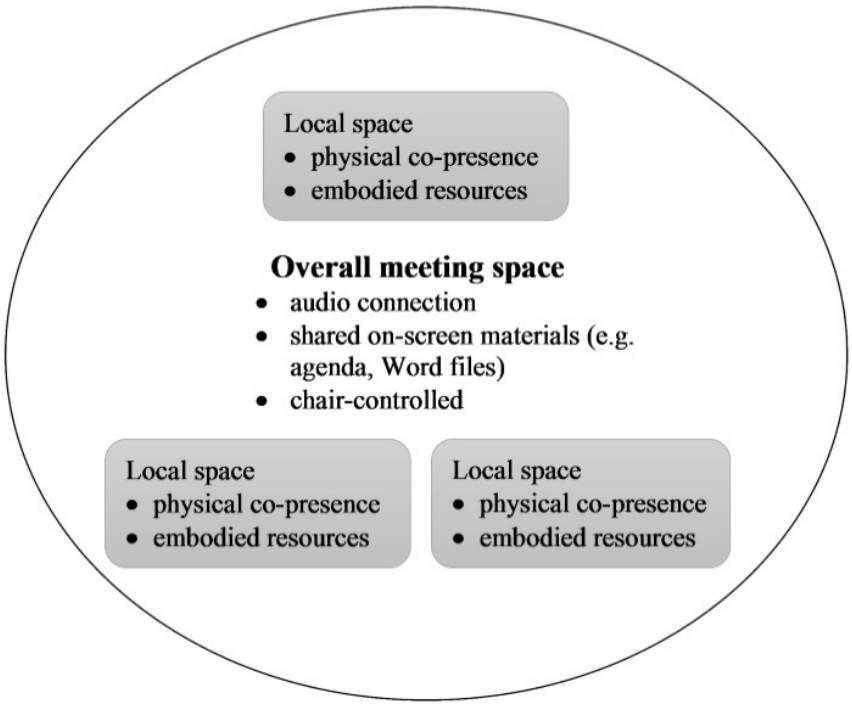

FIGURE 15 Interactional spaces in Microsoft Live Meetings

The analyses show that, in distant meetings, alignment and affiliation relate to three kinds of problematic moments: 1) technological trouble, 2) silences, and 3) disagreements. The local participants mainly orient to these instances by embodied displays but sometimes also via audible tokens or expressions. In cases of audio distortion and troubles in hearing, awareness of the disruption can be made relevant in the local space by gazing at another participant and producing disconcerted facial expressions. A significant finding of the study is that these actions are not usually communicated across the overall meeting space or to distant participants who might be key people for potentially solving the problems. Furthermore, even in cases where information might be lost because of not hearing what has been said, participants may still prefer to sustain progressivity rather than intervene in the conversational contiguity and re-establish intersubjectivity via initiating repair (cf. Schegloff et al. 1974). The following extract exemplifies a situation where the local participants in the team meeting orient to a shared problem of not hearing.

Extract 3 (excerpt from Article II, Extract 1)

1 DIETMAR any judgements from you: Petri or Anders that you
2 would like to, (.) share too

3 (1.1)
4 PETRI u:h (.) <yes but> yeah (.) if you think about (the character)

5 PETRI /( ) * ( ) ^ ( ) * ( ) ^ ( ) *--->
6 /((flash from wide screen, everyone but Bert turn gaze to screen))
Bruno **frowns, shakes head*
Minna *^frowns, shakes head*
Bruno **turns head to left*
Minna *^turns head to left*

7 PETRI *( ) + ( )
Bruno **whispers to Hannu*
Hannu *+leans forward, gaze directed at laptop screen* H---->* Fig. 16

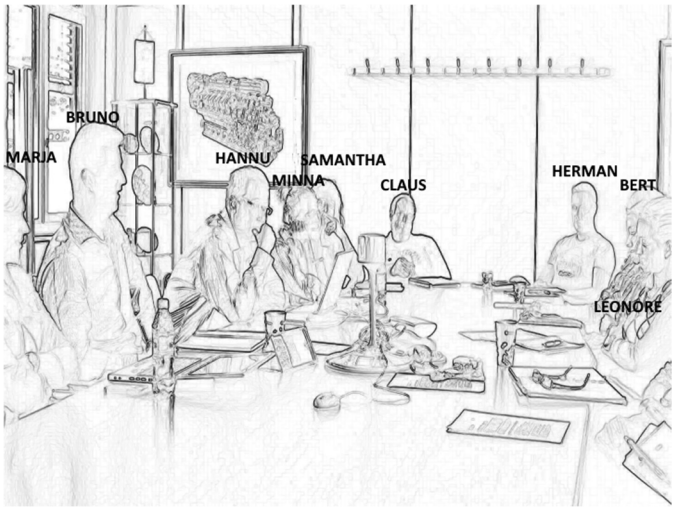

FIGURE 16 Hannu leans forward.

8 ((Leonore and Claus giggle quietly, Herman sneers))

9 PETRI *( ) ^( )+( ) ¨( )
Bruno **whispers to Marja, leans back, smiles at people sitting opposite*
Minna ^*leans forward*
Hannu +*straightens posture*)) H----->*
Samantha ¨*raises hand on pursed lips*

10 Claus Δno- now it's clear
Claus Δ*turns gaze to Leonore, raises right hand holding up index finger, smiles*

11 ((Minna, Samantha, Leonore, Sarah and Herman turn gaze to Claus))

12 Leonore ⌂£↑a(h)h£
Leonore ⌂*raises left hand holding up index finger*

13 ((*laughter among local participants*))
14 PETRI ( )

15 DIETMAR thank you very much I can (.) fully agree on that one that sounds
16 like a prominent thing I totally get your point (0.2) fully agreed

17 Minna ^°I don't understand°
Minna ^*turns gaze to Leonore, leans back*

18 DIETMAR ⌂uhm (.) +Ricardo
Leonore ⌂*shakes head*
Hannu +*opens right palm, leans back*

19 DIETMAR any chip from you
20 ((Hannu, Minna and Claus turn gazes to screen one after the other;
Bruno and Marja gaze to each other, smile))

The extract illustrates the local participants' orientation to a technological problem in hearing that starts in line 5 when a distant participant, Petri, takes the floor, and continues throughout his turn (until line 15). They react to the disruption that makes Petri's talk unintelligible with various displays of alignment and affiliation that are primarily produced bodily or in a barely audible manner: some make disconcerted facial expressions and some shake their heads and smile (lines 6-8). Although the local team leader, Hannu, who is controlling the devices at this end initially leans forward, thereby indicating an orientation to take the floor (Figure 16), he subsequently withdraws from this position. Two possible reasons for these moves can be suggested: on the one hand, it is impossible to detect a sequentially suitable slot to insert intervening talk, and on the other hand, interrupting a turn during multiparty meetings is more challenging when the interrupter is unable to secure recipiency with embodied cues (cf. Ford & Stickle 2012). After Hannu's withdrawal, Claus makes a sarcastic comment about the situation and, smiling, raises his index finger (line 10), action which the others react to with affiliative displays (lines 12-13). Even after Petri's

turn closure and Dietmar's ratification of the prior turn, the local participants continue to orient to the problem retrospectively: Minna produces an epistemic account with a quiet voice regarding not understanding and invites the co-participants' attention via gaze (line 17), and Leonore and Hannu respond to this with embodied affiliative behaviours (lines 18-20). Concurrently, Dietmar takes the floor and selects the next speaker, Ricardo, asking him to "chip in" (line 19). After this, discussing the topic continues in the overall meeting space, and the local participants reorient themselves to it. What the analysis of the data shows is the local participants' preference for engaging in alliance building and sustaining progressivity, although missing out part of the discussion.

The absence of visual access to the bodily behaviours of all parties can also make silences problematic, especially after adjacently constructed first-pair parts such as questions. The data show that silences can become important resources through which the local participants engage in community building and momentarily shift away from the main activity. In addition to troubles in hearing and understanding, alliances are frequently co-constructed during disagreements. However, the forming of oppositional alliances is distinctive in that not all displays of disaffiliation by the local participants are made known to the distant parties. This is illustrated by the following extract from a meeting with three local participants and eight distant participants. The physically co-present participants are Hannu, Marja, and the chair, Dietmar who sits opposite Hannu and is captured by a second camera.

Extract 4 (excerpt from Article II, Extract 4)

1		>>-- ((Marja and Dietmar gazing at screen))
2	Marja	I think it's the same thing that we've had with the supplier deliveries
3		(.) that they have booked in a hundred pieces and they accidently put in
4		two hundred pieces (.) the easiest way is to check the inventory and the
5		urgent issue case ↑area. if the parts are not ↑<u>there</u> (.) then,
6		~(0.3)+(0.1)
	Marja	*~raises right hand, concurrently shrugs* Fig. 17
	Dietmar	*+turns gaze to Marja, hand on temple*

FIGURE 17 Marja raises right hand, concurrently shrugs.

7 Marja then we can mark them as completed (.) the orders they are not going to
8 count they're lost.

9 +(2.2)
Dietmar *+turns gaze to screen, starts typing* D----->*
10 MARKKU I: guess we just cannot close the orders as +the ( ) has done (.)
+D----->*
11 +for instance in our case
Dietmar *+turns gaze to Marja*

12 MARKKU here in Finland so (.) they have checked that
13 +one hundred pieces left
Dietmar *+Dietmar turns gaze to Hannu, then screen, starts typing* D*--->>

14 MARKKU and only .hhh fifty pieces is reportedly in and uh (0.2) we just cannot
15 close them

16 (2.0)
17 GUNNART exactly

18 (0.5)
19 RICARDO Markku did we (.) ~so we move the delivery date to the fu↑ture
Marja *~turns gaze to Hannu, shakes head*

20 ((Marja sighs, +picks up coffee cup, leans back, turns gaze to screen))
Dietmar *+glances at Marja while typing*

21 ((Marja crosses arms))

In this extract, Marja produces a multiunit turn, including taking a stance on the current stage of a problematic issue within the company (lines 2-8). She uses embodied resources and a gesture, a shrug, to anticipate the gist of the argument and display a level of disengagement from the topic (Figure 17; Streeck 2009). Her final matter-of-fact statement (lines 7-8; see Kangasharju 2002) invokes either an agreeing or disagreeing response, and without taking a stand or even aligning on a conversational level (i.e. responding), Dietmar establishes an orientation shift towards his screen and starts typing. This phase is accompanied by a silence (line 9) that signals passive opposition. What follows is an other-correcting counterargument by Markku, a distant participant, whose disaffiliative stance is then ratified by Gunnart (line 17). Ricardo's subsequent turn, concerning future action, aligns with the oppositional stance and at the same, overrides Marja's opinion on the matter (line 19). Instead of trying to substantiate her point of view during the subsequent turns, Marja seeks support from the local participants via gaze and shaking her head. Furthermore, she does not make a new attempt to display disagreement but instead disengages from the topic by sighing and repositioning her body and arms (lines 20-21). The extract shows how the sequential and temporal organization of the disagreement and Marja's opposing view become important resources for local community building that takes place in parallel with the actions taken to reinforce the oppositional alliance in the overall meeting space.

The findings of the study suggest a strong connection between problem-related alignment/affiliation and community building as well as potential preference for sustaining progressivity over re-establishing intersubjectivity. This is supported by the observation that, in all the analysed cases, the local participants shift their orientation to a parallel conversation amongst themselves and construct an alliance in the local space rather than make explicit attempts to solve the interactional troubles in hearing, speaking or understanding. Alignment and affiliation are multimodally accomplished through the utilization of shared material and embodied resources, such as facial expressions and gestures, and this seems to override the need to verbally establish remedial work. Although this schismatic activity does not disrupt the unfolding of meetings, it excludes the distant parties and thus illustrates the consequences of the visual barrier and asymmetric access to interactional resources. The study contributes to the strand of research that highlights both the affordances and challenges of technological environments and how these are made visible through participants' own agency and conduct (e.g. Hutchby 2001, 2014). Furthermore, it shows the interplay of multimodally composed turns and dynamically transformed interactional spaces.

4.1.3 Article III: Closings of distant meetings

Oittinen, T. (submitted). Multimodal resources in the closings of technology-mediated business meetings.

Article III (submitted) focuses on the endings of distant meetings and the ways the chair and participants jointly establish a coordinated exit. Drawing on the same data set of ten meetings as in the first article, the aim was to examine the organization of the "closing track" and the multimodal resources used for its accomplishment (Button 1987, 1991). This involved investigating the process and strategies with which the shift from meeting talk to bracketing out of the meeting mode and dissolving the interactional space is accomplished (see Nielsen 2013; Boden 1994; Mondada 2011a). The study shows how parties who cannot monitor each other's visual cues to detect transition-relevance places and anticipate the imminence of closure draw on different constellations of verbal and embodied displays to initiate closings and display alignment with these emerging trajectories. Article III reports on the practical problem of transitioning from meeting structure to terminal phase, emphasizing that achieving alignment is essential in moments that can be used for re-openings (Raymond & Zimmermann 2016; cf. Ticca 2012).

Previous studies suggest that closings of encounters include a stepwise progression in which the mobilization of various trajectories can occur (e.g. Haddington 2019; Ticca 2012: LeBaron & Jones 2002; Broth & Mondada 2012). In his research on leave-taking from cars during drop-offs, Haddington (2019) identifies a cluster of simultaneously occurring actions that advance two separate activities, namely the conversational closing and the drop-off. What is required

from the participants is attentiveness to both verbal and bodily-visual practices as well as monitoring the point where exiting the car becomes a relevant next action. Studies on formal meetings have pointed out how closings mirror openings and include both verbally and bodily established junctures that advance the closing progress (e.g. Nielsen, 2013; Button, 1987, 1991). Nielsen (2013) identifies different strategies available to chairs, such as topic bounding, concluding summaries, making an opportunity for new mentionables explicit, and declaring closure. In addition, the participants can display their readiness to close by remaining silent and passing opportunities to talk (Nielsen 2013). Furthermore, Raymond and Zimmermann (2016) illustrate how coordinated closings of institutional telephone calls require the participants to reach alignment or misalignment verbally. The third article presents an analysis of the sequential and temporal progression of the final phases of formal meetings, paying special attention to junctures where the closing activity is particularly sensitive to the emergence of new conversational openings.

The findings suggest three crucial moments in the overall trajectory of closings: 1) when closing is first initiated and made relevant as the next step, 2) when opportunity spaces to initiate re-openings emerge and need to be managed, and 3) when departure from the overall meeting space is negotiated. Ways to initiate the closing-relevant trajectory include verbal invitations to move on to the next phase, usually produced by the chair, and an orientation shift within the interactional space. During this phase, the chair begins to prepare for closure by manipulating devices or the screen view. The following extract shows this aspect.

Extract 5 (excerpt from Article III, Extract 1)

1		((Marja orients to wide screen, Hans to laptop))
2	Hans	six: uh number six the (op)s buying from the
3		workshops need of course to follow these: (.)
4	Hans	p: + o: +(1.0)
	Hans	*+frowns*
	Hans	*+lifts upper body, starts typing --->*
5	Hans	a::s (.) sorry about that °↑one°
6		+(2.7)
	Hans	*+--->*
7	Hans	which are valid in the respective count↓ries
8		/(2.8)
	screen	*/cursor moves from bottom right to upper left corner on 'save' icon*
9	Hans	<that /basically wha- (.) was
	screen	*/changes saved to ppt*
10	Hans	*what I had (.) on my (.)>
	Marja	**rubs right arm*
11	Hans	list +now (0.2) open

Hans +*hand on laptop mouse* ---->

12 Hans /fo:r (0.4) questions (.) and: (0.5)
screen /*name list opens on screen* Fig. 18 & 19

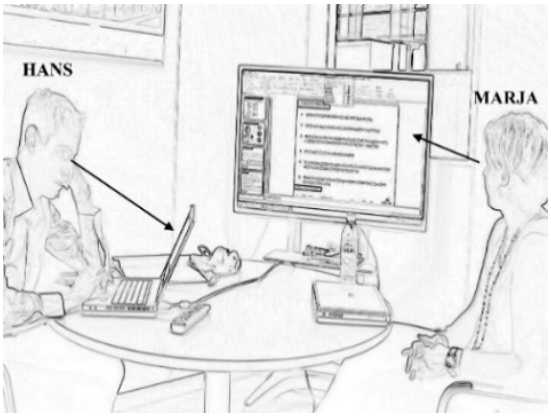

FIGURE 18 Hans manipulates mouse.

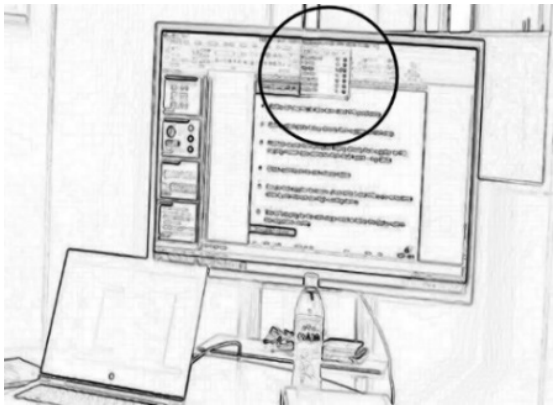

FIGURE 19 Name list on screen opens.

13 Hans remarks:+
Hans ---->+
14 (2.2)*(0.2)+(3.2)
Marja *stretches neck
Hans +*grins* -->

15 EINO Eino +here (.) one comment, the planning side ---
Hans +--->*glances down at keyboard*

The extract shows how the transition from Hans's last agenda point to being in a meeting preclosing phase (Nielsen 2013: 50) is collaboratively accomplished through his multimodal turn construction, involving a side sequence during which he identifies a visual repairable on the screen and self-corrects it (lines 4-7; cf. Greiffenhagen & Watson 2009) and Marja's orientation to the screen. Because the screen view is shared with everyone, Hans's corrective action along with the verbal self-repair ('sorry' in line 5) is made accountable in the overall meeting space and the distant environments. Concurrently with manipulating the devices, Hans concludes the sequence with formulating a kind of a summary and saves the changes made (lines 9-11). What follows is an explicit verbal transition towards closure (lines 11-13) during which Hans opens the name list on the screen, allowing himself and Marja to see if the six distant participants have their mute on or off (Figures 18 & 19). This move of granting access to the floor is peculiar to the meetings in the data, and here it not only places the conversation on the closing track but also accompanies an embodied shift to mutually monitoring the other participants' state of availability. By not looking at Hans during the silence that ensues (line 14), Marja indicates her readiness to close but also her orientation to wait for a distant participant to respond. Since Eino takes advantage of the opportunity to take the floor, the closing does not

proceed further on the closing trajectory but temporarily remains in the current phase.

Opportunity spaces also emerge in other sequentially suitable slots, such as when the chair leaves the floor open, and they are usually manifested as silences. Since these moments are susceptible to re-openings and negotiations that diverge from the closing trajectory, mutual effort and additional interactional work is needed to manage them. The next extract shows how the opportunity spaces that emerge during closing are produced in diverse recipient-designed ways.

Extract 6 (excerpt from Article III, Extract 4)

1 Hans but I would (.) u::h think that it is something
2 let in- in the (O P) organization=Onni I don't know how you ↓see that one
3 (2.3)*(1.0)
Onni **turns off mute* Fig. 20

FIGURE 20 Onni turns off mute.

4 ONNI yeah (1.0) I think (.) we (.) proceed like that
5 Hans okay
6 (0.8)
7 Hans so *I will make sure
Onni **turns on mute*

8 Hans that this is bein- this information is being shared and then we can discuss
9 abou- about the: also let's say the motive operations for the
10 Hans .hhh for the coming *weeks (.) month.
Marja **turns gaze to hands and stretches fingers* ---> Fig. 21

11 (2.1)
12 Hans a:l?<u>right</u> (.) *any further ↑questions (.) re↓marks.
Marja --->**turns gaze to screen*

FIGURE 21 Marja stretches fingers.

13 (2.3)
14 Hans otherwise I consider <this meeting> (.) as closed and uh,
15 thank you very much for your participation
16 and let's keep in touch:

17 (2.5)/(1.3)/(0.6)
screen /*a name disappears from the name list*
screen /*another name disappears*

The chair provides two opportunity spaces for the co-participants to diverge from the closing trajectory. The first one is restricted and hence Hans targets Onni as the one to respond to his request for confirmation (lines 1-2). The considerable silence that ensues is made intelligible by Onni's action in turning off his mute at the other end (Figure 20), which the local participants acknowledge via gazing at the screen. After Onni's brief agreeing response, Hans produces a sequence-closing third 'okay' (e.g. Schegloff 2007). When Hans uses a topic bounding 'so' and initiates a new sequence, Onni turns his mute on again. After this, Hans makes another, this time more open call for further questions (line 12). Since no one makes use of the second opportunity space to continue the conversation (line 13), Hans declares the meeting closed and thanks everyone for their participation (cf. Nielsen 2013). He remains positioned towards the screen for a couple of seconds and waits for the other parties to respond, but instead of ratifying the closure verbally, the distant participants gradually leave the overall meeting space during the silence that ensues (line 17). The interactional space continues to be reconfigured during the subsequent turns, which show how the departure is negotiated:

Extract 7 (excerpt from Article III, Extract 5)

18 Marja +thank *you
Hans +*raises upper body, reaches out right hand, withdraws, and then moves left hand on laptop cable*
Marja **turns body and gaze to middle of the room* Fig. 22

19 MERVI thank you bye bye

screen *another name disappears from the list*

20 Hans bye bye

21 ( ) +(take care)
Hans +*glances at the wide screen, then repositions laptop, unplugs cable* Fig. 23

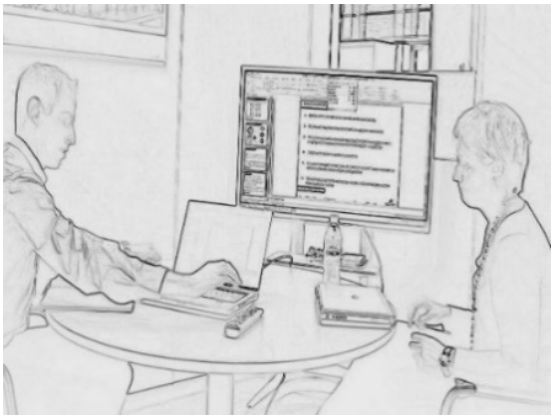

FIGURE 22 Marja turns body to front.

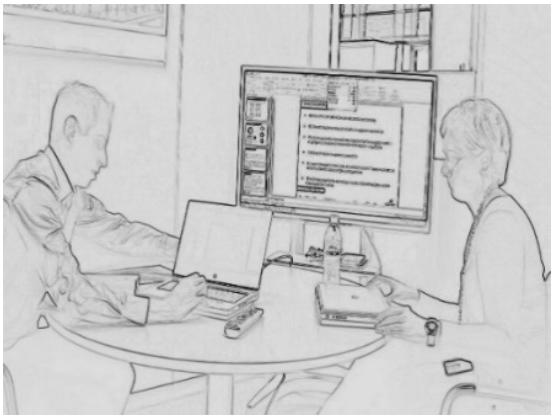

FIGURE 23 Hans unplugs cable.

The extract shows that whereas some participants consider the chair's closing words as anticipation of both conversational and technological closing (cf. Muñoz 2016), others do not. Concurrently with Hans's movement towards closing the devices (Figure 22), Marja produces a terminal token which Mervi, a distant participant, aligns. She adds another closing remark, a farewell (line 19), to which Hans responds with a similar token. After this, there is yet another aligning token from a distant participant (line 21), which is followed by disabling the connection (Figure 23) and at the same time, dissolving the distributed participation framework and the overall meeting space. In general, the closings of distant meetings seem to lack the stage of informal talk after finishing agenda-related talk (see Ruhleder & Jordan 2001b; Section 2.2.2). Although there is some variation in the ways closings proceed, depending on contextual factors such as the number of participants and the location of the chair, the closing trajectory and relevant junctures are negotiated through finely coordinated actions in and between the local and distant environments. This involves multimodally constructed turns and making actions during silences accountable in the overall meeting space. The steps from meeting talk towards a coordinated exit include accomplishing the initial transition, managing opportunity spaces and negotiating departure from the overall meeting space, all moments during which the role of the chair is crucial.

Thus, Article III shows how the interactional spaces are collaboratively and multimodally reconfigured at the end of distant meetings. Accomplishing the closing requires maintaining a shared focus on the overall trajectory of the closing process, managing other, potentially competing trajectories, and orienting to the practical task of leave-taking. The chair and participants advance closings with verbal displays, such as declarations and boundary marking, and making use of

various bodily-visual resources, such as gaze and manipulations of screen and other objects. The study highlights the process-wise unfolding of closings and the ways they are locally and multimodally established in the moment-by-moment unfolding of turns and actions.

4.1.4 Article IV: Recovering interactional space in a video-mediated meeting

Oittinen, T. (submitted). Noticing-occasioned recoveries of the interactional space in a video-mediated business meeting.

Article IV (submitted) investigates the multimodal practices with which the participants in the video-mediated meeting, which uses Cisco Telepresence (see Figure 3), a collaborative videoconferencing system, manage shifts in co-orientation that are occasioned by embodied noticings. Cisco Telepresence differs from traditional videoconferencing systems in that camera distortions are minimized so that the participants in diverse locations can see each other in their natural size and shape (see O'Hara et al. 2011; Heath et al. 2014). The article addresses this unique setting from the point of view of changes in participants' epistemic status and how these are displayed at specific moments via bodily-visual change-of-state expressions (see Heritage 1984; cf. Stivers et al. 2006). These embodied noticings are treated here as actions-in-conversation (Schegloff 2007: 87) that manifest a sudden shift in orientation and occasion reconfigurations of the interactional space. The study investigates particular moments where sequentiality of conduct is incoherent, and a noticing renders a problematic feature, or repairable, relevant in the ongoing interaction. The participants use subtle visual cues as well as material objects to solve these problematic situations and recover the interactional space. Cisco Telepresence interactions are complex in that the participants have to concurrently monitor multiple screens, displaying the different distant environments and the agenda-related activity.

In CA research, a noticing has been defined as action-in-conversation that draws attention to a feature or action in the conversational setting that has not previously been considered relevant (e.g. Schegloff 2007; Kääntä 2014). The source of the noticing can be a sound, object, prior talk, or action, and it does not automatically presume trouble. Instead, the meaning of a noticing is co-constructed by participants in interaction, which may or may not be consequential for the unfolding of on ongoing activity. Whereas a noticing is featured in an individual's embodied initiative, it makes future action collectively relevant and can sometimes anticipate a verbal or embodied intervention and the emergence of a competing trajectory (Helisten 2019). In face-to-face encounters, where participants are in each other's immediate co-presence, noticing-related disjunctive actions are usually implemented by other-than-current-speaker(s), which may occur in parallel with the ongoing main activity or lead to its momentary or permanent suspension (e.g. Keisanen 2012; Goodwin & Goodwin 2012). Previous literature on noticings has looked into mundane interactions (Helisten 2019), classroom contexts (Kääntä 2014) and mobile settings (Goodwin

& Goodwin 2012; Rauniomaa et al. 2018). However, ways to make other-than-current-activity relevant in enhanced video-mediated interactions and particularly in the business setting, have not gained attention. The study contributes to filling this gap and furthers understanding of the affordances of these environments and the ways minimal visual cues and the manipulation of material objects can become important structuring resources (cf. Mondada 2011a).

Through detailed analysis of two instances in the video-mediated meeting, Article IV gives insight into the ways noticings flag troubles-in-interaction, which can then be solved unproblematically via additional interactional work. In the first instance, a participant who notices an auditory barrier, i.e. his party's mute is on, identifies the problem of not being heard in one local environment. He solves the problem as a parallel activity by performing a remedy of action so that the main activity is not disturbed (cf. Arminen et al. 2016). However, transitional phases where changing presenter rights involves object manipulations may require more work and be susceptible places for problems to occur. This is the case in the second instance, where a visual barrier emerges, i.e. trouble in seeing the co-participant's presentation in a separate agenda-screen in the meeting rooms (screen 3). This is attended to only after some significant delay, despite not being able to contribute to the current speaker's referential activity. In the following extract, the emergence of this problem is collectively recognized by other-than-current-speakers through consecutively produced noticings, occasioning a clear shift in co-orientation. The participants' bodily-visual behaviours and turning away from the agenda-screen (screen 3) indicate divergent trajectories and make the need to recover the interactional space relevant (see Mondada 2013a).

Extract 8 (excerpt from Article IV, Extract 2)

1 DIETMAR Oh (.) +yeah sorry (.) it's my
Noach *+glances at Olek*

screen 1 */~image display changes*
Dietmar *~gaze to laptop; hand on mouse -->*
2 DIETMAR /presenta[tion
3 NOACH [oh +yeah.
Noach *+turns gaze to screen 3; puts hand on cable*

4 DIETMAR *I thi:nk <that wa:s>
Marja **turns gaze to screen 3 --->*

5 +~(0.3) *<u>this</u> one, o:r?
Noach *+unplugs cable*
Dietmar *~turns gaze to laptop screen ---> l.10*
Marja **glances at Noach*

6 that's ~it- ^page two:?
Dietmar *~glances at Marja*

Jaap ^*turns gaze to screen 3* Fig. 24

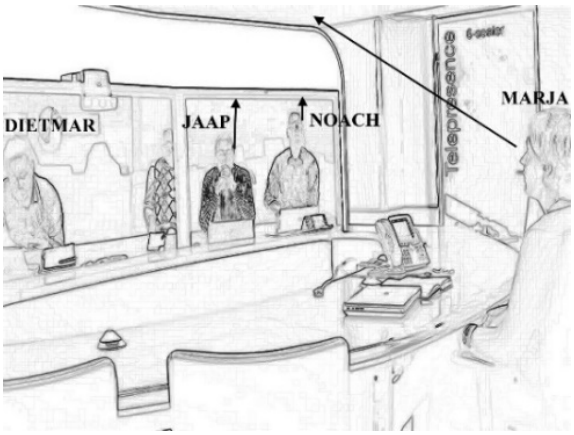

FIGURE 24 Jaap turns gaze to screen.

7 (1.8) ~ (0.5) + (0.7) * (3.5) * (0.5)
Dietmar ~*glances at Marja*
Noach +*glances down*
Marja **opens and closes mouth*
Marja **pouts lips ---->**

8 (OLEK) (°-suppose::°)
Noach *glances at right, past Jaap*
Dietmar *gaze to laptop screen -->*

9 (2.2) + (4.6) *+ (3.2) *^ (3.4)
Noach +*turns gaze to O and K, then screen 3*
Marja ---->*
Noach +*gaze down, starts writing +--->*
Marja **turns gaze to screen 1* Fig. 25
Jaap ^*turns gaze down*

FIGURE 25 Marja turns gaze to screen 1.

10 DIETMAR Marja ~(.) do you have, one (.) old of those
Dietmar ---->~*lifts gaze to straight ahead*

11 DIETMAR (.) old reports

12 (1.0)
13 Marja which old re↓ports

The extract shows how the problem emerges during Dietmar's object manipulation, namely his actions in opening the presentation and failing to share the screen view. After he invites everyone to look at screen 3 via deictic reference 'this one' (line 4), the others first mutually orient to the possibility to see what they are supposed to see (Figure 24). However, they soon make their noticing of the trouble of not seeing the presentation relevant via embodied displays, such as glancing down and at other participants (lines 4, 5 & 7). Despite having sought confirmation verbally and bodily from the others (lines 5 & 7) and getting only a hesitative response, Dietmar does not seem to notice the problem or the other participants' trouble-relevant bodily-visual behaviours (cf. Ruhleder & Jordan 2001a). Particularly visible during the two long silences (lines 7 & 9) is the way co-orientation splits into divided focus points and parallel activities in the meeting rooms (Figure 25). The extract thus illustrates how embodied noticings can form the initial step towards redesigning the interactional space (cf. Mondada 2013a).

The following extract is from a moment later where Dietmar displays 'having noticed' the problem with a visible embodied change-of-state token, a frown (cf. Heritage 1984), and takes the necessary steps to correct the situation.

Extract 9 (excerpt from Article IV, Extract 5)

1 NOACH ^so we list events we look that who is the
Jaap ^*writes, hand on forehead* ^--->

2 the: ~chooser of those events ↓so (.)
Dietmar ~*frowns, turns gaze to laptop*

3 if ~for instance we are picking up- we have
Dietmar ~*moves hand quickly on the side of laptop* Fig. 26

4 ~booked a carrier which u:h, comes
Dietmar ~*adjusts laptop and taps Cisco Touch Panel, puts hand on chin*

5 +back to us and say ↑hey the (goods)
Noach +*turns gaze down*

6 are not ready for a ~pick-up then
Dietmar ~*glances at Marja*

7 +u:h then, (.) so we
Noach +*turns gaze to Marja*

8 went to the *premises
Marja **turns gaze to screen 3* Fig. 27

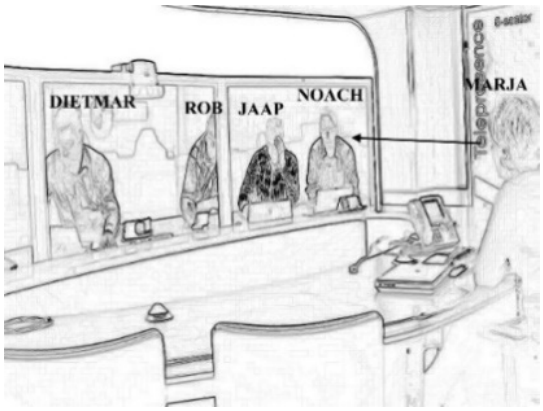

FIGURE 26 Dietmar orients to laptop.

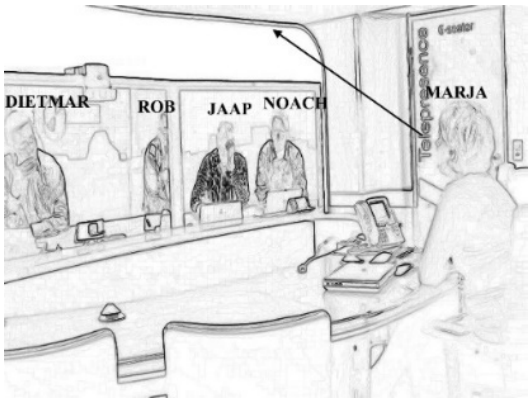

FIGURE 27 Marja turns gaze to screen 3.

Although the feature that enables Dietmar's noticing is undetectable in the video-recorded data, his frown brings this aspect into interactional focus and manifests his orientation to something being "wrong" (line 2; cf. Kaukomaa et al. 2014). His subsequent actions, namely turning towards his laptop and touching the Cisco Touch Panel (Figure 26), include orienting to remedial work in his local space; this, after a brief delay, renders the presentation visible to everyone. He then ceases action and monitors the other participants during the ongoing talk (lines 6-8). When Marja turns her gaze to screen 3, the success of the remedial action is ratified (Figure 27). To summarize, the recovery of the interactional space consists of the participants' initial move away from the main activity, the chair noticing the trouble himself and taking relevant action to solve it. In general, the analysis shows not only a preference for letting the current speaker do the noticing, rather than inserting intervening action, but also the way the participants make the affordances to do so intelligible.

Article IV shows how reconfigurations of the shared interactional space are occasioned by trouble-relevant embodied noticings (cf. Schegloff 2007: 87). It highlights the process through which the problem is first made collectively relevant in the unfolding of interaction and then attended to via mutual monitoring of the co-participants' local environments and bodily-visual behaviour. An important finding is that enhanced video-mediated settings and a wider perceptual range can facilitate the use of minimal visual cues, resulting in unproblematic ways of dealing with technology-related troubles and collaborate in and across the international spaces.

4.2 Summary

This chapter has introduced theoretical and practical underpinnings and the main findings of the four research articles. In general, they all address the main research question concerning how participants coordinate their actions in and across interactional spaces in distant meetings. The main findings further illustrate some of the ways in which interactional spaces in distant meetings are

jointly constructed, re-negotiated and even reconfigured in the unfolding of interaction and through drawing on different constellations of verbal, material, and bodily-visual resources. In distant meetings where video-mediation is not used, the architectures-for-interaction and structures for producing and interpreting verbal and embodied behaviours involve asymmetric elements: unlike in face-to-face meetings or a video-mediated setting, one cannot rely on bodily-visual resources for turn-taking or displaying dis/alignment. Thus, the concept of interactional space and ways to co-construct it through collaborative practice are different in these two settings. Next to be discussed are the implications of these findings for research and practice and how they can be transformed into a more comprehensive understanding of spatial and contextual configurations in technology-mediated settings (cf. Goodwin 2000).

5 CONCLUSIONS AND DISCUSSION

This dissertation research has investigated the coordination of actions in and across interactional spaces in technology-mediated business meetings. In addition, I aspired to find out how co-presence is coordinated through verbal and embodied means. Drawing on CA and engaging in micro-level analysis of the multimodal processes and practices enabled me to address these aspects in detail and move towards a conceptualization of interactional space that could be applied in the context of distant meetings. In this chapter, I discuss how the studies reported in the four articles form a synthesis of the present micro-level research on social interaction and the phenomenon of space-making in distant meetings. I first focus on the notion of 'interactional space' and then elaborate the discussion on the offerings of the research articles regarding the organization of formal meetings and the way troubles are attended to *in situ*. I also take into consideration the role of technology and the relevant theoretical observations. Lastly, I consider the limitations and implications of this study for future research and for practitioners in the business context.

5.1 Interactional spaces in distant meetings

As I point out in Chapter 1, orderly and meaningful social activity requires not only general communicative competency but also knowledge of how to place oneself sequentially, temporally and physically within the interpretative framework of interaction (Goffman 1963, 1967; Goodwin 2000). This involves acknowledging the situated and contextual affordances of the frames and (pre)conditions of interaction: i.e. the resources with which to co-construct the interactional space for mutual focus of attention and co-presence. In face-to-face meetings and encounters, interactional space has been perceived as a dynamic realm that is actively constituted by the collaborative actions and bodily arrangements of participants (Mondada 2011a, 2013a; see also Kendon 1990; Goodwin 2000). This dissertation has shown that establishing the framework for

co-presence and collaborative action in distant meetings involves processes that are complex and multidimensional. By using the framework of multimodally informed CA (e.g. Mondada 2014a; Nevile 2015; Hazel et al. 2014; Rasmussen 2014), I have been able to zoom into the ways in which the chair and participants organize their conduct via a multiplicity of modes and semiotic resources. They make use of both verbal and bodily-visual displays, such as gaze, body movement and gestures, and draw on technological artefacts to establish mutual focus on the course of interaction and make their presence and participation intelligible.

A significant observation regarding the notion of interactional space is that the chair and participants of distant meetings are required to display their orientation to *multiple involvements* in and across the physical and online environments. More specifically, one must acknowledge the presence and actions of a local party, but on the other hand, and at the same time, uphold the course of the main activity by co-orientating to a distributed participation framework and thereby make relevant the *mediated spatial arrangement*. In the study framework, all the participants were thus found to display their availability and orientation in *multiple interactional spaces* (see Section 1.2; Figure 1): in the local space, by actions which made the physical location relevant, and in the overall meeting space, by the collaborative work that was done to sustain and negotiate meeting-related activities. The audio- and video-mediated meetings included not only verbal interaction but also features that could be seen and potentially modified on screen. Although the perceptual range in the two types of settings were fundamentally different, the screen activity in both constituted an additional mutually recognized *spatial layer* (see also Mondada 2011a). In addition to the local and overall meeting space, the participants had access to other types of connected presence (see Licoppe 2004) through the affordances of their laptops/computers and mobile phones. These have been called *(other) adjoining space(s)* in which the trajectories pursued are not necessarily relevant to the unfolding of the meetings. The interplay between the interactional work to uphold orientation to these spaces and that of achieving the goals of the meeting has formed the key interest in the study and for understanding the dynamics of distant meetings. However, interactional spaces are to be perceived as multi-layered constructs that can be attended to simultaneously, rather than as something that the participants make relevant with a separate set of actions. This is similar to face-to-face meetings where participants have been found to display their engagement in dual involvements (e.g. Raymond & Lerner 2014).

What makes my conceptualization of interactional spaces in technologized settings fundamentally different from that of Wasson (2006) is that I perceive interactional space as something that not just "is", but as something that is constituted in and through interaction by the actions and orientations of the participants. From this perspective, the contingencies in all the spaces and in the institutional frame of events matter and help in forming an ecological and organizational hub (cf. Heath & Hindmarsh 2000). All four articles introduced in Chapter 4 contribute to understanding this aspect and how the different

configurations: local space configuration, overall meeting space configuration and the adjoining space configuration(s), are actively upheld and sometimes transformed at different phases of meetings. In addition, by a close analysis of the video-recorded data from one location enabled me to see how the participation frameworks can dynamically evolve in the local space. For instance, the fact that the participants frequently manipulate material objects in the meeting room and alternate their orientation between the onscreen activities and each other illustrates this point. Furthermore, in the meetings with more than one local participant, embodied resources were frequently used for interpersonal communication, showing thus another way the local space arrangement affords more than a static way of merely "being" in the same room. Another important point is that interaction and the insitutionality of the events are construed through the situated actions made intelligible and accessible in the overall meeting space. The co-construction of the interactional spaces of distant meetings encompasses the participants' orientation to the overall trajectory of the meeting, as displayed by an agenda, the roles enacted, and other contextual factors that affect the moment-by-moment organization of participants' vocal and visual behaviours. It is this orientation that renders the spatial designs and structures available. The interactional work done to co-construct and sustain the spatial arrangements of meetings thus intertwines in the activities and goals pursued.

As pointed out by Kendon (1990) and Mondada (2011a, 2013a), the sequential setting and the context play an important role in maintaining, transforming and reconfiguring the spatial arrangements of interaction. In Chapter 2, I address this from the point of view of materiality and *architectures-for-interaction* and the ways sociomaterial environments inform the course of events, making formal meetings illustrative of heavily structured institutional settings (e.g. Jucker et al. 2018). In distant meetings, interactional spaces are particularly susceptible to changes because of the need for participants to be sensitive to the *possibilities* for new emerging trajectories across physical settings while remaining pragmatic when mobilizing and selecting what resources to use (cf. Mondada 2014). In addition to the various focus points making a claim of participants' attention, sequential places that are prone to renegotiations of interactional spaces, namely transitions between phases and topic shifts, also exist. The phenomenon in which additional interactional work is done to establish and stabilize new orientation to the activity shift in question is clearly perceivable, as demonstrated in Articles I, III, and IV. While similar findings have been made on informal face-to-face encounters (see e.g. Mondada 2011), my study shows that technologized business settings have special features that cause these transitions to be different. For instance, the inability to use mutual gaze to obtain the formation that typically accompanies the beginning of a meeting means adopting other strategies, such as monitoring the screen and participant list for arrivals (Article I). In addition, in the absence of visual cues enabling them to detect the point when a transition becomes a relevant next step, participants can again make use of the screen as a resource to not only evaluate the state of availability of others but also to manifest their own position (Article III). Overall,

the findings of this study highlight participants' agency, skills, and flexibility when it comes to negotiating, transforming, and repairing the interactional space(s) during and between meeting-related activities.

Whereas earlier studies on multiparty interaction in the business context have focused mainly on one type of spatial arrangement at a time: i.e. that of traditional face-to-face meetings or videoconferencing (e.g. Halvorsen 2016), the present research takes into account the embeddedness of the face-to-face and virtual domains. For this reason, I found limiting the scope of the study framework, including mapping the relevant theoretical aspects and main objectives, both important and challenging. I believe I succeeded in answering the main research question: *how do participants of distant meetings coordinate their actions and co-presence in and across interactional spaces, and what kind of verbal and embodied means do they use?* and the questions set for the individual research articles.

5.2 Coordinating actions and co-presence at the beginning and end of distant meetings

In the theoretical framework of this study, I have presented formal meetings as interactional, joint accomplishments in which both the chair and participants play an important role (e.g. Asmuß & Svennevig 2009). In addition, the chair's contribution to turn-taking and achieving coordinated entries and exits are considered fundamental (Boden 1994; Button 1987, 1991; Nielsen 2013), although not in a predetermined manner, since meetings and their progressivity are always contingent on contextual factors, such as the varying constitutions of attending parties, the overall purpose and the physical setting. Articles I and III focused on different aspects of the meeting structure, namely openings and closings, zooming into the meetings that were arranged without a video connection between the local and distant parties. As I sought to avoid 'technological determinism' (Arminen et al. 2016: 292) and instead analyse the data through unmotivated looking, I discovered how interactional spaces are action-shaping and action-shaped but also activity-bound. In other words, by starting with not assuming that the technology used restricts participants' behaviours, I was able to reveal some distinctive characteristics and interesting micro-level phenomena regarding the transitions between the formal and informal phases of meetings and diverse turn-taking systems (see Section 2.2.1). In both cases, technology seems to create special frames and (pre)conditions for the organization of interaction and one's ability to coordinate co-presence and availability.

The two articles depict the practical tasks of opening and closing meetings as a multilateral and multi-dimensional process, requiring rearranging of bodies in the local space and displaying heightened attentiveness to what is going on in the overall meeting space. Regardless of the visual barrier between the local and

distant environments, verbal and bodily-visual displays of the participants were shown to be important resources for the (re)organization of the meeting structure (see Schegloff 1992; Arminen 2005; Heritage & Clayman 2010). Furthermore, the chair and participants made use of various affordances and multimodal resources to coordinate and manage their presence and participation, including the manipulation of objects and on-screen practices. My findings illustrate that openings and closings form two central boundaries that presume attention collectively to the (re)construction of the interactional spaces and to the overall meeting space configuration. Although prior studies have documented on instances where openings and closings mirror each other and include a similar stepwise progression, such as clearly marked premeeting and preclosing phases (Nielsen 2013; see also Mirivel & Tracy 2005), in distant meetings, there is variation in the way these steps are taken and which chair and participant strategies are used. It seems that this variation is dependent on contextual factors, such as the number of people present, the location of the chair, the room architecture, and the technology used. For instance, in the large team meeting, in which the chair was a distant participant, openings and closings were more straightforward and included less intervening talk than occurred in some of the smaller meetings. However, this meeting was also different in other ways, namely it was particularly susceptible to local community building (see section 4.1.2).

In general, the practices with which interactional spaces are co-constructed at the beginning and dissolved at the end of distant meetings are distinctive, and they involve different constellations. As presented in Chapter 2, the openings of formal face-to-face meetings involve bracketing into a meeting mode and achieving the steps from preparatory and premeeting phases to a leader-plus-one formation (Ford 2008). This involves the subtle orchestration of verbal and embodied conduct with which a processual shift from multiparty talk to more focused, meeting-related talk is also established (e.g. Boden 1994; Asmuβ & Svennevig 2009; Nielsen 2013). In distant meetings, the use of technological devices to coordinate co-presence and manage topic progression is key in that it also manifests the chair's control both over the floor and distribution of rights to speak (see also Svennevig 2012b). The beginning is the moment when the participants first orient to this formation. In general, the opening phase of meetings involves mechanical work, such as creating the preconditions for the meeting by setting up the devices, and interactional work, such as verbal junctures, monitoring the screen(s) and check-in greetings, to establish 1) co-presence and 2) entry into the meeting proper. The chair and participant techniques with which attention to agenda and the business of meeting is drawn are similar to the ones used in face-to-face meetings, such as verbal boundary markers, but the window for establishing mutual focus is more flexible and it is particularly susceptible to the emergence of parallel trajectories. These competing alignments usually involve bodily-visual practices, and they might, in some cases, be consequential for the opening process, even though not made intelligible in the overall meeting space.

During closings of meetings, what needs to be accomplished is the move out of the meeting structure and, in the end, departure. Whereas Button (1987, 1991) and Nielsen (2013) have suggested verbal strategies for this, such as the formulation of summaries, declarations and boundary marking, other studies on face-to-face encounters introduce the relevance of embodied practices to manage and align with closing-relevant trajectories (e.g. Haddington 2019; Ticca 2012). My findings suggest that there is some variation in the ways the shift from meeting talk to the closing and to a new configuration of interactional spaces is negotiated. In practice, this shift encompasses a change of orientation to the business of closing, managing the relevant junctures for re-openings and, in the end, disengaging from the mediated spatial arrangement. As during openings, verbal and embodied resources, such as boundary markers and gestures, are selectively used to advance the process. Whereas in face-to-face meetings bodily rearrangements have been found to inform co-participants about the upcoming leave-taking (e.g. LeBaron & Jones 2002), in distant meetings other resources must be used. An interesting finding is that in some cases closing tokens are only unilaterally produced, for instance in the case of the large meeting, while in other occasions they might be produced by some participants but are not responded to by the other parties (see Section 4.1.3). Hence, two points can be raised from the fact that participants do not treat this as problematic. First, not holding the distant participants accountable for the lack of verbal contribution to the closing indicates that silence is treated as acceptable and even a kind of a default display. Second, the participants of distant meetings seem to have developed new norms within their professional community and been socialized into particular meeting practices (cf. Hjulstad 2016; Norris & Luff 2013; Luff et al. 2016). This complies with earlier studies on other kinds of technologized environments, such as Skype meetings, where people have been found to orient to new situated maxims or they have created their own ways of working (see Section 2.2.3).

As illustrated by previous literature on face-to-face meetings (Nielsen 2013) and asynchronous virtual meetings (Markman 2009), openings and closings are locally, multimodally and procedurally accomplished. In addition, the analyses support earlier findings on audio and video-mediated meetings in that there is very little or no non-work talk before and after agenda-related business, making the whole processes of bracketing in and out of the meeting mode distinctive (see e.g. Halbe 2012; Ruhleder & Jordan 2001b). My studies contribute to earlier literature by highlighting the spatial arrangements during these activities and showing that the technologized environment not only affects the structuring of distant meetings but also creates new demands for their accomplishment. The participants need to acknowledge and attend to multiple involvements, which makes the beginning and end subject to local negotiations and interactional contingencies.

5.3 Coordinating actions in moments of interactional trouble: the role of technology

The emergence of interactional troubles is common in distant meetings and can relate to technological distortions as well as other types of problems that disrupt the sequential unfolding of interaction. As presented in Chapter 2, troubles in face-to-face meetings can be flagged with embodied means (e.g. Oloff 2018) but also by initiating repair in sequentially suitable places. On the other hand, there are diverse practices with which problems in technologized interactions can be solved, which various studies, ranging from asynchronous chat conversations to video-mediated environments, have shown (e.g. Rintel 2010; Norris & Luff 2013; Ruhleder & Jordan 2001a; Markman 2010). What is of particular interest in the present study is how the use of technological objects renders troubles intelligible in a synchronous collaborative environment. The practices and procedures with which troubles are attended to and resolved was one of my key objectives, since they form susceptible places for the reconfiguration of the interactional spaces. Articles II and IV focused specifically on this aspect, highlighting the role of the *affordances* available in the immediate social, material, and technological environment through which social actions are made both accountable and intelligible (see Hutchby 2001, 2014; see also Gibson 1979). Although the amount of data from the video-mediated meeting was insufficient for developing a comprehensive understanding of the differences between the Microsoft Live Meeting and Cisco Telepresence meetings, some preliminary observations can be made.

First, in the case of the former, the local participants dealt with troubles in hearing, speaking, and understanding primarily by displaying alignment and affiliation via bodily-visual practices in their local space (Article II). The troubles related to technological issues, ambiguous silences and moments of disagreement. The participants' decision to orient to local community building rather than initiate repair contributed fundamentally to the reconfiguration of the interactional spaces. It can be deducted that, in environments where not everyone can see each other, there seems to be a preference for securing progressivity over disturbing the ongoing main activity, even if not understanding or hearing something. Second, in the Cisco Telepresence meeting the troubles analyzed related to not being heard or not seeing the co-participant's presentation. In these situations, having symmetric access to co-participants' embodied displays and thus a wider perceptual range (see Hutchby 2001) was seen to contribute to the ways divergent trajectories emerge and become recognized in the overall meeting space. The study showed how bodily-visual cues, namely trouble-relevant noticings, drew attention to a feature in the setting that made recovering the shared interactional space relevant. The findings of Article IV indicate that a repairable can be identified and visibly attended to in the overall meeting space through technology-oriented remedies (see Rintel 2010), requiring less additional effort because of the participants' ability to mobilize a new trajectory via

embodied resources. Based on these observations I suggest that, unlike in asymmetric environments and traditional videoconferencing settings, participants in Cisco Telepresence can trust that their actions *can be noticed* and oriented to by others.

Although both studies report on instances of trouble that require the participants' attention to either transforming or recovering the interactional spaces, the process that is undertaken is different. In the case of Microsoft Live Meeting, the local participants can be seen to withdraw from the activities towards solving the trouble and shift their orientation from the overall space configuration to the local space configuration. Thus, although the trouble is oriented to visibly, it is not made relevant in the overall meeting space nor does it affect the main activity of the meeting. In contrast, in the case of Cisco Telepresence, the setting allows the participants wider access to each other's local environments (cf. Hazel & Mortensen 2014; Licoppe et al. 2017), creating a kind of an "extended" interpretative framework. This makes them more sensitive to an abundance of mobilized trajectories that are used as resources for flagging and mutually solving interactional troubles. In the two analysed instances in Article IV, the embodied actions of participants, namely their visible orientation shift away from the overall meeting space configuration, are recognized by the current speaker, which then leads to remedial work. Video-mediation thus creates affordances with which meanings can be conveyed via bodily-visual resources that facilitate interactional processes. Moreover, being able to see the co-participants not only renders their physical actions accountable in the moment-by-moment unfolding of the meeting, but it is also consequential for the ways spatial arrangements are negotiated and upheld.

Thus, the demands on participants' attention in a video-mediated meeting can be different from those required of participants in an audio-only meeting, where the meeting-related activity is not challenged by visually perceivable trajectories. Whereas participants in meetings without a video-connection have access to visuals on screen but only asymmetric access to one another's conduct, video-mediated meetings afford an opportunity to monitor distant environments through shared *see-ability*. However, as suggested by other scholars (e.g. Nielsen 2019; Norris & Luff 2013), even in more enhanced video-mediated settings gaze is not necessarily enough to ensure equal possibilities for participation or to advance turn-taking. The study similarly shows that, if the co-participant is not looking at the right direction at the right moment, the mere affordance of gaze to display co-orientation does not lead to successful situational anchoring of events or promotion of intersubjective understanding. This observation is important in that it highlights the dynamic evolvement of spatial arrangements and how the affordances of technologies do not lead to automatically upholding a certain formation, but instead, they become relevant *structuring resources* only when oriented to by participants (see Mondada cf. Kendon 1990). However, the study findings yet illustrate how gaze can become a significant resource in resolving troubles in a non-problematic way, as opposed to having limited or asymmetric

access to the resources with which to draw attention to co-participants' environments (cf. Hazel & Mortensen 2014; Licoppe et al. 2017).

Overall, the present findings indicate that the diverse affordances and constraints for producing social actions in these two settings engender different opportunities for solving troubles-in-interaction, which in turn shape and are shaped by the spatial arrangements and their respective consequences. It is also suggested that orientation to the overall meeting space configuration functions as a kind of a "default mode" for advancing meeting-related activities (cf. Licoppe & Morel 2012). This could inform future studies on the ways the participants themselves orient to video-mediated fragmentation (Arminen et al. 2016).

5.4 Implications

This thesis has implications for research, theory and practice, and it contributes to discussions on various notions and concepts, such as the spatial dimension of interaction, participation framework, and affordances for the era of digitalization, or "digital practices". My findings have particular relevance not only in micro-level investigations on workplace interactions, but also in other studies on multiparty meetings and technologized environments. This study of distant meetings from a bottom-up perspective has led to insights on the constructions of institutionality, situational roles, and ways to accomplish distant meetings *in situ*. It contributes to our understanding of distant meetings as dynamic events that are jointly accomplished through the multimodal conduct and collaborative practice of the chair and other participants.

The present findings have implications for CA and other interactional studies adopting a multimodal approach (e.g. Deppermann et al. 2010; Hazel et al. 2014; Mondada 2014a; Nevile 2015; Rasmussen 2014). First and foremost, they show the interconnectedness of verbal and embodied actions and the ways in which participants in distant meetings organize their conduct via a multiplicity of modes and semiotic resources. My study has offered new insights into the institutionalization of events and particularly the importance that spatial arrangements and utilization of material and technological objects have in the organization of activities and activity shifts. Moreover, my work contributes to a better understanding of how artefacts and objects can also become important structuring resources for demarcating between different activities. In this sense, actions and activities are understood as being technologically framed but *contextually and spatially bound*. Second, as I aspired to unravel the ways troubles are oriented to and resolved in the unfolding of talk and actions, I was able to address and possibly develop some basic CA concepts, such as that of repair which I connect to the ways the participants do remedial work: an aspect that has not been investigated much in the context of technology-mediated meetings (but see Arminen & Auvinen 2016). Furthermore, whereas it has been found that in face-to-face encounters recognizing the need for repair usually leads to halting

progressivity because of the aspiration to reestablish intersubjectivity (e.g. Sacks et al. 1974), the findings of this study suggest that the prioritization of activities might be different in remote environments.

The present research also contributes to the area of meeting research and elaborates on the ways in which the structure of formal meetings and the roles are jointly established in the moment-by-moment unfolding of interaction (see e.g. Asmuβ & Svennevig 2009; Asmuβ 2015). My study has looked beyond category-bound behaviours (Sacks 1992; see also Drew & Heritage 1992) and, with the focus on the micro-level interactional practices at different stages of meetings, I have provided a fresh view on the situated interplay between the finely tuned coordination of actions and the roles enacted. Moreover, the chair and participants' use of verbal strategies is not key, but instead, their roles are constructed and construed via different constellations of multimodal conduct and by orienting to the arrangements in and across the interactional spaces (cf. Goffman 1963; Goodwin 2007; Mondada 2011a). The present study has highlighted how the composition of actions and turns, including not only what is said in a specific location but also what is done via embodied displays and actions on screen, have a bearing on the ways the roles of the chair and participants are communicated over distances. An important point to this is that "being a chair" or "being a (team) leader" involves facilitating turn-taking and agenda-based topic progression via controlling the devices used, which illustrates how leadership is constructed as in situ practice via utilization of technologies (see Clifton 2019; cf. Svennevig 2012b).

The points made in this investigation may also inform studies in the field of multiactivity (e.g. Haddington et al. 2014; Mondada 2014b). As also found in face-to-face work settings, the ways of managing competing courses of action is a practical problem that requires participants' attention. In the framework of distant meetings where participants cannot see one another, these trajectories are not always made known to all co-participants but may instead be made relevant in only one location. This means that a distributed participation framework may facilitate the emergence of new competing trajectories, such as those involving orienting to other communicative networks through mobile phones or laptops. In addition, since commonly this does not lead to suspending one or the other activity, it might be appropriate to assume that the absence of visual access increases the tendency to initiate and uphold parallel interactional behaviour. For instance, one can be engaged in using one's mobile phone in one location, although it does not disrupt the sequential unfolding of talk nor is it considered disruptive. However, these *implicit alignments* can still have a bearing on one's level of activity or the turn-taking system of meetings.

The study has been guided by previous studies in the areas of workplace studies (e.g. Hindmarsh & Heath 1999; Heath & Luff 2013b; Llewellyn & Hindmarsh 2010) and CA-inspired studies in human-computer interaction (HCI) (e.g. Heath & Luff 2000; Heath & Luff 1992a; Luff et al. 2014; Mlýnař et al. 2018; Arminen et al. 2016). By taking a bottom-up approach and placing the orderliness and sequentiality of social actions at the investigative core, I was able to offer new

insights into technologized interactions in the business setting and, more specifically, into the practices and processes that the participants of distant meetings *themselves* make relevant. As workplace studies and computer-supported cooperative work (CSCW) (Luff et al. 2003; Norris & Luff 2013; Luff et al. 2016) have traditionally focused on the role of technologies in interactions at work and specifically embodied conduct in technology-mediated settings, my findings increase understanding on the embedded features that facilitate mutual monitoring possibilities (see also O'Hara et al. 2011). Although the amount of data on video-mediated interaction is not sufficient for arguing for the significance of gaze or other practices with which co-orientation is established and maintained in these settings, the observations in Article IV can still be used to inform future research. Moreover, since many of the earlier studies on enhanced video-mediated environments focus on experimental or quasi-naturalistic settings (cf. Luff et al. 2014), conducting research on authentic interaction is important. What could be an interesting starting point for further investigation are, for instance, the embodied practices for joint decision-making. Overall, the findings on both the audio-only and video-mediated meetings in this study contribute to the ongoing debate in the rapidly developing areas of workplaces studies and CSCW (Luff et al. 2003; Norris & Luff 2013).

This dissertation has implications for practice and professional settings. In view of the aspiration of studies on institutional interactions to reveal the "fingerprint of institutional practice" (Arminen 2005), the findings indicate that the participants in this particular setting have become socialized into the meeting format and created shared norms related to their ways of working. They are able to make skilful use of various verbal, linguistic, embodied, and material resources to achieve the activities of the meetings and smoothly coordinate their actions despite the visual and/or auditory barriers. What is thus required of them is attentiveness to various trajectories in their local and distant environments and the ability to flexibly adjust their behaviours to meet the situational requirements of the meeting. Furthermore, to interact meaningfully means being able to communicate competently as well as knowing how and when to draw on the affordances enabling one to position oneself within the interpretative framework. This contributes to the wider discussion on contemporary workplace cultures, increasingly digitalized practices, and the ways business professionals are integrated into these technologically equipped working communities.

5.5 Limitations and concluding remarks

While I have been able to shed light on the topic of space-making and action coordination in technology-mediated meetings, the study has its limitations which I will now briefly discuss. I will end the section with some suggestions for future research and concluding remarks.

When I started this study, I had a broad objective to investigate the ways in which authentic, formal meetings in an international company unfold. This led

to taking a bottom-up approach, which was fruitful in many ways. First, as my plan at the beginning was not very restrictive, it enabled me to collect the data and explore the phenomena as they emerged from them. Thus, when I collected the data, I did not narrow down the recordings to specific kind of meetings, but I rather aimed to get as much data as possible during the time frame of my two visits to the company. This gave me the opportunity to observe the interactions and the company culture holistically. Second, having an open mind from the very beginning allowed me room to develop the research questions and objectives throughout the study. I believe that this has led me to better results when it comes to providing a general view on distant meetings. By looking back, I recognize how a more systematic approach could have afforded me a clearer starting point for the investigation of interactional spaces in distant meetings. After all, one of the first observations I made was the substantial use of technologies in the setting.

This brings me to one of the gaps in my dissertation research. The ways to "make space" and create the frames and (pre)conditions of interaction in the framework of distant meetings are addressed in this study from the perspective of one location. Although acknowledging the contribution of my work that is fundamentally different from the earlier, more fixed models of interactional spaces (cf. Wasson 2006), having the opportunity to include video-recordings in the other locations could have been fruitful. It would have perhaps allowed me a more comprehensive understanding of the actions made to co-construct and uphold orientation to the overall meeting space. However, as explained in Chapter 3, this was not possible due to the agreements with the company, nor would it have been even feasible, because the participants came from various locations in and outside Europe. Nevertheless, future research that illustrates the production and interpretation of social actions in all physical locations of similar environments could provide interesting details on their interactional and organizational ecology. What could be particularly fruitful focus points are the diverse ways in which participants make space-making relevant in their respective environments and how the sequentially and temporally organized actions in them intertwine. This kind of a study could be complemented by interviews and a multimethod approach, enabling participants the opportunity to also voice how they experience their presence and participation in these spaces.

While reflecting on the methodological and practical decisions made during the process, one concerns the practices with which the data were collected and analyzed. As I had not anticipated the direction of my study trajectory, the cameras were not always ideally positioned in the rooms where the recordings took place. Whereas the framing of the recordings in general facilitated the subsequent analysis of talk and bodily conduct in the material environment, it was at times difficult to decipher actions on screen(s) and, more specifically, to see what was on them. This in turn might have informed my way to *do* multimodal analysis (see Luff & Heath 2012). Furthermore, whereas I decided to stay in the recording room as a silent observer, some CA-inspired investigations have been even less disruptive in that the researcher has left the room prior to the beginning of meetings. Although I did not perceive my presence as

intervening with the naturally occurring events during the time I spent in the field or during the recordings, this is probably something I would now change to minimize the risk of potentially drawing the attention of study participants.

Lastly, taking the approach of multimodal CA to study the details of video-mediated interaction via video-recorded data was challenging due to having only limited access to everything that was going on. In the case of Cisco Telepresence, analyzing the use of embodied resources, such as gaze, gestures and body movement, to which the participants in different locations visibly oriented, was not an easy task. Overall, all the decisions I made helped me come to the conclusions presented in this overview, and I feel that I succeeded in providing not only reliable and valid results but also an emic perspective on the topic, which is what I aspired to do from the beginning.

This research has extended the concept of interactional space into a social, multimodal construct that is oriented to by participants in formal business meetings in the moment-by-moment unfolding of interaction and through the utilization of the spatial, material and other resources available (cf. Mondada 2009, 2011a, 2013a). The interactional space is thus seen as fluid and susceptible to changes in the distributed participation framework and to the recognizable shifts in co-participants' orientation in the local and overall meeting space. Whereas in this dissertation the concept has been applied to a specialized multiparty setting, the findings can also be used to formulate new questions not only in the theoretical and methodological areas addressed, such as interactional studies, CA, workplace studies, and technology-mediated work environments, but also in other related fields, such as education and sociology. As technologies prevail all aspects of our lives, what should be further emphasized is their role in the organizational and interactional ecology: they may frame but they do not determine interaction.

SUMMARY IN FINNISH

Toiminnan koordinointi teknologiavälitteisten kokousten vuorovaikutustiloissa

Tämä tutkimus tarkastelee erään suuren kansainvälisen yrityksen teknologiavälitteisiä ns. etäkokouksia ja sitä, miten niihin osallistuvat työntekijät koordinoivat toimintaansa useissa vuorovaikutustiloissa (Mondada 2009, 2011a, 2013a) sekä erilaisia multimodaalisia resursseja hyödyntäen. Tutkimuksen keskiössä ovat etenkin verbaalit ja keholliset ilmaukset sekä sosiomateriaalisen ympäristön ja objektien käyttö vuorovaikutuksen temporaalisessa ja sekventiaalisessa jäsentämisessä. Väitöskirjani noudattaa keskustelunanalyyttista menettelytapaa, ja tutkimukseni aineisto koostuu vuosina 2012 ja 2013 videonauhoitetuista tallenteista. Tarkastelen työssäni osallistujien toiminnan koordinointia vuorovaikutustilojen yhteistoiminnallisen rakentamisen ja niistä neuvottelun näkökulmasta. Yhtäältä olen kiinnostunut siitä, millaisia vuorovaikutuksellisia, materiaalisia ja multimodaalisia resursseja osallistujat hyödyntävät, mutta toisaalta siitä, miten heidän toimintansa fyysisessä tilassa vaikuttaa yhteisen teknologiavälitteisen kokoustilan neuvotteluun ja kokousten aktiviteettien etenemiseen.

Tutkimukseni on laadullinen ja perustuu autenttiseen videonauhoitettuun aineistoon sekä sen mikrotason analyysiin. Keskustelunanalyysi on sekä työni teoreettinen että metodologinen viitekehys, ja olen keskittynyt tässä väitöskirjassa syvemmin etenkin tiettyihin keskustelunanalyyttisen tutkimuksen osa-alueisiin. Näistä tärkeimpiä ovat vuorovaikutuksen multimodaalinen mikroanalyysi, joka keskittyy nimenomaan kehollisten, verbaalien ja materiaalisten resurssien hyödyntämiseen tilannekohtaisesti (esim. Hazel et al. 2014; Nevile 2015; Mondada 2014a). Toisen keskeisen alueen muodostaa työelämän tutkimus (engl. *workplace studies*), jossa tarkastellaan niin ikään vuorovaikutuksen multimodaalista aspektia, mutta ennen kaikkea teknologian roolia työelämässä ja sen erilaisissa konteksteissa (esim. Heath & Luff 2000; Llewellyn & Hindmarsh 2010). Tutkimukseni lähtökohtana on ollut alusta asti tietty institutionaalinen ympäristö ja sen vuorovaikutukselliset prosessit, ja siksi yksityiskohtainen ja kattava mikrotason analyysi on ollut keskeisessä asemassa. Keskustelunanalyysille tyypillisesti tutkimukseni alkuvaihe koostui kokouskäytänteiden havainnoinnista ja videonauhoitusten tekemisestä ilman ennalta oletettua hypoteesia (Arminen 2005). Aineistonkeruun suoritin kahdessa vaiheessa viikon kestävillä vierailuilla yrityksen toimistolle Keski-Eurooppaan maaliskuussa 2012 ja elokuussa 2013, jolloin kuvasin ja/tai nauhoitin yhteensä neljätoista kokousta. Näistä kaksitoista on teknologiavälitteisiä ja kaksi kasvokkaisia. Tutkimukseni osallistujat ovat yrityksen työntekijöitä ja esimiehiä, joilla on erilaisia osaamisalueita ja tehtäviä. He kaikki puhuvat englantia vieraana kielenä (*English as a lingua franca*). Kokoukset ovat luonteeltaan kirjavia, sillä niiden kokoonpanot, tavoitteet ja pituudet ovat pitkälti erilaisia. Lisäksi puheenjohtajan fyysinen sijainti videonauhoitetussa aineistossa vaihtelee. Tämä antaa hyvin totuudenmukaisen kuvan siitä, millaisiin kokoustilanteisiin yrityksen työntekijät päivittäisessä työssään osallistuvat. Suurimmassa

osassa aineistoni kokouksia yhteys etäosallistujiin on muodostettu Microsoft Live Meeting -järjestelmän avulla, joka mahdollistaa ääniyhteyden sekä tietokoneruudun ja materiaalien jakamisen muille osallistujille. Yksi kokouksista taas on videovälitteinen, ja siinä käytetty järjestelmä on Cisco Telepresence, jonka kautta sekä videoyhteys että materiaalien jakaminen on mahdollista. Vaikka analysoin suurimmaksi osaksi ensin mainittuja tilanteita, antaa jälkimmäinen kokousympäristö työlleni mielenkiintoisen näkökulman. Tämä siksi, että osallistujien hahmottamisen rajat ja vuorovaikutuksen resurssit ovat erilaiset Cisco Telepresence -ympäristössä, sillä he näkevät muut etäosallistujat ruuduilla heidän luonnollisessa koossaan.

Vuorovaikutuksen yksityiskohtaiseen tarkasteluun pohjautuvaa kokoustutkimusta on tehty jonkin verran aikaisemminkin (esim. Asmuß & Svennevig 2009; Ford 2008), mutta tutkimusta tämän päivän teknologisoituneista kokouskäytänteistä on etenkin peräänkuulutettu (Due et al. 2019; Heath & Luff 2013a; Heath et al. 2004). Tutkimukseni on ensimmäisiä niistä, jotka tarkastelevat formaalien teknologiavälitteisten kokousten vuorovaikutustilojen muodostumista ja niistä neuvottelua autenttisessa työympäristössä. Työni laajentaa uudella tavalla teoreettista kenttää ja syventää tietoutta siitä, miten sosiaaliset, materiaaliset ja teknologiset resurssit sekä ympäristön luomat käyttömahdollisuudet (*affordances*; Hutchby 2001, 2014) vaikuttavat osallisuuden ja yhteisen tulkinnallisen kehikon rakentumiseen (Goodwin 2000, 2007). Näin ollen tutkimukseni tarjoaa uutta diskurssille siitä, miten yhteistoiminnallisuutta käytännössä rakennetaan ja miten sitä voisi myös tukea vastaavissa yrityskonteksteissa. Päätutkimuskysymykseni on: Kuinka etäkokousten osallistujat koordinoivat toimintaansa ja läsnäoloaan useissa vuorovaikutustiloissa, ja millaisia verbaaleja ja kehollisia resursseja ja prosesseja tähän liittyy? Lisäksi pyrin väitöskirjassani vastaamaan seuraaviin alakysymyksiin: 1) Miten vuorovaikutustilat organisoidaan etäkokousten alkuvaiheissa multimodaalisesti ja vuorovaikutuksellisesti? 2) Millaisia käytänteitä fyysisesti paikalla olevat osallistujat hyödyntävät kohdatessaan vuorovaikutuksen ongelmia? 3) Millaisia multimodaalisia käytänteitä liittyy vuorovaikutustiloista poistumiseen kokousten lopussa? 4) Millainen rooli on kehollisilla resursseilla vuorovaikutustilan uudelleenorganisoinnissa, kun kyseessä on videovälitteinen kokous?

Väitöskirjani koostuu tästä kokoavasta yhteenvedosta sekä neljästä artikkelista. Luku 1 esittelee työni taustalla olevat keskeisimmät teoreettiset ja metodologiset käsitteet, joita ovat vuorovaikutuksen multimodaalisuus, keskustelunanalyysi ja vuorovaikutustilat (Mondada 2007b, 2009, 2011a, 2013a). Luvun lopussa esittelen myös tutkimukseni tavoitteet. Luvussa 2 avaan syvällisemmin väitöskirjani metodologista ja teoreettista taustaa. Aloitan pureutumalla keskustelunanalyysin syntyperään ja perusteisiin, lähtien siitä, miten keskustelunanalyysin pääajatuksena on alusta asti ollut vuorovaikutuksen näkeminen merkityksellisenä ja jäsentyneenä toimintana (alaluku 2.1; Sacks et al. 1974; Sacks 1992; Schegloff 1968). Tämän jälkeen esittelen kokousvuorovaikutuksen tutkimuksen osa-alueita ja sitä, miten kokoukset jäsentyvät, miten vuoroista ja osallisuudesta neuvotellaan multimodaalisesti ja millainen rooli materiaalisilla resursseilla on

aktiviteettien rakentumisessa ja erilaisissa siirtymäkohdissa (alaluku 2.2; mm. Asmuβ & Svennevig 2009; Nielsen 2012, 2013; Ford & Stickle 2012). Alaluku 2.3 käsittelee teknologisia vuorovaikutustilanteita (*technologized interactions*; Hutchby 2001) niin jokapäiväisissä kuin institutionaalisissa tilanteissa siitä näkökulmasta, että teknologian ei tulisi ajatella määrittävän vuorovaikutuksen etenemistä vaan pikemmin luovan sille erityiset puitteet (mm. Arminen et al. 2016). Tätä näkemystä tukevat useat keskustelunanalyyttiset tutkimukset ja niiden löydökset siitä, miten teknologian mukaantulo vaikuttaa sosiaaliseen toimintaan ja sen organisointiin tilannekohtaisesti, mutta synnyttää samalla uusia käytänteitä ja toimintatapoja (mm. Licoppe & Morel 2012; Markman 2009, 2010; Norris & Luff 2013; Hjulstad 2016). Luvun 2 lopussa nivon yhteen, miten aikaisempi keskustelunanalyyttinen kokous- ja työelämän vuorovaikutustutkimus ja näkemys teknologiasta merkittävänä vuorovaikutuksen mahdollistajana auttavat ymmärtämään vuorovaikutustilojen rakentumista ja niistä neuvottelua nimenomaan tämän väitöstutkimuksen kontekstissa: formaaleissa kokoustilanteissa, missä osapuolet eivät aina näe toisiaan.

Luvussa 3 pohdin aineistonkeruuprosessiani ja metodologisia ratkaisujani, keskustellen millaisia vaiheita videonauhoitusten tekemiseen, käsittelyyn ja analysointiin sisältyi. Perustelen ratkaisujani niin aineistonkeräämisen, esimerkkien valinnan kuin litteroinninkin näkökulmasta. Tutkimukseni keskiössä on puhuttu vuorovaikutusaineisto liittyen yrityksen sisäiseen viestintään, ja pääsääntöisesti olen noudatellut keskustelunanalyyttista menettelytapaa jokaisessa vaiheessa (mm. Hutchby & Wooffit 2005 [1998]; Psathas 1995; Mondada 2008). Aineistonkeräämisen jälkeen aloitin niin sanotulla raaka-analyysilla, jolla pyrin havaitsemaan ja dokumentoimaan joko toistuvia tai yksittäisiä mielenkiintoisia vuorovaikutuksen ilmiöitä (mm. Goodwin 1984). Litteroinnissa olen käyttänyt Jeffersonin (1994) merkintätapoja kuvamaan puhuttuja vuoroja, kun taas vuorovaikutuksen multimodaalisten piirteiden, kuten eleiden ja liikkeen merkitsemisessä olen soveltanut Mondadan (2018 [2001]) konventioita. Osaamiseni mikrotason vuorovaikutuksen analysoinnissa ja sen kommunikoinnissa on kehittynyt läpi väitöskirjatyön, ja siitä syystä litterointityylini Artikkeleissa 3 ja 4 eroaa jonkin verran Artikkeleista 1 ja 2, joissa merkinnät olivat yksinkertaisempia. Tämä on kuitenkin tyypillistä keskustelunanalyyttisen tutkimuksen alkuvaiheissa. Luvun lopussa käsittelen tutkimukseeni liittyviä eettisiä kysymyksiä, jotka liittyivät työhöni oleellisella tavalla. Olen prosessin jokaisessa vaiheessa noudattanut yhteisiä sopimuksia yrityksen edustajien kanssa, liittyen osallistujien anonymisointiin ja yrityssalaisuuksien suojelemiseen. Olen esimerkiksi editoinut kaikki videoilta artikkeleihin liitetyt kuvat ja käyttänyt tekstissäni pseudonyymejä. Aineistoani eivät myöskään ole nähneet muut kuin asiakirjoissa nimetyt tutkimukseen liittyvät henkilöt.

Luvussa 4 esittelen väitöskirjani neljän artikkelin keskeiset löydökset sekä esimerkkejä niistä havainnoista, jotka ovat olleet merkittävimpiä kullekin osatutkimukselle. Pohdin myös artikkelien antia tämän tutkimuksen viitekehyksen valossa sekä etenkin sitä, miten niiden löydökset tukevat näkemystä vuorovaiku-

tustiloista dynaamisina ja yhteistyössä neuvoteltuina epästabiileina rakennelmina (mm. Mondada 2013). Luku 5 on tämän kokoavan yhteenvedon päätösluku, jossa palaan alussa esitettyihin tavoitteisiin ja pohdin keskeisimpiä tutkimustuloksia suhteessa niihin. Lisäksi pohdin tutkimukseni vaikutuksia keskeisimpien käsitteiden ymmärtämiseen sekä antia eri tutkimusalueille. Pohdin myös työni sovellettavuutta eri aihealueilla ja mahdollisia implikaatioita käytännön työelämän konteksteille. Tarjoan myös näkemyksiä mahdolliselle jatkotutkimukselle, jonka avulla teknologiavälitteistä vuorovaikutusta pystyttäisiin ymmärtämään yhä laajemmin.

Työni neljästä artikkelista kaksi on julkaistu kansainvälisissä aihealueen lehdissä vuosina 2015 ja 2018, ja kaksi muuta on liitetty tähän yhteenvetoon julkaisemattomina käsikirjoituksina. Toinen näistä (Artikkeli 4) on hyväksytty julkaistavaksi abstraktin pohjalta videovälitteisisiä kokouksia käsittelevään kansainväliseen erikoisnumeroon, kun taas toinen (Artikkeli 3) on lähetetty aikakausilehteen, mutta odottaa vielä päätöstä. Jokainen artikkeli vastaa päätutkimuskysymykseeni ja sen lisäksi myös yhteen alakysymykseen, käsitellen näin vuorovaikutustilojen rakentumista osana kokousten eri aktiviteetteja tai mahdollisia ongelmakohtia. Artikkelit 1-3 keskittyvät kokouksiin, joissa videoyhteyttä ei ole (Microsoft Live Meeting), kun taas Artikkeli 4 on yksittäistapauksen tutkimus kokouksesta, joissa on videoyhteys (Cisco Telepresence). Artikkeleissa pyritään erottelemaan toiminta fyysisessä tilassa (*local space*), yhteisessä kokoustilassa (*overall meeting space*) ja mahdollisissa muissa tiloissa (*adjoining spaces*) sekä pohtimaan, miten ne vaikuttavat toisiinsa ja kokousten etenemiseen.

Artikkeli 1 (Oittinen & Piirainen-Marsh 2015) on yhteiskirjoitus, joka esittää yhdessä tehdyn analysoinnin tuloksia väitöskirjaa varten tekemäni aineistonkeruun ja taustatyön pohjalta. Se tarkastelee kokousten alkuvaiheita ja sitä, miten osallistujat yhdessä rakentavat vuorovaikutustilaa sekä neuvottelevat siirtymän kokousten epäformaalista formaaliin vaiheeseen ja esityslistan asioihin (*meeting proper*). Analyysin keskiössä ovat osallistujien kielelliset ja multimodaaliset resurssit, joiden avulla he neuvottelevat 1) läsnäolonsa yhteisessä kokoustilassa, muodostaen näin etäosallistujakehikon (*participation framework*; Goffman 1963; vrt. Nielsen 2013) sekä 2) orientaationsa kokouksen viralliseen aloittamiseen. Artikkelissa osoitamme, kuinka kokousten avaukset etenevät prosessimaisesti, vaatien puheenjohtajan ja osallistujien yhteistyötä (Nielsen 2013). Avausten rakentuminen riippuu pitkälti verbaalien ja kehollisten viestien tekemisestä näkyväksi niin sekventiaalisesti kuin temporaalisestikin. Ensimmäisessä, osallistujakehikon rakentumisen vaiheessa keskeistä on kriittisen massan saavuttaminen esimerkiksi tervehtien muita ääneen ja seuraten ruudulta nimien ilmestymistä osallistujalistalle (Boden 1994). Toinen vaihe koostuu orientoitumisesta asialistaan ja siirtymästä, jossa puheenjohtajan verbaalit vuorot rajakohdissa ovat keskiössä. Osallistujat taas osoittavat samanlinjaisuutta puheenjohtajan kanssa ohittaen nämä hetket olemalla hiljaa ja orientoitumalla kehollisesti joko puheenjohtajaan tai omaan tai yhteiseen kokoushuoneessa olevaan näyttöön. Siitä huolimatta, etteivät kaikki osallistujat näe toisiaan, kehollisia resursseja, kuten katsetta, eleitä ja

objektien manipulointia, käytetään tukemaan avausten kumpaakin vaihetta. Artikkeli antaa uutta toiminnan koordinoinnin tutkimukselle teknologiavälitteisessä vuorovaikutuksessa sekä auttaa näkemään, kuinka näissä ympäristöissä avaukset jäsentyvät kaikkien osapuolien toimesta.

Aikaisempi tutkimus on osoittanut, kuinka teknologiavälitteisiä vuorovaikutustilanteita värittävät joskus erilaiset ongelmat (mm. Rintel 2010, 2013). Artikkeli 2 (Oittinen 2018) tutkii sitä, miten osallistujat, jotka ovat samassa fyysisessä tilassa, osoittavat samanlinjaisuutta ja samanmielisyyttä sellaisina hetkinä, kun vuorovaikutuksen ongelmia ilmenee. Osa näistä ongelmista liittyy teknologisiin häiriöihin ja kuulemisen ongelmiin, kun taas toiset ymmärtämisen ongelmiin ja erimielisyyksiin. Kaikki kolme ilmentävät toiminnan sekventiaalisuuden häiriintymistä, mihin fyysisessä tilassa olevat osallistujat orientoituvat. Artikkelin teoreettisena taustana hyödynnän yhteistoiminnallisten responssien määritelmää (*cooperative reponses*; Steensig 2012) sekä monenvälisessä kokoustutkimuksessa löydettyä liittouman käsitettä (*alliance building*; Kangasharju 1996, 2002). Samanlinjaisuuden on todettu liittyvän ennen kaikkea vuorovaikutuksen jäsentymiseen ja etenemisen tukemiseen, kun vastaavasti samanmielisyyden osoitukset yhdistetään myötäilevän kannan ottamiseen. Molemmat responssityypit ovat kasvokkaisessa kokousvuorovaikutuksessa keskeisiä silloin, kun neuvotellaan vastakkaisista liittoumista (Kangasharju 2002). Artikkelini tarkastelee tällaista liittouman syntymistä keskittyen hetkiin, jolloin lähiosallistujat selvästi erkaantuvat kokouksen päätoiminnasta ja osallistujakehikko hajaantuu (Egbert 1997).

Toisen artikkelin analyysi osoittaa, että etäkokouksissa suositaan niiden etenemisen turvaamista silloinkin, kun yhteisymmärryksessä tulee katkoksia. Kun vuorovaikutuksen ongelmia ilmenee, osallistujat, jotka ovat fyysisesti samassa tilassa, käyttävät ensisijaisesti kehollisia resursseja samanlinjaisuutta ja -mielisyyttä osoittaessaan, mutta tuottavat joskus myös hiljaisella äänellä verbaaleja ilmaisuja. He eivät silti keskeytä kokouksen toimintaa yhteisessä vuorovaikutustilassa. Tärkeä löydös on, että vaikka liittoumat tekisivät yhteiseksi koetun ongelman syntymisen näkyväksi yhdessä tilassa, sitä ei välttämättä tuoda esiin tai ratkaista kaikkien osapuolien kesken. Tämä kuvastaa nimenomaan usean vuorovaikutustilan merkitystä niissä kokouksissa, joissa osallistujat eivät näe toisiaan, korostaen sitä, että omasta osallistumisesta näiden tilojen toimintaan neuvotellaan jatkuvasti: ne eivät siis vain ”ole” olemassa sanan staattisessa merkityksessä, kuten jotkin aikaisemmat tutkimukset ovat väittäneet (vrt. Wasson 2006). Artikkeli 2 tuo uutta tietoa niin ongelmiin suhtautumisesta etäkokouksissa kuin siitä, millainen rooli multimodaalisilla resursseilla on liittoumien syntymisessä ja tällaisten tilanteiden ratkaisemisessa.

Artikkeli 3 (Oittinen, käsikirjoitus) keskittyy kokousten lopetuksiin ja siihen, miten yhteisestä vuorovaikutustilasta poistuminen neuvotellaan eri osapuolten kesken. Erilaisissa kasvokkaisten tilanteiden lopetuksissa keskiössä ovat usein niin verbaalit kuin keholliset osoitukset, joilla voidaan joskus ilmentää useiden päällekkäisten toimintajaksojen lopetuksia (mm. Haddington 2019; LeBaron & Jones 2002). Yhtäältä saatetaan mobilisoida lähdön tekemistä fyysisesti eleiden ja

liikkeen avulla, kun taas toisaalta kyseessä on myös keskustelunlopetus. Ne aikaisemmat tutkimukset, jotka ovat keskittyneet nimenomaan kokousten lopetuksiin, ovat tuoneet pitkälti esiin kielelliset keinot saada aikaan siirtymä ”lopetuskurssille” (*closing track*; Button 1987, 1991) ja kokonaan pois kokousmoodista (Boden 1994). Nielsen (2013: 50) on listannut niin ikään erilaisia puheenjohtajan ja osallistujien käyttämiä strategioita siirtymissä, kuten rajakohtien merkitsemisen verbaalisti ja hiljaisuudet, joilla osoitetaan valmius siirtyä lopetuksessa eteenpäin. Insitutionaalisissa puhelinkeskusteluissa samanlinjaisuuden saavuttaminen verbaalisti on todettu keskeiseksi edellytykseksi puhelun lopettamiselle (Raymond & Zimmermann 2016). Artikkeli 3 osoittaa, kuinka lopetuksista neuvotellaan etäkokouksissa hetkinä, jotka ovat alttiita uusille sekvenssien avauksille: 1) kun lopetusvaiheeseen siirtymisestä tulee relevantti seuraava askel, 2) kun puheenjohtaja tarjoaa mahdollisuuden siirtyä pois lopetusvaiheesta ja 3) kun yhteisestä vuorovaikutustilasta poistumisesta neuvotellaan. Ensimmäisessä vaiheessa keskiöön nousevat etenkin puheenjohtajan rooli ja se, miten muut osallistujat orientoituvat lopetuksen lähestymiseen.

On tyypillistä, että puheenjohtaja tekee lopetukseen liittyvän rajakohdan relevantiksi yhteisessä kokoustilassa sekä verbaalisti että orientoituen erityisellä tavalla teknologiaan, kuten avaamalla ruudulle kokouksen osallistujalistan. Lisäksi myös sillä on merkitystä, miten tähän vuorovaikutustilan muutokseen suhtaudutaan kehollisin osoituksin fyysisessä tilassa mutta myös ruudulla näkyvän toiminnan kautta. Toisen merkittävän vaiheen neuvotteluun vaikuttavat useimmiten puheenjohtajan antamat mahdollisuudet aloittaa uusi sekvenssi (*opportunity spaces*) ja se, tartutaanko niihin vai annetaanko niiden ohittua hiljaisuudella. Joissakin tapauksissa näitä tilaisuuksia on yhden lopetuksen aikana useampia, ja keskeisessä asemassa ovat osallistujien käyttämät resurssit. Esimerkiksi kokouksessa, missä puheenjohtaja osallistuu etänä, saatetaan tuottaa kehollisia mielenilmauksia, jotka eivät kuitenkaan vaikuta lopetusten etenemiseen yhteisessä kokoustilassa. Viimeisessä vaiheessa, vuorovaikutustiloista poistumisessa, ei aina vaadita kaikkien osallistujien samanlinjaisuuden osoituksia, vaan osallistujakehikon purkaminen voidaan saavuttaa myös siten, että osallistujat yksinkertaisesti poistuvat kokouksesta ilman verbaaleja hyvästejä. Artikkeli 3 osoittaa selvästi, millainen vaikutus kontekstuaalisilla tekijöillä, kuten puheenjohtajan sijainnilla ja osallistujamäärällä, on lopetusten etenemiseen. Päätelmät yhtäältä tukevat näkemystä erilaisista puheenjohtajan ja osallistujien strategioista sekä verbaalien osoitusten merkittävyydestä lopetuksissa, mutta toisaalta ne antavat tietoa nimenomaan siitä, miten uudenlaiset teknologiset tilanteet synnyttävät myös uusia käytänteitä jäsentää niitä.

Artikkeli 4 (Oittinen, käsikirjoitus) on yksittäistapauksen tutkimus, joka keskittyy aineiston ainoaan videovälitteiseen kokoukseen. Teoreettisena lähtökohtana on aikaisempi videovälitteisen vuorovaikutuksen tutkimus (mm. Heath & Hindmarsh 2000; Licoppe & Morel 2012) ja etenkin se, miten kehollisia resursseja voidaan käyttää vuorovaikutuksen jäsentämiseen (Norris & Luff 2013; Luff et al. 2016) ja millaisia ongelmia videovälitteisyyteen liittyy (Rintel 2010, 2013). Artikkelin pääkäsitteenä on kehollinen huomaaminen (*noticing*; Schegloff 2007:

87) vuovaikutuksellisena toimintona, ja tutkin nimenomaan sen merkitystä vuorovaikutustilojen uudelleenorganisoinnissa. Huomaamisen on todettu ilmenevän yksilön kehollisena uudelleen orientoitumisena johonkin ympäristössä olevaan piirteeseen, kuten ääneen, objektiin tai aikaisempaan puheen osaan (kts. Schegloff 2007; Helisten 2019). Oma mielenkiinnon kohteeni on niissä huomaamisissa, jotka tekevät jonkinlaisen korjattavan ongelman relevantiksi (*trouble-relevant noticings*; kts. myös Greiffenhagen & Watson 2009) ja näin ollen myös tarpeen korjata tai palauttaa yhteisen vuorovaikutustilan toimivuus. Se, mikä tekee huomaamisen tarkastelusta tässä kontekstissa mielenkiintoisen, on kokouksessa käytetty Cisco Telepresence, joka on järjestelmänä edistyksellinen: osallistujat pystyvät näkemään toisensa ruuduilla heidän luonnollisessa koossaan, ja heillä on kokoushuoneissa samassa kohdassa myös yksi lisäruutu materiaalien jakamista varten.

Tutkimani huomaamiset liittyvät kuulemisen ja näkemisen ongelmiin, jotka ilmenevät vuorovaikutuksen sekventiaalisuuden epäjohdonmukaisuutena. Analyysini ensimmäinen osio keskittyy tilanteeseen, jossa yhdessä fyysisessä tilassa olevan kahden osallistujan mikrofoni on jäänyt äänettömälle. Tämä ilmenee vuoronottamisen ongelmana, jonka ainoastaan toinen, ei-puhuja, huomaa. Hän ratkaisee tilanteen kehollisella korjausliikkeellä siten, ettei kokouksen pääaktiviteetti häiriinny. Toisessa analyysiosassa ongelman aiheuttaa se, ettei puhujan esitelmää ole jaettu muille osallistujille Cisco Touch Panel –toiminnon kautta. Siinä missä muut osallistujat useassa fyysisessä tilassa orientoituvat tähän näkyvästi, puhuja itse ei huomaa ongelmaa ennen kuin vasta merkittävän viiveen jälkeen, ollessaan siirtynyt kuuntelijan rooliin. Kun hän vihdoin huomaa ongelman, hän korjaa sen itse, mutta niin, että tarkkailee ruudun välityksellä hetkeä, jolloin myös muut huomaavat vuorovaikutustilan korjaantuneen. Artikkeli 4 syventää tietoutta videovälitteisen kokousvuorovaikutuksen jäsentämisestä kehollisilla toiminnoilla ja tekee selväksi osallistujien roolit näissä tilanteissa: kaikilla ei ole pääsyä korjata tilanne, ja tämä vaikuttaa siihen, miten erilaisia teknologian käyttöön liittyviä ongelmatilanteita voidaan ratkaista. Pääsääntöisesti tämä ympäristö vaikuttaisi tukevan kehollista ongelmanratkaisua, mutta lisää tutkimusta vastaavista tilanteista silti tarvitaan.

Tämä väitöskirja tarkastelee autenttisten teknologiavälitteisten kokousten vuorovaikutusta soveltaen dynaamisen vuorovaikutustilan käsitettä ja tarjoten täten uudenlaisen tulokulman tällaisiin tilanteisiin. Multimodaalisen vuorovaikutuksen rakentumista ja resursseja on tutkittu paljonkin kasvokkaiskokouksissa ja myös sitä, kuinka noissa tilanteissa puheenjohtaja ja osallistujat yhdessä orientoituvat fyysisen tilan materiaaliseen ympäristöön, sitä hyödyntäen aktiviteeteista neuvotellessaan (Mondada 2011). Tutkimukseni keskiössä ovat olleet ympäristön tarjoamat käyttömahdollisuudet ja se, miten niitä hyödynnetään ja miten niiden merkityksestä neuvotellaan jatkuvasti kokousten edetessä. Merkittävä löydös on ollut se, että osallistujat toiminnallaan orientoituvat useaan vuorovaikutustilaan joko yhtä aikaa tai vuorotellen ”tuplaorientaatiolla” (*double orientation*; Deppermann et al. 2010: 1707). Esimerkiksi sellaisen kokouksen osallistuja,

missä videoyhteyttä ei käytetä, saattaa osoittaa olevansa mukana yhteisen kokoustilan toiminnassa olemalla hiljaa, mutta olla silti suuntautunut muuhun toimintaan fyysisessä tilassaan. Kun taas mietitään aineiston videovälitteistä kokousta ja Artikkelin 4 tuloksia, voi niiden mukaan osallistuja tehdä relevantiksi jotakin, mikä näkyy yhteisellä materiaalien jakamiseen tarkoitetulla ruudulla, ollen muutoin fyysisesti orientoitunut etäosallistujiin katsomalla kameraan. Tällä tavalla teknologiavälitteisessä vuorovaikutuksessa voidaan mobilisoida useita toiminnallisia liikekaaria, mutta rakentaa silti yhteistä aktiviteettia ja tilaa, suunnaten täten kohti yhteisiä kokoukselle asetettuja tavoitteita. Vaikka vaikuttaa siltä, että videovälitteisessä vuorovaikutuksessa osallistujilla on enemmän mahdollisuuksia kehollisten ilmausten tulkintaan ja näin ollen myös osallisuutensa rakentamiseen kuin niissä kokouksissa, joissa videoyhteyttä ei ole, ovat nämä tilanteet osaltaan haastavia huomion kiinnittyessä useisiin ruutuihin ja toimintoihin samanaikaisesti.

Kaiken kaikkiaan väitöskirjani artikkelit, niiden löydökset ja tämä yhteenveto osoittavat, kuinka toiminnan yhteistoiminnallinen koordinointi etäkokouksissa pohjautuu osallistujien kykyyn huomioida niin kontekstuaaliset tekijät kuin heidän oma osallisuutensa vuorovaikutustilojen jatkuvaan muutostilaan. Tutkimukseni jatkaa niin keskustelunanalyyttistä kuin työelämävuorovaikutuksenkin tutkimusta, ja löydökseni heijastelevat ennen kaikkea teknologian keskeistä roolia työelämässä mutta myös vuorovaikutuksen jäsentämisessä. Tutkimukseni tuloksia voidaan yhtäältä hyödyntää tulevassa havainnoivassa ja mikroanalyyttisessä tutkimuksessa, mutta toisaalta myös muilla tutkimuskentillä, kuten sosiolingvistiikan osa-alueilla, johtamisen tutkimuksessa ja työelämän etnografisessa tutkimuksessa. Työlläni on myös käytännön sovellettavuutta, sillä sen avulla voidaan miettiä uusia teknologisia ratkaisuja sekä käytännön koulutuksia tämän päivän kansainvälisessä ja yhä teknologisoituvassa yritysmaailmassa.

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APPENDICES

Appendix 1: Transcription conventions

,	intonation is continuing
.	intonation is final
↑	rising intonation
↓	falling intonation
?	slightly rising intonation
=	latched utterances
[ ]	overlapping talk
tha-	a cut-off word
<u>what</u>	word emphasis
>what<	speech pace that is quicker than the surrounding talk
<what>	speech pace that is slower than the surrounding talk
°what°	speech that is quieter than the surrounding talk
WHAT	speech that is louder than the surrounding talk
£what£	smiley voice
wh(h)a(h)t	laughingly uttered word
(what)	uncertain hearings
( )	unrecognizable item
(x)	confidential item
(.)	micro pause, less than 0.2 seconds
(0.5)	silences timed in tenths of a second
((gazes))	transcriber's comments
*--->	gesture or action described continue across subsequent lines
*--->>	gesture or action described continue until and after excerpt's end
---->*	gesture or action described continue until the same symbol is reached

ORIGINAL PAPERS

I

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Openings in technology-mediated business meetings

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Abstract

The prerequisites for opening a meeting, or beginning any kind of interaction for that matter, are participants' presence and shared orientation towards the situation at hand. This paper analyses how the initial moments of technology-mediated business meetings involving distributed work groups are organized sequentially and multimodally. Drawing on video-recorded meetings in an international company, it documents the multimodal practices used in the process of establishing co-orientation to the shared meeting space and achieving entry into the meeting. The analysis shows that the stepwise unfolding of the opening phase requires the coordination of verbal and bodily conducts as well as the affordances of the technological artefacts utilized. The study contributes to a growing body of research investigating the emergent, collective and multimodal accomplishment of activities in workplace meetings.

Keywords: Workplace meetings; Technology-mediated interaction; Conversation analysis; Multimodal practices

1. Introduction

The work of organizations today involves the use of technologies to enable communication over distances. To understand how the use of communication technologies impacts practices of communication and changes organizational culture, there is a need to study how participants organize their activities utilizing available linguistic and interactional resources and the affordances of the technological artefacts used. This study analyses the opening sequences of technology-mediated business meetings between co-located and distant participants in an international company. The opening phases are a key locus for investigating the organization of meetings, since they reveal both the prospective course of the whole encounter and the social organization of the participants (see e.g. Boden, 1994). Earlier studies highlight common patterns in the opening phases of meeting interactions in diverse cultural and organizational contexts (e.g. Bargiela-Chiappini and Harris, 1997; Chan, 2008; Nielsen, 2013). However, detailed studies of the emergent accomplishment of the transition into openings in technology-mediated meetings are still scarce. In a study of quasi-synchronous chat-based meetings Markman (2009) shows that additional interactional work is required to establish co-presence and achieve shared orientation in the virtual space where the activities of the meeting take place. Focusing on synchronous meetings conducted via technology, this paper describes how geographically distributed participants establish co-presence and negotiate a stepwise transition into the meeting proper.

The data for this study come from technology-mediated business meetings in an international company that uses English as a lingua franca. The meetings involve at least two groups of participants, typically two or more teams located in offices in different European countries, who are engaged in communicating in a 'live meeting' format. The meetings were carried out using live audio-connection and simultaneous viewing of shared documents. The data were collected in one of

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the company's offices, which enables detailed analysis of the audible verbal practices of all participants and a rich array of multimodal practices in one physical location. While the analysts' perspective on the situations is unavoidably restricted, it is close to that of the local participants, who are faced with the challenge of establishing and maintaining co-presence with distant participants across a visual barrier (Wasson, 2006) and without access to the full range of communicative resources used. The meetings can be characterized as formal in that they are goal-oriented, have been arranged beforehand, follow a written agenda and involve invited participants who have some perceived organizational role (see e.g. Boden, 1994; Clifton, 2006; Asmuss and Svennevig, 2009; Nielsen, 2009, 2013). They take place in a room containing technology for video conferencing as well as other physical structures typical of meeting rooms. The analysis shows how the transition into business talk is achieved multimodally through coordination of verbal and bodily conducts as well as the affordances of the technological artefacts utilized. The participants draw on the communicative affordances and multiple modalities available in the setting to achieve the transition from activities in the physical (i.e. local) space to the shared meeting space as a prerequisite for initiating the meeting. The procedures for establishing co-orientation and accomplishing activity shifts are contingent to contextual features of the technology mediated setting, in particular the need to manage and coordinate participation across parallel interactional spaces. In the local space, visual monitoring and bodily as well as verbal orientation to written documents displayed on the screen emerge as key resources for establishing co-orientation to the shared meeting space and achieving entry into the business of the meeting. The study contributes to earlier research by shedding light on the interactional ecology of distributed meetings.

2. Social interaction in meetings

Within the broader context of institutional and organizational discourse, meetings have been studied from pragmatic, discourse analytic and interactional perspectives. Topics analysed include participants' roles and identities (see e.g. Angouri, 2010; Angouri and Marra, 2011; Holmes and Marra, 2004; Schnurr, 2011; Halvorsen and Sarangi, 2015), gender (Mullany, 2004; Holmes and Schnurr, 2006), the use of humour (Holmes and Marra, 2002; Rogerson-Revell, 2007; Schnurr, 2009), politeness (Holmes et al., 2012) and intercultural communication processes in meeting talk (e.g. Louhiala-Salminen et al., 2005; Poncini, 2004; Spencer-Oatey and Xing, 2005). Recently a growing number of studies have documented how the interaction order of meetings is accomplished at the microlevel through coordination of verbal, embodied and other multimodal resources (see Asmuss and Svennevig, 2009 for review). Attention has been paid to the social and structural organization of meetings (Boden, 1994; Asmuss, 2008; Ford, 2008; Mirivel and Tracy, 2005; Nielsen, 2013), topic organization and the role of the agenda in it (Barnes, 2007; Svennevig, 2012), the accomplishment of transitions (Atkinson et al., 1978; Deppermann et al., 2010), practices of decision making (Boden, 1994; Huisman, 2001), alignment and community building (Kangasharju, 1996, 2002; Nielsen, 2012) as well as management style and leadership (Schmitt, 2006; Clifton, 2006; Nielsen, 2009; Svennevig, 2012). Yet, so far only a handful of studies have systematically described how embodied resources, such as body movement, posture and gaze, and the embodied orientation to written documents and physical objects contribute to the joint accomplishment of different activities in meetings (Deppermann et al., 2010; Ford and Stickle, 2012; Markaki and Mondada, 2012; Mondada, 2007; Nevile et al., 2014; Nielsen, 2013).

The organizational features of technology-mediated meetings involving distributed teams have not yet been extensively studied. Halbe (2012) observed that more interruptions and overlaps occur in face-to-face meetings than teleconferences and that meeting openings and closings seemed more abrupt in the latter. Markman (2009) found that openings in quasi-synchronous chat meetings between virtual teams are less straightforward than they often are in face-to-face settings: achieving co-orientation required additional interactional work as participants were not able to monitor the ongoing progress of turns. The opening process could also be easily ''derailed'' due to interruptions. Other studies of technology-mediated work environments demonstrate how the affordances of technologies impact the organization of participation and communicative activity (e.g. Heath and Luff, 2000; Hutchby, 2001, 2014).

A fundamental feature of technology-mediated meetings is that they involve multiple interactional spaces which all have separate participant structures (Wasson, 2006: 108). Participants display their orientation to the local physical space as well as the virtual meeting space and additional spaces through details of their conduct. Multimodal conversation analysis (see e.g. Deppermann et al., 2010; Markaki and Mondada, 2012; Mondada, 2009, 2011) enables detailed description of the ways in which participants in distributed locations orient to multiple spaces, accomplish transitions from one space to another and achieve co-orientation to the shared, technologically mediated meeting space as a prerequisite for engaging with the organizational tasks. It also provides a framework for examining how the participants' techniques for achieving and maintaining shared orientation are sensitive to contextual affordances, for instance whether the participants can rely on both visual and auditory contact for mutual monitoring or not.

3. Openings

Although opening sequences have been studied widely in Conversation Analysis (e.g. Schegloff, 1968, 1979; Schegloff and Sacks, 1973; Button, 1987), openings of business meetings have not yet been extensively studied.

Following Boden (1994: 90), meeting openings can be characterized as structured sequences during which participants gain a local meeting membership and concurrently orient themselves to a ''meeting mode''. Nielsen (2013) describes how the opening constitutes a shift from the interaction format of multiparty conversation, based on local negotiation of turn-taking, into the speech exchange system of the meeting, where the chair has a pivotal role. Studies of face-to-face meetings show how the shift from informal talk to the meeting proper is accomplished in a stepwise manner through a number of verbal and nonverbal techniques. The opening of a meeting is frequently preceded by a spate of multiparty talk (Boden, 1994; Bargiela-Chiappini and Harris, 1997; Chan, 2008; Nielsen, 2013). This may involve different types of pre-meeting sequences which have different functions (Mirivel and Tracy, 2005). During this phase the participants may display readiness to open the meeting and verbalize that the conditions for initiating the opening are met. Other key steps in the opening process include the chairman's opening techniques (e.g. boundary marker, summons), a pause during which the floor is open, and another possible chair's technique for opening (e.g. explicit meeting opener; proposal or declaration to get started), after which the first speaker is selected (self-selection or other-selection by the chair) and the first topic is introduced (Nielsen, 2013: 56–57).

A recent study of chat-based virtual team meetings (Markman, 2009) describes a two-stage process for opening meetings. In the asynchronous chat meetings an opening move, typically a so-prefaced turn which referenced prior communication by the team, was followed by an agenda-setting turn which focused talk on a specific topic. While implementing the two-stage process of opening, the participants were found to orient to interactional practices found in face-to-face meetings. For example, it was found that reaching a critical mass of participants was a precondition for beginning the opening process (Markman, 2009: 155–156). Similarly, the first turn in the meeting shared features with meeting openers identified in earlier studies (e.g. Boden, 1994; Bargiela-Chiappini and Harris, 1997). Significant differences were also found. While turns commenting on the critical mass of participants in face-to-face meetings create a space for the opening in the next turn, in the quasi-synchronous meetings of virtual teams, ''stage 1 turns marked only the transition into a possible opening sequence and further work was needed to focus the team's attention'' (Markman, 2009: 156). Also the role of silence was different. In the chat environment silences can be due to a number of factors, including features of the technology and the participants' engagement in other activities. Silences were therefore often ambiguous and additional work was required from the participants to disambiguate situations involving nonresponses (Markman, 2009: 159). The findings highlight the way that constraints of the chat environment impact the development of the opening process. This study adds to earlier work by describing how the opening process is shaped by contextual features of synchronous technology mediated meetings in which the participants have shared access to the meeting agenda, but do not have visual access to each other.

Recently increasing attention has been paid to the way that transitions between different phases of meeting talk are accomplished through different modalities. For example, Nielsen (2013) describes how gaze is used to signal withdrawal from pre-meeting talk and display readiness for meeting talk. Svennevig (2012) shows how topic introductions are accomplished multimodally through verbal references, gaze, gestures and embodied orientation to the written agenda (see also Mirivel and Tracy, 2005). Mikkola and Lehtinen's (2014) study of performance appraisal demonstrates how written documents as material objects are used in a step-by-step embodied negotiation of activity shifts. A case study by Deppermann et al. (2010) describes the detailed procedures through which participants manage a time-out from meeting-talk and back to work talk. Recent studies of other types of institutional settings further highlight the role that written documents have in establishing a shared focus of attention and securing participation in the task at hand (Svinhufvud and Vehviläinen, 2013; Mikkola and Lehtinen, 2014). In the analysis that follows, we describe how the transition from a pre-meeting phase to the meeting proper is achieved in meetings between co-located and distant colleagues and teams conducted via live-technology.

4. Data and method

The data for the current study come from interactions of a large international corporation, where English is used as a lingua franca and modern communication technologies are applied to meet with the demands and deadlines of the fast-paced global working environment. Within the target company, traditional face-to-face meetings have become a scarcity whereas distant meetings are promoted as the new format. The data collection took place in two phases in 2012 and 2013 in one the company's offices in Central Europe. Participant observation on site was carried out to get to know to the company's meeting practices in their natural surroundings, and thus set the basis for conducting a more detailed analysis based on video-recorded meetings. The video data were collected using either one or two video-cameras as well as audio recording devices. Additional information that might not be captured by the cameras was written down manually in field notes. The participants come from different linguistic backgrounds and for all of them English was a second language. All participants gave their consent to being recorded. Their identities and the name of the corporation are protected by using pseudonyms in the transcribed extracts.

The data for this article consists of ten distant meetings which are formal in a sense that they all had a specific time, place and agenda, and only specific people were invited to attend them. The number of participants ranged from two to

over twenty, and the largest meeting involved four teams distributed in four geographical locations. The software used was Microsoft Live, which enables live audio and video connection and sharing the agenda or outline of the meeting for all parties. It was the participants' choice to conduct the meetings via audio-connection and to use the software to enable simultaneous viewing of documents that are open on the participants' computers. The technology allows regulating sound and thereby controlling the distant participants' access to talk outside the meeting proper, but this function was not used. In spite of the visual barrier between the interactional spaces (Wasson, 2006), the participants were thus potentially present for each other via audio-connection throughout the meeting. In most of the meetings a written agenda was displayed on the participants' own computer screens and in meetings involving a large number of participants, it was projected on a wide screen on the wall.

The analysis builds on the growing body of studies applying Conversation Analysis to the study of organizing properties of meetings (see e.g. Asmuss and Svennevig, 2009; Cooren and Taylor, 1997; Clifton, 2006; Deppermann et al., 2010; Nielsen, 2009, 2013; Svennevig, 2012) and technology-mediated interaction (see e.g. Hutchby, 2001; Arminen, 2005). Interaction in any setting is viewed as a sequentially organized multimodal process, which relies on resources of the body and the communicative affordances of the material setting, including written materials and technological artefacts located and used in the interactional setting (Hutchby, 2014). The analysis shows how the participants draw on different modalities and the affordances of the technology utilized in managing stepwise entry in to the shared meeting space and initiating the meeting proper. Section 5.1 describes how the participants establish co-presence and organize the distributed participation framework. In Section 5.2 we show how the entry into the business of the meeting is achieved.

5. From communicating one's presence to meeting talk

5.1. Organizing distributed participation framework

The achievement of mutual orientation and co-presence within an interactional space depends on indicators by means of which participants perceive and know about each other's presence (cf. Goffman, 1967; Kendon, 1990; Hausendorf, 2012) and it has to be interactively achieved. For the participants in distant meetings, establishing co-orientation presents a practical problem: the distributed participation framework must be organized both technically and verbally at the beginning of each encounter. Even though the attendees can see in the participant list on the screen when someone enters the meeting, they still need to assemble in a technology-mediated meeting space and jointly ''talk the workgroup into being''. This involves interactional efforts to establish co-orientation, i.e. mutual orientation to an interactional space (Mondada, 2009) where the participants are in one another's immediate presence. Establishing, managing and maintaining co-orientation is a condition for accomplishment of local tasks such as those required to open the meeting. How this is done and what kind of interactional work is required is contingent on contextual factors: the number of attendees, the organization of the participants in physical and/or virtual spaces and the affordances of the technology.

Meetings typically start after a critical mass of participants has been determined to have been reached (Boden, 1994; Markman, 2009). Establishing the critical mass in the data involved multiple resources: embodied orientation to the computer screen or wide screen, checking the participant list, verbal utterances commenting on attendance and check-in greetings. The first example comes from a kick-off meeting where the manager Hans has called in other managers in order to introduce a new procedure. Marja and Hans are the local participants sitting around the same table opposite each other, both with laptops in front of them, whereas six other people attend the meeting from other locations. The participants do not see each other, but everyone has visual access to the written agenda which is controlled by Hans. The agenda is also displayed on a large screen in the meeting room.

Example 1

1	Hans	[((gazes to large screen; clicks on list of participants))
2		[((Marja closes her laptop, puts water bottle on table
		and turns gaze towards screen)) Fig. 1
3		[(4.0)
4	Armando	hello (.) good morning,
5	Johannes	good morning

Fig. 1: Hans and Marja gaze towards large screen

6 Annette good morning

7 Hannu morning

8 (1.1)

9 Hans can somebody con[firm that ohm (.) it works all fine

[((gaze to laptop screen *--- >))

10 <with the> the voice and so on (0.2) kind of trying

11 at least for me a new concept here so:,

12 ((smiles, shifts gaze towards Marja, then to large screen))

Fig. 2 & 3

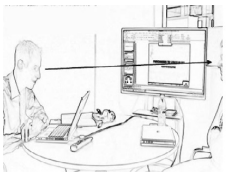

Fig. 2: Hans shifts gaze to Marja

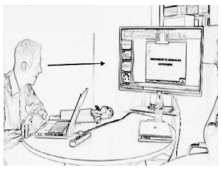

Fig. 3: Hans shifts gaze to screen

13 Marja m(h)h(h)m

14 Johannes yeah we can hear [you loud and clear and an-

[((Hans turns gaze to laptop screen *--- >))

15 Hans gre[at

16 Johannes [se- [see your presentation

17 [((Marja shifts gaze to large screen *--- >))

18 Hans great (.) good

19 (0.7)

20 Hans so Rudolf is joining as well

21 (1.0)

((Lines omitted))

((Marja gazes at large screen)) *--->>

22 Hans so: I [guess everybody's in the meeting now (.)

23 [((Hans turns gaze to large screen)) *--- >> Fig. 4

Fig. 4: Hans gazes at large screen

24 good morning everybody,

25 (2.7)

26 Hans I'm actually sitting here together with Marja

and we have [---]

After some initial remarks by the two local participants, Hans fixes his gaze on the large screen and clicks the list of participants to check who has joined the meeting (line 1). While he is monitoring the screen, Marja closes the cover of her laptop, places a water bottle that she is holding on the table and shifts her focus towards the meeting space by adjusting her body position and directing her gaze towards the screen (Fig. 1). In lines 4–7 four distant participants make their presence known with short greetings which serve as ''check-ins'' or displays of mutual surveillance (Goffman, 1967). These do not get a response from Hans, who keeps his gaze focused on the screen. After the silence during which both the co-located participants attend to the screen, Hans initiates a meeting preparatory sequence to check the audio-connection. While producing the turn, he shifts his gaze from the large screen to his own laptop. His request is followed by a verbal account referring to his lack of experience with the new technology (lines 9–11). On completion of the turn, a shift in the participation framework occurs as Hans momentarily raises his gaze from the screen of his laptop and smiles at his local colleague Marja (Fig. 2), who reciprocates with a smile and quiet, but audible chuckle (line 13). After this brief affiliative sequence, Hans shifts his gaze back to the large screen and waits for a response (Fig. 3). Johannes responds on behalf of the distant team ('we') and confirms not only the audio-connection but also visual access to the document displayed on the screen (lines 14 and 16). While J's turn is still in progress, Hans responds with a sequence closing assessment (line 15), followed by two more assessments after Johannes completes his turn (line 18). Although most participants are now present and the technical connection has been confirmed, Hans is not yet ready to launch the meeting. During a silence of 0.7 s he monitors the screen again and comments on the presence of Rudolf (line 20) whose name has appeared on the participant list. This is followed by another silence and a further preparatory sequence in which Hans seeks the other participants' permission for the recording (lines omitted). After this Hans produces a so-prefaced turn which establishes that the critical mass has been reached (line 22) and opens the meeting with a collective greeting (line 24). While performing the greeting, he also shifts his gaze and body towards the large screen (Fig. 4). He gazes at the screen silently for a while, providing the others an opportunity for response (line 25). However, as no responses are offered, Hans continues with a turn in which he makes Marja's participation in the meeting officially known to the others and proceeds to introduce the first topic (line 26), thereby consolidating his role as the chair.

This excerpt shows how achieving the critical mass is done interactively through visual monitoring and checking of the list of participants on the screen as well as verbal check-ins and comments that make the presence of incoming participants known to the others. A participation framework is established where Hans adopts the role of chair by taking control of turn-taking, addressing the others collectively and speaking on behalf of other participants. His situated identity is also confirmed by other participants as they ''pass the opportunity to talk'' (Nielsen, 2013) (e.g. lines 21 and 25) and wait for Hans to initiate the next step. Both Hans's and Marja's embodied actions display their orientations to the two interactional spaces. Moving into engagement with the meeting space is marked by a shift of gaze to the large screen, which shows a power point presentation related to the meeting agenda. Embodied orientation to the large screen enables both the local participants to monitor the presence of distant participants and to display their attention to the written document as a way of showing readiness to begin the meeting proper. The local participants direct their gaze to the large screen at two key phases of the opening: during the initial monitoring and when moving into opening of the meeting (lines 23–24). Gaze and body orientation also enable the co-present participants to briefly disengage from the meeting space and establish an interactional team to share an affiliative moment in the local space.

The next excerpt comes from a larger meeting involving a local group of 12 participants and three groups in other locations. The extract illustrates how steps in the transition towards the opening are achieved multimodally and shows

how establishing the critical mass is done in a recipient designed way by addressing attendees as members of a category, in particular the national group. This way of addressing recipients has been found to occur in multinational meetings, where it enables the participants to make national categories locally relevant and thereby display specific kinds of expectations regarding the participants' identity and expertise; their ''rights and obligations to talk and to know'' (Markaki and Mondada, 2012: 31).

Prior to the opening process, local participants have walked into the meeting room and taken seats around a large table. The co-located participants do not have visual access to the distant participants, but all parties have visual access to the meeting agenda, which is displayed on a large screen at the front of the meeting room. The pre-meeting phase is characterized by several parallel conversations between some participants, while others remain silent and attend to their own activities (e.g. filling in the informed consent form). After some minutes of pre-meeting activity several participants begin to show readiness towards moving into the meeting. They withdraw from talk and other engagement with co-located participants and wait in silence; some browse through papers in front of them. Five participants visibly orient to the agenda by turning their gaze towards the screen one-by-one. A distant participant is then heard to speak and two more participants shift their focus to the screen (lines 2–3; Fig. 5).

Example 2

1 ((multiple participants talk))

2 ? (° °)

3 ((two people turn gaze to screen)) Fig. 5

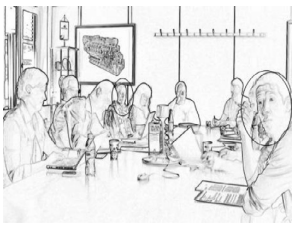

Fig. 5: Two participants gaze towards screen

4 Dietmar good morning gi:rls (.) ohm,

5 Bruno °£good [morning£°

6 [((gazes towards participants opposite him

Fig. 6: Bruno gazes towards colleagues

Fig. 7: Bruno turns gaze towards Marja

7 Dietmar [(verify) if you can hear me from ↑Finland (0.3)

8 [((Hannu picks up loud speaker)) Fig. 8

9 Dietmar [can somebody confirm if you hear us

10 [((Hannu puts speaker back on the table)) Fig. 9

Fig. 8: Hannu picks up loud speaker

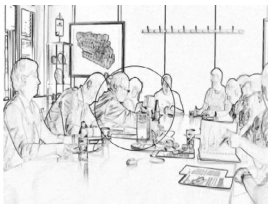

Fig. 9: Hannu puts speaker on the table

11 (4.0)

12 Hannu [yes we can hear

[((leans forward)) Fig. 10

Fig. 10: Hannu leans forward

13 ((Hannu leans back))

14 ((several people gaze at screen)) Fig. 11

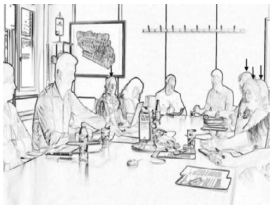

Fig. 11: Several participants gaze towards screen

15 Dietmar and everybody through here (.) okay

16 ((loud background noise from technological devices))

17 Dietmar do we have also (.) Italy and Netherlands group on board

18 (4.8) ((Marja flips over brochure on table)) Fig. 12

Fig. 12: Marja handles brochure

19 Dietmar (can't reach) (1.0) (or tries)

20 Leonardo yeah we're currently on board (.)

21		we're just looking for the louder speakers but we are here
22	?	(so are we)
23		(1.0)
24	Dietmar	(tack)
25		(1.8)
26	Dietmar	then

The first verbal move towards entry into the meeting is performed by the chair, who is one of the distant participants. Dietmar makes his presence known with a check-in greeting (line 4), which is followed by a request for confirmation that the audio-connection works (lines 7–9). Dietmar's turn accomplishes a shift towards the meeting proper by making relevant several identity categories. The check-in greeting is designed as humorous by using the gender category 'girls' collectively to addresses the other participants, even though there are several male participants present. Dietmar's reference to his own location by mention of the country (line 7) invokes his situational identity as a distant participant and a representative of his group. At least two of the local participants respond by smiling (Bruno and Minna),[1] but Bruno is the only one to respond verbally (line 5). The audio-connection is poor, and while Dietmar's turn is still in progress, Hannu orients to the disturbance by reaching towards the speaker on the table and picking it up. A silence of c. 4-s follows, during which Hannu attends to the speaker and places it back on the table. Only after this he leans forward and confirms verbally that the audio-connection works speaking on behalf of the group (line 12). With his actions Hannu establishes himself as a lead actor in the local group. Concurrently with his turn and immediately after, several participants turn their gaze to the agenda displayed on the screen and thereby show orientation to entry into the meeting (Fig. 11). After briefly addressing his local team (line 15) Dietmar requests confirmation that the remaining two teams are also present by referring to the countries where the teams are located (line 17). In this way he makes relevant those specific offices and groups for the business of opening the meeting and invites representatives of these groups to speak up. The lack of immediate response occasions an account where Dietmar seems to comment on trouble with establishing contact with the missing distant parties (line 19). After a delay of several seconds, the Italian and Dutch representatives respond and officially join the meeting (lines 20–22). Leonardo also accounts for the silence by referring to the team's preparatory activities involving technology (searching for loud speakers) (line 21). With this utterance he conveys that although present, the team is not yet ready to start the meeting. After a short silence, Dietmar thanks them in Swedish, which playfully alludes to the Swedish-Finnish environment he is currently visiting and at the same time marks the sequence closed.

Similarly to the first example the chair establishes his role at the very beginning by taking control of the turn taking in the shared meeting space. However, here Dietmar requests confirmation from all parties separately. Instead of addressing individuals he uses categorization to refer to a specific group or location of participants. A multimodal analysis of the co-located participants shows how they shift from parallel conversations and other activities to the meeting space by withdrawing from talk and shifting their gaze to the large screen on which the agenda is displayed. Participants orient to the affordances of technology with their bodies. For instance, one participant manipulates the loud speaker before verbally confirming the team's presence. A verbal comment from another distant group (line 21) shows that activities involving technology are in progress in other locations too and may be used to account for the time lapse before responding to the chair's turns. Embodied orientation to and manipulation of technological objects is thus made accountable in the interaction. Co-located participants also respond to problems with the audio-connection: several participants display troubled facial expressions in response to loud noise (line 16) and one of them moves an object next to the microphone (Fig. 12). These silent activities take place at the shared physical space and do not interfere with the virtual meeting space. The distributed participation framework gets established when the last team leader's confirmation of the team's presence in the meeting space is verbally acknowledged by the chair (line 24).

The next extract is from a semi-regular update meeting in which Joonas and Walter are the local participants and Vilma and Fred are expected to attend distantly from Finland and the Netherlands. The co-located participants are using their individual laptops and do not have visual access to the distant participants. They are seated next to each other and both focus on the screen for the most part of the interaction. Moments before the episode begins, Joonas is seen to type something on

[1] Bruno and Minna are clearly visible on the video. Both gaze at participants on the other side of the table, whose facial expressions were not captured on camera.

his laptop. Prior to the extract the three male participants have been engaged in pre-meeting small talk while waiting for Vilma, having a good laugh about being filmed and teasing each with comments related to physical appearance.

Example 3

1	Walter	but your beard grows not where (.) it's supposed to grow he
2		[he
3	Joonas	[he he (.) hey I was asking Vilma Lane that where is she and
4		u::h she started to reply to me but uh then she went away so (.)
5		[le- let's give her a second fo-]
6	Walter	[yeah she said in one minute she's here] yeah
7		((Joonas leans back; gazes at Walter's screen)) *--- > Fig. 13
8	Joonas	I think she's in (out) some other meeting
9		so let's [wait a second more
10		[((Joonas turns gaze to Walter's screen)) *--- > Fig. 14

Fig. 13: Joonas leans back

Fig. 14: Joonas turns gaze towards Walter's screen

11	Walter	oh she's now joining actually
12	Joonas	ah [she's now coming very good (0.6) ↑ah
13		[((Joonas shifts gaze to his own screen)) Fig. 15 *--- >

Fig. 15: Joonas gazes at his screen

14		(1.2)
15	Walter	gut gut
16		(1.3)
17	Fred	so um how do you treat Tina's sister? In a good way?
18	Joonas	we- uh as we [treat Tina. £Very bad£.
19		[((Joonas turns gaze to Walter's screen))

20 ((Walter laughs))

21 ((Joonas turns gaze to Walter and then his own screen))

22 Fred okay (.) so is this because of her sister or why.

23 Joonas eh- ((turns gaze to Walter)) Fig. 16

24 (1.0)

25 Vilma ↑h[i

26 Joonas [((leans over and turns gaze to W's screen)) Fig. 17

Fig. 16: Joonas gazes towards Walter

Fig. 17: Joonas gazes towards Walter's screen

27 Fred hi hi

28 Walter hi Vilma huh huh [huh

29 Joonas [hola

In line 1 Walter extends the joking sequence by teasing Fred about his beard. After appreciating the joke with a laughing response, Joonas redirects the focus of talk by addressing the absence of the fourth participant (Vilma) (line 3). The turn marks an abrupt shift from pre-meeting talk to meeting-preparatory talk (Mirivel and Tracy, 2005), which is also signalled by the use of 'hey' to mark a topically disjunctive turn. By topicalising the absent participant Joonas makes visible that he has been monitoring the screen for visual signals of her presence. He also assumes his institutional role by reporting his own prior interaction with Vilma (lines 3–4) and requesting that the others wait for her to join before proceeding (lines 5 and 8). In lines 5–6 the two local participants compete for a turn as Walter intervenes and offers his own, slightly more specific report of Vilma's prior communication. Walter monitors his screen throughout, while Joonas monitors both his own and Walter's screen (Figs. 13 and 14). As soon as Vilma becomes visible as participant, Walter announces it verbally (line 11). The turn initial 'oh' orients to the sudden change in the situation signalled through the computer screen (cf. Heritage, 1984).

In lines 12 and 15 both Joonas and Walter comment on the visual signal of Vilma's presence on the screen with positive assessments. Both monitor their own screens and wait for Vilma to check in verbally. As this does not happen, a silence ensues and the next step in the opening process is delayed. The silence is broken by Fred who initiates a new pre-meeting sequence with his question addressed to the two active participants, Walter and Joonas (line 17). Joonas responds with a humorous remark, which is appreciated by Walter with laughter (line 20). Fred's second question, however, does not get a response, apart from a brief vocalization from Joonas, who turns his gaze to Walter (Fig. 16). This action treats Fred's turn as problematic, possibly both because of its content and its placement: it seeks to expand a pre-meeting sequence at a juncture where the other participants have shown orientation to proceed with the opening process. At this point Vilma finally checks in with a short greeting (line 25). During Vilma's greeting, Joonas turns his head, leans slightly towards Walter and directs gaze to Walter's screen (Fig. 17), possibly to seek visual confirmation of her presence.[2] Fred and Walter both respond with reciprocal greetings, followed by Walter's laughter. Joonas greets Vilma in Spanish, which further contributes to a jocular and informal tone. The greetings are followed by a silence, which marks a boundary before the next step in the opening process.

As in the preceding examples, the participants in this excerpt treat establishing the presence of all participants as a precondition for opening the meeting and engage in interactional work to accomplish this. This involves multiple, partly

[2] The video data does not show the participants' computer screen. However, it is clear from the recording and observational data that Walter is engaged in other activities (e.g. sending messages).

overlapping activities taking place in different interactional spaces: verbal references to the absent participant and prior engagement with them, visual monitoring of not just one's own, but also a co-participant's screen, and verbal turns that make the new participant's presence public in the meeting space. Unlike Excerpts 1 and 2, the opening phase of this meeting is characterized by more equal participation and joint activity through which both local participants take an active role in making sure that the step of achieving the critical mass is established publicly before any further action can be taken.

Establishing the distributed participation framework in distant meetings is constrained by the affordances of the technology and involves interactional procedures to establish shared orientation to the virtual meeting space and achieve co-presence. These procedures are contingent to specifics of the situation: the number of participants, their positioning in the physical space, the roles that they adopt and perform in the initial moments of the encounter and the affordances of the technology (e.g. the lack of visual access to distant participants). Achieving the critical mass is accomplished by monitoring the screen and verbal turns including check-ins, turns referring to absent participants and announcements making some party's presence public to the others. The next section examines how participants proceed to the formal opening phase.

5.2. Achieving mutual orientation to agenda

Once co-presence of the relevant participants is established and the distributed participation framework is in place, the next step is to move to the meeting proper and shift from one turn-taking system to another (Nielsen, 2013: 40). Thus, what is required of meeting participants is co-orientation and shared focus on the meeting at hand (Goffman, 1963; Wasson, 2006; Goodwin, 2007) while the chair is commonly expected to make verbal entry into agenda-related talk. This section analyses how the shift into agenda-related talk is accomplished.

The simplest instances of moving into agenda-related talk include silence from the participants' side and verbal initiation performed by the chair, e.g. use of a topic boundary marker (e.g. 'uhm', 'okay', 'then'). Extract 4 begins at the final stages of a pre-meeting exchange. The chair, Hans, has received affirmative answers to his request for permission to record the meeting, but has asked for confirmation. In line 1 he gives the participants an opportunity to respond. When no one replies Hans initiates a shift to the formal opening of the meeting.

Example 4

1		[(2.0)
2		[((Hans leans to table, looks at his computer screen *--- >>
3		[((Marja gazes towards wide screen)) *--- > Fig. 18
4	Hans	good (0.3) [↑alright good
5		[((Hans corrects his posture))
6		(0.8)
7	Hans	uhm (.) what is it all about [it's about purchasing in uh to
8		[((Marja turns gaze to Hans))

Fig. 18: Marja gazes towards wide screen

*---> Fig. 19

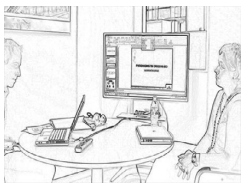

Fig. 19: Marja gazes towards Hans

9 Hans into the management work e:r work shop (0.4)

10 and the respective stocks

11 I have been signing out the material

12 already the (.) by [end of- of last week (.)

13 [((Marja turns gaze to screen)) *--- >> Fig. 20

Fig. 20: Marja gazes towards screen

14 Hans don't know whether everybody had (.) has had a

15 chance to: to go through it (0.3) nevertheless this,

16 uh the topic [---]

During the silence at the beginning of the extract Hans leans forward gazing at the screen of his laptop and waits. Marja orients to the meeting space by gazing at the large screen (Fig. 18). The silence is taken as confirmation that all participants agree to being recorded and after 2 s Hans marks the pre-beginning sequence closed with 'good' (line 4). After a short pause Hans continues with a clear boundary marker 'alright good' with a rising intonation. He also concomitantly corrects his posture, and thereby shows embodied orientation to the topic transition and prepares himself for agenda-related talk (i.e. getting to business). The pause that follows is not exploited by other participants, and Hans moves into meeting talk with a turn initial topic marker ('uhm', line 7) followed by a rhetorical question – answer sequence which announces the topic (lines 7–10). With this he secures himself a multiunit turn. At this point the other local participant, Marja, shifts her gaze from the screen towards Hans (Fig. 19) and signals her role as recipient of his talk. Hans's turn continues with a reference to materials that he sent to the others prior to the meeting (lines 11–12). This way he implicitly makes relevant the retrospective-prospective aspect of the situation: i.e. ''how we got here/where we are going'' (Boden, 1994: 95).

Example 4 represents a transition type that is simple and unproblematic. The interactional space has been stabilized in the pre-beginning phase prior to the extract (cf. Mondada, 2009): the participants have established their engagement in the meeting at hand and Hans has adopted his role as the chair by taking control of the turn-taking (see Ex. 1). Hence, at this point it is expected of him to mark the beginning of the next section and move on with the agenda. The transition from pre-meeting talk to the meeting proper is achieved through bodily action as well as verbal utterances. Gaze and a shift in body posture display orientation to the meeting space and readiness to entry into the business of the meeting. Distant participants contribute to the opening phase by ''passing the opportunity to talk''[3] (Nielsen, 2013) and Marja makes an additional display of attendance by looking at Hans. The entry into the meeting is accomplished smoothly and no extra work is needed to create or sustain mutual orientation.

However, even though the chair's verbal initiation of agenda-related talk is a significant step in the transition, the temporal organization of bodily and other conducts of other participants is not always in line with it. In addition, the more there are parallel activities going on the more difficult they are to coordinate. The following example is from a bi-weekly update meeting in which the local participants, Dietmar, Marja and Hannu sit in a triangular shape and 15 distant participants attend from 6 different locations. The manager Dietmar controls the agenda that is displayed on the screen of laptops placed in front of each local participant.

[3] Since the videorecordings were made in one office only, it is not possible to examine the embodied or other conduct of the distant participants.

Example 5

1 [((Marja tapping her phone))

2 [((Hannu clicking mouse))---- >* Fig. 21

Fig. 21: Marja handles phone

3 Dietmar o:kay (.) meeting as recorded (0.5) o:hm, after we started up

4 though (0.3) for those (0.2) ohm, welcome to the meeting (.)

5 ohm (.) for (x) (.) o:hm

6 (1.9)

7 Dietmar I think I uploaded the meeting minutes to the: (.) workspace

8 any comments (.) any com↑plaints?

9 (3.3)

10 Dietmar changes?

11 (3.1)

12 [((Hannu leans back))---- >*)) Fig. 22

13 Dietmar [not the case [<so let's get on::>

14 [((Hannu turns gaze to screen)) *---- >> Fig. 23

Fig. 22: Hannu leans back

Fig. 23: Hannu gazes towards screen

15 Dietmar [ohm,

16 [((Marja puts phone away; shifts gaze to screen)) Fig. 24

17 Dietmar well (.) [it's a little bit nasty that we don't have those there

18 [((Marja starts writing)) *--- >> Fig. 25

Fig. 24: Marja puts phone away

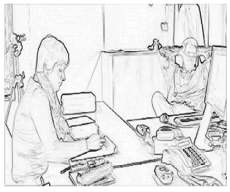

Fig. 25: Marja starts writing

19	Dietmar	I skip one agenda point [which we will come back later on
20		[((D scrolls down on the agenda) (1.3)
21	Dietmar	ohm,
22		(1.0)
23	Dietmar	we had a discussion in management team

The extract begins at a point where the distributed participation framework has been established. However, two local participants, Marja and Hannu are still engaged in other activities (lines 1–2, Fig. 21). Dietmar indicates a shift to the imminent opening turn by welcoming those who joined the meeting late (lines 3–4). The distant participants' co-orientation is established by silence (line 6), while Marja and Hannu are still occupied with their parallel activities. Dietmar proceeds to the next step by referring to the minutes of a prior meeting and asks for the participants' reactions (line 8). The mildly humorous choice of 'complaints' in his turn marks any response from the co-participants as dispreferred. Nevertheless, the silence creates a space for initiating talk related to the minutes. As no response is offered, Dietmar creates another opportunity with an increment which asks for suggestions for 'changes'. The utterance is produced with rising intonation, but again no response is offered. Dietmar treats the silences as indicating acceptance of the minutes and a signal that he may proceed (line 13). Concurrently with Dietmar's transitional turn, Hannu first takes a relaxed position in his chair (Fig. 22) and then turns his gaze to his own computer screen in preparation for entry into the meeting (Fig. 23). It is only the chair's proposal to get started (line 13) that prompts Marja to finally cease other activities and show orientation to the meeting space by gazing towards the screen (Fig. 24). This occurs simultaneously to the pre-initial 'ohm' by Dietmar which marks another step towards the opening (line 15). Dietmar's next turn makes relevant matters in hand by commenting on a problem related to the materials for the meeting (line 17). At this point Marja starts taking notes (Fig. 25). Entry into the meeting proper is achieved with Dietmar's verbal comment on the agenda (line 19) and his actions with the mouse (line 20): Dietmar visibly moves on to the next item in the agenda just before marking the boundary verbally. After another pre-initial 'ohm', he verbally establishes the next item as the current topic.

In the extract the local participants' co-orientation and the transition towards the meeting proper evolves progressively through verbal and bodily conduct. The chair's verbal actions mark clear steps towards the business of the meeting and utilize similar resources as identified in earlier studies to accomplish these steps (boundary markers; reference to the minutes and agenda). Scrolling down the agenda using the mouse serves as a further mediated resource that indicates an activity shift and facilitates co-orientation of the distant participants. The local participants shift their orientation towards the opening by ceasing other activities, changing body posture, gazing at the screen and beginning to take notes. Compared to the previous example, the opening phase is more complex: it is longer and involves multiple steps, which are sensitive to the fluidity of the interactional space (i.e. the meeting space) caused by the large number of distant participants and engagement with other activities. Whereas distant participants publicly signal their readiness to proceed via silence, local participants' shift in focus is achieved via temporally bounded bodily conducts that do not occur simultaneously or in a similar manner. However, a clear turning point is where Marja finally gazes at the screen and indicates that she is finished with multitasking. A crucial part of the transition itself is the chair's use of the written agenda as a resource for accomplishing a topic and activity shift. A similar phenomenon of using material objects as interactional resources have also been found in face-to-face meetings where written documents have been used to secure participation and draw attention (e.g. Nielsen, 2012, 2013; Mirivel and Tracy, 2005; Mikkola and Lehtinen, 2014; Mondada, 2006; Svennevig, 2012). Here the chair's visible scrolling on the agenda mediated through the screen works to secure participation of the distant participants specifically, as the focus shifts visibly to the business of the meeting.

The following extract further illustrates how the other participants orient to the chair's verbal steps in the opening process through embodied conduct. In this case the chair, Dietmar, is a distant participant and the focus is on the twelve local participants who are seated around a large oval table. The agenda is projected on a large screen in front of the room by Hannu, the manager of the local team.

Example 6

1	Dietmar	[(tack)
2		[((Minna picks up mobile phone)) Fig. 26

3 (1.8) ((people moving in chairs)) *--- >

Fig. 26: Minna picks up phone

4 Dietmar then

5 (1.5)

6 Dietmar some bullets and dots what [still will be going on as-

7 [((Minna puts phone away)) Fig. 27

8 ((five people turn gaze to wide screen)) Fig. 28

Fig. 27: Minna puts phone down

Fig. 28: Several participants turn towards screen

9 Dietmar uh [lots of these ohm where (x) (0.5) (x)

10 [((Bruno touches loudspeaker and smiles)) Fig. 29 & 30

Fig. 29: Bruno touches loudspeaker

Fig. 30: Bruno smiles

11 Dietmar and then I will, ( ) management team ( )

12 ((Minna frowns; leans forward and rubs her forehead)) Fig. 31

Fig. 31: Minna leans forward, rubs her forehead

13 Dietmar ohm, we have probably: (0.5) one big topic

14 where we try to struggle where we try to improve

15 [but the current way seems to be

16 [((Bruno turns gaze to Minna))

17 ((Minna whispers))

18 Dietmar [< not as > (.) a decision not has

19 [((Hannu points to microphone with a circular gesture)) Fig. 32

Fig. 32: Hannu points towards microphone

20 Dietmar resolved bringing ( ) to the ( ) and (Jean)

21 [which have

22 [((Minna whispers something and leans back)) Fig. 33

23 ((Bruno leans back and turns gaze to Marja)) Fig. 34

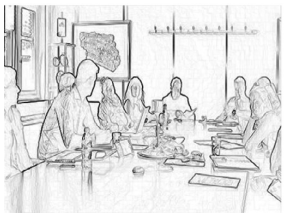

Fig. 33: Minna leans back

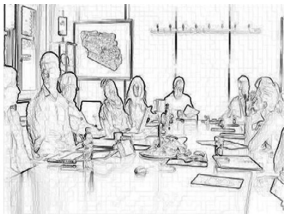

Fig. 34: Bruno turns towards Marja

Line 1 marks the closing of the first phase of the opening: Dietmar uses Swedish to thank the others for confirming their presence. Simultaneously Minna picks up her mobile phone (Fig. 26), while some others shift their body positions slightly. Dietmar marks the next step with the boundary marker 'then' (line 4). All other participants pass the opportunity to talk. Dietmar achieves another step within the transition process by referring to the visually available features of agenda, 'bullets and dots' (line 6), that he has displayed on the large screen. The chair's reference to the agenda attracts participants' focus to the meeting space: concurrently with the end of Dietmar's utterance, Minna puts the phone away (Fig. 27) and at least four people turn their gaze towards the screen (Fig. 28). However, a side episode within the local space emerges during the opening turn due to problems with the audio-connection. This is first reacted to by Bruno who is about to have a sip of his beverage, yet suddenly ceases from action. Bruno leans over to check the table microphone and then smiles meaningfully to the people sitting opposite (Figs. 29 and 30). Then also Minna can be seen to orient to the problem by frowning (Fig. 31). Soon Bruno, Hannu and Minna who are sitting next to each other begin to whisper and Hannu makes a pointing circular gesture towards the microphone (Fig. 32). However, the main activity (i.e. the opening) is

not disturbed or further action taken to solve the problem. All three shift their attention quickly back to the meeting space, as they lean back and stop whispering (Figs. 33 and 34). Bruno briefly gazes at Marja (Fig. 34), who does not respond.

What makes the establishment of co-orientation difficult is the involvement of technology and people's embodied orientation towards it. Even though both local and distant participants indicate their readiness to move on via silence (lines 3 and 5), there is still a lot going on in the local space: people are correcting their postures, reading documents and sipping beverages. The chair's reference to 'bullets and dots' gets some participants to cease other activities (e.g. Minna) and shift focus to the agenda on the screen, yet the problem of not hearing properly immediately causes a new series of parallel activities available only to those physically present: head turns, facial expressions, gestures and whispers. It is not until after Minna and Bruno quiet down and lean back one after the other that the general uneasiness also stops and all local participants can be seen to orient to the meeting at hand, and the interactional space for the meeting gets stabilized.

6. Concluding remarks

With this article we aimed to shed new light on the multimodal accomplishment of distant meeting openings that are influenced by several participation frameworks and the use of technology. The analysis focused on two key stages in the opening process: the establishment of the distributed participation framework within a shared interactional space and the transition to meeting proper. Detailed analysis of the opening phases revealed characteristics that both support and add to previous findings, raising new questions for the study of interaction in meetings.

Similar to face-to-face meetings, opening phases of meetings conducted via communication technology progress in a stepwise manner (see Nielsen, 2013; Markman, 2009) and involve the use of multiple modalities. Achieving a critical mass is a prerequisite for opening the meeting (cf. Boden, 1994) and involves verbal and embodied procedures as well as bodily orientation to and use of technological artefacts. Participants in the local space monitor the screen for visual signs of distant participants joining in and verbally address the presence of other participants. In these meetings where the distributed participants did not have visual access to each other, verbal check-ins, references to absent participants and announcements that make some party's presence public were key resources for establishing the critical mass prior to beginning the meeting proper.

Even though meetings are predesigned and thus, routinely predictable events, shifts between formal and informal talk and from one agenda item to another have to be accomplished with locally constructed means of interaction (cf. Deppermann et al., 2010). The analysis highlights how such shifts were managed by coordinating action in both the meeting space and local space. The techniques used to accomplish entry into the meeting proper were similar to those identified in earlier studies of face-to-face meetings: boundary markers, verbal announcements and references to the written agenda by the chair and different participant strategies, such as silence, looking at the screen and ceasing other activities. However, the ways in which verbal and embodied conducts are manifested in time and parallel interactional spaces were sensitive to contextual factors, including the technology used. For example, the chair's embodied actions (e.g. scrolling down, Ex. 5) and verbal references (Ex. 6) that target visual features of the agenda serve as an efficient technique for attracting distributed participants' attention to the official business of the meeting and coordinating entry into the next activity. In this regard the analysis both supports and extends earlier findings about the crucial role that written documents play in achieving the shift into meeting talk (cf. Svennevig, 2012). On the other hand, problems with technology influence the opening process. Technical problems can prolong the opening process and disrupt its progress (cf. Markman, 2009). Problems with the audio-connection are oriented to by local participants and they occasion parallel activities in the local space creating fluidity in the participation framework. However, they are generally not made public to the distant participants. The participants oriented to the primacy of the meeting space (cf. Boden, 1994) by conducting other activities quietly (e.g. whispering) and relying on embodied resources rather than verbal activity.

A significant difference between technologically mediated and face-to-face meetings is firstly, the way that people utilize and orient to the material surroundings, and secondly, the resources they use to show their focus to the meeting at hand. In instances where parties in the meeting cannot see each other it can be impossible to interpret where distant participants' orientations lie at any given time. Thus, the chair's activities designed to advance the opening process are based on the one hand on what he or she can hear, and on the other hand, what he or she can observe in the physical space or on the screen. While silences can be interpreted as compliance with the chair's opening techniques (i.e. passing the opportunity to talk), they do not necessarily indicate that other participants are ready to begin the meeting as multiple activities may still be in progress in other interactional spaces. Such activities generally do not interfere with the shared meeting space, but they crucially shape the organization of the local interactional space and may have bearing on the temporal organization of the opening, e.g. cause accountable delays in responding. In fact especially in larger meetings, the participants rarely get visibly organized for the business of the meeting (e.g. via ceasing other activities or turning gaze to screen) at the same time or in a similar manner. However, entry into the meeting proper is achieved in a coordinated way generally during the chair's opening turn.

With this study we have shown how the affordances of the technology used figure in the opening process in distant meetings. Unlike face-to-face meetings, openings of distant meetings require additional interactional work from both the

chair and participants. Central in this is the ability to manage and to coordinate multiple overlapping activities taking place in several parallel interactional spaces.

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Appendix A. Transcription conventions

The excerpts are transcribed according to conventions developed by Gail Jefferson. Multimodal details have been described according to conventions developed by Lorenza Mondada.

,	intonation is continuing
.	intonation is final
↑	rising intonation
↓	falling intonation
[ ]	overlapping talk
tha-	a cut-off word
what	word emphasis
>what<	speech pace that is quicker than the surrounding talk
<what>	speech pace that is slower than the surrounding talk
°what°	speech that is quieter than the surrounding talk
WHAT	speech that is louder than the surrounding talk
£what£	smiley voice
wh(h)a(h)t	laughingly uttered word
(what)	uncertain hearings
(x)	unrecognizable or confidential item
(.)	micro pause, less than 0.2 s
(0.5)	silences timed in tenths of a second
((gazes))	transcriber's comments
*- - - >	gesture or action described continue across subsequent lines
*- - - >>	gesture or action described continue until and after excerpt's end
- - - - >*	gesture or action described continue until the same symbol is reached
>>- -	gesture or action described begins before the excerpts beginning

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II

MULTIMODAL ACCOMPLISHMENT OF ALIGNMENT AND AFFILIATION IN THE LOCAL SPACE OF DISTANT MEETINGS

by

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Multimodal accomplishment of alignment and affiliation in the local space of distant meetings

Abstract

Technology-mediated (i.e. distant) meetings are complex settings that involve distributed participation frameworks and the coordination of actions in multiple interactional spaces (cf. Mondada 2013). This paper examines how problems with hearing, speaking, or understanding in the overall meeting space enable the negotiation of alignment and affiliation by co-present participants in the same local meeting space. Conversation Analysis (CA) is used to investigate the local accomplishment of alignment and affiliation achieved through the sequential and temporal organization of verbal, embodied, and material resources of interaction in three types of situations: during technological trouble, silences, and disagreements. The analysis shows that the local participants draw on their physical setting and the material environment to make interactional problems relevant amongst themselves. During these parallel interactions, the co-construction of alignment and affiliation enhances the sense of local community and enables the building of alliances that are not made public in the overall meeting space.

Keywords: alignment, affiliation, technology-mediated meetings, conversation analysis, multimodality, interactional space

1 INTRODUCTION

Companies today use modern technologies to enable meetings between colleagues over distances. Although material surroundings are known to play an important role in the sequential organization of face-to-face meetings, little is known about the ways in which the challenges and affordances of technology-mediated settings affect interactional order (e.g. Heath & Luff 2000; Rintel 2010, 2013; Hutchby 2001, 2014). Drawing on multimodal Conversation Analysis (see e.g. Hazel et al. 2014), this paper looks into the ways in which participants in the same physical location make problems related to hearing, speaking or understanding relevant during distant meetings by constructing sequences of alignment and affiliation with each other. Both alignment and affiliation are forms of cooperation of which the former functions on the structural and the latter on the affiliative level of interaction (Steensig 2012; Stivers et al. 2011). Previous studies on multiparty interactions show that alignment and affiliation are powerful means in the organization of alliances (Kangasharju 1996, 2002) and in advancing in-progress activities (e.g. Stivers & Robinson 2006; Mondada 2006).

The data for this study comprise fourteen distant business meetings video-recorded in one of the offices of an international company. In addition to the people present in the meeting room, others participate distantly in the meetings via Microsoft Live software that enables all participants to be audio-connected and share the agenda and other relevant materials (e.g. tables, Word files). The agenda is typically displayed on the participants' individual computers or a large shared screen in the meeting rooms. Active participation in the meeting thus calls for verbal contribution but also for displaying orientation towards the screen(s). This study adopts the view that participants seek to coordinate their actions in multiple interactional spaces (cf. Wasson 2006): i.e. while having a sense of belonging to 'an overall meeting space', with their bodies and presence they are also engaged in the interaction of 'a local space' (Figures 1 & 2). However, rather than as separate entities with stable structures, these spaces are treated here as co-constructed through interaction by the participants themselves.

This study investigates the ways in which alignment and affiliation are constructed in a local meeting space. The analysis shows that when local participants display their orientation towards a shared problem they engage in a parallel turn-taking system, thus

departing from the main activities of the meeting (cf. schismatic interaction; see Sacks et al. 1974; Goodwin 1987; Egbert 1997). Junctures vulnerable to such problems are technological trouble, silences and disagreements. The findings suggest that local alliances are co-constructed through a three-stage process of 1) inviting alignment in the local space, 2) negotiating/ratifying the local community, and finally, 3) closing the parallel interaction. Physically co-present participants draw on their bodies and the material environment to make interactional problems relevant. They enhance the sense of a local community, but at the same time, exclude the distant participants and make oppositional alliances visible in their local space. The findings contribute to earlier research on the interactional ecology of distributed workgroups that depicts the organization of social actions within technologized meeting environments (Hutchby 2001, 2014; Markman 2009; Oittinen & Piirainen-Marsh 2015).

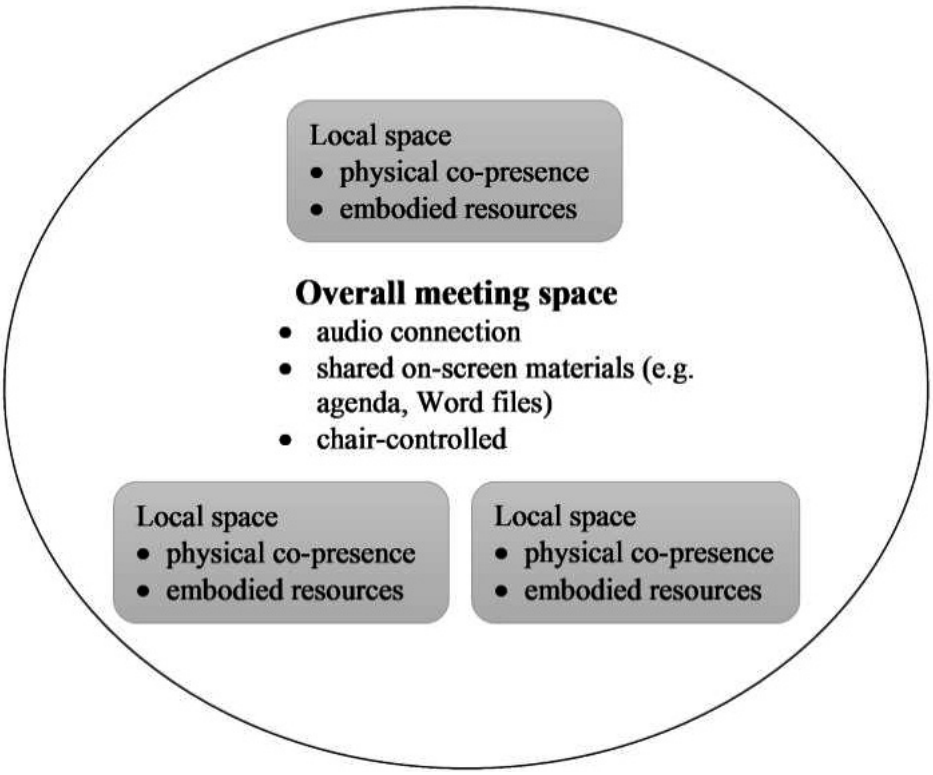

Figure 1. Interactional spaces in distant meetings.

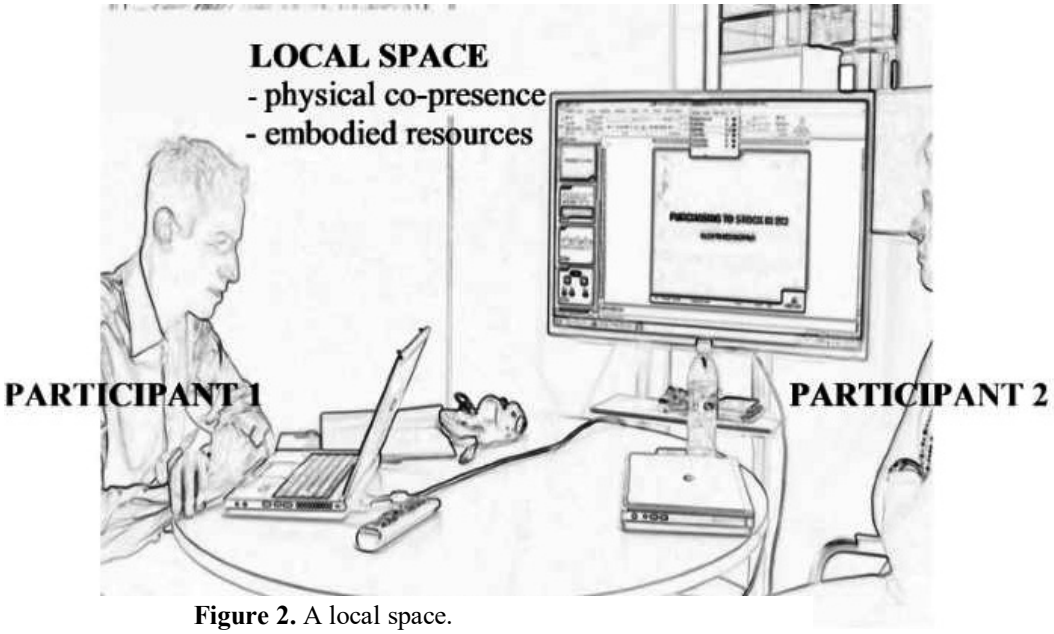

Figure 2. A local space.

2 MULTIMODAL INTERACTION IN DISTANT MEETINGS

Whereas Goffman (1963) frames co-presence, mutual monitoring and central situational focus as the primary requirements for multiparty face-to-face meetings, today's distant meetings are characterized by multiple interactional spaces, separate participation structures and mutual monitoring channels (Wasson 2006). Interactional spaces are thus constantly negotiated in interaction (e.g. Mondada 2011, 2013). Furthermore, technology-mediated meetings are susceptible to simultaneously occurring space-making practices. In previous studies of multiparty conversations, parallel turn-taking systems have been characterized as schismatic interaction (Sacks et al. 1974; Goodwin 1987; Egbert 1997). However, little is known about how parallel activities emerge and are negotiated during meetings where visual access and the availability of embodied resources are restricted. This study examines how parallel interactions create the opportunity to co-construct alliances during task-related talk. Meetings utilizing a distributed participation framework have received little attention in linguistic and interactional research. From the perspective of linguistic anthropology, Wasson (2006) suggests that participants in distant meetings may actually engage in three interactional spaces: the local space, the meeting space, and other virtual spaces (e.g. instant messaging). In this paper, interactional spaces are viewed as dynamic constitutions that are "constantly (re)established in interaction" (Mondada 2013, p. 250), rather than being fixed,

stable entities where social actions occur. Thus, shared focus on the meeting space is an interactional accomplishment and always a pre-requisite for beginning and upholding agenda-related conversation (Oittinen & Piirainen-Marsh 2015). The temporal coordination of multimodal resources, including physical actions (e.g. clicking a mouse), embodied displays (e.g. gaze) and verbal contributions is important for the accomplishment of shared orientation in and between the spaces and specific meeting activities (e.g. openings, closings, or problematic sequences). In other words, advancing meeting progressivity and mutual understanding are affected by the participants' orientation towards both the affordances and constraints of technology (Rintel 2010, 2013).

A growing number of studies have described participants' use of multimodal resources during face-to-face meetings, addressing topics such as the social organization of meetings (Clifton 2008; Asmuß & Svennevig 2009; Nielsen 2009; Mirivel & Tracy 2005), accomplishment of transitions (Nielsen 2013; Deppermann et al. 2010), turn-taking (Ford 2012), negotiations of entitlement (Asmuß & Oshima 2012), topic organization (Svennevig 2012) and community building (Nielsen 2012; Kangasharju 2002). Recently, growing attention has been paid to the communicative affordance of objects and to the physical setting as an interactional resource (see e.g. Hutchby 2001, 2014; Nevile et al. 2014; Goodwin 2007; Mondada 2007, 2013; Markaki & Mondada 2012; Nielsen 2012). However, the processes involving the joint accomplishment of distributed workgroups, i.e. how participants negotiate their participation and roles within "technologized interactions" (see Hutchby 2014), remain to be investigated.

Studies focusing on technology-mediated interactions suggest that the challenge for participants is their asymmetrical access to the shared interactional resources (Rintel 2013; Hutchby 2001; Heath & Luff 2000; Markman 2009). Heath & Luff (2000) found that even in encounters using a video-connection, embodied conducts may lose their interactional and sequential significance, as participants fail to achieve alignment of gaze to secure recipiency at the beginning of turns. Then again, other studies have found evidence for technology as an interactional resource (Rintel 2010, 2013; Olbertz-Siitonen 2015). In his work on relational video calling, Rintel (2013) noticed that silences and problematic responses derive from either technological distortion or inattention. In either case, technology was used as a 'way out' of situations that were somehow problematic. This paper examines the ways in which local meeting participants orient to constraints and communicative affordances when accomplishing alignment and affiliation with each other.

3 ALIGNMENT AND AFFILIATION

Alignment and affiliation are both forms of cooperation (Steensig 2012; Stivers et al. 2011). On the structural level of social interaction alignment is about projecting mutual understanding of the unfolding of the interaction, accepting in-context roles (e.g. speaker/hearer, chair/participants) and supporting ongoing actions or turns-in-progress (Steensig 2012; Raymond & Zimmerman 2016; Rendle-Short et al. 2014; Riordan et al. 2014; Stivers et al. 2011; Stivers 2008). For instance, vocal continuers ('mm', 'yeah') and embodied actions, such as gaze, are common ways to facilitate the proposed action and signal focus on a speaker's turn. In comparison to alignment, "affiliation is the affective level of cooperation" (Stivers et al., p. 21) designed to project cooperation with an action preference, display empathy, or support a prior speaker's stance (Steensig 2012; Stivers et al. 2011). By contrast, disalignment is defined as a set of actions that interfere with the main activity in progress (e.g. changing the topic) (Butler et al. 2011; Stivers 2008), and disaffiliation as those that reject a stance (e.g. disagreements). It is worth noting that whereas all utterances inherently call for aligning responses, they do not always invite affiliative ones (e.g. Steensig 2012).

Both levels of cooperation are important resources for ensuring progressivity in mundane and institutional settings. That is, participants engaging in any conversation constantly evaluate what has been said in deciding on a relevant next action, and thus orient to securing progression of the interaction (Schegloff 2007; Sacks 1987). A relevant term that intertwines with progressivity is intersubjectivity which is the inherent product of relevantly organized turns at talk and manifests the participants' mutual understanding about the unfolding of the interaction (Heritage & Clayman 2010). Focusing on the family context, Stivers and Robinson (2006) found that in multiparty conversation where someone is selected as the next speaker, there is a clear preference for an answer (i.e. progressivity) over waiting for the selected next speaker to respond. Some studies also emphasize the interconnection between sequence size and orientation to progressivity in institutional encounters. For instance, in her study on food ordering in a Japanese restaurant Kuroshima (2010) suggested that while interactional work to restore intersubjectivity (i.e. via repair) is always done at the expense of progressivity, orientation to advancing the conversation may nevertheless promote trust and affiliation between customer and chef. What underlies this kind of inherent mutual understanding and the successful production of minimal aligning responses is the presupposition of access: i.e. to know, see and hear. In their work on box

office service encounters Lindström et al. (2016) found that while orientation to artefacts within the given setting facilitates intersubjectivity it also provides a resource for temporary exits from mutual accessibility. Understanding the function of progressivity and intersubjectivity is relevant for this study, because the ways in which the meeting participants orient to problematic instances render junctures for alignment and affiliation work visible. In technology-mediated interactions where only the physically co-present participants in the local meeting sphere have visual access to each other and share similar resources, the restrictions on equal access to relevant information may interfere with the construction of relevant next actions and cooperative responses (Rintel 2013; Heath & Luff 2000).

Alignment and affiliation have been found to be central in certain meeting activities, such as agreement formulations (Barnes 2007), securing participation (Nielsen 2012; Mondada 2011), negotiating entitlements (Asmuß & Oshima 2012), transitions (Nielsen 2013; Mondada 2006; Ford 2012) and forming oppositional alliances in multiparty meetings (Kangasharju 1996, 2002; Nguyen 2011). Kangasharju (2002) showed how collective disagreement and alliances are constructed via displays of alignment and affiliation primarily after specific kinds of utterances: i.e. matter-of-fact statements, stance-takings and proposals. Furthermore, alliances are generally invited either verbally via collaborative completion of the previous turn, and/or nonverbally via embodied conducts such as gazes and headshakes. Oppositional teams are thus developed sequentially through two or more turns that contradict the previous speaker, and via displays of agreement that are targeted specifically to the initiator of the disagreement (Kangasharju 2002). In addition, with bodily practices it is possible to signal co-operation with others while at the same time distancing oneself from the rest (Kangasharju 1996, 2002; Nguyen 2011). Other studies have further shown the empowering effect of embodied resources and multimodal displays of orientation in securing recipient alignment and participation at different stages of meetings (e.g. Streeck 2009; Deppermann et al. 2010; Nielsen 2012; Ford 2012; Mondada 2006; Samra-Fredericks 2010). This study looks at how participants make use of various surroundings to engage in alignment and affiliation work, and sheds light on the ways in which troublesome moments during distant meetings can become resources for social actions.

4 DATA AND ANALYTIC APPROACH

Drawing on video-recorded data collected in the Central European office of an international company, this article aims to provide a fine-grained analysis of the joint production of alignment and affiliation in one local space of distant meetings. Distant meetings can be described as involving the use of a communication technology and engagement in a distributed participation framework: i.e. participants are physically located in different geographical locations but connected with each other via audio transmission and online interaction. The data consist of fourteen meetings characterized as formal, i.e. they are pre-scheduled events with a specific turn-taking format and predetermined chair and participant roles, and have the purpose of either sharing information or solving task-related and organizational problems (see e.g. Boden 1994; Sacks et al. 1974). The fieldwork was conducted in one geographical location, where two video cameras and audio recording devices were placed in the meeting rooms. The technology used by the participants was Microsoft Live, which enables audio-connection between distant locations and the distribution of written agendas and other relevant materials (e.g. charts, pdfs and company-related programs) in the overall meeting space. During the meetings, the agenda was quite commonly projected onto a large screen in the room, but also appeared on the participants' laptops, to which the people co-present were frequently orienting. The length of the meetings in the data varies from half an hour to two hours. In the recordings, participant numbers vary. In most cases, one to three participants are present in the physical location where the recordings take place and two or more participants are in distant locations. However, one meeting involves the participation of four teams in addition to twelve participants seen on camera (Extracts 1 and 2). In this case, the number of distant participants is not known. English is the company working language and hence a lingua franca. Both the local and distant participants gave their informed consent to be recorded. Their identities and the company's name are protected by pseudonyms in the extracts analyzed.

The challenge of conducting *in situ* analysis of interactional achievements in distant meetings arises from the distribution of the participating groups in multiple geographical locations and the dynamics in and between the interactional spaces (Wasson 2006; Oittinen & Piirainen-Marsh 2015). All participants are physically situated in a 'local space' which allows them access to the interactional resources within that material setting, including the embodied displays of the other co-present participants and the objects in the meeting rooms. They are also engaged in an 'overall meeting space' that comprises not only the agenda that

they see moving on their screens, but also various interactional resources: the physical environment, the audio-connection and the online shared materials. Therefore, the definition of a 'local space' is always subjective. For the sake of clarity, it is systematically used in this paper to refer to the physical space occupied by the participants on camera.[1]

As an inductive method, Conversation Analysis (CA) enables description of the details of interactional processes and the ways in which verbal, embodied and other semiotic resources (i.e. actions and orientations to material objects) are organized in time and space (e.g. Streeck et al. 2011; Mondada 2006; Sacks et al. 1974; Hazel et al. 2013). CA is specifically relevant for the current study, as it facilitates microanalysis of the turn-by-turn negotiation of cooperative responses, alignment and affiliation, providing important insights into how participants in distant meetings orient to interactional problems and the establishment of intersubjectivity and progressivity (e.g. Heritage & Clayman 2010; Schegloff 1992). The transcripts are based on the conventions developed by Jefferson (2004). For the multimodal details, the symbols created by Mondada (2001) are applied (see Appendix). Capital letters mark a speaker as a distant participant.

5 BUILDING ALLIANCES WITH ALIGNMENT AND AFFILIATION IN PROBLEMATIC SITUATIONS

The results show that problematic situations, i.e. technological trouble, silences, and disagreements, can be used as resources for creating opportunities to negotiate alignment and affiliation and thus enhance the sense of a local community. In general, the local participants indicate their availability and alignment with the ongoing talk in the overall meeting space via silence and by physically orienting toward the agenda on either their laptop screens or the large screen on the wall. However, what happens during interactional disruption is that they break away from the main conversation in the overall meeting space: In the present data, two or more local participants shift their focus (e.g. via gaze) away from the shared screen and towards each other, which occasions the formation of a participation framework separate from the meeting activity. The analysis describes the process of constructing an alliance by 1) inviting alignment in the local space, 2) negotiating/ratifying the local community, and 3) closing the parallel interaction. This involves using a range of

[1] For this study, it was not possible to collect video-recorded data from multiple locations.

multimodal resources, such as gaze, gesture and bodily action, and orientation to material objects, like the mouse or the shared screen in the meeting room.

5.1 Alignment and affiliation during technological trouble

Hearing-related technological problems occur frequently in distant meetings, and they leave the participants with two choices: to either let the situation pass with no effort to restore intersubjectivity in the overall meeting space, or to initiate repair. In Extracts 1 and 2, the interactional problem of not hearing leads the local participants to deviate from the main activity in the overall meeting space and engage in parallel interactions.

The first extract comes from a meeting with a team of twelve people sitting around a large oval table in a meeting room and three other teams participating distantly via an audio-connection (Figure 3). The written agenda is controlled by the meeting chair, Dietmar, who is a distant participant. The leader of the local team, Hannu, is responsible for setting up the devices and projecting the agenda from his laptop onto a wide screen at the front of the room. The purpose of the meeting is to share comments on recently launched work practices. At the beginning of the extract, Dietmar invites one of the two other distant participants, Petri or Anders, to take the floor (lines 1-2). For some reason problems occur during Petri's subsequent turn and the local participants initially react to these by orienting towards one another.

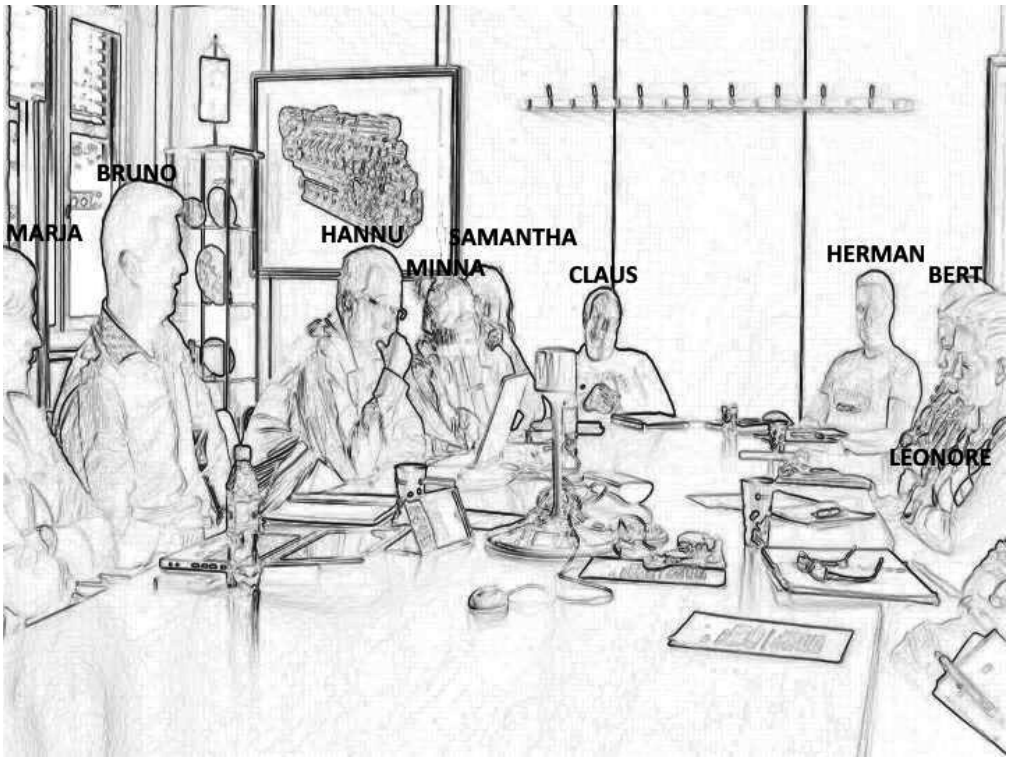

Figure 3. Twelve local participants sitting around the table.

Extract 1

1	DIETMAR	any judgements from you: Petri or Anders that you
2		would like to, (.) share too
3		(1.1)
4	PETRI	u:h (.) <yes but> yeah (.) if you think about (the character)
5		[( )
6		[((*flash from wide screen, everyone but Bert turn gaze to screen*))
7		[((*Bruno and Minna frown, shake heads; Bruno and Leonore turn heads*
8		*to left; Bruno whispers to Hannu*))
9		((*Hannu leans forward, gaze directed at laptop screen*)) H----->*
10		((*Leonore and Claus giggle quietly, Herman sneers*))
11		((*Bruno whispers to Marja, leans back, smiles at people sitting opposite*))
12		((*Minna leans forward, Hannu straightens posture*)) H----->*
13		((*Samantha raises hand on pursed lips*))
14	Claus	[no- <u>now</u> it's clear
15		[((*Claus turns gaze to Leonore, raises right hand holding up index finger,*
		smiles))
16		((*Minna, Samantha, Leonore, Sarah and Herman turn gaze to Claus*))
17	Leonore	£↑a(h)h£ ((*Leonore raises left hand holding up index finger*))
18		((*laughter among local participants*))
19	PETRI	( )
20	DIETMAR	thank you very much I can (.) fully agree on that one that sounds
21		like a prominent thing I totally get your point (0.2) fully agreed
22	Minna	°I don't understand°
23		((*Minna turns gaze to Leonore, leans back*))
24		[((*Leonore shakes head, Hannu opens right palm*))
25	DIETMAR	[uhm (.) Ricardo
26		((*Hannu leans back*))
27	DIETMAR	any chip from you
28		((*Hannu, Minna and Claus turn gazes to screen one after the other;*
29		*Bruno and Marja gaze to each other, smile*))

The extract begins with Dietmar inviting Petri or Anders to offer their 'judgements' on the topic (lines 1-2). Petri begins his turn by projecting a dispreferred response (Schegloff 2007): a minimal verbal token 'u:h' and a negation indicative 'yes but' uttered slightly slower than the preceding words. Suddenly a technical problem transforms his talk into an unidentifiable mumble (line 5), and at the same time the wide screen emits a blue flash. All but one (Bert) of those present in the local space react by turning their gaze towards the wide screen. The participants orient to the technological disruption by turning their gazes to one another, making disconcerted facial expressions (e.g. frowning) and smiling. In addition, Bruno and Minna shake their heads at the same time, and Bruno turns his upper body towards Hannu, who is sitting next to him, and whispers something. Hannu then leans forward and stays close to his laptop microphone for a few seconds, which seems to display an orientation towards taking a turn (line 9; cf. Mondada 2007, 2013). Meanwhile, Bruno turns his upper body again, towards Marja, and whispers something to her. He then leans back and smiles at the people sitting opposite, which invites them to smile. As Minna leans forward, Hannu shifts from the forward leaning position and straightens his posture a little (line 12). Samantha invites alignment by putting the fingers of her left hand around her pursed lips to imitate mumbling and turns her gaze first to Leonore and then to Minna. However, no one looks at her, and, partly in overlap, Claus turns his gaze to Leonore, then smiles, slightly raises his right index finger and makes a sarcastic comment on the ongoing technological trouble (line 14). His use of the contextual reference 'now' with a clear emphasis invokes shared knowledge of another troublesome moment experienced by the participants prior to this extract.

Affiliative displays follow Claus's comment. Leonore responds with a smilingly uttered 'ah' and an exaggerated hand gesture (line 17), and the other local participants laugh (see Stivers et al. 2011). Petri and the other distant participants do not display any (verbal) orientation to the audible comments made in the local space, which suggests that they might not have heard them. Instead, Dietmar initiates sequence closure by thanking Petri and verbally agreeing with him (line 20-21). Minna then makes an additional, barely audible, verbal remark about not understanding, and turns her gaze to Leonore (line 22). Leonore displays her agreement with a headshake (line 23; see Kangasharju 2002). Hannu then opens his right palm, shakes his head, and concurrently with Dietmar's selection of the next speaker, leans back (line 26). His actions function as a distancing move that also marks the shift towards establishing a shared focus on the overall meeting space, even though repair was never initiated nor the missing information retrieved by the local participants. The

meeting is then moved on by Dietmar (lines 25 and 27), who makes no recognition of the parallel interaction.

In the above extract, the local participants are faced with a shared problem of hearing, which they react to in their multimodal displays of alignment and affiliation (e.g. facial expressions, gazes, smiles, gesture, and whispers). Their disalignment from the main activity of the meeting and their allotted roles (i.e. speaker, hearer) is not made public in the overall meeting space, indicating orientation to progressing the meeting. At the same time, alignment and affiliative actions are used to enhance the sense of a local community. Although at some point Hannu's bodily orientation (i.e. leaning forward, close to the microphone, line 9) anticipates his taking a turn in the overall meeting space, he does not initiate a repair sequence that would restore the lost information (see Schegloff 1992). Hannu's further actions have a twofold function: by raising his hand and shaking his head, he first affiliates with the local collective, and then by leaning back he physically distances himself from the local collective and thus invites closure of the parallel interaction (line 26).

The next extract is from a later point in the same meeting. Minna has been asked to give an update on a work task that she was involved in. Using Hannu's laptop, she has delivered a PowerPoint presentation projected onto the wide screen. In the extract, she is addressed by a distant participant, Hans, whose speech cannot be heard due to technological distortion. Since Minna is verbally targeted as the recipient, she cannot ignore this problem with the audio-connection.

Extract 2

1	Minna	so (0.5) I'm very happy how our (0.9) category move went and
2		our team is working very well together so (0.4) we're all good
3		(0.9) ((*Minna straightens posture, smiles*, fig. 4))
4	Minna	thanks
5		(1.0)
6	HANS	( ) Minna [we ( )
7		[((*Bruno, Hannu, Claus, Bert and Leonore turn gaze to screen*))
8	HANS	[( )
9		[((*Bert, Claus and Leonore turn gaze to Minna*))
10	HANS	([ )
11		[((*Minna touches keyboard mouse; Marja, Samantha, Claus, Bert,*
12		*Leonore and Julia turn gaze to screen*))

13 HANS [( ) how is (.) the ( ) going, and how is it ( )
14 [((*Minna puts hand on right temple; Bruno, Minna and Leonore*
15 *frown*, fig. 5))
16 ((*Bruno and Leonore turn gaze to Minna; Leonore shakes head; Minna*
17 *turns gaze to Leonore*))
18 [(0.9)
19 [((*Minna leans forward, turns gaze to wide screen*))
20 Minna .hh ((*tongue click, micro headshake*)) I could really hardly hear you it's a
21 very bad connection [could you <u>please</u> re↑peat
22 [((*Minna leans very close to laptop screen, turns*
23 *gaze to Leonore, grins, turns gaze to wide screen*))
24 (0.5)
25 HANS yes. and get probably improved with (mine)
26 Minna ↑£oh£
27 ((*Bruno turns gaze to Minna, smiles*))
28 HANS is it better <u>now?</u>
29 Minna yes (.) thanks [eh he
30 [((*Marja, Bruno, Claus and Leonore turn gaze to screen;*
31 *Marja, Bruno, Hannu, Bert, Julia and Leonore smile*))
32 HANS okay (.) I was wondering –

The extract begins as Minna has just concluded her presentation and is orienting to topic-closure with a summary and a so-prefaced self-assessment 'we're all good' (line 2). She moves physically further away from the laptop and the table microphone, indicating that she is ending her turn and opening the floor to the other participants (Figure 4).

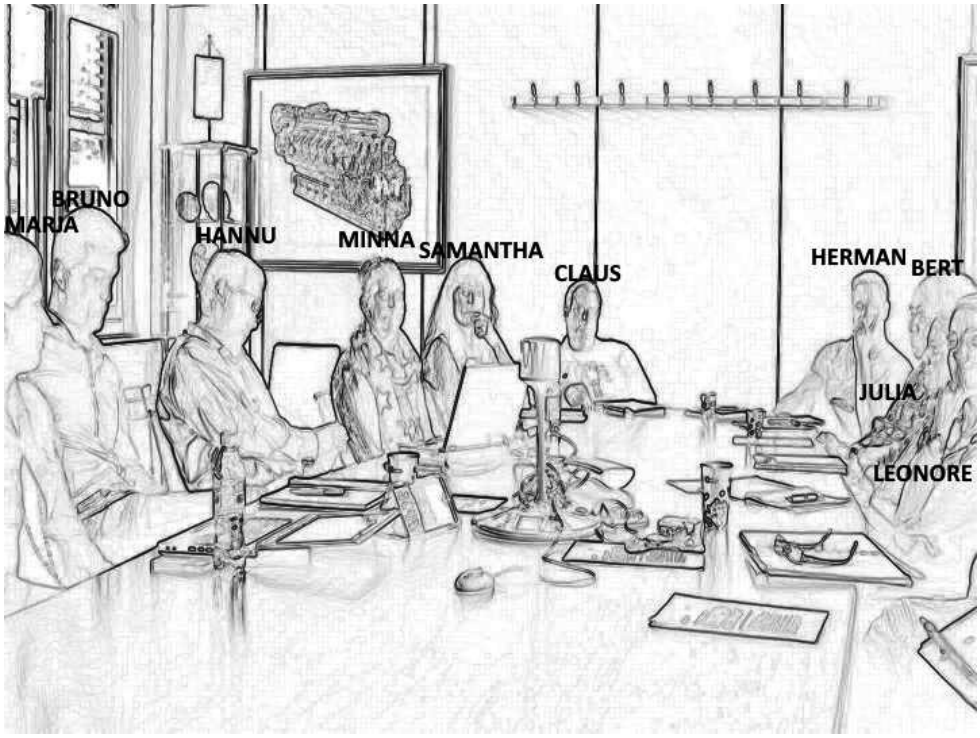

Figure 4. Minna straightens posture, smiles.

She produces a closing-implicative remark, 'thanks' (see e.g. Nielsen 2013), which is followed by a 1.0-second pause. Hans selects himself as the next speaker and targets Minna as the recipient of his comment (line 6). The sound quality immediately deteriorates, and five people react by turning their gaze towards the wide screen for a few seconds (line 7). After three people have turned their gaze to Minna, she touches the attached keyboard mouse. This action is followed by seven people turning their gaze again towards the wide screen (lines 11-12). Minna displays discomfort by putting her hand on her right temple and frowning. Concurrently Bruno and Leonore make similar displays of their orientation to the shared problem (i.e. frowning; Figure 5), after which they both turn their gaze to Minna. When Leonore shakes her head, she concurrently turns her gaze to Minna, who looks at her for a while with a similar disconcerted facial expression.

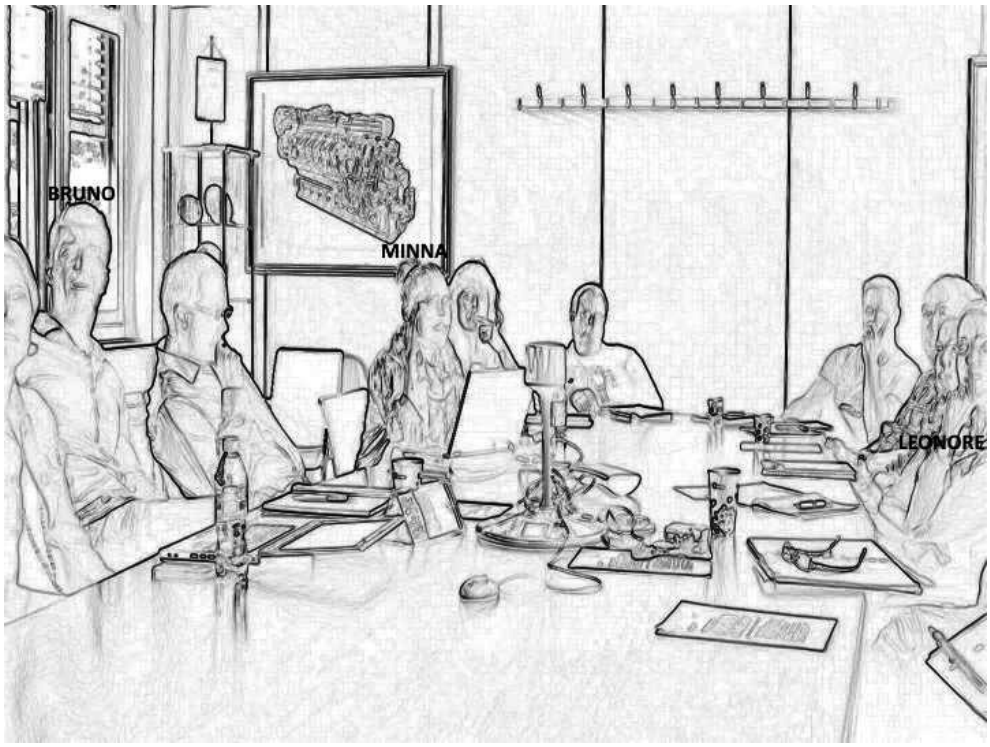

Figure 5. Minna puts hand on right temple; Bruno, Minna and Leonore frown.

Minna's turn-beginning markers, an in-breath and a tongue-click occurring concurrently with her change of posture (line 20), foreshadow the imminent nonaligning turn: she initiates a repair sequence by producing an epistemic account 'I could really hardly hear you it's a very bad connection', which also serves to account for her inability to provide a preferred response (i.e. an answer to Hans's question; line 20-21; Schegloff 2007). She then requests Hans to repeat his turn, at the same time leaning far over the laptop and producing her utterance very close to the laptop microphone, thus showing embodied orientation to the problems of audio transmission (line 19-22). Next Minna turns her gaze to Leonore and grins, thereby displaying her discomfort and inviting the affiliation of the local collective. These actions seem related to the trouble caused by having to interfere with the progression of the meeting. When Hans offers a solution to the technical problem (line 25), Minna's high pitch 'oh', produced smilingly, not only acknowledges receipt of the information but also indicates a clear change of state (line 26; Schegloff 2007; Heritage 1984). Bruno immediately aligns with this "now-hearing" stance and smiles (line 27). Minna marks the sequence closure via a 'thank you' and post-positioned laughter that the five local participants further affiliate with via smiling (line 31).

As in the first extract, the local participants display their orientation to not hearing with a several bodily resources: gaze directed towards each other and towards the screen on

the wall, and facial expressions that can be interpreted as projecting awareness of a problem (Olbertz-Siitonen 2015). Minna, on the one hand, is accountable for responding, and therefore cannot let the problem of hearing pass. At first, during Hans's turn, she affiliates with the others in the local space, but then initiates a repair sequence in the overall meeting space by orienting both to the technological problem and the lost content (for content-oriented repair, see Rintel 2010).

The extracts show the local participants drawing on a range of multimodal resources to make the shared problem relevant in their interaction. Technological problems can thus create an opportunity for establishing local alliances and building a local community. Problems like this are not typically made public in the overall meeting space, a phenomenon that may be explained by participants' preference for progressivity, i.e. maintaining the progression of the main activities of the meeting. Extract 2 further demonstrates that when technological distortion disrupts the interaction and participants' ability to produce a relevant next action, the problem needs to be addressed in the overall meeting space.

5.2 Alignment and affiliation during silence

Due to the restrictions on visual access, the reasons for silences are sometimes unclear to the participants in distant meetings. Not all instances where silences occur reflect interactional trouble; whether they do rather depends on their sequential position and what is preferred as the relevant next action in the conversation. In the data, silences after first-pair parts, especially those subsequent to questions, often interfered with the natural flow of the interaction and sometimes led to confusion between the local and distant participants.

In the next extract, Marja has suggested that she could be the one to train members of the company in a given protocol. The chair, Dietmar, has expressed his wish for rapid execution of the task, and Marja communicates her need to obtain more information from the other teams. Markku, one of the eight distant participants, is the only one to respond to Marja's request for information, but only after some delay (line 12).

Extract 3

1		[((*Marja leans back, gazes at screen; Hannu gazes at Marja*))
2	Marja	[< I: > I will try to do th- do the training next week but I need to know
3		from the units if the: using of the ( ) lists is [familiar to them or not.
4		[((*Marja straightens posture*))
5		(2.3) ((*Marja puts elbows on table, right hand on chin*, fig. 6))

6	Dietmar	okay ((*Dietmar puts hands on keyboard, turns gaze to screen*))
7		((*Hannu turns gaze to screen*))
8	Marja	but it's quite simple (.) [°simple list°
9		[((*Dietmar takes hands off keyboard*))
10	MARKKU	in Finland we have (1.0) [done ( ) lists
11		[((*Dietmar puts hands on keyboard*))
12		(3.2) ((*Dietmar starts typing*)) D----->*
13	Dietmar	[okay
14		[((*Hannu turns gaze to Marja*))
15	Hannu	° ([scrapping) °
16		[((*Marja turns gaze to Hannu*))
17	Marja	°mm[m° ((*Marja tilts head to left*)) D----->*
18	Dietmar	[any any objection that those people get trained and and that
19		they try to [spread it (.) ((*Dietmar turns gaze to screen*))
20		[((*Marja turns gaze to screen*))
21	Dietmar	[through: the purchasing next week
22		[((*Dietmar turns gaze to Marja; Hannu turns gaze to screen*))
23	Dietmar	is there any [limitation next ↑week
24		[((*Dietmar turns gaze to screen and then window*, fig. 7))
25		(4.2) ((*Hannu turns gaze to Dietmar, then to Marja*))
26		((*Dietmar turns gaze to Marja, smiles*))
27	Dietmar	@I [love efficiency@
28		((*Marja turns gaze to Dietmar, smiles*))
29		((*Hannu smiles*))
30	Dietmar	let's go on. [eh he
31		[((*Dietmar turns gaze to Hannu, then the screen, starts typing*))
32	Marja	si(h)le(h)nce, [it can also mean that he he he
33		[((*Marja turns gaze to Hannu*
34	Marja	no- not understanding [but,
35		[((*Hannu turns gaze to screen, Dietmar*
36		*starts typing*))
37		I was thinking that should we: [discuss about scrapping,
38		[((*Marja turns gaze to Dietmar*))

Marja's statement 'I will *try* to do the training next week' placed preceding a 'but'-prefaced clause indicates uncertainty and frames her future action as conditional on the acquisition of additional information that is needed to perform the task (lines 2-3). Her bodily orientation towards the screen suggests that she is waiting for a response (Figure 6).

Figure 6. Marja puts elbows on table, right hand on chin.

During the ensuing silence of 2.3 seconds, all three local participants look at their screens and thus display their orientation to the relevance of a response from the distant participants. Dietmar then acknowledges Marja's turn with a go-ahead marker, 'okay' (Schegloff 2007), and concurrently puts his hands on the keyboard. Marja continues with an assessment, 'but it's quite simple', which seems primarily aimed at those who are *not* familiar with the procedure (line 8). When she repeats the last two words, 'simple list', in a quieter voice, Dietmar withdraws from his action-projecting body position by taking his hands off the keyboard. Markku responds to Marja's comment, and by using a recognitional reference, 'in Finland we', makes it clear that others may not necessarily be familiar with it (line 10). At the same time, Dietmar again puts his hands on the keyboard, during the following pause of 3.2 seconds, starts typing. Concurrently with Dietmar's acknowledgment of Markku's turn ('okay', line 13), Hannu turns his gaze to Marja (line 14). When he whispers, Marja turns to look at him, replies affirmatively with 'mmm', and a head tilt. While Dietmar is still engaged in typing and signals no recognition of these parallel activities, Marja and Hannu develop a local affiliation that is not visible in the overall meeting space.

Dietmar then ceases to type and formulates a proposal that has two components: a request to either reject or accept the future action (i.e. training) and its schedule (i.e. the following week) (lines 18-23). His post-expansion, 'is there any limitation next week', assumes agreement with the action itself, but at the same time, makes the latter request relevant for the production of a response. Towards the end of his turn, he gazes at Marja, who looks at her screen, then towards his laptop screen, and finally, towards the window (Figure 7). By so doing, he momentarily distances himself from the situation and displays unavailability for interaction in the local space (see also Lindström 2016). During the following pause of 4.2 seconds and partly in overlap with this action, Hannu turns his gaze towards Marja, who is still oriented to her screen. Also Dietmar turns his gaze towards Marja, smiles, and then comments on the lack of response as a sign of 'efficiency' (line 27), produced in an animated tone, and thereby invites a local alignment. Both Hannu and Marja affiliate via smiling and thus treat his comment as humorous (lines 28-29). When Dietmar declares 'let's go on' (line 30), he further takes the silence from the distant participants' side as a sign of common agreement and an indication of their readiness to move on (cf. Nielsen 2013). After his post-turn laughter, during which he briefly looks at Hannu, he quickly restores his orientation to the meeting and starts typing (line 31). Marja continues to align with Hannu by commenting laughingly on the role of the silence (i.e. as potentially indicating 'not understanding') and looking at Hannu smilingly. Noticing that the other two local participants are already oriented to the overall meeting space, she realigns and uses the contrastive 'but' to accomplish a rapid in-turn shift to another meeting-relevant topic ('scrapping') brought up earlier in the extract by Hannu (line 34-37).

Figure 7. Dietmar turns gaze to screen and the window.

In the extract, the local participants orient to lack of response and protracted silences (lines 5 and 25) as problematic. They negotiate a local alliance among themselves, and promote their mutual understanding via humor. While silence is something that all three local participants orient to via bodily displays and verbal accounts, the moment-by-moment organization of aligning and affiliating displays is affected by Dietmar's engagement in other activities. Hence, the construction of alliances and the 'us' versus 'them' arrangement in distant meetings relates not only to the asymmetries in visual access between the local and distant participants, but also to the ways in which the participants make their availability known to the others in the local space.

The reasons behind silences are not straightforward in distant meetings, and what makes them problematic is usually their sequential position and what is considered as a relevant next action (e.g. responses after questions). Extract 3 shows the local participants making use of silences as resources for enhancing their local alliance and accomplishing progressivity (cf. Nielsen 2013). Although engagement in other activities (e.g. typing) in the material setting may influence the ways in which alliances are temporally and sequentially structured, silences nevertheless create room for different kinds of negotiations of alignment and affiliation in the local space.

5.3 Alignment and affiliation during disagreement

In face-to-face meetings, participants have access to each other's verbal and bodily resources; this is important as it enables anticipation of dissenting turns and the co-construction of oppositional alliances (e.g. via headshakes; see Kangasharju 1996). In distant meetings, not all displays of disaffiliation are made relevant in the overall meeting space, which on the one hand shows orientation to sustaining progressivity, yet on the other hand leaves situations sometimes unresolved.

The next two extracts are drawn from a meeting in which the local participants are Hannu, Marja and Dietmar. There has been a discussion on a problematic issue concerning lost warehouse materials and how to mark these in the system. As the specialist in the area, Marja has tried to correct false assumptions about the practices in use. A distant participant, Markku, has asked for clarification on the responsibility of the carriers, and the extract begins with Marja's reply.

Extract 4

1 >>-- ((*Marja and Dietmar gazing at screen*))

2	Marja	I think it's the same thing that we've had with the supplier deliveries
3		(.) that they have booked in a hundred pieces and they accidently put in two
4		hundred pieces (.) the easiest way is to check the inventory and the urgent
5		issue case ↑area if the parts are not ↑<u>there</u> (.) then
6		[(0.4)
7		[((*Marja raises right hand, concurrently shrugs*, fig. 8))
8		((*Dietmar turns gaze to Marja, hand on temple*))
9	Marja	then we can mark them as completed (.) the orders they are not going to
10		count they're lost
11		(2.2) ((*Dietmar turns gaze to screen, starts typing*)) D----->*
12	MARKKU	I: guess we just cannot close the orders as [the ( ) has done (.)
13		[D----->*
14		[for instance in our case
15		[((*Dietmar turns gaze to Marja*))
16	MARKKU	here in Finland so (.) they have checked that
17		[one hundred pieces left
18		[((*Dietmar turns gaze to Hannu, then screen, starts typing*)) D*--->>
19	MARKKU	and only .hhh fifty pieces is reportedly in and uh (0.2) we just cannot
20		close them
21		(2.0)
22	GUNNART	exactly
23		(0.5)
24	RICARDO	Markku did we (.) [so we move the delivery date to the future
25		[((*Marja turns gaze to Hannu, shakes head*))
26		((*Marja sighs,* [*picks up coffee cup, leans back, turns gaze to screen*))
27		[((*Dietmar glances at Marja while typing*))
28		((*Marja crosses arms*))

Marja starts her multiunit turn with an 'I think'-prefaced assessment displaying an epistemic stance (lines 2-5) while maintaining her gaze at the screen. Her 'if – then' conditional account includes an emphasized deictic expression, 'there', that stresses the place where she thinks the missing parts can be found (line 5). She cuts off the natural continuance of her turn after the word 'then', and during the ensuing pause of 0.4 seconds raises her right hand

and concurrently shrugs. This both anticipates the upcoming gist of her argument and pre-figures her disengagement from the issue under discussion (Figure 8; see Streeck 2009).

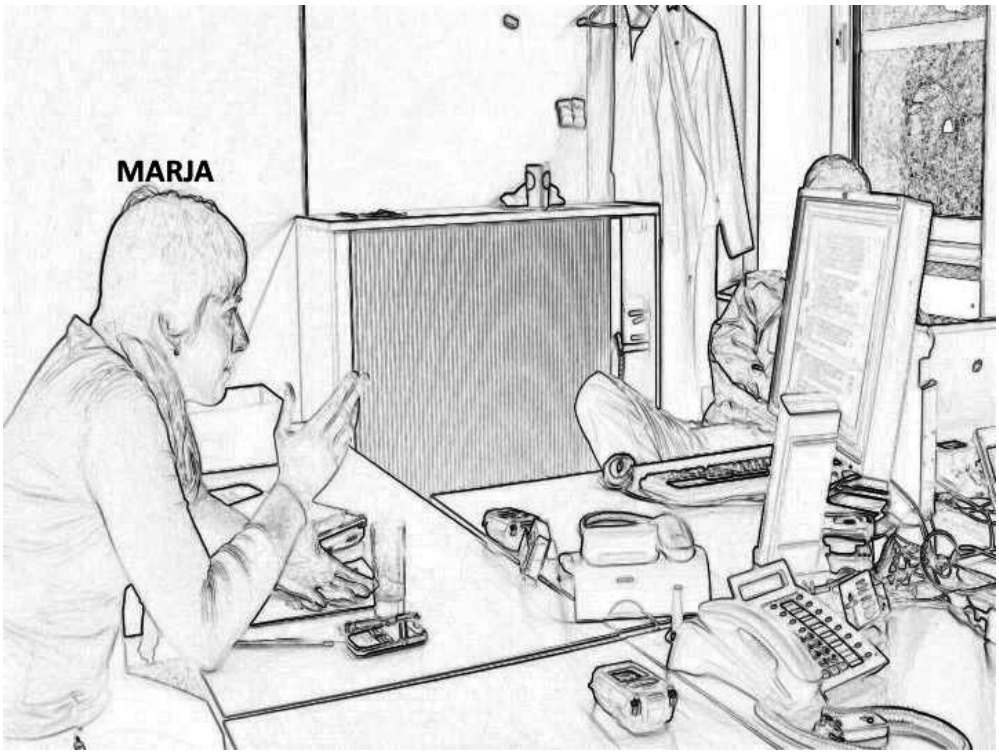

Figure 8. Marja raises right hand, concurrently shrugs.

Dietmar turns his gaze towards her and leans lightly on the fingers of his right hand, thus displaying an orientation to listening (line 8). Marja ends her turn with a matter-of-fact-statement (see Kangasharju 2002), a proposal to 'mark the orders complete', which is followed by a silence of 2.2 seconds. On the conversational level, Marja's turn (lines 4-10) invites instant cooperation with a preferred action (i.e. to agree/disagree; see Steensig 2012). Instead of contributing to the conversation, Dietmar turns his gaze back to the screen and starts typing (line 11). The ensuing silence thus displays passive opposition to the proposal and is followed by Markku's epistemic account that is also an other-correcting counter-argument that explicitly disagrees with Marja (lines 12-20; see Kangasharju 2002). By mitigating and delaying the second part with an explanation (lines 14-19), he further orients to producing a dispreferred response (Schegloff 2007). During the turn, Dietmar momentarily ceases typing and as an alignment invitation, turns his gaze first to Marja, and then Hannu (lines 15 and 18). After this brief monitoring of the local participants, he then starts typing and continues to do so until the end of the extract.

Markku's opposing turn that has ended with a partial repetition of his argument 'we just cannot close them' (lines 19-20) is followed by a silence of 2.0 seconds. At this juncture,

the sequence has reached the point that the disagreement has to be either ratified, or rejected. After some delay, Gunnart affiliates with Markku and thus makes their mutual agreement audible (line 23; Kangasharju 2002). By addressing Markku by name and asking about the delivery date, Ricardo further aligns with the proposed oppositional alliance and concurrently proposes Markku's opinion as overriding Marja's. In the local space, Marja invites Hannu's support by turning her gaze towards him and displaying disagreement with a headshake. She then sighs and disengages from the situation by leaning back, sipping coffee, and finally crossing her arms. Dietmar aligns with Marja's actions with a brief glance, yet quickly reorients to the screen.

Since the distant participants collectively disagree with Marja and establish an oppositional alliance, Marja makes her opposition tacitly known and invites the local participants to affiliate with her. While Hannu and Dietmar both acknowledge Marja's turn via gaze, and thus align with her actions, they do not explicitly affiliate with her, either via additional embodied displays in the local space or verbally in the overall meeting space. Although in face-to-face meetings tacit oppositional alliances are usually made public at some point (see Kangasharju 2002), in this case, Marja does not signal her disaffiliation again in the overall meeting space.

Not being able to monitor the bodily-visual cues of the parties engaging in a dispute may lead to sequence expansion and require additional efforts to resolve the situation. In the final extract, a distant participant, Heinrich, has proposed that a group of operators be given a clear process schedule. Dietmar has acknowledged his turn, yet without actually agreeing to its content. In what follows Dietmar makes it clear that he has delegated the task of training to Marja and asks for others for their approval. This occasions disagreement that is addressed in the long multiunit turns by Marja and Heinrich.

Extract 5

1		((*Marja and Dietmar gaze at screen; Hannu writes with pen*))
2	Dietmar	feel free to occupy them but as soo:n as Marja wants to give out
3		some training and instruction please read them (.) is that ↑good
4		(1.0)
5	HEINRICH	yeah that's good but it- it's a- it's a ↓shame (.) because >then we-
6		then we try to set up a way and everybody will probably do it
7		differently I will do it differently< then Herman will do it and- (.)
8		others and Keijo: and in the end (.) then we have to (0.2) organize it again

9 Marja yeah but what is- [what <u>is</u> your
10 [((*Hannu stops writing, turns gaze to Marja*)) H*--->>
11 ((*Dietmar turns gaze to Marja, frowns*, fig. 9))
12 Marja [↑problem now
13 [((*Marja leans forward, turns gaze to screen*))
14 Marja because I'm trying to understand from technical side (.) it is <<u>not</u>
15 that difficult> that you ask for the documents from the suppliers
16 for a certain [amount of materials.
17 [((*Marja begins to move hands*)) M---->*
18 then you <u>check</u> the documents you <u>check</u> the quality (.) if that is ok↑ay,
19 you put it to the ( ) you create this [<u>folder</u>
20 [((*Marja draws a rectangle with both forefingers*))
21 for this supplier which there is instructions how to do that (.) <u>then</u>,
22 you add the information to the ( ) file that you send to ( ) to upload
23 (.) and [then the <system is uploaded.>
24 [((*Marja taps table rhythmically with fingernails of both hands*))
25 Marja (0.2) so, the process as such is really really simple but it's a question of
26 what do you [ask
27 [((*Marja holds out right hand, palm up*, fig. 10)) M---->*
28 Dietmar okay then [you organize some [problem (.) meetings
29 [((*Dietmar taps table with knuckles*))
30 HEINRICH [(° °) (° °) yeah
31 Dietmar let's [organize [a meeting,
32 [((*Marja turns gaze to Dietmar*))
33 HEINRICH [°we don't-°
34 [((*Dietmar turns gaze to Hannu*))
35 Dietmar with [questions that those people have (0.2) [let's discuss it in the
36 [((*Dietmar turns gaze to Marja*)) [((*turns gaze to screen*))
37 [((*Marja rolls eyes,*
38 *then turns gaze to screen*))
39 Dietmar group and, then (.) [let's get it going.
40 [((*Dietmar lifts both hands, palms up*, fig. 11))
41 (1.3)

42 RICARDO maybe so- sorry guys ca- can I also comment a little bit (.) from
43 [my experience --
44 Dietmar [((*Dietmar turns gaze to right, puts right hand fingers on top of nose,*
45 *closes eyes*, fig. 12))

By his statement and instruction (lines 2-3), prompting others to follow a certain procedure and attributing some authority to Marja, Dietmar makes clear his role as the manager and chair of the meeting. He ends the turn with a question, 'is that good' following a pause of 1.0 seconds. Heinrich begins his response with a "pro forma" agreement, 'yeah it's good', which is followed by an instant negation, 'but it's a shame' (line 5; Schegloff 2007). This anticipates his counter-argument, which is produced partly at a faster pace, indicating slight agitation (lines 5-8). Marja's response is immediate, and she constructs opposition through a turn-initial marker ('yeah but'), followed by a question 'what is your problem now', uttered in a tense voice. Hannu and Dietmar instantly display orientation to Marja's turn by ceasing their other actions and turning their gaze towards her. Dietmar frowns (Figure 9). At the beginning of her turn, Marja changes her body position and leans forward gazing steadily at the screen (line 13). Next Marja produces an epistemic account, 'I'm trying to understand

Figure 9. Dietmar turns gaze to Marja, frowns.

from technical side', that is followed by a disaffiliative assessment, 'it is not that difficult', uttered with emphasis (lines 14-15). She then continues with a long statement explicating the protocol stage by stage (lines 15-24), using her hands for further emphasis, and maintaining her gaze on the screen (lines 24). She produces the 'so'-prefaced summary (line 25-26), and holds out her right palm concurrently with uttering the final word 'ask' as a forward gesture to give away the floor (Figure 10; see Steensig 2012). Although her verbal contribution is directed specifically to the distant participants, her bodily displays visibly draw the attention of the local participants.

Dietmar acknowledges Marja's turn instantly via 'okay', and his expression (frown) and tense voice suggests that he orients to the issue as misplaced. He proposes that another meeting should be arranged to solve the problem and taps the table top emphatically with the knuckles of his right hand, concurrently with uttering 'problem meetings' (line 28). Overlapping with Heinrich, whose words are not audible (lines 30 and 33), Dietmar self-

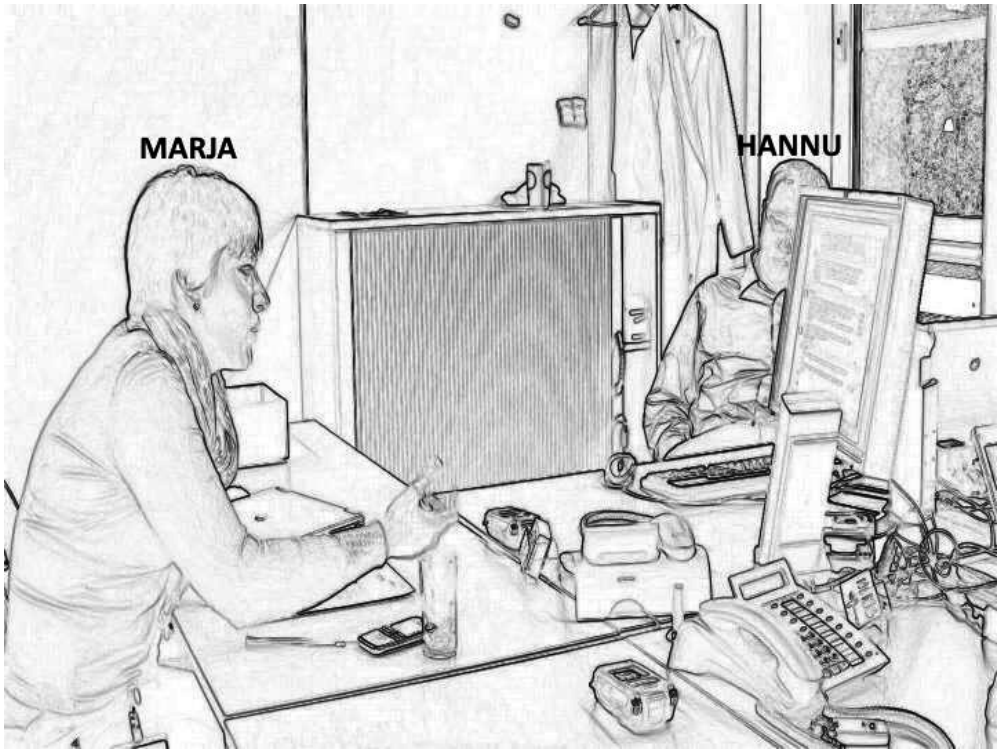

Figure 10. Marja holds out right hand, palm up.

repairs and reformulates his proposal with an inclusive ‘let’s’ directive (lines 31, 35 and 39) and makes additional alignment invitations via gaze in the local space (lines 34 and 36). By looking at Marja while referring to ’those people’, Dietmar explicitly orients to the juxtaposition of ‘us’ versus ‘them’, the local and distant participants (line 35). When he lifts his hands, palms up, he indicates disengagement from the topic and, concurrently, sequence closure (Figure 11). Marja rolls her eyes and thus indicates disagreement with the proposal (line 37), yet she aligns with the others, displaying her readiness to move on via silence (see Nielsen 2013). A distant participant, Ricardo, initiates a post-expansion in which his turn-initial delay, a pre-request, expresses that he is aware of performing a disaligning action (line 42). Dietmar displays his orientation to the inconvenience visibly by placing the fingers of his right hand above his nose, leaning slightly on his elbow and closing his eyes (Figure 12). By thus doing, he also makes his disalignment/disaffiliation available in the local space, but not the overall meeting space.

Figure 11. Dietmar lifts up both hands, palms forward.

Figure 12. Dietmar turns gaze to right, puts right hand fingers on top of nose, closes eyes.

In the above extract, Heinrich's disaffiliative response to Dietmar's proposal engenders a dispreferred sequence expansion, a dispute during which the physically co-present participants align with each other via embodied displays. Although Marja's embodied actions (lines 17-27) cannot be seen by the distant participants, they are closely monitored in the local space and seem like an attempt to invite an alliance. While Dietmar makes it verbally clear that the dispute interferes with the progression of the meeting, at the same time, he takes up the concern and thus, on a higher level beyond locally paired action, affiliates. He draws on the environment and bodily resources for further emphasis, and clearly orients to the juxtaposition of the local and distant participants' interactional resources (i.e. those *there* and us *here*). Although his attempt to restore alignment in the overall meeting space is made explicit to everyone, when it fails at the end of the extract, he makes his disappointment relevant only in the local space.

Restrictions in access to bodily resources limit participants' ability to display and resolve disagreements in distant meetings. The data suggest that local participants do not always make their opinions known in the overall meeting space, but instead, draw on their material setting and bodies, i.e. practices that are specifically available for the local participants to orient to, to construct tacit oppositional alliances (see Kangasharju 2002). In addition, practices aimed at making such alliances relevant in the interaction enhance the

local participants' sense of a local community, but they do not facilitate the reaching of mutual agreement in the overall meeting space. Extract 5 further shows that while local participants' bodily emphases (e.g. frowns, gestures, tapping the table top) may accompany verbal disagreement formulations, they are not seen by the distant participants and thus may implicitly function as attempts to form a local alliance.

6 DISCUSSION

The purpose of this paper has been to investigate how alignment and affiliation are accomplished multimodally between physically co-present participants, who coordinate their actions in multiple interactional spaces: the local space and the overall meeting space. The focus has been on instances where the interaction is challenged by either technological problems, silences, or disagreements. This involves the inducing of parallel interactions in the local space that potentially enable the formation of alliances. The analysis describes the process of constructing an alliance by 1) inviting alignment in the local space, 2) negotiating/ratifying the local community, and 3) closing the parallel interaction. This progression involves use of a range of multimodal resources, such as gaze, gesture and bodily action, and orientation to material objects, like the mouse or the shared screen in the meeting room. Although asymmetric access to interactional resources is clearly an obstacle to accomplishing intersubjectivity and mutual agreement in the overall meeting space, it is nevertheless drawn on in the interaction between the local participants and used as a resource to enhance their sense of local community.

In face-to-face encounters, embodied displays of alignment and affiliation have a significant function in securing contiguity (e.g. Ford 2012; Stivers 2008), providing clues about interactional trouble and the formation of alliances (Kangasharju 2002). In distant meetings where not everyone can see each other, a range of multimodal resources (facial expressions, gaze, gesture) is available only to the co-present participants, who can thus make use of them to display mutual agreement and construct a local alliance in a way that excludes the distant participants. On the one hand, the emergence of interactional problems enables the negotiation of these collectives, and on the other hand, alignment and affiliation make relevant the juxtaposition of the local and distant participants, and the creation of oppositional alliances. However, although not all problems are made public in the overall meeting space, the local participants will nevertheless visibly orient to them amongst themselves (e.g. as in Extract 1, where some information is lost). Means for alliance-building

between physically co-present participants depends on individual displays of availability in the material setting (see Extracts 3 and 4; Lindström 2016).

The present data suggest a clear preference exists for progressivity over sequence expansions: i.e. when problems occur, parallel alignments that emerge in the local space do so in a such a way as not to disturb the main activity of the meeting. Then again, on occasions where the continuity of the interaction is at risk in the overall meeting space (e.g. when one is unable to provide a relevant next action due to a hearing problem; see Extract 2), repair (e.g. Schegloff 1992, 2007) becomes a prerequisite for progressing the main activity. Thus, since repair always extends the sequence size, it is a resource that is resorted to with reluctance. In the extracts, initiating repair makes the interactional problems public and negotiating them relevant in the overall meeting space. At the same time, it accomplishes a shift in orientation from the local participants' alignment work to securing the progression of the meeting. As seen in Extract 2, repair can contribute to the process of closing parallel interactions between physically co-present participants, while also facilitating intersubjectivity between the participants in the overall meeting space.

Although alignment and affiliation represent different levels of cooperation, their functions are not always separable in the co-construction of alliances (see also e.g. Steensig 2012, Kangasharju 2002). The ways in which they are displayed are contextually multilayered, as the local participants are also engaged in the overall meeting space. For instance, in Extract 5, a local participant's embodied actions seem to invite alignment and affiliation in the local space, although the formulations of verbal disagreement are directed to a distant participant. Furthermore, whereas the local participants may explicitly display their orientation to silences as problematic via verbal contributions in the overall meeting space (see Extract 3), their embodied displays may promote other, additional, orientations towards alignment/affiliation, relating to their understanding of the situation. Overall, how the local participants evaluate problematic instances and what they consider as both relevant and necessary actions for progressing the interaction may be different from that of the distant participants.

In previous research on institutional encounters, an orientation to progressivity has been shown to reflect trust in the interaction: i.e. that all participants know, see and hear (Kuroshima 2010). In distant meetings, participants similarly treat securing continuity and the ability to perform a relevant next action important, even if they cannot be sure to have access to all knowledge and resources. This study showed that, via alignment and affiliation, participants in the same physical location orient, firstly, to the asymmetries of interaction,

i.e. restrictions in visual and audio access, and the availability of embodied resources, and secondly, to problems with hearing, speaking, or understanding. Hence, technological trouble, silences, and disagreements can be understood both as constraints on the unfolding of the meeting, but also as interactional resources with which alliances are built and solidarity is enhanced. Further studies are needed to look into whether a correlation exists between specific kinds of problems and the functions of alignment and affiliation, and whether similar practices can be found in other distant meeting contexts. For instance, the social implications of how simple, everyday problems like technical issues may become more than a discursive aspect in the interaction of distant meetings could be a worthwhile topic. Whereas disagreements appear to be more problematic for both the local and distant participants, technological problems are not always equally evident to everyone. Thus, investigation on how they can be negotiated, including in other types of technologized environments would be welcomed (see also Hutchby 2014). Furthermore, such studies could help practitioners and designers of software technologies in developing applications that ensure participants more equal access to the interactional processes involved.

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APPENDIX. Transcription conventions

The excerpts have been transcribed according to the conventions developed by Gail Jefferson. Multimodal details have been described by applying the conventions developed by Lorenza Mondada.

,	intonation is continuing
.	intonation is final
↑	rising intonation
↓	falling intonation
[ ]	overlapping talk
tha-	a cut-off word
<u>what</u>	word emphasis
>what<	speech pace that is quicker than the surrounding talk
<what>	speech pace that is slower than the surrounding talk
°what°	speech that is quieter than the surrounding talk
WHAT	speech that is louder than the surrounding talk
£what£	smiley voice

@what@	animated voice
wh(h)a(h)t	laughingly uttered word
(what)	uncertain hearings
(x)	unrecognizable or confidential item
(.)	micro pause, less than 0.2 seconds
(0.5)	silences timed in tenths of a second
((gazes))	transcriber's comments
*--->	gesture or action described continue across subsequent lines
*--->>	gesture or action described continue until and after excerpt's end
---->*	gesture or action described continue until the same symbol is reached
>>--	gesture or action described begins before the excerpts beginning

III

MULTIMODAL RESOURCES IN THE CLOSINGS OF TECHNOLOGY-MEDIATED BUSINESS MEETINGS

by

Tuire Oittinen

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IV

NOTICING-OCCASIONED RECOVERIES OF THE INTERACTIONAL SPACE IN A VIDEO-MEDIATED BUSINESS MEETING

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