

Department of Management Studies

Sensemaking in Meetings

Collaborative Construction of Meaning and Decisions through
Epistemic Authority

Johanna Telenius



Sensemaking in Meetings

Collaborative Construction of Meaning and
Decisions through Epistemic Authority

Johanna Telenius

Main dissertation advisor

Professor Eija Ventola, Aalto University School of Business, Finland

Opponent

Doctor Winston Kwon, The University of Edinburgh Business School, United Kingdom

Aalto University publication series

DOCTORAL DISSERTATIONS 185/2016

© Johanna Telenius

ISBN 978-952-60-7015-5 (printed)

ISBN 978-952-60-7014-8 (pdf)

ISSN-L 1799-4934

ISSN 1799-4934 (printed)

ISSN 1799-4942 (pdf)

<http://urn.fi/URN:ISBN:978-952-60-7014-8>

Graphic design: Matthew J Goode

Unigrafia Oy

Helsinki 2016

Finland

Author

Johanna Telenius

Name of the doctoral dissertation

Sensemaking in Meetings

Publisher School of Business**Unit** Department of Management Studies**Series** Aalto University publication series DOCTORAL DISSERTATIONS 185/2016**Field of research** Organizational communication**Date of the defence** 14 October 2016**Language** English **Monograph** **Article dissertation** **Essay dissertation****Abstract**

Meetings are important in knowledge-intensive organizations where opportunities for sharing knowledge are the essence of daily work. Meetings are also the de facto event required in almost all organizations and businesses to make decisions. This study examines sensemaking in meetings of software engineers in an IT & telecommunications company. It provides an explanation of how sensemaking serves as a driver for decision making. The identities of the participant also come into play as they use their epistemic authority to influence the evolving meanings and decisions. By incorporating epistemic authority this study draws light on the real-time management of power in professional meetings.

The study examines how language specifically is used as a resource for the construction of sensemaking. Conversation Analysis (CA) is used as a method to identify those interactions which characterize how sensemaking and epistemics are played out in organizations. The position taken in this study that sensemaking, decision making and epistemic authority are interactionally accomplished social activities, and the analysis demonstrates how they become consequential for the organizational activities. CA also makes it possible to show how these notions relate to decision making.

Majority of existing research focuses on managerial practices or the chairperson's role in meetings. This study adds to the existing literature on sensemaking and decision making by integrating the notion of epistemic authority as a factor in the accomplishment of these activities among professional peers. The data is comprised of video recordings of five authentic meetings among technical professionals in the area of system software development working in a large multinational company. The findings draw light on the collaborativeness of sensemaking. Firstly, the analysis shows that the practices through which the participants pursue their individual agendas tend to constrain the collaborativeness of sensemaking and they lead to long-winded discussion or argumentation, whereas the practices through which the participants pursue mutual sharing of knowledge lead to collaborative acts of sensemaking. Additionally, the closing phase of each topical discussion in the meetings formed a transition phase in which the past discussion is integrated with future actions, and this becomes labelled as decision. Sensemaking precedes as well as follows decision making at the point of discussion in which collaborative acknowledgement is expressed.

Keywords meetings, interaction, sensemaking, decision making, epistemic authority, professional talk

ISBN (printed) 978-952-60-7015-5**ISBN (pdf)** 978-952-60-7014-8**ISSN-L** 1799-4934**ISSN (printed)** 1799-4934**ISSN (pdf)** 1799-4942**Location of publisher** Helsinki**Location of printing** Helsinki**Year** 2016**Pages** 218**urn** <http://urn.fi/URN:ISBN:978-952-60-7014-8>

Acknowledgements

There are many persons without whose support and encouragement this work would not have been possible – or would not even have started. I'm particularly grateful for Professor emerita Mirjaliisa Charles who once over a casual conversation tickled my curiosity by mentioning that the PhD program is open for applications. I'm also indebted to Professor emerita Helena Kangasharju whose lectures on Conversation Analysis raised my interest towards this perspective and who was also willing to read some of the first drafts and gave helpful tips on the methodological front.

Professor Eija Ventola took over as my supervisor after Mirjaliisa Charles and persistently saw to it that I progress on concrete level and continued writing. Thank you for pushing me forward through the years when full-time work and other activities nearly took over.

I also truly respect the opportunities of sharing thoughts with Professor Johanna Moisander. Our discussions weren't many but you were always able to spot the essential however vaguely I described the situation or problem at hand.

I sincerely appreciate the thorough and insightful comments which I received from my preliminary examiners Professor Andrea Whittle and Dr. Winston Kwon; they guided me in improving this work during its final stages

The research started as a part of a larger research program on business know-how, *Liike2*, funded by the Academy of Finland. Our project team in this program, called "Does business know how?", helped me to define the context for my thesis. I also want to extend my thanks to the HSE Foundation and the Foundation for Economic Education; these grants enabled me to take some time off and focus full time on studies and writing.

This work has been done mainly while working full-time. I therefore wish to give my thanks to the colleagues who became a part of my data and the managers who allowed me to gather the material from the company. Many managers have changed during the time, but I am particularly grateful for Juhani Törnqvist and Pasi Toivanen who continued to show interest and gently encourage me to continue despite challenging work duties. Additionally I'm thankful for Tommi Hiltunen for reviewing the final draft from company's perspective.

Finally, I would like to thank the most important people in my life: my family and friends. I am forever grateful for my mother and brother Kimmo who have continued to let me feel that I am free and capable to pursue any goal in life that I set my mind to. My friends were there for fun times during which I could get my mind off this work. And last but not least, my loving thoughts go to my best

encouragement during that last laps of the work: Matthew. Your observations and editorial review were invaluable in the end. Thank you for being there, for everything.

Helsinki, August 2016

Johanna Telenius

Contents

| | |
|---|----|
| Acknowledgements..... | 1 |
| 1. Introduction..... | 9 |
| 1.1 Meetings as a context of study..... | 9 |
| 1.1.1 Sensemaking in meetings..... | 10 |
| 1.1.2 Decision making in meetings..... | 12 |
| 1.1.3 Epistemics as an interactional phenomena in meetings..... | 13 |
| 1.2 Research methodology..... | 15 |
| 1.3 The conceptual framework and research questions..... | 17 |
| 1.4 Contribution of the study..... | 18 |
| 1.5 Structure of the study..... | 19 |
| 2. Sensemaking..... | 20 |
| 2.1 Collective and intersubjective nature of sensemaking..... | 20 |
| 2.2 Temporal aspects of sensemaking..... | 23 |
| 2.3 Disruptive nature of sensemaking..... | 25 |
| 2.4 Sensegiving..... | 27 |
| 2.5 Absence of interaction in sensemaking literature..... | 29 |
| 2.6 Meeting as a place for sensemaking..... | 31 |
| 2.7 Summary..... | 32 |
| 3. Decision making as sensemaking..... | 34 |
| 3.1 Defining decisions and decision making..... | 34 |
| 3.2 Sensemaking as an enactment of decision making..... | 35 |
| 3.3 Temporality of decision making..... | 37 |
| 3.4 Decision making as problem solving..... | 39 |
| 3.5 Decision making as an interactional process..... | 40 |
| 3.6 Summary..... | 42 |
| 4. Professional role and identity at play in the construction of epistemic authority..... | 43 |
| 4.1 Membership categories as professional signifiers..... | 44 |
| 4.2 Professional roles and identities in meetings..... | 46 |

| | | |
|-------|--|-----|
| 4.3 | The interactional construction of epistemic authority | 47 |
| 4.3.1 | Epistemic status and gradients | 48 |
| 4.3.2 | Epistemic stance and stancetaking | 50 |
| 4.4 | Participation framework | 52 |
| 4.5 | Epistemic authority and power in meetings | 54 |
| 4.6 | Methodological issues with power | 55 |
| 4.7 | Summary | 56 |
| 5. | Conversation analysis (CA) | 58 |
| 5.1 | CA as a research methodology | 58 |
| 5.2 | Sequential organization and action formation | 60 |
| 5.3 | Affiliation and alignment in interaction | 62 |
| 5.4 | Accountability | 63 |
| 5.4.1 | Accounts in conflictual situations | 65 |
| 5.4.2 | Factual accounts | 65 |
| 5.4.3 | Arguing as an act of sensemaking in conflictual situations | 66 |
| 5.5 | Characteristics of institutional interaction | 67 |
| 5.6 | Meeting as a context of institutional interaction | 69 |
| 5.7 | Comparing sensemaking and CA | 70 |
| 5.8 | Summary | 71 |
| 6. | Data and method | 73 |
| 6.1 | The nature of software engineering and software architecture | 73 |
| 6.2 | Case company and the organization | 74 |
| 6.3 | Data collection method | 76 |
| 6.3.1 | Primary material | 76 |
| 6.3.2 | Supplementary material | 78 |
| 6.4 | Method of analysis | 78 |
| 6.5 | Validity and reliability | 79 |
| 6.6 | Summary | 81 |
| 7. | Pursuing individual agendas | 82 |
| 7.1 | Negative evaluations and problem statements | 83 |
| 7.1.1 | Deterministic negative evaluation | 84 |
| 7.1.2 | Evaluative problem statements | 89 |
| 7.2 | Counterproposals and position statements | 93 |
| 7.3 | Challenging questions | 100 |
| 7.3.1 | Immediate challenge to preceding turn or statement | 101 |
| 7.3.2 | Topicalizing challenge as a question | 104 |
| 7.4 | Summary | 108 |

| | | |
|--------|--|-----|
| 8. | Pursuing mutual agendas | 112 |
| 8.1 | Inviting and offering expertise knowledge | 113 |
| 8.2 | Open invitation to share knowledge | 116 |
| 8.3 | Collaborative management of overt disagreement | 120 |
| 8.4 | Formulating understandings | 124 |
| 8.4.1 | Formulating candidate understandings..... | 126 |
| 8.4.2 | Collaborative formulation of explanations | 130 |
| 8.4.3 | Formulating other participant's stance..... | 132 |
| 8.5 | Summary | 136 |
| 9. | Pursuing decisions..... | 138 |
| 9.1 | Orienting to collective commitment | 139 |
| 9.2 | Announcing decisions | 148 |
| 9.3 | Giving sense to ephemeral nature of decisions | 157 |
| 9.4 | Orientation to a choice..... | 159 |
| 9.5 | Summary..... | 163 |
| 10. | Discussion..... | 168 |
| 10.1 | Observations about the context | 169 |
| 10.2 | Collaborativeness of sensemaking in meetings | 170 |
| 10.2.1 | Collaborative sensemaking actions | 170 |
| 10.2.2 | Competitive sensemaking actions | 171 |
| 10.3 | Sensemaking as a driver of decision making | 174 |
| 10.4 | Observations on the forms of organizing talk..... | 176 |
| 10.4.1 | Sequential structures..... | 177 |
| 10.4.2 | Action formation | 178 |
| 10.5 | Participation framework and epistemic authority..... | 180 |
| 10.5.1 | Orientation to the source of epistemic authority | 181 |
| 10.5.2 | Interactional identities..... | 182 |
| 10.6 | Summary | 184 |
| 11. | Conclusions..... | 186 |
| 11.1 | Contributions of this study | 186 |
| 11.2 | Limitations and future research | 188 |
| 11.3 | Concluding remarks..... | 190 |
| | References..... | 191 |
| | Appendix 1: Transcription symbols..... | 208 |
| | Appendix 2: Excerpt 47 | 210 |

List of tables

| | |
|--|-----|
| Table 1 Meeting data | 77 |
| Table 2 Decision-making activities | 166 |

List of figures

| | |
|---------------------------------------|-----|
| Figure 1 Sensemaking activities | 184 |
|---------------------------------------|-----|

List of Excerpts

| | |
|---|-----|
| Excerpt 1 [CLIF] Worthless1 | 84 |
| Excerpt 2 [CLIF] Worthless2 | 87 |
| Excerpt 3 [CLIF] UIAdapter1 | 89 |
| Excerpt 4 [CLIF] ProductMgmt | 92 |
| Excerpt 5 [CLIF] Remote4 | 94 |
| Excerpt 6 [ErrMsg] DifferentOpinion..... | 97 |
| Excerpt 7 [EIA] SeparateMilestone1 | 98 |
| Excerpt 8 [CLIF] UIAdapter2 | 101 |
| Excerpt 9 [CLIF] UIAdapter5 | 102 |
| Excerpt 10 [EIA] Counterarguments..... | 104 |
| Excerpt 11 [CLIF] Confusing..... | 105 |
| Excerpt 12 [CLIF] UIAdapter3 | 107 |
| Excerpt 13 [CLIF] Python2 | 113 |
| Excerpt 14 [EIA] SeparateMilestone2 | 114 |
| Excerpt 15 [WUIF] ConcurringThoughts..... | 116 |
| Excerpt 16 [CLIF] Wrappers1 | 117 |
| Excerpt 17 [CLIF] User | 118 |
| Excerpt 18 [CLIF] MgmtInterface1 | 119 |
| Excerpt 19 [ErrMsg] Integer2 | 120 |
| Excerpt 20 [ErrMsg] Integer3 | 121 |
| Excerpt 21 [ErrMsg] Integer4 | 122 |
| Excerpt 22 [EIA] Challenging | 122 |
| Excerpt 23 [HWC] Recap1 | 127 |
| Excerpt 24 [HWC] Recap2 | 128 |
| Excerpt 25 [AA] WhoCan | 129 |
| Excerpt 26 [CLIF] Node/ClusterLocal..... | 130 |
| Excerpt 27 [HWC] PacketsInOut..... | 131 |
| Excerpt 28 [AA] CLIAuth2/Objects1 | 133 |
| Excerpt 29 [CLIF] ExternalScript | 134 |
| Excerpt 30 [ErrMsg] Satisfied | 140 |
| Excerpt 31 [ErrMsg] EverybodyAgree | 141 |
| Excerpt 32 [AA] IndicativeInput..... | 143 |
| Excerpt 33 [AA] Issues | 144 |

| | |
|---|-----|
| Excerpt 34 [WUIF] AnybodyHaveProblem..... | 146 |
| Excerpt 35 [WUIF] Magic | 147 |
| Excerpt 36 [CLIF] InSummary..... | 149 |
| Excerpt 37 [CLIF] YouModify..... | 150 |
| Excerpt 38 [EIA] InReleaseX | 151 |
| Excerpt 39 [EIA] OtherComments..... | 151 |
| Excerpt 40 [TPM] NoStrongOpinion | 153 |
| Excerpt 41 [TPM] Endorse | 155 |
| Excerpt 42 [HWC] "Tiedontasaus" | 156 |
| Excerpt 43 [EIA] ConcreteWalls | 158 |
| Excerpt 44 [AA] ComingBack | 159 |
| Excerpt 45 [CLIF] MoreOrLess..... | 160 |
| Excerpt 46 [CLIF] UIAdapter4..... | 162 |
| Excerpt 47 [AA] Beginning the topical discussion on AA..... | 210 |

1. Introduction

Sensemaking and decision making are central activities for organizations, as they form the purpose and direction for their primary business activities. Meetings are a typical forum for managing these activities in collaboration. This is a study of professional meetings as a stage for sensemaking and decision making. These organizational activities are seen to be connected in the way they realize themselves in the meeting interaction. The identities of the participant also come into play as they use their epistemic authority to influence the evolving meanings and decisions. The focus is on the various ways that epistemic authority is displayed and how it influences the trajectories of talk towards collaborative sensemaking, and in that way supports or disrupts possibilities for a common understanding and decisions.

The data is comprised of the video-recordings of naturally occurring meeting talk. This material is used to describe the social interaction taking place in face-to-face meetings among software experts who convene regularly to make decisions for a complex telecommunication product. (The actual meetings and the organization where they take place are described in more detail in chapter 6.)

1.1 Meetings as a context of study

Meetings abound and fill up the calendars of not only managers but also other professionals. Having worked for years in a software research and development department of a large multinational company, I have come to experience that too often, meetings are a source of frustration. At times people come out of meetings somewhat puzzled and unsure about what was decided, or if anything was decided. Similar comments came to my knowledge about the specific type of recurring meeting from which the data for this study was gathered; although its primary purpose was, to come up with a decision regarding a particular technical topic each time. I had learned that the discussions that took place in these particular meetings had often been highly conflictual in nature. This aroused my curiosity to explore what really happens in these meetings. What, based on the actual meeting talk, would seem to be the essence of the decision-making process? What seems to create the feeling of ambiguity? How do the participants display their understanding if a decision has come about or not?

The frustration and confusion so often expressed about meetings notwithstanding, professionals cannot deny the importance of meetings. Meetings are

important in knowledge-intensive organizations where opportunities for sharing knowledge are the essence of daily work. Professionals make individual decisions in their domain of responsibility, but more often than not decisions require networking and agreement with other experts. The most natural place for such interaction to take place is in a meeting of some sort. The need for such opportunities increases as the technologies become more complex. As Weick (1990/2001, p. 156) rightly states, technologies within the products are becoming more abstract and ambiguous. Hence the developers, as well as managers, sense increased cognitive demands for inference, imagination, integration, problem solving and mental maps that enable them to monitor and understand abstract phenomena. The practical place for sharing this type of knowledge is a meeting. For the technology-driven and knowledge-intensive companies such as the one studied here, this complexity also means that decisions do not fall into the hands of managers only, but also technical experts assume more and more responsibility for the decisions which are critical for business. It is essential for them to learn how to convert their technical skills into profitable results (Baird, 1989), by expressing their opinions through talk.

Meetings have naturally become an interesting topic for communication research as well (Asmuß & Svennevig, 2009; Svennevig, 2012 and *Discourse Studies* in 2012, volume 14, issue 1). The studies by Boden (1994, 1995) have worked as an inspiration for many to follow. There is an increasing amount of studies on meeting interaction based on naturally occurring data (Bargiela-Chiappini & Harris, 1995, 1996, 1997 a,b; Nikko, 2009; Poncini, 2004; Whittle, Housley, Gilchrist, Mueller, & Lenney, 2015; Wodak, Kwon, & Clarke, 2011). In essence, meetings are viewed in these studies as social events the goals of which become interactional joint achievements (Holmes & Stubbe, 2003; Huttunen, 2010; Kangasharju, 2002, 2004; Nikko, 2009, etc.).

So far, the studies on meeting interaction have focused mainly on managerial interaction, or the chairperson. Relatively little work has been done on interaction between professional peers, or about the system of turn-taking in multiprofessional teams. This is not surprising since it can be difficult to get access to company-internal material that would feature employees' involvement in decision making. One study on this aspect is that by Huttunen (2010) which describes the emergence of understanding from an interactional point of view, among a team of technical experts in an Information Technology Research & Development (R&D) environment. Her study is concerned with practices of understanding, knowing and sensemaking in problematic situations in meetings, in terms of determinacy and power (Huttunen 2010). This study can be seen as an extension on that, but sensemaking is approached more specifically from the point of view of epistemic interactional resources as enablers or constraints to organizational sensemaking and decision making.

1.1.1 Sensemaking in meetings

Sensemaking is one of the central functions of meetings. Sensemaking, in short, is “the process by which people construct, interpret, and recognize meaningful

features of the world” (Gephart, Topal & Zhang, 2010, p. 275). Traditionally it has been seen as an act of removing ambiguity. Sensemaking is required when there is a bigger change in the organization or an unexpected situation which interrupts the normal course of events. This is what Weick, Sutcliffe and Obstfeld (2005, p. 413) call “disruptive ambiguity”. Verbal and non-verbal activities are used to make sense of situations and actions that deviate from the norm. In such a situation, reasoning and decisions are needed to amend the situation.

Sensemaking as an approach to study organizations has largely been established around the framework provided by Weick (1990/2001, 1993a/2001, 1995) who describes it as the shared way of knowing and seeing things that are essential for organizational existence and development. Sensemaking is understood as an ongoing accomplishment through which people make sense of the situations and attempt to make them “rationally accountable to themselves and others” (Weick, 1993a/2001, p. 11). In case of ambiguous situations, people are triggered to construct meaning through discussion. This study explores how sensemaking becomes a highly integral part of the decision-making process in a knowledge-intensive organization. Sensemaking is seen as a means of sharing an understanding about the available knowledge base based on which decisions can be made.

Although research into organizational sensemaking has been interested in the design and practices of communication-based systems and activities, research on the actual use of interaction and language as the dynamic arena of sensemaking are surprisingly rare. Some exceptions are the studies by Cooren (2004, 2007) which aim to integrate the macro level ideas of sensemaking with the methods of conversation analysis. Another example is a study by Rovio-Johansson (2007) which looks at sensemaking as a collective activity where language is used as a tool for understanding social reality. Cornelissen (2012) uses a theoretical model to describe how individuals make and create sense, through language, while being accountable to others. He describes the language of communication professionals and how they use metaphors as accounts through which they make sense of anomalous circumstances. He maintains that metaphors are used by the communication professionals to align themselves with the assumed social expectations and to mark particular roles for themselves in order to meet those expectations.

The fact that sensemaking is a relatively theoretical and abstract phenomenon may explain the absence of analytical focus on communication and language in the sensemaking literature. For instance Cooren (2004) has been criticized for using too little data (a few interactional sequences taken from one managerial board meeting) to be able to draw any meaningful conclusions about the constitutive force of interaction to organization as a whole (e.g. Fairhurst & Putnam, 2004; McPhee, Myers & Trethewey, 2006). More deductive approaches are claimed to be better suited for describing the link between communication and organizational structure.

Despite the kind of criticism mentioned above, this study will follow the track opened by Cooren (2004, 2006, 2007), and it accords with his argument that “it is possible to study the detail of organizational interaction while accounting

for the sequential dimension that is so characteristic of organizational processes” (Cooren, 2006, p. 329). In other words, the underlying assumption here is that it is possible to study the organization of interaction in organizations –as it happens while keeping the wide-angle lens on how the organization of interaction “scales up” to the larger questions about the organization (Taylor & Van Every, 2000) such as sensemaking. This study applies sensemaking as an analytic resource to describe the link between the micro processes of meeting interaction and the macro level organizational activities. These two processes are at play in the participant’s actions and they work as a common frame for information sharing and decisions.

Through the analysis of this study, a distinction is drawn between collective and collaborative sensemaking. Collective sensemaking is the term most often used in organizational studies. It is described as an event carried out by multiple actors, and it relates to the shared way of understanding and seeing things (e.g. Maitlis & Christianson, 2014). It implies orientation to the outcome of the sensemaking process, and thus relates well to the pursuit of collective decisions. This study focuses more specifically on the interactive process of collaborative sensemaking which triggers an active participation framework and can realize itself through argumentation or confirmatory creation of explanations for unclear events or concepts. The study shows how the collectiveness and collaborativeness of sensemaking is directly linked to the underlying goal of the meeting, i.e. the decision, and the interactional practices are seen as a means to construct this decision by making mutual sense of the topic at hand.

1.1.2 Decision making in meetings

Meetings are the primary forum for making decisions in organizations. Even if not all meetings are meant for decision making, they are a way to get the necessary people together to look at the same problem at the same time, and to create a common view about the status (Boden, 1995).

Ample research on decision making exists within the disciplines of sociology and social sciences. However, these studies are often occupied with the outcome in light of some chosen parameters affecting decision making. Individuals are treated simply as “problem solvers rather than as political and personal beings” (Putnam, 2007, p. 95). Some studies have given consideration to interpersonal, organizational and group nature of decision making. It is understood that organizations form “socially shared frames for events” (Beach & Connolly, 2005, p. 124). Thus they take into account such processes as power and negotiation over the unitary pursuit of goals (Pfeffer, 1981). Some studies also recognize that decision making requires sociolinguistic and sociopragmatic competencies. For instance Holmes & Stubbe (2003) focus on interpersonal and pragmatic features of talk, such as politeness, while treating decision-making as a problem-solving activity.

The procedural and emergent nature of decision making, i.e. what really happens during the decision-making process interaction-wise, is seldom considered. Boden (1995) is one of the first and most cited studies in which decision

making is approached as a socially situated activity shaped by the conversational practices. So far few studies have applied conversation analysis for the study of decision making as an interactional achievement. In her study, Huisman (2001) describes decisions as interactional and linguistic constructs that are used for the collaborative creation of commitment to future course of actions. She identifies decision-making episodes as turns of talk during which participants first exchange information and share opinions about the current state of affairs, and then the decision emerges.

Samra-Fredericks (2005) treats decision making as a strategic practice of the organizations, involving strategic talk during which the decision emerges (see also Boden 1995). In a similar vein, Kwon, Clarke, & Wodak (2014) describe various discursive strategies that are used by team members in a board meeting to create shared views for strategically important topics. Various studies also consider the effect of identity and roles on the decision making. Drawing on the discussion of various institutional activity types by Levinson (1992), decision-making episodes have been described as speech activities during which participants orient to what they consider to be allowable contributions according to the identities that they can make relevant to talk (Jabs, 2005; Clifton, 2009). This is advanced to cover intricate power dynamics by Kwon et al. (2009) who provide a longitudinal ethnographic view to decision-making episodes of a senior management team meeting in a multinational company.

This study aims to explore decision making as an interactional achievement among professional experts for whom the meeting serves as the arena for sharing the required knowledge and understanding about the technical solution that is to be chosen as a baseline for software development. The perspective taken here is that decision emerges as a result of collective sensemaking. Decision making is the underlying goal of the meeting although it does not surface itself explicitly at all times in the meeting interaction. Epistemic positions are dynamically displayed and negotiated during the activity.

1.1.3 Epistemics as an interactional phenomena in meetings

When considering meetings among professional, it is natural that the ways in which epistemic authority is used to influence the emerging decision. Epistemics is a term from philosophy, often used interchangeably with knowledge. It refers to an interdisciplinary study of knowledge and human information-processing using the formal techniques of logic, linguistics, philosophy, and psychology. It is mainly concerned with the forms, nature, and preconditions of knowledge. Knowledge can be defined as “a cognitive entity, a commodity possessed in tacit or explicit form” (Maier, Prange & von Rosenstiel, 2001). Epistemics is concerned with the systems, rules, and ideas for forming knowledge. Knowledge is one of the most valuable assets of a business company and its professionals. Knowledge has become a productive force in itself, in many ways replacing capital, labor and natural resources as primary sources of creating value and wealth (Knorr Cetina, 1999). Sharing knowledge is central for the development of an organization and its professionals. It is naturally also something that

is constantly visible and enacted in any organizational encounters, including meetings.

Epistemics has become a topic of interest for the study of social relations recently also within the discipline of conversation analysis (for more, see Stivers, Mondada, & Steensig, 2011). It refers to the “members’ methods for managing rights to (identity-bound) knowledge in self-other relationships”, i.e. in “epistemics of social life” (Raymond & Heritage, 2006, p. 678). It is also related to entitlement: who is allowed to have or evaluate specific types of knowledge. Entitlement is not a predefined category, but it is oriented to and negotiated by participants in interaction (Asmuß & Oshima, 2012, p. 72).

Most of the existing studies on identities take epistemic asymmetry as their point of departure and focus on expert-lay communication. Many studies have described different institutional settings such as medical care (Lindholm, 2003; Peräkylä, 2002; Stivers & Heritage, 2001), therapy (Arminen, 2005), judiciary (Atkinson 1992), or educational (McHoul, 1978, 1990). There are also studies within media, such as televised interviews of politicians (Clayman & Heritage, 2002a; Heritage & Clayman, 2010). These studies focus specifically on the institutional roles of one professional against a member of another professional group. These studies aim to show how the identity of the (professional) expert is enhanced and maintained rather than achieved through talk. The present study addresses meetings in which most of the participants are peers who have an equal expert identity. There is one system architect (from now on referred to as “architect”¹) who has studied the specific topic of the meeting in more detail and presents the solution to the colleagues. Thus the presenting architect - as well as the colleagues - work on positioning themselves as experts and aim to achieve this identity. The expertise is not exclusively with the presenter, but other participants act as “critical interrogators” (Ekström & Kroon Lundell, 2011; Heritage & Clayman, 2010). As a result, the whole act of knowledge sharing becomes a local enactment of epistemic positions and a process of collective sensemaking through interaction. By this kind of enactment the participants “implant that which they later discover and call ‘knowledge’” or “understanding of their environment” (Weick, 1977, p. 267).

In this study, epistemics (as knowledge) is treated as a phenomenon which becomes demonstrated through the epistemic stances taken in interaction (Heritage, 2012a; Kärkkäinen, 2003, 2006). Epistemics is seen as a feature which pertains to the organization of institutional talk and the realization of professional identity. Epistemic stance is the intersubjective and interactional expression epistemic status concerning the topic at hand (e.g. Heritage, 2012a; Keisanen, 2006). It refers to the interactional practices through which speakers negotiate and evaluate their epistemic position towards the issue at hand. Epistemic authority for this study as it will provide the lens through which to consider how it is exercised by all participants, the institutionally given roles notwithstanding.

A social constructionist view to epistemics on macro level is taken by Samra-Fredericks (2003) who distinguishes two kinds of knowledge: firstly,

¹ A more detailed description of the role of the system architect is given in Chapter 6.

“knowledge of “ organizationally relevant categories (Berger & Luckman, 1967) and secondly, the “knowing how” to utilize e.g. the system or turn-taking for gaining support for one’s opinion. This is tied with epistemic authority and competition over whose definition of organizational reality – whether concerned with strategy, process, or a product – will prevail. Participants may invoke “taken-for-granted ways” to contest knowledge (Samra-Fredericks, 2003, p. 154). Tacit cultural knowledge, expertise and know-how is claimed and disputed in meetings (Samra-Fredericks, 2005).

In this study epistemic authority is studied to see how it influences the sense-making process. It is shown how epistemic authority as a resource can become an enabling or constraining factor for sensemaking and decision making. Epistemic authority is understood to be embedded in sensemaking which will be explained in chapter 4. Not only is epistemic authority taken to establish common understanding, but it can also be used to convince others about one’s opinion.

1.2 Research methodology

The analysis is based on ethnomethodological perspective which focuses on the practical reasoning that is used by participants to portray a social activity as accountable and orderly (Heritage & Watson, 1979). Conversation Analysis (CA) is used as a method to identify those interactions which characterize how sensemaking and epistemics are played out in organizations. CA also makes it possible to show how these notions relate to decision making. CA is a study of social practice, where talk is seen as an organized activity, governed by sociocultural norms. It provides means to see how participants construct their social world through and during interaction. The participants interpret what is said and by doing so construct meaning to what is said and meant by each move during the conversation. In so doing, the participants also create meaning to their mutual relations.

The orderliness of talk in institutional settings, such as meetings, has three general characteristics (Drew & Heritage, 1992). Firstly, the participants orient to some specific identity or role, for instance that of a chairperson or presenter. Secondly, the interaction meetings has some specific goal, for instance a decision. Thirdly, the interaction reflects and orients to the peculiarities of the particular context in which it takes place.

CA is a way to see how sequences of turns at talk become the means through which social activities get done (Schegloff, 2007a). This kind of analysis of each minute action makes CA particularly suited for investigating interaction in meetings. CA also provides a view to sensemaking as a path through incrementally constructed actions to the final decision. CA also makes it possible to explore how people interact and position themselves during conversation. The positioning is related to the professional identities and to the activities used for constructing knowledge. Lyotard (1985) claims that earning the identity of a knowledgeable requires a display of competence which never an accomplished fact, but it always depends on the peer group’s judgment while they evaluate the truth of the statement. “Each language partner, when a “move” pertaining to

him is made, undergoes a “displacement”, an alteration of some kind that not only affects him in his capacity as addressee and referent, but also as sender” (Lyotard, 1985, p. 16).

CA has traditionally concentrated on uniform and sequential structures of mundane talk, such questions and responses, or greetings to greetings. CA does not provide similar means to identify uniform structures which could be labeled as activities belonging to the groups of sensemaking or decision making. However, CA does allow us to identify the linguistic constructs which are at play in the process through which sensemaking and decision making emerges. For sensemaking, CA provides a perspective to analyze how meanings are expressed by participants in talk and thus used for knowledge construction. Knowledge creation becomes a joint activity and the practices used also reveal whose knowledge is considered relevant, i.e. who is considered to have epistemic authority. The epistemic positioning is tightly related to institutional aspects of interaction, the professional identity of the participants, the goal of the meeting, and the overall organizational context. The framework of epistemic engine by Heritage (2012b) is applied to identify the degrees of epistemics e.g. in questions. This framework is applied by Heritage (2012b) for dyadic conversation, whereas in this study it will be applied for multiparty conversation. Thus sequential positioning will be used as a relevant additional indicator of epistemic status and authority.

This study also falls into the tradition of social constructionism, a perspective to communication which is grounded to a significant degree on works of Goffman (1959), Garfinkel (1967) and Berger & Luckman (1967). In this approach, it is seen that participants construct their social world through and during interaction. Meaning is constructed by each move during the conversation. While constructing the social world, they construct organizational reality and their roles. Consequently, language has both a constituting as well as a constitutive role. With reference to Berger & Luckmann (1967), Maitlis (2005) describes sensemaking as a process of social construction in which “organization members interpret their environment in and through interactions with each other, constructing accounts that allow them to comprehend the world and act collectively” (Maitlis, 2005, p.21). However, she later (in Maitlis & Christianson, 2014) makes a more refined distinction and narrows down the concept of sensemaking in organizations by returning to its Weickian roots and seeing it as a process triggered by violated expectations that needed clarification. This study, as well, explores how violations, or what will be called dispreferred actions in meetings, in the terms of conversation analysis. However. This study also explores the wider notion of sensemaking, as a collaborative process of meaning making.

Both the epistemological as well as the ontological perspective in this study are social constructionist. Meeting talk is viewed as a social phenomenon by which common understanding is linguistically generated, thereby also generating meaning and purpose to the decision per se. Social constructionism includes the methods of CA (Maynard, 2003) and therefore it also provides a framework

for approaching both sensemaking and decision making as interactional phenomena of meetings. Interaction shows how sensemaking and decision making are built on common knowledge about organizationally relevant categories (Berger & Luckman, 1967; Boden 1994, p. 134, Samra-Fredericks, 2003). This constructionist approach forms the basis of the conceptual framework under which the research questions are formed.

1.3 The conceptual framework and research questions

The concepts and notions that were described in the preceding sections together form a framework that is applied to analyze meeting interaction in more detail. The position taken in this study that sensemaking, decision making and epistemic authority are observable behaviors as interactionally accomplished social activities which are intertwined and influencing one another in meetings. These concepts are used analytically to demonstrate how they become consequential for the organizational activities by making acceptance or rejection the relevant next action. It is believed that these actions can lead to both affiliative and collaborative management of organizational activities or to disaffiliation and conflict which needs to be worked out with more effort.

For the purpose of establishing an analysis that can explore organizational sensemaking, as it happens, the primary research question is formed as follows:

- How is collective sensemaking produced in conversational interaction in professional meetings?

The more detailed questions are:

- How is epistemic authority used as a resource for building agendas for sensemaking and decision making in meetings?
- How are acts of collective sensemaking used for the accomplishment of decisions?

By answering the empirical questions above, the study explains how the participants manage to create understanding and make decisions while maintaining the identity of a professional practitioner.

In this study, conversation analysis is used to analyze the constant flow of sensemaking in interaction, and disaffiliative actions and dispreferred responses are viewed as disruptions which trigger the sensemaking process in interactive terms. The participants instinctively interpret such interactional situations as disruptions in the social relationships, and it is particularly important to maintain social relationships intact in organizational surroundings.

Sensemaking is regarded an activity the purpose of which is to reach a mutual understanding of divergent or contradictory interpretations. Within organizational studies this concept has been applied to investigate people's notions about organizational decision making, change and performance (Choo, 1998; Whittle et al., 2015). Gioia & Chittipeddi (1991, p. 442) describe sensemaking as

“meaning construction and reconstruction by the involved parties as they attempt to develop a meaningful framework for understanding the nature of the intended event or topic”.

Since the data for this study comes from meetings where the discussions are highly technical in nature, this study must also draw light on the peculiarities of the nature of technical communication and the understanding of knowledge in technology overall. However, it is understood that the resources used for decision making or epistemics are generally the same as in any organizational or institutional setting of similar kind, or even in mundane situation where a decision needs to be made or knowledge shared.

1.4 Contribution of the study

This study adds to the existing theory of sensemaking and decision making in a unique way by integration of the notion of epistemic authority as an enabler or constraint to the accomplishment of these activities in situ. The analytic focus is on the sequential organization of these activities.

There are studies which consider decision making as an aspect of sensemaking but real-time data for explaining this phenomenon is scarce. This study draws specific light on the sensemakers and how their activities construct the sense as they interact. This is different from the mainstream of sensemaking literature which tends to focus more on the occasions of sensemaking than sensemakers (Hernes & Maitlis, 2010). Real-time view to sensemaking practices of the individuals is rare (Brown, 2000; Hindmarsh & Pilnick, 2007; Liu & Maitlis, 2014). The data and the context of this study provides an additional perspective to the sensemaking efforts which are not only about organizing the biases in the organization but about constructing a view for the product's future features that do not yet exist except as abstract constructs of software components and interfaces on the drawing board of the architect.

By incorporating epistemics and epistemic authority this study draws light on the real-time management of power in professional meetings. The study shows how epistemic authority as given or achieved in interaction, and whose view is in this way becomes more significant or authoritative. Aspects of power are also explored from the point of view of sensemaking.

This study is a conversation analytic inquiry into the peer participation in the construction of mutual organizational sense and decisions in meetings. In this way the data adds to the understanding of institutional interaction and satisfies for its part the increasing interest in meeting interaction within CA research. The professional peer setting provides a new angle to the management of power in the construction of sense and decisions.

As for practical contributions, managers of today are becoming more and more trained to communication and even aspiring managers understand the commonly repeated mantra: (all that) leadership and management is communication. The often missed point is that also other professionals in knowledge-intensive industries need to understand the traits of effective communication as well. Hence, this study aims to increase engineers' understanding of the purpose

of meeting interaction by drawing light on the various linguistic resources and their effects on achieving common goals. It is important for them to be aware of the potential of making a difference through skillful interactional or rhetoric practices, and in particular of how the expressions of knowledge matter and become consequential for the meanings and decision that are achieved. While wishing to enhance engineers' sensitivity to the linguistic resources available to them, the attempt is not, however, to provide any normative rules.

1.5 Structure of the study

This study is divided into eleven chapters. This introductory chapter is followed by chapter 2 which introduces the literature on sensemaking and discusses its role in interaction in particular. Chapter 3 explores aspects of decision making as an interactive process. Chapter 4 establishes the theoretical background for professional identity and epistemic authority and discusses the role of power and influence in meetings. Chapter 5 introduces conversation analysis as a research methodology. Chapter 6 describes the environment from which the data is gathered and the method used for analyzing the data and places it in the wider context of software engineering. Chapters 7 to 9 form the analyses. Chapter 7 focuses on sequences which pursue individual agendas, whereas chapter 8 describes sequences which strive for collaboratively constructed understandings. Chapter 9 describe the closing phases of the meetings in which sensemaking is specifically enacted for the purpose of decision making. Chapter 10 discusses the findings more generally, and chapter 11 describes the contributions and limitations of the study.

2. Sensemaking

This chapter discusses the various perspective to sensemaking within organization studies. As a concept, sensemaking has been used for a broad range of meanings and purposes (Holt & Cornelissen, 2014; Maitlis & Christianson, 2014). The theoretical notions of sensemaking vary widely and cannot be defined as one single theory (Maitlis & Christianson, 2014) but rather as "a set of ideas with explanatory possibilities" (Weick, 1995, p. ix). Lately the literature has drawn more on the social-constructionist and phenomenological approaches (Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2015). In essence, sensemaking has become to be seen as a collective effort accomplished in cooperation and dialogue between the participants. Hence, collective sensemaking as an approach suits well to the framework of studying how organizations and people in meetings construct meanings and make decisions. It provides a wider social context for theorizing on meeting talk, by integrating the macro level aspirations of the participant with what they say and how they say it.

This chapter focuses on the collective and intersubjective aspect of sensemaking (section 2.1). The ontological variations in the theoretical perspective to sensemaking with regard to its temporal nature are described in section 2.2., and section 2.3 explains the notion of disruptiveness. The concept of sensegiving is then discussed in section 2.4 before arguing that there is a relative absence of interaction in the sensemaking literature (section 2.5) despite the increasing number of studies on sensemaking in meetings (section 2.6). A summary is drawn in section 2.7.

2.1 Collective and intersubjective nature of sensemaking

Collective sensemaking, quite simply, refers to understandings of events that are carried out by multiple actors. It is the concept used in the majority of organizational literature as reference to "the process through which people work to understand issues or events that are novel, ambiguous, confusing, or in some other way violate expectations" (Maitlis & Christianson, 2014, p. 57). Seeing sensemaking as collective phenomenon is quite different from the original Weickian tradition which focuses on the individual's cognitive processes of sensemaking rather than the interactive process of doing so (Maitlis & Christianson, 2014).

In the current ethnomethodological approaches sensemaking is conceptualized as an intersubjective process rather than an individual one (Llewellyn & Spence, 2009; Bolander & Sandberg, 2013). Organizations are described as “collections of people trying to make sense of what is happening around them” (Weick 1993a/2001, p. 5). According to Boden (1994, pp. 188-98), there is a local logic in the organizational rationality which is intersubjectively understood by the participants. Events become the springboard for the creation of intersubjective meaning (Maitlis & Christianson, 2014)². Sensemaking concerns the active engagement of people in the construction of understanding of events and actions while they experience that very same event or action (Maitlis & Christianson 2014; Weick, 1995).

From CA point of view, intersubjectivity is achieved through the methods used for displaying understanding in interaction (Schegloff, 1992a). The procedural sense of shared understanding is demonstrated in the ways utterances are understood and taken up (Heritage, 1984a; Sacks, 1992a,b). Intersubjectivity is the reflexive accomplishment of the participants. Speakers display their understanding of the preceding talk as being of a particular kind (for instance a question which is addressed specifically to some participant), either explicitly or tacitly (Schegloff, 1992a). In doing so they create mutual understanding and intersubjectivity by showing responsiveness to prior talk. Through confirmation this becomes mutual understanding through “sequential architecture of intersubjectivity” (Heritage 1984a). CA is therefore in essence an analysis of the specific interplay between action, context management and intersubjectivity because “all three of these features are simultaneously, but not always consciously, the objects of the participants’ actions” (Heritage, 1997, p. 163).

When sensemaking is considered to emerge as a result of one individual’s cognitive process, for collective purposes.

“If sensemaking occurs within a person’s head, then collective sensemaking in organizations becomes a process through which more influential individuals episodically persuade others to think as they do. Collective sensemaking may pause when enough members hold the same understanding to act together. If sensemaking takes place in the conversations between people, collective sense is generated in an ongoing, iterative manner, as actors shape each other’s meanings in repeated cycles of sensemaking. Collective sensemaking may pause when enough members engage in a discourse that allows them to act together” (Maitlis & Christianson, 2014, pp. 95-96).

² It is worth noting that there are ontological differences in the ways intersubjectivity is perceived in the various approaches to sensemaking. Largely, sensemaking is seen as an intersubjective and interactive process, but some regard it as a primarily cognitive process that takes place largely in individuals’ heads (Maitlis & Christianson, 2014). Collective sensemaking assumes that collective understanding is constructed, even if it would be a result of more influential persons persuading others to think the way they do.

When sensemaking is triggered within individuals, collective meaning making becomes a process during which individuals aim to influence and shape one another's understandings in favor of one's own. This may lead into a "framing contest" between peers. Frames are the means by which sense is made of ambiguous information (Kaplan, 2008). The term is based on Goffman (1974) who introduced framing as a way interactants use to conceptualize and interpret phenomenon. This does not necessarily lead to collaborative sensemaking but eventually someone's position emerges as dominant (Kaplan, 2008; Maitlis & Christianson, 2014). On the other hand, when sensemaking is triggered between individuals, the construction of meaning becomes a more intersubjective and mutually co-constituted process (Maitlis & Christianson, 2014, p. 78). Interaction comes into play when members choose the information or topic which they regard significant and therefore worthy of attention (Choo, 1998, p. 3), and such an issue may become a topic of its own in a meeting.

Schegloff (1991a) describes intersubjectivity as the common ground which is constructed through interaction, to display socially shared cognition. Socially shared cognition is a term used in psychology similarly to what is called as shared or mutual knowledge in classical epistemology, and shared or mutual culture in anthropology. However, Schegloff draws on Garfinkel (1967) and problematizes the notion of "shared" or "common", as they have been applied in computer science to describe equal copies of content in different memory storage. This, naturally, is not how human cognition works: despite surface level intersubjectivity, or "shared" understanding, the understanding can inevitably never be exactly the same in different human minds. Therefore he emphasizes "the procedural nature of social sharedness" which aims for "the maintenance of a world (including the developing course of the interaction itself) mutually understood by the participants as some same world" (highlights in the original; Schegloff (1991a, p. 151). Socially shared cognition comes into play on micro level of interaction when for instance repair is needed during conversation for removing misunderstanding or mishearing.

The intersubjective process of sensemaking is close to what is described in CA as "understanding-display device" (Sacks, Schegloff, & Jefferson, 1974), or the socially shared cognition. It is the meaning through which "speakers almost necessarily reveal their understanding of that to which their talk is addressed, whether that is prior talk, other conduct, or events and occurrences "scenic" to the interaction" (Schegloff, 1991a, p. 167). Understanding is not absolute or static but something created progressively through negotiation. It is constructed and demonstrated in various kinds of turns at talk, including the most minute speech tokens, hesitation and even pauses, but also the most elaborate explanations and descriptions (Schegloff, 1991a; Maynard, 2003). All these features are players in the creation of sequential context of interaction which accommodates for the accomplishment of the mutual understanding of and orientation to what is going on during conversation (Maynard, 2003, p. 73). In this respect, all communication and conversations can be seen as rather mundane processes of sensemaking caused by someone saying something and the coparticipant making an interpretation of what the utterance means. Sensemaking is

as relevant for everyday interaction and events as it is for “big things” (Patriotta & Brown, 2011; Patriotta & Spedale, 2009). These types of mundane sensemaking practices often go unnoticed because the participants in interaction usually take them for granted (ten Have, 2004).

In the present study, intersubjectivity concerns the ways participants construct meanings and share understandings of what is being talked about and how. However, the “shared” understanding which is achieved and signaled in interactional terms does not necessarily mean a shared opinion on the actual substance being discussed (Jacoby & Ochs, 1995; Nikko, 2009). As Maitlis & Christianson (2014, pp. 66-67) say, instead of having reached a completely unified understanding, it is assumed that an agreement on a meaning that enables coordinated action to take place based on this intersubjective understanding has been reached. Furthermore, as persuasion is a way of influencing other participants’ understandings, this study will draw on one sub-notion of sensemaking, namely sensegiving, which is reviewed in section 2.4.

2.2 Temporal aspects of sensemaking

The process of sensemaking is often viewed temporally as either retrospective or prospective. Retrospective nature of sensemaking is often seen as one of the core properties of sensemaking as a way of discovery by looking back at earlier observations (Weick, 1995; Weick, Sutcliffe & Obstfeld, 2005). It is believed that there always is some past action or event which triggers the need for assessing a situation. Reality becomes an ongoing accomplishment when people make an effort to understand what occurs by creating order through retrospective reflections (Weick, 1993b, p. 635).

Recent studies believe in the prospective process of sensemaking (Maitlis & Christianson, 2014; Gephart et al., 2010). From the point of view of organizational decision making this means that the outcome is often known before the decision, not vice versa, as is the view in traditional theories of decision making. Outcome develops some prior definition. Cooren (2004) and Huttunen (2010) exemplify how past interactions (in prior meetings or with experts or other organizations) are referred to in meetings to increase common understanding through a common frame of reference. Cooren (2004) calls this translocalization and Huttunen (2010) tagging. The organization realizes what its activities are about by making sense of its own past actions (Weick 1977).

More studies are emerging which point to a wider temporal perspective to sensemaking, as it realizes itself in language. Wiebe (2010) maintains that seeing sensemaking as retrospective process ignores the present which is the moment at which sensemaking takes place; the conception of sensemaking in the present involves drawing on all three dimensions of temporality. Future-oriented, prospective sensemaking involves “the conscious and intentional consideration of the probable future impact of certain actions, and especially nonactions” by the social actors (Gioia, Thomas, Clark, & Chittipeddi, 1994, p. 378). Weick (1969/1979) and later e.g. Gioia, Corley, & Fabbri (2002, p. 623) argue that forward-looking sensemaking creates an illusion of a perfect future and the

most desired expectation of the sequence of events and then start acting as if that event has already transpired, which enables a "retrospective interpretation of the imagined event".

This study contends in accord with Gephart et al. (2010) that future-oriented sensemaking (constructing meanings that create images of the future) is embedded in past and present temporal states and uses past and present temporal orientations to provide contexts for proposed future entities. Future-oriented sensemaking does indeed occur when people seek "to construct intersubjective meanings, images, and schemes in conversation where these meanings and interpretations create or project images of future objects and phenomena" (Gephart et al., 2010, p. 285). This is the essence of any decision which presumes future actions. Also, it would be impossible to invent anything new without a forward-looking mental fabrication; inventions as new features in a software product rely on known cues and behaviors as they do not yet exist in the phase when decision are made to go forward with them except on paper.

Literature also takes different stands on whether sensemaking takes place in an episodic fashion or continuously (Maitlis & Christianson, 2014). Episodic nature of sensemaking refers to the Weickian way of sensemaking which consists of episodes broken down by the various inputs from the organization (Weick et al., 2005). This means that events are looked at retrospectively and from the outside (Taylor & Van Every, 2000). In ethnomethodological approaches, sensemaking is seen as an act of continuous adjustment. Gephart et al. (2010, p. 281) describe it as follows: "The sensemaking practices and the production of social reality are ongoing and continually enacted . . . there is no time out for sensemaking." To make sense, through talk, people not only transmit information but also transform it (Boden, 1994). They reflexively tie past to future through present orientation (Boden, 1994, p. 48). Viewing sensemaking in such continuous fashion differs from the Weickian tradition which focuses on the streams of events as they become explained by the actors, in retrospect. However, to be able to make any sense in the constant flow of inputs and outputs, the members in social interaction do design their interaction around episodes which may or may not be linked to one another. Hendry & Seidl (2003) lean on Luhmann's (1990) notion of episode as a sequence of communication that is structured in terms of its beginning and ending. In this view, episodes

"provide opportunities for the normal constraints of communicative practice to be suspended and alternative communicative practices explored. They thus provide a social mechanism by which reflective discourses can be pursued within the social system, but without necessarily disrupting the practices and routines by which that system is maintained" (Hendry & Seidl 2003, p. 180).

It is the beginning and ending of an episode that create a difference between the inside and outside perspective to the sequence of communications within an episode and the communications that take place before and after it. In this approach an episode is seen as a wider generic structural feature of any kind of

social system. A meeting can be seen as a larger episode which consists of smaller episodes such as decision-making episodes (Clifton, 2009; Huisman, 2001). The participants in a meeting understand that a meeting has a certain structure and limitations of time. Sense is generated by referring to external organizational constraints or enablers, which in part influences how the sense is made during the meeting. Also, these types of constraints are not necessarily mentioned during meeting interaction although they influence the sensemaking processes.

To take an ongoing, real-time view, Hatch (1999) uses a jazz performance as a metaphor for fluid organizational structures: jazz musicians do have certain common structures around which the performance is built. However, these structures are not accepted as a given (Hatch, 1999, p. 83) but they improvise in real time; the “unexpected” improvisation becomes the expected as it builds on common structures. It is the same with interaction: we expect certain structures while we at the same time being prepared and responsive to the unique turns of talk of the coparticipants. In a wider organizational perspective, one could say the meeting interaction provides the *raison d’être* for such events: we expect some common structures to be followed in the meetings, but if everything was known beforehand there would be no point in having the meeting. The moments when the expected structures are broken become the focal points for new understanding.

The continuous fashion of sensemaking seems apt for considering the context of meeting interactions and how decision become made in such circumstances. The discussion which happens here and now draws on past experiences and opinions to reflect on the future possibilities of actions.

2.3 Disruptive nature of sensemaking

Sensemaking is often seen as the process triggered by something out of the ordinary or expected which individuals strive to understand. The purpose of sensemaking efforts, then, is to get the world back into order.

There is another important track of research which focuses on sensemaking as an enabler of other organizational processes such as organizational learning, strategic change, innovations – and decision making. These studies discuss how sensemaking can become an intentional disruption of order instead of just being an ordering force triggered by some unexpected crisis (Maitlis & Christianson, 2014). This allows us to see that it is important especially for knowledge-intensive organizations to intentionally push themselves into doing sensemaking in order to grow. One can already see that meetings, when skillfully managed, also have the potential to be forums for such sensemaking. Meetings, as an arena for sharing information, draw on the intersubjective nature of sensemaking.

Whether bringing order to an unexpected situation, or an explanation of an intentional disruption of the state of events is needed, both call for a process of collective sensemaking to achieve a more unified understanding. Sensemaking becomes “the process by which people construct, interpret, and recognize meaningful features of the world” (Gephart et al., 2010, p. 275). For this practice to

become “collective”, it takes on the characteristic of an event that must take place between people. This in itself means that “sense is not an object to be passed on but a skillful activity to be engaged in” (Sandberg & Tsoukas, 2015). Collective nature of sensemaking focuses on the social dynamics of sensemaking in organizations rather than on individual level of interpretive acts. Maitlis & Christianson (2014, p. 67) define sensemaking as

"a process, prompted by violated expectations, that involves attending to and bracketing cues in the environment, creating intersubjective meaning through cycles of interpretation and action, and thereby enacting a more ordered environment from which further cues can be drawn."

Organizational sensemaking is concerned with how something comes to be understood as a relevant event for organizational members (Weick et al., 2005, p. 410). The event, by and large, may refer to some process or activity which may vary in size. The most typical point of interest in sensemaking literature is a major event which, according to Sandberg & Tsoukas (2015), can refer either to a planned event (such as organizational change or strategy) or an unplanned one (such as a crisis or disaster). However, they point out that there are also minor planned events which can similarly interrupt the normal flow of organizational activities and thus require the actors to restore meaning through sensemaking efforts. Minor planned events can be policy adjustments or upgrading of a software program. Meetings, too, can become minor events of sensemaking when the participants get engaged in pointing out their various views on the specific task at hand.

Organizational sensemaking literature is also interested in how information is exchanged during the event. Choo (1998), for instance, integrates organization theory and information science as a framework for exploring the information use in organizations. In this framework sensemaking provides the overall context for interpreting meanings and changes in the context of the organization. Sensemaking becomes the necessary step for generating new information and for evaluating this information in order to make decisions.

There are further issues to be considered regarding the unexpectedness of sensemaking, especially with regard to their emotional effects. Unexpected events do not necessarily trigger sensemaking. Ocasio (2011) has noted that an event must first catch our attention in order to trigger sensemaking. Sensemaking occurs when the discrepancy between what one expects and what one experiences is great enough, and important enough, to cause individuals (or groups) to ask what is going on, and what one should do next. This experience of a discrepancy or violation is subjective. How significant it feels will be influenced by a variety of factors, including its impact on individual, social, or organizational identity (Corley & Gioia, 2004; Pratt, Rockmann, & Kaufmann, 2006) and personal or strategic goals (Balogun & Johnson, 2004; Maitlis, Vogus, & Lawrence, 2013). It is natural that when negative emotions come at play, they trigger the need for reasoning, arguing and more elaborate sensemaking in organizations (Maitlis & Christianson, 2014). However, Liu & Maitlis (2014) also show, in

their study of top management team meetings, that the discussions which are positive in tone enable deeper sensemaking and greater agreement about an appropriate course of action between the participants, while negatively laden discussions lead to superficial sensemaking and a failure to act collectively. They show that emotional dynamics generated in team meetings increase or diminish the relational distance between people, and in so doing, affect the shape and outcome of strategic conversations. This is shown by predefined roles and episodic resources as well as by more transient, dynamic relational shifts that occur through the emotions expressed in discourse.

There are two aspects to the disruptiveness in meetings. Firstly, there is the actual topic which is discussed, which is not really a disruption but more of a self-induced problem for which a solution is needed, through sensemaking. The solution in essence becomes more of an invention than a disruption. Secondly, from the perspective of pure interaction, there are the turns of talk which present reactions and counteractions to the turns of the other coparticipants, for the purpose of making sense of what the other participants mean.

2.4 Sensegiving

Sensegiving is the ability to shape the way others make sense (Whittle et al., 2015), and as such important when considering aspects of sensemaking in interaction. Sensegiving is “an interpretive process in which actors influence each other through persuasive and evocative language (Maitlis & Lawrence, 2007, p. 57). It describes the practices used by a speaker to take authority to create meaning for or on behalf of a larger audience, “the process of attempting to influence the sensemaking and meaning construction of others toward a preferred redefinition of organizational reality” (Gioia & Chittipeddi, 1991, p. 442). Gioia & Chittipeddi (1991) use the term sensegiving to describe the future-oriented nature of sensemaking: it occurs when managers try to communicate what an organizational change means to their stakeholders. As distinct from sensemaking, sensegiving seems to have a persuasive function, whereas sensemaking is more like a cognitive function. In the literature on strategic change, sensegiving is regarded as complementary and reciprocal with sensemaking.

Sensegiving is often connected with the role of the leader, as the leader is often the one who has the final word as sense-giver (Weick, 1995). Shotter (1993, p. 152) describes good managers as authors who “give a sharable linguistic formulation to already shared feelings, arising out of shared circumstance... The leader is a “sense-giver” who “embodies the possibilities of escape from what might otherwise appear to us to be incomprehensible (Shotter, 1993, p. 254). Citing Gioia & Thomas (1996), Rouleau explains:

“sensemaking has to do with the way managers understand, interpret, and create sense for themselves based on the information surrounding the strategic change. Sensegiving is concerned with their attempts to influence the outcome, to communicate their thoughts about the change to others, and to gain their support. Although these processes appear to be

conceptually different, the boundaries of each are permeated by the other.” (Rouleau, 2005, p. 1415)

When viewing these processes as discourse and action, sensemaking and sensegiving become even less distinct domains but rather two sides of the same coin – one implies the other and cannot exist without it (Hopkinson, 2001; Rouleau, 2005, p. 1415). Hopkinson (2001) establishes a narrative study of narrators’ interpretation of their position as actors in a social network. She supports the commonly held view in sensemaking theories that person’s actions in any situation are shaped more by his or her understanding of the situation than the objective properties of a situation. Thus, as sensegiving is a means of enforcing influence on one’s way of seeing the world, the degree of influence that the members in a social network seek is associated with the way the members in the network make sense of this social network (Hopkinson 2001, p. 435). Furthermore, just like sensemaking, also sensegiving is not simply a top-down process, because those who are the recipients of sensegiving can make their own interpretations and resist those of the original sensegiver (Maitlis & Sonenschein, 2010; Maitlis & Christianson, 2014). There are various conditions which trigger sensegiving and which enable it. In their study, Maitlis & Lawrence (2007) show that basically anyone in the organization can use discursive resources to make persuasive accounts or to make sense of organizational routines and practices. This means that having or taking an expert in substance matter enables and even sets expectations for sensegiving.

Polanyi (1967) uses terms sensegiving and sense-reading to explain how participants furnish language with meaning and make sense of speech. Sandberg & Tsoukas (2015), quite aptly point out that, although sensegiving would seem to provide forward-looking perspective to sense, the “making” and “giving” of sense cannot be separated but are simultaneous efforts in the process of sense-making.

Sensegiving cannot be fully separated from sensemaking, and these should be seen as simultaneous and complementary activities (Sandberg & Tsoukas 2014). Yet sensegiving is useful for studying decision making in meetings, as it is tightly intertwined with decision making as a way of justifying a course of action (Garfinkel, 1967). This is particularly true for decisions which include a distinct element of choice. People justify the choice by enhancing the positive features of the chosen alternative and the more negative features of the rejected alternative (Weick, 1995). Also, sensegiving acts are reflections of epistemic authority.

For the purpose of this study, the following distinction will be made: sensemaking is something that is collectively achieved, in collaboration, during interaction, whereas sensegiving is an attempted verbal interpretation of common sense on behalf of the team, typically made by an influential person. This means that sensegiving is in fact related with the notion of epistemic authority, as it becomes the tool for the more knowing person, or the one with epistemic status, to give sense on behalf of the others. Temporally, also sensegiving can be the outcome to conclude more or less successful sensemaking efforts of a team.

2.5 Absence of interaction in sensemaking literature

Most theorists give credit to the fact that communication – words and language – is central for sensemaking; so much so that the chapter “Substance of sense-making” in Weick (1995), for instance, is all about the importance of words and language that actors use to describe unclear surroundings or events. Sensemaking is afforded by a “network of intersubjectively shared meanings that are sustained through the development and use of a common language and everyday social interaction” (Weick, 1995, pp. 38-39). Or as Maitlis (2005, p. 21) states: “organizational sensemaking is a fundamentally social process: organization members interpret their environment in and through interactions with others, constructing accounts that allow them to comprehend the world and act collectively”. Moreover, in citing Mills (2003), Weick et al. (2010, p. 409) explain how language plays a central role in the creation of sensemaking because it is “the primary site where meanings materialize” (Mills 2003, p. 35). “When we say that meanings materialize, we mean that sensemaking is, importantly, an issue of language, talk, and communication. Situations, organizations, and environments are talked into existence” (Weick et al., 2010, p. 409).

Weick also refers to Garfinkel’s (1967) ethnomethodology as providing background to the notions of organizational sensemaking. Organizations structure and are structured by sensemaking processes for which language is used (Weick, 1995). “Sensemaking involves turning circumstances into a situation that is comprehended explicitly in words and that serves as a springboard into action.” (Weick, Sutcliffe & Obstfeld, 2005, p. 409). Further, they state that “sensemaking occurs when a flow of organizational circumstances is turned into words and salient categories” (Weick et al., 2005, p. 409). This definition supports the social constructionist perspective which builds on the assumption that situations and organizations are talked into existence. These statements notwithstanding, Weick does not come up with a concrete notion of what the role of communication might be in the sensemaking process (Taylor, 2011; Taylor & Van Every, 2000).

The more recent studies have taken language rather than cognition as the focal point of sensemaking (Maitlis & Christianson, 2014; Colville, Brown, & Pye, 2012; Weick, 2012). In the same vein with Taylor & Van Every (2000, p. 40), it is seen in these studies that “sensemaking involves turning circumstances into a situation that is comprehended explicitly in words”. These studies explain how sensemaking is produced by the individuals as they produce discursive accounts, narratives, and stories (Brown, 2000). Gephart (1993, p. 1485) defines sensemaking as “the discursive process of constructing and interpreting the social world”. Many of these studies, however, fail to focus on the collective production of sense, as talk-in-interaction; rather they give an account of one individual’s account of the event at a time.

Several of the studies that have taken the role of language in sensemaking as a topic of inquiry describe storytelling as a feature of sensemaking. Colville et al (2012, p. 8), for instance, state that stories provide a scheme of interpretation (i.e. the meaning of the situation) while at the same time serving as a scheme for action (i.e. what should be done next). Boyce (1995) describes stories and

storytelling as a way of constructing shared meaning. Shared meaning is the organizational reality that emerges from the collective sensemaking. Collective sensemaking is “the process whereby groups interactively create social reality, which becomes organizational reality.... The shared meaning may appear as the interaction and/or overlap of several different perspectives co-existing within a group or as dominant shared sense of meaning” (Boyce, 1995, p. 109). Hill & Levenhagen (1995) describe how entrepreneurs apply metaphors as mental models to make sense of novel concepts for new product development. Articulation of that model is an act of sensegiving, for the purpose of motivating others of innovation.

O’Leary & Chia (2007) observe how meaning, order and regularity are accomplished by using language in the sensemaking process by resorting to commonly understood epistemes. Epistemes refer to the commonly known rules and conventions which need to be adhered to in order to establish common sense among the participants in the situation. Epistemes are the verbalized forms of what Weick (1995) calls salient cues.

Wiebe (2010) and Gephart et al. (2010) as well examine conversational data to make their point. Wiebe (2010) studies managers’ perceptions about organizational change in semistructured interviews. This type of approach is likely to focus on individual cognitive perception, not describing how sense is constructed in interaction. Similarly, Gephart et al. (2010) study how future-oriented sensemaking is produced in conversational interaction in public hearings. This is a quasi-judicial event in which participation is quite restricted as what comes to setting agenda items or influencing actual decision making (Farkas, 2013) and the conversation is likely to be rather unidirectional.

Considering the above, the scant availability of literature about organizational sensemaking that would devote analytical attention to interaction as a local act of sensemaking is surprising. Weick himself, for instance, has not operationalized it in any systematic way (Taylor & Van Every, 2000). There are studies that attempt to fill this gap by approaching sensemaking from the traditional field of communication. Taylor & Van Every describe sensemaking as a socially constructed and coordinated system of action which draws on the resources of language to create “symbolically encoded representations of these circumstances” (Taylor & Van Every, 2000, p. 58). Interactive talk is used for sensemaking, and the circumstances are “talked into existence and the basis is laid for action to deal with it” (Taylor & Van Every, 2000, p. 58.). Hindmarsh & Pilnick (2007) apply ethnomethodology and methods of conversation analysis in an interesting way to show how the embodied conducts of medical experts are used to collaboratively construct order and sense in the activities anesthetic rooms and operating theaters in a hospital.

Pomerantz & Fehr (1997) point out the centrality of interaction in the process of sensemaking, from CA point of view: although CA as an approach is concerned with the organization of talk as interaction, it is even more concerned with how social actions, events and objects are made meaningful through talk. Language is an enactment of social actions rather than simple representation of

the world. Language is used for the mutual effort of sensemaking and sensegiving.

This gap in the focused treatment of language and interaction as an essential enabler of sensemaking leaves room for comparing and integrating the aspects of sensemaking and interaction in more detail by using authentic organizational material. This study will aim to bridge this gap by building on the tradition of ethnomethodology in which it is believed that the social constitution of knowledge cannot be analyzed without paying attention to the context of institutional activity in which it takes place (Heritage, 1984a, p. 6). In this study, the context for the social constitution of knowledge in a meeting is established as a practice of sensemaking, and literature concerning this is reviewed in the following section.

2.6 Meeting as a place for sensemaking

This study takes a stand that meetings are essentially places for the sensemaking processes. Their purpose is to make sense of problems and decisional choices rather than to resolve them (Schwartzman, 1987). Topically, the talk in meetings has to do with making sense about realities external to the meeting (Schwartzman, 1987). Meetings operate as sensemaking devices and identities are at play when constructing organizational realities (Kärreman & Alvesson, 2001). They are as much places for socialization as they are for achieving a shared vision and individual commitment (Poncini, 2004). Meetings do not only produce decisions but they act as forums for producing cultural talk: what the members feel and believe about the company and the decisions (Moisander & Valtonen, 2006). This section reviews some previous studies which hone in on meetings from a similar perspective.

Starting with Bargiela-Chiappini & Harris (1997a, p. 37) who draw on the core aspect of sensemaking in their statement that a meeting can become “a deliberate attempt to impose order on the confusing and confused variety of experience that characterizes much of organizational life”. By focusing specifically in how language is used in meetings, they see sensemaking as a process which relates to both speakers and listeners who in the meetings enable emergence of intra-textual and inter-textual connectedness (Bargiela-Chiappini & Harris, 1997a, p. 69). Sensemaking “with its textual realizations is the essential abstract link between the dimensions of the interpretive framework (contextual, situational, linguistic), a major variable cutting across all three aspects of the framework of power” (Bargiela-Chiappini & Harris, 1997a, p. 76).

Cooren (2004) studies managerial board meetings as a place for sensemaking, using CA as a methodology. He shows how talk in these meetings becomes constitutive of the solutions and decisions that are enacted. From a theoretical perspective, he aims to close the gap between micro and macro by integrating the notion of intersubjectivity with sensemaking. He maintains that intersubjectivity reveals the orientation to the shared body of knowledge through conversation (Cooren 2004), making cognition also shared among the participants. As Cooren (2004, p. 529) puts it: “some of the interactional mechanisms identified

and analyzed by conversational analysts should be used as a direct illustration of the phenomenon of collective minding as enacted in decision making or solution-finding processes". He explores how references to past interactions, such as earlier meetings, have an effect on the sensemaking among the meeting participants. Rovio-Johansson (2007), also, describes how sensemaking is constituted as a collective activity in a management team meeting. She focuses on the various discursive tools such as rhetorical strategies, frames and categories which are mobilized by the participants for establishing mutual understanding about the organizational needs

The approach taken by Cooren (2004) gives a springboard for exploring how sensemaking as a practice can be procedurally discerned on both macro and micro level of the meeting context. The sensemaking on macro level is concerned with the primary goal of the meeting, i.e. the collective understanding and decision on the technical solution which is being reviewed and discussed. Micro events of sensemaking concern the minute repairs, corrections and disaffiliations which realize themselves and need to be settled on the spot, in the immediacy of the turn-taking and turn-making. These micro processes of interaction are also what underlie the macro processes of the organization, such as making sense of the ensuing decision, for instance. This interplay between micro and macro works vice versa as well: the micro processes of interaction draw on the macro scripts of decision (Brown, Colville, & Pye, 2015; Cooren, 2004).

The degree and intensity of sensemaking required in meetings varies depending on the complexity of the topics handled as well the degree to which the opinions among the participants vary. This becomes evident in the material of this study as well. Similarly, the diversity of identities and professions that are involved also generate a higher need for sensemaking. Meetings of multiprofessional teams and people who do not know one another need to spend more time constructing common ground. An example of this is a study by Patriotta & Spedale (2009) which shows how different experts who are from different organizations had to make an effort to construct a shared sense of their actual common designated task at hand. The experts have a common designated task but they need to engage in intensive sensemaking efforts to construct a shared sense of their task before they are able to carry it out in a series of consecutive meetings. Another similar example is the study by Huttunen (2010) which gives a longitudinal account of how a more unified understanding evolves over time for an expert project group as they become more familiar with the topic at hand and the organization. The need for constructing common understanding diminishes as a project team becomes more established.

2.7 Summary

In this chapter sensemaking has been reviewed for the purpose of identifying a link towards its meaning in the context of organizational meetings. Drawing on Weick et al. (2005, p. 409), this study builds on the perspective that sensemaking is the central component of meetings, as it is "the primary site where mean-

ings materialize that inform and constrain identity and action". The role of interaction as an integral part of the ongoing process of collective sensemaking in organizations is still an unexplored area, and this study aims to devote some attention to this gap by looking at the practices used by the participants in meetings as supportive of this organizational endeavor.

In the Weickian (1995) tradition, sensemaking refers to the effort of constructing common meaning for events. With this statement he does not imply that sensemaking would or could strive to achieve some accurate or commonly believed meaning as a result, for whatever the issue might be. The act of sensemaking simply provides the possibility for some common meaning to be achieved (Huttunen, 2010). A distinction is worth making in terms of intersubjectivity. In CA terms, intersubjectivity is achieved through the construction of sequences of talk that form an understandable whole. This is different from the intersubjectivity or shared understanding about the actual topic or decision that needs to be made: the participants may not as individuals agree about the decision although they endorse it for organizational purposes. As a group, people label some generally acceptable meaning as common although everyone might not have stated their understanding or opinion. Decision become accepted by majority rule or the opinion of the most powerful, as labeled as outcomes of collective sense.

As said, sensemaking in itself is a process which has an impact on larger organizational processes such as decision making. Organizing is achieved to the degree that sensemaking is accomplished (Sandberg & Tsoukas 2015). Next chapter will discuss the linkages between these two notions in more detail. Furthermore, it seems reasonable to apply ethnomethodology and CA for investigating sensemaking as they are all interested in meaning construction and organizing. This methodology will be discussed in more detail in chapter 5. Chapter 3 elaborates on one particular organizational activity, decision making, as an act of sensemaking.

3. Decision making as sensemaking

This chapter builds a framework for viewing decision making and sensemaking as highly integrated processes in meetings. Meetings afford a relevant context in which to consider this framework as they are often considered the forum where decision making takes place. It is clear, of course, that decisions can be made – and are made – outside meetings. It is clear that not all meetings are for decision making. Meetings often gain the status for legitimizing decisions (see e.g. Boden, 1995). They are a way to get the necessary people together to look at the same problem at the same time and to get their formal approval. Especially in today's knowledge-intensive, professional organizations, any decisions requiring commitment typically require a meeting of some sort between at least two people. If no decision is expected, most definitely some sort of sensemaking is expected to take place in meetings. Most often, these activities are more or less intertwined. Weick (1995, p. 8) summarizes this idea by referring to the perception of March (1984) in saying that sensemaking as a part of organizational life is “as much about interpretation, intellect, metaphors of theory, and fitting our history into an understanding of life as it is about decision and coping with the environment”.

This chapter is divided into five sections and a summary. First, this chapter discusses the concept of decision and decision making in general. Second, decision making is described as an enactment of decision making. Third, temporal aspects of decision making are discussed and a link is drawn to the temporality of sensemaking, which was discussed in more detail in section 2.2. Finally, decision making as problem solving is elaborated before drawing a conclusion of decision making as an interactional process.

3.1 Defining decisions and decision making

How decisions get made has naturally been a topic of great interest in organizational studies. A need for decision making arises when there is a problem or a choice to be made. One could claim that if no alternatives exist it is not possible to make a choice and therefore no actual decision can be made. Decision making is easy if one alternative among many clearly strikes out as the best. However, decision situations in organizations are often more complex than that, although

the making of choice is often presented as being the crucial factor (March & Olsen, 1976). People are not only rational decision makers who aim to maximize profit, but contextual factors matter although they seem unrelated to the actual topic of decision (March, 1988). The decisions are adjusted to the contextual factors.

Mintzberg & Waters (1990) claim that decisions in organizations cannot be isolated to a particular point in time when some choice and commitment to this choice is made. They maintain that this is also fruitless, as “preoccupation with the decision runs the risk of imputing a direct relationship between the abstraction of mental intention at the individual or small group level and the concreteness of realized action at the organizational level. A great deal of real-world behaviour can get lost in between” (Mintzberg & Waters, 1990, p.4).

March & Olsen (1976) point out the difference between a decision, which is a set of outcomes, and decision making, which is a process, and the link between the two is by no means simple. Boden (1994) and Mintzberg (1973, p. 58, in Boden 1994, p. 16) describe the nature of organizational decision making as “fluid and staged exercise in ‘commitment to action’ in which communication flow plays a vital role”. Or, as Mintzberg, Raisinghani, & Théorêt (1976, p. 246) explain, while decision means commitment to action, decision process is “a set of actions and dynamic factors that begins with the identification of a stimulus for action and ends with the specific commitment to action”. The aim of this procedural exercise is to let the opinions of the participants come closer during the process (Boden, 1994, 1995). This procedural perspective to decision making suites well for the purposes of analyzing the type of meetings and decision making in the meetings of this study.

March (1988, p. 14) also concludes that decision making is a 'highly contextualized, sacred activity, surrounded by myth and ritual, and as much concerned with the interpretive order as with the specifics of particular choices’. Action selection is often done through feeling along and interpretations instead of being based on a formal and rational (best) choice at some point in time. Boden (1994, p. 21) sees decisions as “accountable ways of solving some immediate problem so that the solution stands the test of organizational needs and goals”.

Decision making in professional settings is largely about sharing knowledge and planning to act on it. Dant & Francis (1998) elaborate on decision making as an act of organizational planning during which the participants formulate and organize their knowledge for some specific purpose. They identify a link between knowledge and action, both being constrained by the organizational circumstances; uncertainty of future means that whatever is formulated as a decision may need to be revisited later. Not surprisingly, similar tendencies are obvious in the rapidly moving business in which the organization researched in this study operates.

3.2 Sensemaking as an enactment of decision making

A wide variety of literature conceives organizational decision making as being largely about management of meaning (see March, 1997; Smircich & Morgan,

1985). The process of decision making is viewed as a meaning-making process the purpose of which is to reassure the decision makers, not only about the particular decision at hand, but also about the reasoning for the existence and functioning of the organization. In essence, the organizations are more concerned with forming interpretations which support the strategic directions of the company than with the making of actual choices (March, 1997). In this way sensemaking turns into a core enabler of decision making, as people rely on routine ways to rationalize and shape the premises of decision making. The rationality of decision-making process is formed by preferences, identities, rules and expectations are formed during the decision-making process (March, 1997). Decision outcomes are the primary product of the decision-making process, and sensemaking is used to create rationale for these decision outcomes. Decisions become reasoned by rearticulating some plausible story or chain of events. This kind of plausible story is created for the purpose of sustaining motivation at least for the group in the process. Thus, sensemaking is not a premise of decision making but the result of it. Decision making is retrospectively assessed as an act of sensemaking to achieve organizational rationality (Weick, 1995). Organizational rationality becomes “a retrospective scheme of observation, dealing with the contingency and the paradox of decision making process” (Nassehi, 2005, p. 186).

Overall, sensemaking is understood to be a wider notion than decision making as it is concerned with the interplay between action and its interpretation rather than with evaluation of choice (Weick et al., 2005). It is an attempt to find meaning for an action rather than deciding about an action. Sensemaking is more a matter of ongoing interpretation or reasoning about what one should do in a particular event rather than an evaluation in hindsight whether the decision was right or wrong. “It is more about continued redrafting of an emerging story so that it becomes more comprehensive, incorporates more of the observed data, and is more resilient in the face of criticism” (Weick et al., 2005, p.415).

Decision making is bounded by the situation in which it takes place ((Huisman, 2001; Simon, 1945, 1955). In Chia’s (1994, p. 781) terms, “decision is better understood as a series of interlocking pre-definitive acts of punctuating the flow of human experiences in order to facilitate sense-making”. This process may lead to a decision or non-decision. Gephart et al. (2010) suggest that in order for sense to be accomplished through conversation and social interaction it is enough that the messages are being understood, which does not by default mandate or assume substantive agreement with others (cf. Jacoby & Ochs, 1995; Nikko, 2009). A decision is therefore not a necessary outcome or factor in the act of sensemaking.

In knowledge-intensive organizations, decision making creates the occasions for sensemaking as the whole process of decision making is stimulated by questions arising from confusing or complex situations which call for answers (Maitlis, 2005, p. 21; Weick 1993, p. 636). This ties decision making with one of the core properties of sensemaking which is that sensemaking is driven by plausibility rather than accuracy (Weick, 1995). Plausibility is linked with the ephemeral nature of decision making. Organizations are open for multiple and even

conflicting interpretations, which all seem plausible (Weick, 1993a/2001). As O’Leary & Chia (2007, pp. 392-3) mention, the main task in sensemaking is “to create a coherent and plausible account of what is going on without ever really seeking a one true and final picture of how the world actually is”. Sensemaking “allows people to deal with uncertainty and ambiguity by creating rational accounts of the world that enable action. Sensemaking thus both precedes decision making and follows it” (Maitlis, 2005, p. 21). Thus, sensemaking and decision making are intertwined also in terms of their temporal enactment and realization.

3.3 Temporality of decision making

Similarly to sensemaking, decision-making situations are also temporal in nature. The temporal effects of decision making are based on the social expectations that divide the world into that which exists before and that which exists after the decision (Andersen, 2003). The choice implies that a different decision could have been reached. Other alternatives exist before and until the decision is made. Garfinkel (1967) proposes that decisions that are made in everyday situations are defined retrospectively, i.e. the outcome comes before the decision (Garfinkel, 1967, p. 114). He uses court jurors as an example to explore how they retrospectively elaborate on the actions that made their decisions correct ones, and describe the reasoning which lead to the outcomes, and by this way legitimize and make the decision official. Thus decision becomes an act of justifying the course of action which has already been taken. “The rules of decision making in more or less socially routinized and respected situations, may be much more preoccupied with the problem of assigning outcomes their legitimate history than with the question of deciding before the actual occasions of choice the conditions under which one, among a set of alternative possible courses of action, will be elected” (Garfinkel, 1967, p. 114).

The notions above imply that there is a point in time or in the decision-making process which is marked by some reasoning for the choice or agreed upon solution. The decision is made to conclude the process of making the decision. To describe this phenomenon, Clifton (2009) makes a distinction between decision making and decision announcing. Decision making refers to the sensemaking process during which all participants are able to participate, whereas decision announcing is a retrospective, role-bound activity possible only by the participant with correct identity or role. Decision announcing is usually reserved for the chairperson who has the right to formulate the outcome of the discussion as a decision. By retrospectively formulating the preceding discussion as a decision the announcement at the same time projects future actions. Clifton also distinguishes between decision-making talk from other types of problem-solving by highlighting the future-oriented nature of decision making: “for talk to be oriented to as decision-making talk (as opposed to, for example, reflecting on a problem), future action must be projected by somebody incumbent of the correct identity” (Clifton, 2009, p. 61). Announcing is thus an act of leadership but it makes agreement by the coparticipants relevant (Clifton, 2009).

Despite the retrospective reasoning that is used during the decision-making process, the decisions concern future, or the decision-making process overall is an act of assessing, and trying to influence the future state of affairs. Decision making becomes an interactional linguistic construct which builds on an assessment and formulation of the current states of affair for which a change is desired (Huisman, 2001). The desired change is a description of “virtual” future reality. The formulation builds the springboard for commitment to future. As the formulation represents the conceptualization and categorization of the speaker, it is inherently subjective, situational and interpretive (Huisman, 2001, p. 83). The speakers can choose how they conceptualize and evaluate the situation. By making subjective formulations which emphasize the problems in the current or past situation they can project certain more positive outcomes. Thus, decision making is a socially situated activity which is not confined simply by rationality but also by social and linguistic factors (Huisman, 2001). This kind of approach illustrates well how decision making is embedded in the practices of sensemaking, and very close to what Whittle et al. (2015) describe as an act of sensemaking accomplished through framing. The participants in meetings use commonly known categories of organization to problematize the current state of affairs and to argue for the required change. In this way the speakers work towards a certain decision although the act of decision making remains implicit.

Huisman (2001) further maintains that different teams have different norms for interpreting that a decision has been made, and these norms affect the way the participants relate to one another and how they generally participate in the decision-making process. She builds on recursive formulation of states of affairs as they are at the time when a decision about future actions needs to be made. Decision-makers formulate situations and events into decisions recursively during the decision making episode by reflecting on the past, present and future state of affairs (Huisman, 2001, p. 83). The participants strive to create a future reality, shaping the future of the organization. During a decision-making episode, both the past and future states of affair are described. The interpretation of what the decision actually is depends on the orientation and culture of the group as what comes to procedures (Huisman, 2001, p. 83). Furthermore, the formulation of the state of affairs is always subjective, selective, and dependent on the relative position of the participants as speakers (Huisman, 2001, p. 83). Hence, decision is always interpreted in situ, and always prone to become fluid and vague.

The way in which sensemaking and decision making are enacted through retrospective-prospective reasoning is described by Bolander & Sandberg (2013) in their study of meetings in which employee selections are made by the hiring managers and HR after job interviews. The selectors use "practical deliberations" to discursively construct versions of the candidates to rationalize their selection decisions. The meeting situation does not reveal the actual point of time when the selectors may have made their individual decisions; the meeting brings out each selectors' ex post facto rationalization of their decision. The construction of the candidate takes place in the meeting between the coparticipants and it may precede or follow the final selection decision. In the vein of Garfinkel

(1967), Bolander & Sandberg (2013) posit that it is not the decision itself which is important, but the way it is accounted for and framed in a morally acceptable way. Interestingly, they also realized that differences in the decision outcome (to hire or not to hire) did not lead to any meaningful differences with respect to how the selectors made sense of and made decisions about candidates. In other words, the sensemaking practices were essentially the same regardless of the outcome. This study exemplifies how decision making in situated contexts is a practical and deliberate affair, and in that way a consequence of dynamic and social sensemaking processes. And more importantly, it exemplifies how what is said is consequential to what is decided.

3.4 Decision making as problem solving

In literature, decision making is often presented as a problem solving activity (e.g. Angouri & Bargiela-Chiappini, 2011; Sarangi & Roberts, 1999a): it includes the construction of a problem and its solution. For Weick (1995, p. 9) this is more of a cognitive process of problem setting. Citing Schön (1983), Weick (1995, pp. 8-9) describes problem setting as a key component of professional work: "a process in which, interactively, we name the thing to which we will attend and frame the context in which we will attend to them". This means that one of the core tasks of professionals is to identify what the problem is before actual problem solving can begin. Angouri & Bargiela-Chiappini (2011), on the other hand, see problem solving as a fluid, social process constructed locally through discourse. Angouri & Bargiela-Chiappini (2011) explore two phases in professional meetings in multinational companies: 1) the identification of a problem (what the problem is, its diagnosis) and 2) its ownership (whose problem it is, as a resolution). In order for a problem to become resolved in a meeting, a common understanding needs to be established first for what the problem is. Ratifying a situation as a 'problem' is a discursive process negotiated among the participants. Angouri & Bargiela-Chiappini (2011) also explain how participants' status, expertise and shared local histories play a role in shaping the interaction.

Different types of problems call for different ways of solving the problem. Fisher (1974, p. 128), for instance, makes a distinction between two types of problem solving. Firstly, there are problems for which there is one "best" or "correct" answer that can be externally validated, such as mathematical problems. These problems can be solved by any knowledgeable individual alone, even on behalf of a group. Secondly, there are problems which require group acceptance, i.e. the willingness of group members to commit and implement the solution. This second type is seen as "the outcome of group interaction", "a choice made by group members from among alternative proposals available to them" (Fisher, 1974, p. 128). Decision making as a group task is "the process of choosing among alternatives for which no "best" or "correct" answer can be validated by any means other than group consensus" (Fisher, 1974, p. 332). A consensus decision is of the kind on which the members more or less agree, although agreement is necessary but not a sufficient condition for consensus

(Fisher, 1974, p. 129). As explained before, decision making is not always about making a choice, and this is particularly true when there is a problem to be solved.

The processes of decision making and problem solving are often discursively dispersed and fragmented, as is shown in the study of Atkinson (1999). In his data of collegial medical talk, decision making as such does not seem to be the most apparent function of interaction at all; rather interaction is about displays and distribution of authority (Atkinson, 1999, p. 97). According to Sarangi & Roberts (1999a, p. 34), this is important for the aspects of knowledge and power relations of institutional life: how the information is distributed, the way in which knowledge or the problem (and its potential solution) are presented, and the reconfiguration of the occupational status.

As the above literature has shown, problem solving is an integral part of professional work and decision making. A problem and its diagnosis is a marked phenomenon (Angouri & Bargiela-Chiappini, 2011, p. 217) in workplace meetings which provide the context against which issues are raised and discussed. Raising a topic as a problem does not necessarily lead to its ratification as such. Therefore it follows that by its non-ratification the problem loses the status of requiring common decision or sensemaking actions. In fact, decisions can only be made on the problems that are known at the moment of decision, but unperceived problems cannot be covered (Clegg, Carter & Kornberger, 2004). One can easily draw on this for the analysis of the meetings in this study in which software architecture solutions are agreed. The solution which is presented for the audience to decide on, is a solution to a problem which the presenting architect has cognitively processed beforehand, and the meeting is the place where the collaborative diagnosis and decision making merge.

3.5 Decision making as an interactional process

When considering decision making as an interactional process it is generally conceptualized as a socially situated activity which is shaped by conversational practices (Barnes, 2007; Boden, 1994; Clifton, 2009; Huisman, 2001). Decisions are social facts of workplace life; they are not given, and they are not simply the product of some external variables, but they are interactionally accomplished. (Sarangi & Roberts, 1999a, p. 7).

The study by Boden (1994) is one of the most often cited works of decision making from the perspective of interaction. She describes the diffuse and incremental nature of decisions: members create them from within in collaborative stages during the speech event. Decisions also have an ephemeral quality which can be explained by the assumption that future is by nature uncertain, and therefore decision making is fundamentally a contingent activity (Boden, 1994). Contingency refers to the set of intended or arbitrary circumstances that affect action (Dant & Francis, 1998). Organizations need to act and make decisions in the midst of constant changes and uncertainty, and therefore decisions are not necessarily expected to have lasting effects.

Decisions can rarely be identified by looking at single utterances or turns of talk because explicit, concrete utterances indicating that a decision has been reached are quite rare. There is no single moment or concrete utterance to explicate when a decision is made (Boden, 1994; Huisman, 2001). It is not even obvious always that a decision has been made (Boden, 1994; Huisman, 2001). The decision emerges through talk and the participants depict from the context that a decision has been reached. Thus it is not the decision that is made explicit in talk but the actual process and phases of decision making is (Boden, 1994, p. 22).

The overall process of decision making is more difficult to depict on micro level. The process of decision making can be described as episodes, i.e. larger units of talk, or interactional linguistic constructs to which the participants orient to as involving a goal of decision. Huisman identifies decision-making episodes as “snapshots of developing and constantly renewing courses of action in organizations” (Huisman, 2001, p. 76). They consist of turns during which participants first exchange information and share opinions about the state of affairs after which the decision emerges. Certain phases are usually more explicit, such as the decision summary phase during which agreement is sought (Kangasharju, 2007).

Huisman (2001) claims that the actual processes of decision making are interaction-wise similar, regardless of the complexity of the topic. She suggests that the more complex issues simply involve longer stretches of talk and more parties involved, and therefore her findings would be applicable to decisions on both minor topics (such as a decision to buy a printer for the office) and major topics (such as decisions on organizational strategy). As the decisions made by the professionals in knowledge-based industries are becoming more and more complex, and bounded by various interdependencies, such as the context of the meetings in the current study, it will be interesting to explore whether this claim holds true under more complex decision-making circumstances.

Decision-making episodes are seen by Clifton (2009, p. 60) as “speech activities in which participants orient to what they consider to be allowable contributions according to the identities that they can make relevant to talk”. The members in a decision-making situation consider communicative rules to interpret how they are expected or allowed to contribute and act accordingly. The professional identities and social dynamics between the participants affect the various phases of decision making (Atkinson, 1999; Sarangi & Roberts, 1999a). Decision making is “not just a bureaucratic process, rather it functions strategically to maintain certain types of professional role, face and status in the workplace” (Sarangi & Roberts, 1999b, p. 66). Jabs (2005) illustrates this with the most dramatic case of the notorious failure in the launch of the space shuttle Challenger: based on her retrospective analysis of the transcribed presidential hearings concerning the events leading to the accident, it seemed that at least during their retrospective reasoning about the events, the participants involved relied on implicit communicative rules: the managers were the ones who were expected to make the final decisions and the engineers thought they were simply to provide the technical data without contributing actively and explicitly to the

final decision. The behavior seemed to be based on the epistemological assumption and communicative rules that engineering claims are expected to be supported by valid data which is preferably technical and quantitative (Jabs, 2005, p. 286).

3.6 Summary

The purpose of this chapter has been to describe the theoretical approaches toward decision making and to describe its interconnectedness with sensemaking. This provides the theoretical framework to study how decision making and sensemaking are enacted through meeting talk. These terms are partly intertwined, especially when considering their role in meeting talk. However, all sensemaking activities do not necessitate decisions, but all decision making actions do involve a degree of sensemaking or sensegiving. Also, both of these activities are complex and their episodic emergence in meeting talk cannot be easily identified without looking at longer sequences of talk. The review thus gives reason to challenge Huisman (2001) claims that decision-making episodes would be interaction-wise similar, regardless of the complexity of the episode or the topic concerned. It is worth analyzing if a similar conclusion can be made based on the meeting data in this study, which can be regarded as consisting of “major topics” for that organization.

For the purpose of this study decision making is about sensemaking which involves negotiation and lengthy discussions. Decision making is a process, and each sequence or episode of the meeting builds towards an agreement or decision on the final solution. This is what will be described as collaborative decision making in the analysis of this study.

Furthermore, the reviewed literature shows that decision making – as an act of sensemaking – is tightly bound to the context and available resources. In addition to contextual factors, decision making and sensemaking are enabled - or constrained – by the identities and roles involved in the process. The following chapter will therefore review existing literature about professional identities in the construction of epistemic authority.

4. Professional role and identity at play in the construction of epistemic authority

This chapter draws on the multidimensional aspects of role, identity and epistemic authority. Role and identity are widely used concepts in social studies, and they often mean more or less the same. Both are important when considering epistemic authority in the context of professional meetings. This chapter will describe these concepts generally and then tie them into the context of meetings. Moreover, identity is also an important aspect from sensemaking perspective, sensemaking is grounded on identity (Weick, 2001): who people think they are in their context influences how they act and interpret events (Weick, Sutcliffe, & Obstfeld, 2005). To explain briefly what is meant by these concepts in this study, and how they relate to one another, a short definition is given here.

Role is something that one possesses for a particular period of time. It can be that of a teacher, software architect, or a chairperson. Role is also associated with fixed expectations and responsibilities, and identity can be seen as a reflexive enactment of that role in social interaction (Hall, Sarangi & Slembrouk, 1991). Identity as a communicative practice is situated within specific locales (Kuhn, 2009). As an example, being a chairperson is a role which can be enacted in various ways: one can be active and participatory, or refrain from commenting on substance matter and simply regulate the agenda. Both role and identity are resources which participants draw on to carry out their business (Hall et al., 1991, p. 293). They form the social condition for epistemics and epistemic authority. Epistemics is a field of social study concerned with the forms, nature, and preconditions of knowledge. Epistemic authority builds on the assumption that interaction is essentially a display of asymmetry of knowledge between the interactants, otherwise there would be no point in discussing or sharing knowledge. The asymmetries are made relevant by the interactants. Someone (or some) of the interactants can be assumed to possess substantive knowledge over the issue that is being talked about, and this know-how entitles the speaker to use this knowledge. The right to articulate certain knowledge may also be related to the context in which it is embedded, e.g. the organization, or the organizational role of the speaker (Drew, 1991; Heritage, 2013). It is therefore relevant to consider issues of power as well.

Section 4.1. introduces the concept of membership categorization as a method for integrating role and identity with the expectations and entitlements it establishes for the epistemic authority (Sacks, 1972). In section 4.2. the interplay between role and identity in meetings is reviewed. Section 4.3. theorizes on the concept of epistemic authority and this concept is aligned with the notions of participation framework in section 4.4. Finally, aspects of power in relation to epistemic authority are reviewed in sections 4.5, and section 4.6 draws light on some of the methodological issues concerning power. Section 4.7. summarizes the relevant aspects of this literature review.

4.1 Membership categories as professional signifiers

Membership categories are classifications or social types used to describe persons or things (Sacks, 1972). In professional contexts, membership categories are most prominently related to institutional roles. Members of organizations categorize each other by naming their actual roles, professions or domains of knowledge as recipients or as external parties. Whittle et al. (2015) study how various organizational categories are used to imply what certain categories of people can or should do. Speakers can also use membership categories to refer to themselves as representatives of a social or organizational category (profession or domain of knowledge) to which they belong. This can be a way to separate between professional identity and that of a friend. To take an example from an imagined situation, a doctor would say to a patient who is also a friend that As a doctor I would recommend you do x but as a friend I would suggest you also consider y.

Direct person references can also be used interchangeably with the membership categories by using person names, personal pronouns, or some other dedicated terms (Schegloff, 2007b). Bargiela-Chiappini & Harris (1997a, p. 138) explore pronominal references and forms of address as indicators of the process of identity creation and positioning in the interactive setting of internal meetings. When a speaker uses “we” instead of “I”, or “you” instead of “we”, these pronouns can transfer the ownership of the topic or problem that is being discussed either onto the group or some particular participant in the group. “We” is a collaborative utterance which unite the participants in interaction into one common membership category (Schegloff, 1992b). In this way personal pronouns work as a resource for constituting identity, task and setting for a particular institution (Drew & Sorjonen, 1997). Rovio-Johansson (2007, p. 7) approaches a similar idea based on her discussion on usage of rhetoric devices, when she states that the usage of these devices create a sense that participants in a meetings are accountable for the group, as well as a group, for the actions taken by the group.

Several of Sacks’s studies (1972/1986, 1992) concerned the reflexive link between identity, membership category and sequences of talk. His studies were concerned with how the researcher as the analyst could apply any category without making a presumptuous note of its importance as s researcher, or how could the references used by the speakers be conceived as true. Schegloff (1992a) takes

a more restricted stand on this by pointing out that this reflexive link can be analytically demonstrated only if relevance of identity is explicitly oriented to by the participants in talk, and that is the satisfactory condition for the analytic truth claim. There are also several studies which demonstrate how speakers orient to membership categories although they are not explicitly mentioned in the talk by the participants. Sometimes even a gaze is enough to indicate that someone is called upon to enact based on his role (e.g. Markaki & Mondada, 2012). The relevance of epistemic status, rights and obligations of certain membership categories can be inferred by other means.

The relevance of membership categories in corporate meetings is exemplified in Markaki & Mondada (2012) who study how representatives of the same functional organization from different countries convene and become constructed as representatives of that country for the company in that meeting. The representatives are called upon and expected to respond when their particular country is mentioned. In addition to verbal reference, the national identities of the participants are made relevant through various multimodal actions, for instance a gaze. They are selected as next speakers based on their membership category, thereby labeled as having epistemic authority for issues regarding that country. The particular fields of expertise can become marked as locally and organizationally relevant in the way the turns are designed. When a proposition contains an assumption that the selected category-bound respondent has epistemic authority or primacy, it is enough for the respondent to confirm, refuse or correct that proposition (Markaki & Mondada, 2012). The category-bound referencing indexes the epistemic authority or primacy. This can also be visible when there is competition over whose knowledge or expertise counts, or as Samra-Fredericks (2003, p. 156) explores, how the “knowledge of” is exercised in terms of membership categories (Sacks, 1992).

The use of membership categories in professional contexts is largely driven by epistemic authority and status, which is either given or taken, based on the categories to which the participants belong. Membership categories signify persons to whom it is proper or improper to turn to by reference to knowledge (Schegloff, 2007b). Any member of a category is taken to be a proper representative of that category of people, and they are allowed to make category-bound activities of displaying knowledge on behalf of that category. Belonging to a membership category also creates an incumbency to act in a specific way (ten Have, 1999). Membership category gives relevance to what the person in that category is supposed to know or is obliged to know when the topics in talk concern that particular profession or domain of knowledge (Ford, 2008; Raymond & Heritage, 2006; Stivers et al., 2011). The category determines the epistemic status which entails entitlements (what one may do), responsibilities (what one must do) and enablements (what one can do) at a given moment, relative to other members of the social group (Enfield, 2011, p. 291-293).

4.2 Professional roles and identities in meetings

Interaction provides a scene for the local achievement of various kinds of identities in situ. Identity takes on various forms continually even during a single conversation (Goffman, 1967).

The concepts of institutional role and identity are used in literature somewhat interchangeably. For the purpose of this study it will suffice to say that institutional or professional roles are internalized by their owners and they come with certain expectations. They are enacted as identities which are dynamically constructed during interaction (Antaki & Widdicombe, 1998). Identity construction is a dynamic process and therefore identities are relevant both in local and global context (Sacks, 1992). From the strict analytical point of view, identities are of interest when and (only) if they are made procedurally relevant in interaction by the participants (Schegloff, 1999).

The institutional roles and identities of the participants become intertwined and negotiated in meetings (Asmuß & Oshima, 2012). Even such a predetermined role as that of a chairperson takes on different dimensions, and in formal meetings it can be limited to that of a facilitator and not a stance-taking participant (Boden, 1994, p. 101). More often the identity of the chairperson becomes “omnirelevant” (Sacks, 1992). This means that the chairperson performs the activities that are typically expected to be performed by someone in that role, i.e. he or she opens the meeting and keeps track of the agenda and progress, while at the same time participates in discussing the substance at hand as an equal with the other participants.

The various ways in which the chairperson’s role can be enacted is described by Pomerantz & Denvir (2007) who identify two different types of practices that signify different roles (or identities) taken by chairpersons: the facilitative and the deferential. A chairperson who took a facilitative role encouraged group participation and negotiation of the meeting’s procedures, in this way doing “facilitative chairing” rather than defining them himself/herself. This kind of a facilitative role was taken by the chairperson who was not in a senior position and therefore displayed himself as more of a colleague than a manager. A different set of practices was used by a chairperson doing “deferential chairing” who closely monitored the progress and procedures of the meeting, and who sanctioned inappropriate behavior. An example of deferential chairing is a situation in which the chairperson sanctions meeting conduct as inappropriate and attends to progress of the meeting, e.g. in saying I bring this back on course... or Would you please speak one at a time. Consequently, chair’s authority is at time taken for granted, sometimes it is subject to explicit legitimizing (Svennevig, 2012).

Chairperson is naturally only one identity present in meetings. Other people are invited to meetings because they have, and are expected to represent, some specific institutional or professional role. The identities enacted in those roles do not remain static during the meeting event. The participants manage their identities and entitlements especially while disaligning or disaffiliating with the proposals, and their degree of certainty regarding who is allowed to make proposals can differ (cf. Asmuß & Oshima, 2012).

All participants in meetings can use various practices to influence the meeting event and to display their level authority. Clifton (2009), for instance, has shown how other participants in meetings in subtle ways confront or maintain the authority of the chairperson to announce decisions on behalf of the group. The sequential and category-bound resources are used by participants as tools by which the participants can influence the emerging decision. In his material, chairpersons utilize the category-bound resources, i.e. those resources that they are entitled to by their role, whereas subordinates then are more sensitive to the sequential resources made available to them, i.e. the different opportunities provided by the ongoing talk in situ (Clifton, 2009). In his earlier studies, as well, Clifton (2006a) explains how managers use discursive resources as leaders' management practice of influence and epistemic authority while at the same time making sense of the organizational reality and identities. In the case of this study, this is done by using formulations, and in so doing take the authority to describe how things are. In another study (Clifton, 2006b), he describes how the identity of the knowledgeable is constructed through interactive practices in management team meeting in which junior members of a management team claim identity of a competent member by using backchannels, aiding in word search. In this way they basically align with more senior members to appear as competent members in the team (Clifton, 2006b). By aligning with group opinion they claim group membership.

4.3 The interactional construction of epistemic authority

CA has been interested in the conversational practices that are used for managing domains of knowledge in social interaction for some time. It is believed that the way we deploy or rely on our epistemic resources in social situations is normatively governed (Drew, 1991). The participants have presuppositions about the level of one another's knowledge, and these presuppositions provide the basis for assessing the knowable at hand. The articles by Heritage & Raymond (Heritage & Raymond, 2005; Raymond & Heritage, 2006) can be regarded seminal articles driving CA towards epistemics (Drew, 2012). These have led to the general assumption that interaction is to a large degree driven by epistemics.

Epistemic authority is concerned with the relative control over rights to information as an object of linguistic and interactional management (Heritage & Raymond, 2005). It is a way to control whose view is more significant or authoritative. This authority is largely governed by the epistemic status and displayed in the epistemic stance. Epistemic status, in short, refers to the relative degree of knowledge each participant has or is assumed to have in a particular situation. Epistemic stance is an expression of epistemic position in the local and ongoing interaction as afforded by the relationship between the epistemic status and domain (Heritage, 2012a).

This section will explain the various aspects of theorizing on epistemic authority, as they present a relevant point of inquiry for analyzing professional colleagues in meetings, and to identify the various ways they employ for making their knowledge and opinion matter. This section will first introduce the notion

of epistemic status and its gradients. Then the category-bound epistemic authority will be discussed before explaining the various ways of taking an epistemic stance.

4.3.1 Epistemic status and gradients

Epistemic status refers to the participants' relative access to the required domains of knowledge at some point in time. Epistemic status is something that leads to knowledge, whereas authority derives from it (Enfield, 2011, p. 300). Labov & Fanshel (1977) speak of territories of knowledge as they are expressed in turns at talk. They distinguish between A-events, which are in the speaker's (A) domain of knowledge, and B-events, which are in the recipient's (B) domain of knowledge. Questions are typical B-events when made by A as requests for information about issues in B's territory of knowledge. Pomerantz (1980, p. 187) distinguishes two types of knowables: those that the subject-actor as a subject-actor has the right and responsibility to know (type 1), and those to which the subject-actor is assumed to have access to by virtue of the knowing being occasioned (type 2). Type 1 knowledge refers to firsthand information such as knowing one's name or knowing what one is doing. Type 2 knowledge refers to derivative information about events that have been reported by someone else, and the knowledge is based on these reports or hearsay.

Epistemic status is relative and interactively organized. The speakers position themselves as being knowing (K+) or unknowing (K-) relative to coparticipants. Heritage & Raymond (2005) use an abbreviation "K+" to describe an assessment which implies a claim of primary epistemic rights to assess the state of affairs. "K-", respectively, is used for the speaker who has lesser epistemic rights to assess the same state of affairs. In ordinary conversation, the speaker in first position typically has the K+ status and seldom needs to upgrade the assessment. If the assessment is downgraded, the speaker in second position typically provides an upgraded assessment as response. If an assessment is made as K- in first position, this typically implies lesser socioepistemic rights to assess, and K+ assessments are produced by speakers who appear to have higher epistemic rights to evaluate, relative to other participants. In situations where equal epistemic rights are assumed, the assessment that is produced in first position is often accompanied by a tag question (that cake is marvelous, isn't it), and the response is typically produced as a simple declarative. Heritage & Raymond (2005) propose that this kind of distribution of epistemic claims suggests a need for social balance.

Heritage (2012b) and Heritage & Raymond (2012) express this polar notion of knowing and not knowing on an epistemic gradient (K+ and K-) on which participants position themselves based on their epistemic access to the domain of knowledge. Each question establishes a distinctive gap in knowledge, a distinctive epistemic gradient, between questioner and respondent, and the slope of the gradient can vary from shallow to deep. When the speakers have equal access to knowledge, the gradient is flat (Heritage, 2012a; Heritage & Raymond, 2012). However, as Heritage (2012a) points out, even simultaneous experience of something does not necessarily guarantee epistemic equality. Heritage

(2012a) gives an example of a doctor and patient looking at the same X-ray, and it can be assumed that most likely the doctor can claim higher epistemic status to interpret the X-ray, based on his experience and training.

Participants typically recognize one another as being more or less knowledgeable regarding some domain of knowledge (Heritage, 2012a,b), and they acknowledge this while determining the types of actions that are taken by the coparticipants. Based on the inferences made about the epistemic status of someone producing a question (in interrogative form), for instance, it is determined whether that question is meant to be taken as a request for information (indicating low K- by the questioner) or as a statement for which a simple confirmation is enough (indicating some degree of K+ by the questioner, yet placing the recipient on higher K+) (Heritage, 2012a).

Heritage (2012a, pp. 6-7) gives the following examples to illustrate how epistemic stance is designed:

- 1) Are you married
- 2) You are married, aren't you?
- 3) You're married.

All these utterances express the same basic propositional content, but the epistemic stance varies. All assume the recipient as the primary knowing participant (high in K+), but they express a different degree of epistemic gradient on the part of the questioner. Example 1 displays the questioner as unknowing (low K-), whereas example 2 and 3 display an increasing confidence in the likelihood that the questioner also knows the answer and just seeks for confirmation instead of information, example 3 being higher on K+ side than example 2.

Epistemic status can be seen as a more or less permanent feature of social relationships vis-à-vis a specific domain (Heritage, 2012a). However, the epistemic status of the participants relative to one another can vary from domain to domain, as well as over time. Epistemic stance, on the other hand, refers to "the moment-by-moment expression of these relationships as managed through the design of turns at talk" (Heritage, 2012a: 6). Participants in talk invoke background knowledge (Garfinkel, 1967) about one another's epistemic status as a means of determine the kind of actions that are executed in turns at talk. Naturally participants use other factors besides each other's epistemic status for determining this kind of meaning but Heritage (2012a) claims that epistemic status takes precedence over form when participants determine the social action that is performed. Epistemic status is deployed to determine if an utterance that is formulated as an interrogative, for instance, is really designed to do questioning, or if it is meant for some other social purpose (Heritage, 2012a).

The examples of Heritage (2012a) and Heritage & Raymond (2012) are from dyadic conversations. They focus on questions and the questioner's epistemic status relative to the respondent who is assumed to have primary access to information. The response is expected to close the gap in the level of knowledge. The notion gives reason to consider how the dynamics of epistemic status establish themselves in multiparty conversations. Furthermore, as epistemic authority is at play in almost any conversation, it is also worth considering how gaps in epistemic status are displayed, not only in how questions are designed, but in

other types of utterances as well. This type of extension gives reason to believe that the equilibrium on the epistemic scale could be reversed as well: the first speaker can express higher epistemic status relative to the coparticipants and therefore not even expect any response, affirmation or rejection. The analysis in this study aims to extend the use of epistemic gradients to this direction.

A specific organizational role, or belonging to some organizational membership category, provides privilege to certain type of knowledge or experience. Raymond & Heritage (2006) describe how for instance the identity of a grandparent is made relevant and consequential by the methods the speakers use to display their primary rights to evaluate their grandchildren. They have rights to identity-bound knowledge about their grandchildren, relative to the co-participant who is not as close to these children. Similar practices are used by members in various organizations. Ten Have (1995; 1999) and Heath (1992) describe how for instance doctors maintain an asymmetric distribution of knowledge, and how their authority is accepted by patients. To summarize, for the purposes of analyzing epistemic status in a context of a professional meeting, the role carried by the professional as such provided a certain privileges and obligations regarding the knowledge. The identity of a knowledgeable professional is established through interaction, and it is displayed as in the epistemic stances taken.

4.3.2 Epistemic stance and stancetaking

Epistemic stance is the speakers' expression of how they position themselves in terms of epistemic status in and through the design of their turns at talk (Heritage, 2012b, p. 33; Heritage, 2012a). The formulation of epistemic stance demonstrates speakers' level of certainty or doubt toward the matter being talked about, in this way establishing authority to the speaker. It marks the degree of commitment and attitude towards the knowledge (Kärkkäinen, 2006, p. 705). Epistemic stance markers such as I think express both the mode of knowing as well as the attitude toward that knowledge (Ekström & Kroon Lundell, 2011, p.674).

While stance is a subjective notion, stancetaking is the deliberate display of understanding or knowledge for others and therefore intersubjective. Stancetaking is a socially situated and consequential activity (Du Bois, 2007; Jaffe, 2009; Keisanen 2007). It is not a stable possession but enacted; when taking a stance people calibrate alignment and invoke presuppositions of sociocultural values in a dialogical manner by intersubjective interpretation of previous utterances (Du Bois, 2007). In this way stancetaking concerns the "alignment or disalignment between discourse participants with respect to the projected course of action or of the sequence" (Keisanen, 2007, p.277). It is the means through which the participants take up a position with respect to the form or content of their own utterance or that of another speaker (Schegloff 1991a, Jaffe 2009). Even when taking a seemingly neutral position one is taking a stance, and in this way all utterances invoke an evaluation at some level (Du Bois, 2007; Jaffe, 2009).

Speakers index their epistemic authority relative to others by taking a stance (Clift, 2006). Stivers et al. (2011) describe two types of stancetaking in which

epistemic alignment and affiliation is sought due to an asymmetry in stance. Firstly, there may be a difference in the epistemic stance of the participants, and this difference in the epistemic status needs to be managed through talk. Secondly, the difference may concern evaluative stance, which means that differing opinions need to be resolved, and even in this case the participants mainly attempt to work out the difference of opinion by resorting to rational and "factual" reasoning, not as emotional or subjective reasoning.

There is a need to negotiate the rights and access to knowledge in order to reach common understanding (Asmuß 2011, p. 207), and this is achieved dynamically through the epistemic positions that are displayed and acknowledged during the conversation (Mondada, 2011). It is accepted that asymmetry in knowledge will remain, but the participants nevertheless need to reach common understanding. According to Stivers et al. (2011, p. 9), participants in talk exercise social norms for the management of epistemic status and authority, and these norms influence and are influenced by social alignment and affiliation (Stivers et al., 2011). The participants may seek for consensus about their respective epistemic status and authority. Congruence is reached if the speakers agree on who has higher authority, i.e. access and rights to knowledge. Incongruence, conversely, leads to disagreement about who has greater authority (Stivers et al., 2011).

In conversation, epistemic authority is also reflected in the sequential positioning of the epistemic statements. First position statements are designed for stronger epistemic primacy than those taken in second position (Heritage, 2002c). Heritage & Raymond (2005) distinguish between first position assessments and responsive second position assessments. First position assessments are statements which establish a field for the second speaker to take a position through agreeing, disagreeing or adjustment (Heritage, 2002c; Pomerantz, 1984a). First positioned assessments, for instance, are on-record and explicit; they do not agree or disagree with anything that has been said previously (Heritage & Raymond, 2005, p. 16). Second positions, then, are designed to be responsive to the first position statements (Heritage & Raymond, 2005). Positioning is nevertheless not solely confined to temporal order; the positions can be renegotiated reflexively as the conversation continues (Heritage & Raymond, 2005, p. 30).

Heritage & Raymond (2005) draw on the concept of face by Goffman: "when a person volunteers a statement or message, however trivial or commonplace, he commits himself and those he addresses, and in a sense places everyone present in jeopardy (Goffman, 1955/1972, p. 340). By saying something, the speaker opens himself to the possibility that the intended recipients will insult him by not listening or they will think him forward, foolish, or offensive in what he has said" (Goffman, 1967, p. 37). This study will take this argument further by saying that also the others, who are put in the second position, or giving the alternative of going second, also put themselves into jeopardy either by aligning or confronting with the first position, or doing so by silence.

There is also the moral aspect to epistemic authority which is demonstrated in the way participants hold one another strictly accountable for matters concerning who has the right to know what and when, and with which degree of epistemic priority relative to others participating in interaction (Heritage, 2005a, p. 200). Consequently, epistemic authority is tightly related to the inferences about who has power. When speakers, for instance, have similar access to the source of knowledge, for instance to the company as its employees, the one who has worked there longer can claim higher rights to knowledge about issues related to the company based on his or her longer experience. As has been mentioned, other, more junior participants with less experience can still find the interactional means to challenge or support the knowledge displays of the seniors. This will be seen in the analysis of the meetings in this study as well. In the current study, epistemic stancetaking and positioning is seen as necessary for social organization of cooperation. These resources that are used as contributions to challenge or support the opinions expressed are visible in the use of the available participation framework in the meetings. Stance which is essentially subjective in nature is turned into intersubjective sense through talk. The degree to which the participants hold on to their subjective positions is consequential to the organizational sense and development.

4.4 Participation framework

Epistemic authority and stance are associated with participation framework, a concept developed by Goffman (1981); it refers to the different roles that the participants can take during interaction, and to the relationship participants assume towards the situation and utterance. Participant status can be given or taken, or avoided. In taking epistemic positions the speakers display if they are inviting other participants to be the source of knowledge or if they are positioning themselves as the primary or sole owners of the information at hand. Participation framework is closely related to Goffman's understanding of footing, as it is considered who is presented as the original source of the statement: the speaker, the hearer, or some third party. If the speaker is the source of information, the speaker takes epistemic authority. If the hearer or recipient is called upon as source of knowledge, epistemic authority is granted for him or her. If some third party is referenced, this non-present party is made a participant and a powerful source of information. The absence of this third party makes it also harder to challenge the information possessed by said party. In an organizational setup, the identity of the organization itself can become a relevant actor in the identity work and sensemaking process (Weick, 1995).

Participation framework involves the management of interaction among the participants in ways which include both the recipients of the talk as well as the speaker. The expressions can be quite subtle. Goodwin (1987), for instance, explores how glance can be used to change the participation framework. The speaker can select by glance one of the recipients to respond when knowing that the respondent has access to the needed information. The shift in activity changes the participation framework of the moment, the ways in which those

present are aligned towards each other, and the behavior in which they are engaged (Goodwin, 1987).

Sensemaking is influenced by the presence of others as well as the perception of self (Sandberg & Tsoukas, 2015). As Weick (1995, p. 24) puts it:

“what the [interrupted] situation means is defined by who I become while dealing with it or what and who I represent. I derive cues as to what the situation means from the self that feels most appropriate to deal with it, and much less from what is going on out there”.

Most studies focus on how identity is constructed through sensemaking. Watson & Bargiela-Chiappini (1998), on the other hand, show how identities influence sensemaking. They explain how occupational roles create dilemmas which have implications for their self-understanding and the choices that individuals make. The resources individuals use to make sense of their identities and their work vary by national culture, corporate culture, and occupational culture (Watson & Bargiela-Chiappini, 1998).

When dealing with identities, sensemaking literature often focuses the attention to the role of managers or other organizational leaders in the act of sensemaking and sensegiving. Maitlis (2005) compares four different forms of organizational sensemaking as they occur in multiparty negotiations between leaders of symphony orchestras and their stakeholders: guided, fragmented, restricted, and minimal. These forms describe the degree to which participants engage in sensemaking during the negotiations (Maitlis & Christianson, 2014). “Guided” sensemaking occurs when leaders take an active role of a sensegiver in constructing and promoting certain understandings of events, and stakeholders also participate actively in the shaping of beliefs about the issues. Several parties take the opportunity to drive sensemaking by displaying their legitimacy and expertise to be engaged (Maitlis & Lawrence, 2007). “Fragmented” sensemaking occurs when stakeholders are actively involved in raising issues, formulating accounts of a situation, and arguing for potential solutions and leaders do not try to organize or control discussions. “Restricted” sensemaking ensues while leaders promote overarching accounts of issues they encounter and stakeholders accept them with relatively few attempts to provide alternative understandings. “Minimal” sensemaking occurs when there are no particular attempts to influence others’ understandings and participants rely on others’ interpretations of an issue or some external trigger. Based on their review of sensemaking literature, Maitlis & Christianson (2014) say that organizational sensemaking is most often restricted in nature, which means that leaders tend to control the sensemaking processes.

In the current study, participation framework is concerned with who is involved in the discussion, and whose presence or statement is made relevant. Participation framework is at play when speakers specifically invite other participants to contribute when that other participant has the necessary knowledge

to shape the merging sense or decision (Goodwin, 1987). Participation framework thus shows how participants in meeting are aligned towards each other: who are engaged in the activity of sensemaking, and how.

4.5 Epistemic authority and power in meetings

This section draws light on some of the aspects of epistemic authority as power, as it goes without saying that power and influence are factors which pertain to organizations and meetings in which the participant have specific roles. Meetings are “the most important and visible sites of organizational power” (Mumby, 1988, p. 68). While being for decision making and for accomplishing goals, they are also scenes for power. “As such, meetings can be viewed as important not so much by virtue of what they accomplish, but because they provide a context in which various organizational issues can be played out between those members and interest groups that structure organizational agendas” (Mumby, 1988, p. 68). “Meetings provide symbolic contexts in which organization members can dramatize their superiority over others by virtue of their positioning in the organizational hierarchy” (Mumby, 1988, p. 68).

While negotiating power relations, the participants in talk construct certain aspects of their professional identities (Holmes, Stubbe & Vine, 1999, p. 351). More importantly, power is something that can be gained by the actions taken in a meeting, regardless of the organizational position or status. The speakers have other discursive resources that they can use to influence the interaction.

Cunliffe (2001, pp. 352-353) discusses the matters of influence in the construction of meaning between meeting participants: “no one person is wholly in control of meaning, rather meaning (as a verb) is a complex back and forth, unfolding process of mutual construction. In short, it is a question of influence as members of the team try to influence each other”. This aspect is of particular interest in meetings where professionals are equals from status point of view and need to resort to other means of influencing.

There are formal, category-bound resources which restrict or give affordance to the kind of actions that are possible for certain (organizational) identities (Atkinson, 1982, p. 103). A manager, for instance, can take the authority to formulate the outcome of discussion, or give the speaker rights to someone (Clifton, 2006a). The general ability to use linguistic resources and rhetorical skills, is relevant for anyone, regardless of the role or identity, when wishing to influence the outcome of social activities. The one able to utilize the linguistic resources most efficiently can exercise power in ways which surpass the power defined by the formal roles.

This study will view aspects of power as a feature of epistemic authority. Moreover, power is also explored from the point of view of sensemaking, as “the creation of new understandings is not free of power issues and self-interested behavior” (Vlaar, Van den Bosch, and Volberda, 2006, p. 1629). This is an aspect that has not been studied in any major degree before (Weick et al., 2005).

4.6 Methodological issues with power

Power is one of the primary concepts of sociological interest which is also recognized in sensemaking literature although it has not received much attention in sensemaking research into organizations until recently. Identity threats, in particular, are seen as powerful triggers for sensemaking. Weick (1995, p. 23) observes that “sensemaking is triggered by a failure to confirm one’s self”.

Epistemic authority is concerned with control and management of knowledge contributions, thus tightly associated with demonstration of power. In the latest literature, “discursive leadership” has gained ground (Clifton 2006a; Fairhurst, 2007; Svennevig, 2008; Whittle et al., 2015; Wodak et al., 2011). Leadership, in this social constructionist view, refers to the management of meaning (Clifton, 2012; Smircich & Morgan, 1982). It is a language game during which the rights to assess or to define organizational issues as right or factual, are negotiated in talk (Clifton, 2012, p. 150). Leadership is not predefined, nor is it based on organizational status, but emerges during the talk.

Weick et al. (2005, p. 418) point out several potential ways in which power might become a factor of organizational sensemaking: valued/derogated identities, encouraged/discouraged social relations and updatings, accepted/rejected (retrospective) meanings, highlighted/suppressed cues, accepted/rejected plausibilities. Helms Mills (2003) describes how interpersonal, sociocultural, and institutional contexts come into play during sensemaking. Her study concerns strategic change initiatives at a Canadian utility company and how the accounts of the same events by different participants vary and how the power differentials among individuals who participate in the creation of a common view impact the sensemaking process. The accounts that dominate and the practices that become accepted are products of negotiations but privilege some actors over others. Maitlis & Sonenshein (2010, p. 571) discuss how competing accounts in organizations lead to a situation in which some interpretations become legitimate while others “evaporate”.

CA, as well, has been criticized for not being able to take up the topics of power into consideration because it does not necessarily surface in the talk. It is claimed that micro-level phenomena that CA is interested in do not link easily with macro-level social constructs such as power. In critical discourse analysis, power is treated as a predetermined social construct. CA makes it possible to explore how power is achieved in interaction as a means to display epistemic authority. CA can also display what the participants take to be relevant during the ongoing interaction, in how they orient to the rights, obligation and opportunities to talk (Sacks et al., 1974; Schegloff, 1999). Also, it is possible to look at the communicative techniques that participants use to achieve their personal agendas, to present their knowledge claims, or to achieve a decision. Personal agendas can be enacted as topical shifts which refer to the changes in the themes or sequences of events from one utterance to another (McLaughlin, 1984, in Putnam & Fairhurst, 2001, p. 85).

There are studies in the field of organizational communication which point out issues of power as they appear in talk. Bargiela-Chiappini & Harris (1997a) explore how the roles of the powerful and powerless are acted out and thus made

analyzable in meeting interaction. Although the chair is attributed the instrumental power to control the meeting interaction based on the official agenda, the other participants, even if subordinates of the chair, are not immediately regarded as powerless. They can refer to the knowledge held by other participants or non-participants, for instance, to argue their point. Often issues of power are embedded and implied without explicit mention. Heritage (1997, p. 179) contradicts this by drawing a link between the conception of power in the Foucauldian tradition (knowledge is socially constructed in discourse) and in ethnomethodology:

“The view that power inheres in institutional knowledge, classifications, knowhow and normative arrangements is compatible with the conversation analytic view that it is created, renewed and operationalized in many disparate but interlocking facets of the organization of interaction. Both perspectives converge in the idea that this power inheres both in the knowledge, classificatory and interactional practices of institutions and their incumbents, and in the discretionary freedoms which those practices permit for the incumbents of institutional roles” (Heritage, 1997, p. 179).

Heritage claims further that in institutional settings, knowledge as such is not enough. Through examples he shows how e.g. doctors, when attending pediatric consultation together with their own child, hold back their medical expertise, as it is the pediatrician who is entitled to knowledge in that specific situation.

4.7 Summary

This chapter has explained, through literature review, the relationship between status and role, and the discursive rights and obligations that they bring. The theory invites for an analysis in which multiple social dimensions are considered to see how epistemic authority is played out. A variety of conversational practices are used for managing epistemic authority. Questions are commonly seen as a channel for invoking relevance to who has knowledge, or who is the most or least knowledgeable. Even with respect to epistemics, a question is typically seen to indicate a need of knowledge and therefore a lack of it, on part of the questioner. The analysis will demonstrate that it can equally well be used to exhibit a high degree of knowledge.

There is plenty of research about the various ways in which professional roles and identities are constructed through interactional sequences (Hall et al., 1999). These studies are mostly concerned with situations in which the identities of the participants are socially distinct: they focus on practices taken by the doctor with patients, interviewers with interviewees, etc. These studies are conditioned by the epistemic asymmetry determined by the distinct institutional roles. For this reason, Raymond & Heritage (2006) claim that exploring identity is much more interesting in everyday talk than in institutional settings, because

the roles are not as self-evident and therefore need to be worked out more explicitly by the participants. For this same reason, this study maintains that it is worth studying how identities come into play in institutional settings in which professional peers make decisions, as it is the scene where professional roles need to be reinforced and therefore also issues with power, among colleagues, becomes visible.

This chapter has described the distinct ways in which epistemic authority is constructed and how epistemic stances, in particular, influence the ensuing understandings. This approach provides an interesting framework for analyzing the kind of meetings in this study in which the participants are professional experts of mainly equal status but at the same time have their particular domains of expertise. It creates a different scene in terms of who holds control. The explicit and implied ways of enacting power have been explained. The purpose of this literature review has been to create a bridge towards an analysis that will demonstrate the interplay between the professional identity and professional epistemic authority as ways of enacting power.

5. Conversation analysis (CA)

This chapter provides an overview of conversation analysis (CA) as a research method. It describes the basic concepts, features and forms of CA in order to place this study in the framework of institutional interaction and meeting interaction in particular. CA is concerned with social actions, and the present research will draw on studies that feature a set of social actions which are prevalent in both mundane and institutional settings, namely evaluations, proposals, formulations and questions. CA literature provides the analytic tools for identifying how these specific language practices can be associated with social practices such as sensemaking, decision making, and epistemic authority.

5.1 CA as a research methodology

CA, in its essence, is a study of social practice in which conversation is seen as socially organized activity. It is concerned with interactional accomplishment of particular social tasks. “Conversational interaction may be thought of as a form of social organization through which most, if not all, the major institutions – the economy, the polity, the family, and the reproduction and socialization of the population – get their work done” (Schegloff, 1991a, p. 154). “Conversation” of analytic interest takes place in mundane situations as well as in more formal institutional settings such as meetings.

CA has its roots in sociology, phenomenology, and especially ethnomethodology. From sociology it derives the general interest in human behavior. The phenomenological perspective provides the understanding that communication is essentially an intentional activity by which we make sense of everyday world. The ethnomethodological perspective builds generally on the idea that social order is contingently accomplished through the actions by the subjects who use various tactics to coordinate their relationships with others (Heritage, 1987). Ethnomethodology is “a study of a particular subject matter: the body of common-sense knowledge and the range of procedures and consideration by means of which the ordinary members of society make sense of, find their way about in, and act on the circumstances in which they find themselves” (Heritage, 1984a, p. 4).

Ethnomethodology is not a research methodology, but rather a study of methods used in everyday life. It is interested in studying how actors define and react

to the social action. CA is also concerned with meaning and social action but is focuses specifically on talk-in-interaction. Both approaches are concerned with sensemaking although the specific analytic object of study may differ.

Both ethnomethodology and CA are strictly concerned with studying events in situ. Both approach social actions as jointly established contingent accomplishments of the participants in real time (Garfinkel, 1967). Furthermore, both see that utterances are indexical: their understanding depends on who is speaking, the time and place of their production (Garfinkel, 1967, p. 4-5). In other words, the meaning of any social action depends on the context in which it takes place. More importantly, both approach the topic of inquiry from the members' perspective and how they orient to the construction of meaning to social situations. Participants in interaction pay attention to how the turns at talk enact some intended function or some business at hand by their coherent and meaningful sequential placement.

The core analytic question in doing CA is "why this now"; i.e. why, what happens in the micro level of interaction, happens right then and there (Schegloff & Sacks, 1973, p. 299). The analysis is also done by using "next-turn proof procedure" (Sacks et al., 1974) which means that the next turn indicates the participants' orientation to the prior turn. Speakers are responsive to what has been said, in that way looking back, while they also orient to what is expected from them as a response. In CA, the "why this now" question concerns the researcher in particular:

"This placement of meaning within activity streams of participants' overt and mutually-oriented conduct, rather than within heads or consciousness as such, is very compatible with the EM/CA attention to vocal and nonvocal behavioral displays and eschewal of reference to internalized values, rules, attitudes, and the like" (Maynard & Clayman, 2003, pp. 173-174).

CA in its strictest form draws solely on conversation or multimodal activities related to conversation, and it avoids making any analytical claims based on other contextual factors of the situation. Ethnomethodology, on the other hand, applies a wider variety of contextual factors in the analysis.

Methodologically, CA belongs in the theoretical orientations of social constructionism (Maynard, 2003, p. 68). This approach suits well for the current study. The social constructionist framework which builds on the idea that language does not simply reflect reality but constitutes it (Fairhurst, 2007). This approach is part of the linguistic turn that has gained ground within the fields of business communication research and organization research. It is acknowledged that how language is used to describe things is not only a reflection of organizational reality but constructs and maintains the organizational reality (Hardy, Lawrence, & Grant, 2005, p. 60). According to McPhee & Zaug (2000), all communication in organizations has a constitutive force. This is not to claim that all communication as such would be directly organizational, nor related to the decision making. However, communication is related to the self-structuring,

membership negotiation, activity coordination and institutional positioning (McPhee & Zaig, 2000). In this tradition of constructivist epistemology, sense-making and decision making are treated as social practices that are context-bound to the situation at hand (Berger & Luckmann, 1967). To a certain degree, Foucault's philosophy about knowledge being constructed through discourse also suits the approach taken in this study.

The language, or talk, that takes place in meetings, is seen as both constituting and constitutive. As language is socially constructed, organizations are shaped by language (e.g. Boden, 1994, 1995). Organizations are talked into being, and participants construct their social world and their social roles during interaction as a way to construct meaning to the organization and culture (Arminen, 2005; Heritage, 1984a, p. 290). Social construction is therefore central in meetings as well, as they are essentially places for constructing, maintaining, and modifying interpersonal relationships between the participants.

This study explains how conversation analysis can be used for the study of sensemaking practices. In CA, conversation is viewed as the way of organizing meaningful conduct; it is not concerned with conversation as an analytically separate phenomenon. Rather, CA is concerned with how people in society produce activities that make sense of the world around them (Pomerantz & Fehr, 1997, p. 65). This means that the analysis concerns how actions, events, and objects are understood by the participants. Language is used to accomplish social actions.

5.2 Sequential organization and action formation

CA is concerned with sequential organization of talk which refers generally to the types of temporal organization concerning the relative positioning of utterances or actions in talk (Schegloff, 2007a, p. 2). The meaning of an utterance depends on its sequential position (Sacks, 1992). Sequential analysis focuses on the ways consecutive turns are related to one another to form a meaningful sequence. That is, it is concerned with units larger than a sentence or utterance or one turn at talk. It covers the system of turn-taking, repair, sequence organization, and overall structural organization. Moreover, the notion that interaction is recipient designed is intrinsic to CA. These concepts will be shortly introduced in this section.

The system of turn-taking refers to the ways people use to take up and allocate turns at talk and to the ways they manage overlap and interruptions (Sacks et al., 1974). Utterances are not measured as sentences or paragraphs, but as moves and turns. A move is the minimal interactional unit, and turns at talk can contain one or several moves. Change of speaker typically happens at transition relevant places (Sacks et al., 1974). Turn size, i.e. the length of turn by one speaker, may vary between utterances like *uh* to turns extending over several moves.

Repair refers to the practices used by the participants in talk to address problems of speaking, hearing, or understanding. They mark potential sources of emerging trouble (Sacks et al., 1974; Schegloff, Jefferson, & Sacks, 1977) which

relates them closely with sensemaking. Repairs enhance intersubjective understanding as they clarify what is said and talked about (Schegloff, 1991a).

The meaning of sequence organization often overlaps with sequential organization. Schegloff (2007a) makes a distinction between the two. He defines sequence organization as a type of sequential organization which is more concerned with the action that is performed by the sequence (Schegloff, 2007a). There are patterned actions which people take "to co-produce and track an orderly stretch of talk and other conduct in which some course of action gets initiated, worked through, and brought to closure" (Schegloff, 2007a, p. 3). At minimum a conversational sequence is comprised of related turns at talk such as greetings: the occurrence of the first greeting by one party in conversations establishes an expectation for the occurrence of a second greeting by another. Another example is a question which opens up a new sequence during which some response or solution is sought: the expectation is that a question which is given in first position will be followed by a response in the second position, and often, and acknowledgement (such as okay or thank you) in third position (Schegloff & Sacks, 1973). Sequences therefore organize and provide sense for social actions and thereby manage intersubjectivity (Schegloff 1992a, 2007a).

The overall structural organization is concerned with the positioning of utterances or actions in conversation. As an example, greetings are positioned early in conversation. Meetings often have a fairly standard structure of larger sequences such as opening, stating the agenda, etc. This structure is patterned more formally than ordinary talk (Drew & Heritage, 1992, p. 43).

Recipient design is a term adapted by Sacks et al. (1974) from Garfinkel (1967) which means that speakers use language in a way which enables their recipients to understand the intent (Heritage, 2013). This is displayed in the word and topic selection as well as in the ordering of sequences, and the options and obligations for starting and terminating a conversation (Sacks et al., 1974). CA draws on the reflexive nature of conversation; the participants orient to both common sense knowledge and recipient-designed mutual understanding (Schegloff, 1988). Interaction is a reciprocal activity in which the participants orient towards the topic as well as towards the intended meanings of each turn at talk.

In addition to considering the interactional adjacency pairs such as questions and responses, CA is concerned with how turns at talk are designed to produce utterances that are recognized as doing particular social actions such as evaluation, challenging or doing questioning. It is less concerned with topicality of the interaction. To use a simple example by Schegloff (2007a, p. 3): when someone says *Would someone like some more ice tea*, this is treated as an action of doing an offer rather than being a conversation topically about ice tea.

In more formal institutional settings which have a specific goal, the interactants treat each unit of talk as one component of a larger sequence-in-progress, such as decision making in a meeting. They "orient to that larger sequence-in-progress on a moment-by-moment basis", which facilitates the "realization of the sequence as an accomplished fact" (Maynard & Clayman, 2003, p. 191). Sequential analysis offers the means to analyze sequences of meeting talk in an

episodic fashion, and identify those sequences and turns at talk which seem to have implications to the sensemaking process or decision making. Sensemaking and decision making are collaborative efforts which in interaction are realized through affiliation and alignment, which is the topic of next section.

5.3 Affiliation and alignment in interaction

Affiliation refers to responses which operate on the social and affective level of cooperation in interaction (Heritage, 1984a; Heritage & Raymond 2005). An affiliative response is a solidary one which aligns with the mood of the evaluative stance taken by the coparticipants and the preference that is set by the prior action (Stivers, 2008; Stivers et al., 2011). Affiliation frames the interactive role of the stance as agreement or disagreement. Agreements and acceptances are affiliative responses to proposals, evaluations, or invitations. Affiliation is a behavior by which the speaker “displays support of or endorses” the stance of the other coparticipants (Stivers, 2008, p. 36.). On a wider organizational level, a commitment to an organizational decision could be seen as an affiliative act. Disagreements, rejections and corrections are considered disaffiliative social acts. They are also accountable actions as the speaker is expected to offer an account to acknowledge that he or she is deviating from the norm (Sacks, 1973/1987, Pomerantz, 1984a). In addition, disagreements are typically prefaced by hesitations and delays relative to the action to which they respond. Turn beginnings that are framed e.g. with hedges or other epistemic downgrades, project disaffiliative actions (Ford, 2008, p. 76). Other signs of disagreement are the use of passive voice, generalizations, or moral questions.

Compared to affiliation, which is a social phenomenon, alignment is a structural one. Alignment operates at the level of organizing talk and responds to the sequential expectations of interaction (Stivers, 2008). By aligning, the speaker acknowledges the formal design of the prior activity that is being performed and its sequential preference order (Asmuß & Oshima, 2012). In conversation alignment becomes a sensemaking device which buffers or anticipates disruptions in interaction and understandings (Stokes & Hewitt, 1976). Aligning action is a verbal effort “to restore or assure meaningful interaction in the face of problematic situations” (Stokes & Hewitt, 1976, p. 838, cited in Putnam & Fairhurst, 2001). Alignment also refers to situations in which a participant seeks the recipient’s participation in some projected activity (Keisanen, 2006, p. 14). The nature of alignment is exhibited as an affiliative act for example by positioning oneself as knowing or not knowing vis-à-vis the preceding utterance, or by acting surprised.

Heritage & Raymond (2005) point out that from epistemic perspective agreement requires more than just adjusting an evaluation in interaction so that it becomes aligned. The participants also seek to establish independence of access to state of affairs as a basis for agreement. In doing so they consider the entitlements they have to evaluate while agreeing or disagreeing (cf. Asmuß & Oshima, 2012).

Several studies have demonstrated that the way epistemic resources are used is consequential for the affiliation and alignment with respect to epistemic authority (whole volume of articles in Stivers et al., 2011). This approach provides a useful analytic point of view for exploring affiliation and alignment as phenomena of epistemic authority in a collegial meeting context. It establishes the grounds for analyzing material in which professional identities and knowledge about the subject matter are the focus of attention. Affiliation and alignment will be applied in the analysis to see how they affect sensemaking and decision making. As collaborative social efforts, they play a role in the creation of accountability and preference among the coparticipants. These concepts will be discussed in the following section.

5.4 Accountability

Accountability is a key concept of ethnomethodology and CA (Garfinkel 1967; Heritage 1984a). It refers to those descriptions and explanations that people offer when they explain what is going on. The account describes the actions people engage in and thus provide a basis for social order and relevance. As Garfinkel (1967, p. vii) describes it: “Ethnomethodological studies analyze everyday activities as members’ methods for making those same activities visibly-rational-and-reportable-for-all-practical-purposes, i.e., ‘accountable’ as organizations of commonplace everyday activities.”

Accountable action is something that is considered normal or expected. To give an example, accountability inheres in adjacency pairs: a question as a first pair part makes a response as a second pair part “accountably due”, because it can be understood based on its sequential positioning and conversational properties (Heritage, 1984a, p. 247). A non-accountable action, would be an atypical reaction to the question, such as ignoring it and changing the subject, in place of the expected response in the second pair part.

Accountability and accounts are related to the orderly nature of talk and preference (Atkinson & Heritage, 1984b; Sacks, 1973/1987). Preference means that in conversational events speakers can typically choose how they will respond to the preceding action: if they choose to accept an offer or agree with a preceding statement, this is considered a socially preferred action. If they choose to disagree with the preceding statements or to refuse an offer, for instance, this is considered a socially dispreferred action and therefore it is expected that the respondent will provide a reason for the disagreement or refusal – an account. Dispreferred actions are therefore “sequence-expansion relevant” (Schegloff, 2007a). Preference for agreement is the rule in “normal”, amicable conversations (Pomerantz, 1984a; Sacks, 1973/1987). A preferred response is a speaker’s way of maintaining social solidarity and rapport (Heritage, 1984a). A preferred response is unproblematic in a sense that it conforms to the normative expectations. It can therefore be performed directly and with minimal delay. Dispreferred actions are socially more problematic and therefore often produced with delay or in mitigated form (Pomerantz, 1984a).

Accountability has a close relation to sensemaking. Garfinkel (1976) approach focused on everyday practices of the participants and the actual explanations produced in the moment for interpreting and accounting for their experience as they interacted. This kind of approach is somewhat different from the Weickian perspective. To generalize, ethnomethodology builds on accountability being enacted in situ, whereas the Weickian tradition perceives it more like a practice used in aftermath (Maitlis & Christianson, 2014). Accountability relies on the unspoken assumption about what is normal or typical in a certain situation. If normality is breached, accountable actions are made relevant. Accounts are used to explain or describe the world, in words, by making it meaningful based on the previously unordered external cues (Antaki, 1994; Potter & Wetherell, 1987; Maitlis 2005). Accounts build a reflexive link to the event or action that they describe, as well as in relation to what, or what type of action, they are doing (Potter, 1996, p. 66).

Accountability is also related to epistemics. People are made normatively and morally accountable for what they do during interaction (Drew, 1998). The participants are keen to hold one another within strict standards of accountability concerning who has knowledge, what knowledge, and when, relative to the co-participants (Heritage, 2005, p. 200). Moral accountability is an area of interest for those engaged in discursive psychology (Edwards & Potter, 2005).

In institutional groups accountability also means that each member is responsible for actions taken by that group (Rovio-Johansson, 2007, p. 7). In this respect accountability is closely linked to the decision-making process and power of the team to make decisions. The way accounts are used to justify decisions can be described as acts of sensegiving, as described in section 2.4 of this study.

Accountability is a way of doing arguing. An account is a discursive act which is used to excuse or justify a chosen course of action (Wooffitt, 2005, p. 79). Arguing can have two different meanings. On the one hand, arguing refers to a dispute or quarrel during which explanations and justifications are produced as claims and counter-claims. On the other hand, arguing can simply refer to a piece of reasoning given independently or as a part within a longer dispute for the purpose of describing things (Antaki 1994, p. 140; Billig, 1989). Descriptions of this kind are produced as parts of actions which are embedded in wider sequences of interaction (Potter, 1996, p. 47). Arguments are open for either appreciation or rejection (Brockriede, 1974, p. 167). An argument carries potential for disagreement but does not always lead to that. In this section, these different meanings of arguing are described by relating them to accountability and preference, as well as to the degree of affiliation displayed.

Accountability aligns with politeness theory as the need for accounts is triggered by the social preference for agreement (Brown & Levinson, 1987, p. 386). However, when a context for arguing has been established, preference for agreement is no longer valid and disagreement becomes the preferred action (Kangasharju, 2009; Kotthoff, 1993). This is the case when accusations or complaints are displayed as first position actions and the respondent in second position is expected to defend his or her point.

5.4.1 Accounts in conflictual situations

The need for accounts becomes apparent in conflictual situations in particular. Disagreements are situations in which two or more participants consecutively present views which differ from those proposed by a previous speaker (Coulter, 1990a, p. 185; Kangasharju, 2002, p. 1450). People typically argue over topics, or challenge the terms and definitions given to things or events (Antaki, 1994, p. 160). While arguing over the content, they argue over the opinions by using claims and counter-claims to align their epistemic positions. The scene is set for dispreferred and disaffiliative statements which call for accounts. Accounts are produced by the participants as explanations or justifications to argue or justify their positions. They provide “the social reasoning that people go through to make sense of their world, and (perhaps), impose that sense on other people” (Antaki, 1994, p. 1). The participants resort to their earlier experience, to some external party, or to something which is considered an objective fact.

Kangasharju (2009) uses disputes as a general term for the various levels of disagreements. She puts disputes on a scale ranging from an ordinary disagreement to an aggravated conflict. An aggravated conflict is constructed by refusing the typical preference for the agreement mode. Kangasharju identifies specific disagreement sequences, ranging from one turn or even a shorter time (e.g. a headshake) to episodes that continue over the whole encounter (Kangasharju, 2002). One typical feature for aggravated disputes in multiparty discussions is that they become dyadic, and other participants withdraw (Kangasharju, 2001, 2009). Disputes of all kinds need to be resolved by the participant in interaction. A concession refers to the phase in which the participants are able to agree on the central issue and thereby terminate the conflict (Kotthoff, 1993, p. 193). The participants typically agree partially during the dispute, but these partial agreements do not mean final concession yet. The final concession is an interactional achievement of an affiliative state.

5.4.2 Factual accounts

Factual accounts are prevalent in meetings among professionals who strive to create mutual understanding of issues that they are dealing with. In such situations accounts are also used in non-conflictual manner for the purpose of describing and classifying things. In professional institutional situations, accounts are often designed as factual. Factual accounts imply truth or real occurrence (Potter, 1996). They are made in a manner which makes them seem solid and independent of the speaker (Potter, 1996, p. 97). When reporting facts or what is assumed common knowledge, speakers assume the other participants see the import of these facts for the topic or issue at hand.

One way of generating factual accounts, especially, is to use specific categories. Categorization is an important aspect of ethnomethodology in the creation of accountability and sense for any social encounter (Garfinkel, 1967). As discursive entities categories are also important tools for the creation of sense among the coparticipants as they are simple and useful ways to identify people, rela-

tionships or things that are common to the interactants. Typifications for familiar structures are created by categories of language (Taylor & Van Every, 2000). As reference to people and their relationships, Sacks (1972, 1992) developed a membership categorization device which refers to the resources used by the speakers to connect certain members of a group or society with specific characteristics, rights and obligations. These categories are also used to describe and make sense of institution-specific events or categories that are not directly linked with the persons interacting. They are context-dependent accounts that are embedded in the professional language (Rovio-Johansson, 2007), but they can also draw on the general categories that are specific to a particular professional group. This is also one of the essential properties for sensemaking which is created using salient cues (Weick, 1995).

Factual accounts are used to build rationale also in affiliative situations in which common understanding is pursued. They are also used extensively as justifications and counterclaims. Latour (1987) observed in his study of scientific argumentation that when the conflict between the scientists became more obvious, they began to use more technical (i.e. factual) descriptions for arguing their point.

In addition to factual accounts people may strive to mitigate their own accountability by resorting to other sources as a basis of believing the nature of affairs (Pomerantz, 1984c). Accounts can then be given in terms of membership categories. Especially when there seems to be doubt about what is true, people resort to using their direct experience, or they refer to something someone else had said as an evidential (Pomerantz, 1984c). In reporting his or her experience, the speaker is accountable for representing only his or her personal experience, although it is implied that the experience is more or less typical. In reporting what others have said, speakers are strictly accountable for citing accurately, but not for the actual views cited (Pomerantz, 1984c). Interactionally, they may be affiliating, disaffiliating, or leaving their positions on the cited views ambiguous (Pomerantz, 1984c). This type of reasoning is used when there is a need to defend viewpoints, to back away from positions, or to decide which versions are credible. Thus accounts are evidently acts of sensemaking, and disaffiliative situations require more accounts as explanations than affiliative situations do. From sensemaking perspective, accounts are a way for the participants to make sense of conflicting points of view, and a way to reconcile their beliefs and expectations about the situation as they experience it (Maitlis & Christianson, 2014; Weick, 1967). Arguing by using factual accounts, in particular, is an act of sensemaking.

5.4.3 Arguing as an act of sensemaking in conflictual situations

Arguing as such should be treated as a natural part of organizational life. Exchange of opinions should be the basis on which decisions are made and problems are solved. Thus even arguing which is conflictual in nature is not contradictory to the effort of collective sensemaking but rather a central tool for achieving it, because it helps the participants to collectively construct under-

standing about a situation (Weick, 1995). Moreover, conflicts that are intentionally suppressed may lead to superficial consensus and agreement (Kotthoff, 1993). This is not to say that conflicts would not also be destructive when they disrupt the functioning of the group. In a well-functioning team, conflicts can be managed in a constructive manner so that they lead to a resolution through an exchange of opinions which increases the overall understanding of the different perspectives. Differing opinions need to be encouraged to enhance common understanding. But if the general orientation is simply to disagree and the disaffiliative state is not resolved, collective sense or decision cannot be reached. Thus, agreement needs to be locally achieved in interaction.

Brockriede (1974) makes a case for the value of confrontational arguments, as explanatory accounts, over nonconfrontational (nonargumentative) or descriptive accounts. According to him, nonargumentative descriptions are not useful because they can only be responded to by acknowledging or disagreeing with their accuracy, whereas argumentative explanations “create sense by concrete experience and more general concepts (Brockriede, 1974, p. 170, in Weick 1995, p. 139). If a recipient fails to confront the original statement, the intersubjective reliability of the original argument is increased. If the original explanation that is being criticized is also successfully disconfirmed by its recipient, the argument contained in the original explanation must be abandoned or revised. Thus “the product of the process of confrontation by argument and counterargument is a more dependable understanding” (Brockriede, 1974, p. 139). Therefore explanations or justifications as accounts enhance sensemaking more than descriptions or classifications do (Weick, 1995, p. 139). It must be pointed out that the act of sensemaking as such does not always need to rely on argumentation. In fact Weick (1995, p. 138) describes how sensemaking occurs on a scale from non-argument to argument. The sensemaking processes on the non-argumentative end of the continuum are not belief-driven, whereas the practices used in the argumentative end are oriented towards enhancing understanding.

From a sensemaking point of view, one can see that conflicts can have other useful effects on the functioning of the group. They can make the group as a whole more observant to the situation, which means that participants pay more attention to the discussion than they might in fully consensual situations. Rovio-Johansson (2007) noticed in her investigations of managerial meetings that if the discussion did not involve the activity area of a particular manager, he or she kept silent. However, they entered the discussion or at least became more observant and active listeners when controversial issues were discussed (Rovio-Johansson, 2007).

5.5 Characteristics of institutional interaction

The primary analytic interest of CA has been in the everyday mundane talk such as talk between family members or friends. This is what is typically meant by “conversation”. The analysis of conversation has been extended to institutional talk to cover encounters that take place in some institution or organization for

the purpose of accomplishing some organizational task. At least one of the participants in talk in this type of setting represents some formal organization, and the task, as well as an identity of a professional, which is made relevant through talk (Drew & Heritage, 1992). The other participants or some of the participants in this type of encounter are clients or users of that institution as laymen, and the studies focus on the form and structure of everyday talk framed by the roles, identities or occupational constraints (Putnam & Fairhurst, 2001, p. 81). To cover both the “conversational” talk and the talk taking place for institutional purposes, Schegloff (1987a) adopts the term “talk-in-interaction”. For the purpose of the present study, it is sufficient to refer to meeting interaction or meeting talk. The institutional nature of interaction is demonstrated by the relevance the participants give to the goals, roles and context of conversation.

Similar conventions of turn-taking can be found in institutional interaction as in ordinary conversation (Heritage, 2004). However, there are also certain differences e.g. in the ways turns are designed. Topics, contributions and the order of speakership can be constrained by the institutional context of situation. Structure of turn-taking in meetings is different from ordinary conversation (Goodwin, 1981). In some institutional settings, the specific roles can determine the size and shape of turns of talk allowed for the participants (Drew & Heritage, 1992). Allowable contributions by all or some of the participants can be restricted.

The local design of turns at talk is affected by the institution because the participants deploy different inferential schemes to interpret the meaning of the utterances, based on the context and the role of the speaker. These inferential schemes define how speakers interpret, present, argue and elaborate their point of view in a particular institutional context. A classic, often cited example of the various inferential schemes is the following from the Heritage and Sefi health-visitor corpus (Drew & Heritage, 1992, p. 33; Heritage & Sefi, 1992) in which the parents of a new-born baby respond to a remark from a health visitor by performing different actions;

Visitor: He’s enjoying it, [isn’t he
 Father: [°Yes, he certainly is=°
 Mother: =He’s not hungry ‘cus (h)he’s ju(h)st (h)has ‘iz bo:ttle .hhh
 0.5
 Visitor: You’re feeding him on (.) Cow and Gate Premium

The father treats the health visitor’s remark as a sincere act of social rapport and affiliates with it. The response by the mother is clearly defensive, and she treats the visitor’s remark as an implication that the baby has been neglected or that the mother is not competent enough to notice that the baby is hungry. Inferential schemes are involved also in ordinary interaction, but in institutional settings they are more closely intertwined with the institutional context and roles of the speakers.

Meetings are one forum of institutional talk where the identities of the participants matter, the agenda constrains to larger or lesser degree the allowable contributions, and the talk is governed by inferential frameworks. This makes it relevant to review meetings as a context of institutional interaction.

5.6 Meeting as a context of institutional interaction

Meeting as a context can be defined as “a planned gathering ... in which the participants have some perceived (if not guaranteed) role, have some forewarning of the event, which has itself some purpose or reason” (Boden, 1994, p. 84). The participants orient to achieving some goals, whether decisions or solutions (Schwartzman, 1989).

In this section some general characteristics of a meeting as a context of study in CA are outlined. CA focuses on some distinct characteristics of this notion. According to Drew & Heritage (1992, p. 18), context is twofold. Firstly, it relates to the sequential context of interaction and the local configuration and understanding of the preceding activity in which the talk occurs. This is the strictest CA perspective to the social institution of interaction which views interaction as an entity in its own right, and the focus is on elements similar to the ones found in everyday conversation (Heritage, 1997, p. 162). Just like any other interactional context, interaction in meetings has a sequential logic of turns at talk. Its design and actions can be compared to other similar types of sequential structures and social actions in other contexts. Secondly, context provides a perspective to the larger social environment in which the talk takes place. In this perspective, context covers the time and place of the conversation, as well as the identities of the interactants (Sacks et al., 1974). This type of study is specifically concerned with the practices used for managing social institution as context for interaction (Heritage, 1997, p. 162). Meeting *per se* provides a particular kind of social context of talk which is characterized by multiparty talk and which is episodic in nature (Schwartzman, 1989, p. 7). It typically has a highly conventionalized structure (Drew & Heritage, 1992), and an agenda governs the orientation of the participants. The participants are sensitive to the expectations set by this kind of meeting structure. However, although meetings have characteristics that are common to them in general, for each meeting – even for a regular meeting among the same participants – some particular and unique treatment is generated through the interaction in that specific moment in time.

In short, it is the participants who make the meeting as a context real by their orientation (Arminen, 2005, p. 19). This means that context is not a simply a static precondition or an external constraint to conversation but something that is dynamically and locally produced and transformable at any moment by the contributions of interactants (Drew & Heritage, 1992). This makes conversation both “context-sensitive” and “context-renewing” (Heritage, 1984a, p. 242). Context is treated as “both the project and product of the participants’ own actions and therefore as inherently locally produced and transferable at any moment” (Heritage & Greatbatch, 1991, pp. 94-95; Heritage 1997, p. 163).

Context is an important aspect of study in both CA and sensemaking approaches. Next section will compare these perspectives to build a case for combining these aspects in the analysis.

5.7 Comparing sensemaking and CA

This section proposes a comparison of the theories of sensemaking in organizational theories and the ethnomethodological perspective of conversation analysis. There are distinctly similar ways of thinking, even on conceptual level, although the level of detail is somewhat different. CA is about how participants make sense of interaction moment-by-moment. It focuses on the minute details of interaction. Sensemaking literature tends to focus on macro level concepts, such as decision making. The current study shows how the concrete focus on authentic data, enabled by the methods of CA, can be a fruitful and practical contribution also to sensemaking.

Similarly to CA, sensemaking is also closely linked with the social constructionist approach. "Organizations structure and are structured by sensemaking processes" (Weick, 1995, p. 64). Sensemaking is understood as an ongoing accomplishment through which people create their situations and actions and attempt to make them rationally accountable to themselves and others (Weick, 1993a/2001, p. 11). Through "discussion, groping, trial and error and sounding out", people share perceptions among themselves and gradually define or create meanings (Huber & Daft, 1987, p. 151) Weick, 1995, p. 99) that enable decisions and actions. Sensemaking is seen as a discursive social process (Brown & Humphreys, 2003; Watson & Bargiela-Chiappini, 1998; Hopkinson, 2001). The constructionists emphasize that sense and reality are formed within rather than merely communicated through language (Hopkinson, 2001, p. 428). These studies, however, focus on the discursive resources such as individual narratives and textual analysis about how the individual or text uses discursive resources to make sense of the world and their position in that world. They do not draw on interactive construction of sense as a social means of constructing sense in conversation. Brown & Humphreys (2003) discuss the socially constructed nature of sensemaking in their narrative study of how the members of organizational groups make sense of major organizational change events. They analyze narratives to see how individuals and groups interpret and make sense of change events. They claim to be interested in the socially constructed nature of sensemaking rather than observable actions. However, narratives draw light on the cognitive explanations of events, not their collective or interactive nature.

One could say that the general analytic focus of sensemaking and CA is the same: both see that language is used in order to make the intent recognizable for the recipient (Heritage, 2013). It is the observable activities of the participants in interaction which provide the grounds for analytic claims to be made about the participants' sensemaking activities (Wooffitt, 2005, p. 33). In the sensemaking perspective, the same question is treated as being in the domain of the research subject while he or she strives to create order to ongoing talk and activity.

Sensemaking is often viewed as an event or process which is episodic in nature (Maitlis & Christianson, 2014). The ethnomethodological approaches, in particular, focus on the ongoing and continuous nature of sensemaking: it is an act that occurs and evolves continuously, in the moment (Gephart et al., 2010). In CA events are the sequences of conversation or trajectories of talk that provide the means of getting some activity done through talk (Schegloff 2007a).

5.8 Summary

The purpose of this chapter was to describe CA as methodology and the perspective it provides for observing meeting talk. Some social actions that are relatively prevalent both in ordinary talk and in institutional meeting talk were presented. The various types of accounts are seen as consequential for the organizational tasks that are focused on in meetings. They exhibit the social moods and tendencies of interaction, and it is suggested here that affiliative and disaffiliative actions have different consequences for the overall management and progress of meetings. Affiliative actions lead to collaborative and mostly constructive management of topics of talk, whereas disaffiliative actions require more effort from the participants, especially if they lead to disagreement and conflict. However, they may also prove more constructive from the point of view of organizational learning. Both agreement and disagreement are achieved in interaction.

The following conclusions are drawn from the partially controversial theoretical perspectives as central for analyzing meeting interaction in this study. Firstly, the analysis focuses on features that can be empirically determined. Secondly, a priori classifications are not used as such, but the roles or identities of the participants in the meetings are described when they are made locally and demonstrably relevant by the participants. For instance the chairperson for all the meetings is the same person but his role as a chairperson is pointed out only when it appears consequential from the analytical point of view. Thirdly, when contextual matters are hearable, they cannot be ignored (cf. McHoul et al., 2008). Some contextual knowledge that is not sequentially available may be rendered meaningful for the situation and must be analyzed (McHoul et al., 2008). These types of “supra-local matters” (cf. Schegloff, 1987a) may become relevant when the participants in meetings refer to issues outside the scope of meeting and the ongoing interaction. Although CA is typically focused on the “micro-phenomena” of interaction and eschews making links to sociological “macro-level” orders such as power (cf. Wooffitt, 2005, p. 186), the analysis in this study aims to identify such links between organizational sensemaking and decision making.

In the overall context of this study it is worth pointing out that studies in organizational sensemaking also build on the ethnomethodological approach by stating that it accounts for “what one does in the presence of other people to prove social competence and the rationality of actions” (Weick, 1995, p. 13). Ethnomethodology and CA are both interested in the forms of practical reasoning and “embodied action”, and the deviations from normal states of affair (Maynard & Clayman, 2003, p. 176). CA as a method makes it possible to

demonstrate how the orderliness of ordinary talk is played out in various contexts while making sense of the specifics of that context. It is in the ordinary actions that we see how people orient to a specific practice (Llewellyn & Spence, 2009). However, such practices come so intuitively to us that we do not pay attention to them when everything goes according to expectation. It is the out of the ordinary, the unexpected, which gets our attention. Sense is maintained through orderly actions, but actual sensemaking is required when something extraordinary happens or when the orderliness is broken.

6. Data and method

This chapter describes the case company and the meetings from which the material has been gathered. Then the actual data for the analysis will be described. As the meetings in this study are from the software engineering environment, it is necessary to consider some of the peculiarities of the profession in order to see how this culture demonstrates itself in the meeting interaction. This chapter starts by describing this professional context before explaining the case company and data collection method. The method of analysis and its validity and reliability will also be described.

6.1 The nature of software engineering and software architecture

Software engineering is one of the central fields of computer science (Bucciarelli, 2003). It is the application of systematic, disciplined and quantifiable methods to develop, operate, and maintain software (Brey & Søraker, 2009). It involves the analysis of the requirements that should be satisfied by the software, specification the overall design for the product, and the verification of the software against the requirements. It also concerns the usability, security and reliability of the software product. Thus, software engineering covers a wide range of techniques and procedures that are relevant throughout the product development process, and software programming is at the heart of it. Programming is the central phase in the software development process. It involves the actual writing, testing, debugging and maintenance of the software code. Programming and the selection of programming language are elements belonging to software engineering, but software engineering also involves all the complexities of the creation of a software product. System software architecture is the enabler, or the first step, towards programming.

Engineering design is deemed to be a rational process. This means that “many of the decisions that are made regarding design – whether they concern the setup and execution of the design process or the object of design itself – can be justified on the basis of factual reasons (arguments). These reasons are supposed to show that, given the aim of the design process and given the various possible courses of action, a specific course of action is to be preferred above all possible other ones because it leads more directly or effectively to the aim pursued” (Kroes, Franssen & Bucciarelli, 2009, p. 565).

A fundamental element of engineering work is to engage with different points of view and different ways of seeing the object of design, and then together create, analyze and develop a new product according to given requirements and goals (Bucciarelli, 2003, p. 9). However, the design and development is often spread around different locations or departments which tends to increase ambiguity.

One particular part of software engineering is system architecture which concerns the overall structure of software systems. The architectural design provides an abstract view of a system “that distills away details of implementation, algorithm, and data representation and concentrates on the behavior and interaction of black-box components” (Bass, Clements, & Kazman, 1998, p. 6). It describes the structures of the system, including the software components, their externally visible properties, and the relationship among them (Bass et al., 1998). It provides the blueprint for implementation.

Definition of the system architecture has a central role in enabling an organization to meet its business goals. It is therefore crucial to define the software architecture early in the software product development process. “If a project has not achieved a system architecture, including its rationale, the project should not proceed to full-scale system development. Specifying the architecture as a deliverable enables its use throughout the development and maintenance process” (Boehm, 1995, in Bass et al., 1998, p. 21). This dependency between the system architecture work and the other phases of software engineering becomes evident in the meeting discussions used for this study also.

The meetings in this study represent a mix of two cultures: that of the organization, and that of the profession of software engineering. Ulijn, who is interested in relationship of technology and culture, makes an important distinction between organizational and professional culture by pointing out that professional culture is concerned with “the extent to which professionals (e.g. scientists, engineers, and managers) identify with their professional discipline rather than with their organization” (Ulijn, O’Hair, Weggeman, Ledlow, & Hall, 2000, p. 299). The professional identity is also interesting from sensemaking point of view. Some of the studies by Weick (1990/2001) are concerned with sensemaking processes which are triggered by changes or interruptions caused by technology. In this study, which concerns the sensemaking processed by technical experts, the perspective is somewhat different: their sensemaking efforts are focused first and foremost on constructing the technology instead of making sense about the usage of it.

6.2 Case company and the organization

The data comes from in-house meetings of a software research and development department (SW R&D) in a large multinational company headquartered in Finland. This department, situated in in corporate headquarters, is responsible for the development of platform software on top of which other company-internal R&D organizations implement additional features to create the product for delivery. The department overall includes a product management team, system

architecture team, as well as teams for software development and testing. The size of the department at the time of data collection was 100 to 120.

The material is from technical meetings of the system architecture team within this department (hereafter called AT for short). This team was responsible for designing and specifying the system level software architecture for the product. This architecture was described in documents which are called feasibility studies or specifications. These documents capture the requirements and needs of the stakeholders (company-internal applications); they explain the functionality, performance criteria, and the interoperability issues. They also lay out the decomposition of the software into architectural entities and dependencies between those entities.

The purpose of these meetings was to make decisions on the system level software architecture for the product. Process-wise, AT decisions are the first step in the product development process, and further decisions regarding the scheduling and effort needed for the actual development depend on it. After the AT decision, further analysis is made by the R&D teams concerned to capture the effects of the decision on the software design on component level. Then product management creates a product requirement proposal and seeks for preliminary commitments for resources before the meeting of product decision board. The product decision is a commitment to implement the agreed architectural change and to deliver it as a part of some software release. Based on that decision, release program planning starts, including a more detailed agreement on the resources and timing of implementation.

AT meetings were semi-open meetings. The primary participants in these meetings were the system architects, the members of the AT team. System architects were expected to participate in meetings even when the topic was not directly related to the domain. At the time of this study, there were ten architects in the team, and their team leader acted as the chairperson for the meetings. Anyone else in the department who had an interest could also attend these meetings. The R&D engineering organization was divided into teams based on particular technical areas, and product managers were assigned to responsible for particular technical areas. Thus R&D line managers and senior engineers of the R&D teams, as well as product managers, were expected to participate when the architectural topic of the meeting concerned their area of responsibility³. The customers for this product came from inside the company and they were sometimes invited.

The primary professional and educational background for the participants was in the field of software engineering. National cultural background varied. The organization overall was highly multicultural, and English was used as a common lingua franca, although practically no one used English as a native language

³ As I was a practitioner (one of the interested parties) in this organization during the data collection, my role in these meeting could be described as observer-as-semi-participant. I would have participated in some of these meetings regardless of this study, but some of them I joined just for the interest of collecting the material.

(in the recorded meetings, none of the participants were native speakers of English). Most of the AT team members were already colleagues of long standing at the time of the recording.

There was typically only one architectural item on the agenda per meeting. The chairperson opened and closed the meeting. The presenting architect was the one who can be expected to talk the most and who could legitimately have longer monologues without interruption. It is particularly interesting to see what kind of linguistic resources the other participants used when wishing to contribute to the presented solution as their roles were not as clearly predefined as that of the chairperson and the presenting architect. Instead, they had to work harder to legitimize their contributions, or in CA terms, they need to take accountable actions to make their participation relevant.

6.3 Data collection method

In this section, the data and data collection method is described. The core material consists of the actual recorded meetings, described in section 6.3.1. The other materials which are referred to during the meeting interaction are described in section 6.3.2.

6.3.1 Primary material

This study is based on authentic video-recordings of five meetings of the system architecture team described above. The meetings were recorded in 2005 and 2006. At the time, the meetings took place weekly. The overall recorded material amounts to 10 hours and 53 minutes. The total duration of each of the recorded meetings varied between 1 h 40 minutes and 2 hours. The full length of each meeting was video recorded, with one exception. In one of the meetings, about 16 minutes of talk was missed in the middle of the meeting due to magnetic disturbance on the tape.

Four out of five meetings convened to cover one topic only. The fifth meeting (and actually the first recorded one) included an extraordinary presentation [EIA] by a program manager who was not a regular member of the AT team. The purpose of his presentation was to introduce a procedural change that included changes affecting the AT team. This meeting then continued with two other topics ([AA] and [TPM]) that were presented by one of the architects.

The recordings are authentic but as research material they are still reproductions of the actual social events, the meetings (Hutchby & Wooffitt, 1998, p. 74). They have been transcribed according to CA conventions (Atkinson & Heritage, 1984a; Sacks, Schegloff & Jefferson, 1974). A fairly detailed transcription exists for the whole duration of each meeting, with a more detailed transcription evolving during the analysis for the excerpts that were chosen as relevant representations of the social situation described in the analysis sections. These transcripts serve as detailed representations of the social interaction in meetings and together with the recordings they form the base for the analysis. A confidentiality agreement has been signed with the company. Pseudonyms replace the names of the participants as well as product names and some other technical

terms that are confidential in nature. The same pseudonym is used for the same participant in each meeting.

The data consist of five SA meetings. The details of the meetings and the length of the topical discussion are described in Table 1 below (* means that a couple of minutes missing in the middle due to change of cassette):

Table 1 Meeting data

| TOPIC | ID OF MEETING / TOPIC | # OF PARTICIPANTS | DATE | TOTAL DURATION OF MEETING (HH:MM) | DURATION OF RECORDING |
|-------|-----------------------|-------------------|-------------|-----------------------------------|---|
| 1 | EIA | 16 | 2 Jun 2005 | 00:29 | 00:29 |
| 2 | AA | 16 | 2 Jun 2005 | 01:26 | 01:26 |
| 3 | TPM | 14 | 2 Jun 2005 | 01:10 | 00:59 *) ca 11 minutes missing from the beginning after the coffee break between topics |
| 4 | CLIF | 11 | 10 Jun 2005 | 02:00 | 01:58 *) |
| 5 | HW | 19 | 26 Apr 2006 | 02:31 | 02:29 *) |
| 6 | ErrMsg | 15 | 3 May 2006 | 01:50 | 01:32 (*) + 16 min. magnetic disturbance in the beginning |
| 7 | WUIF | 21 | 19 May 2006 | 02:00 | 02:00 |
| TOTAL | | | | 11:26 | 10:53 |

The number of participants in the recorded meetings varied between 11 and 21. The architects formed the majority of participants in all meetings. All architects are men. One of the product managers (in one meeting), one line manager (in two meetings) and one engineer (in one meeting) were female. The core team remained the same over the period of time between the first and last recorded meeting.

The video recording was done using a single camera which was set on a stand at one end of the meeting room. The participants were typically sitting around a long table in a type of meeting room which left little room to place the camera far enough to catch all participants all the time. The attempt was to keep the moving of the camera to the minimum, in order not to distract the attention of the participants. The participants seemed to forget about the camera fairly quickly and realized its presence after a few minutes. Also, I as a researcher did not make a big fuss of the camera, nor explained in depth why it was in the meeting room; the participants were simply instructed to act as if it was not there.

The fact that it was not possible to capture everyone in the picture all the time means some limitations to the level of analysis. It was not always possible to analyze what the effect of non-verbal actions such as gaze might have been for example on the selection of the next speaker, why or how the one who responded to questions became selected as next speaker. Thus reference to such actions is made only if it is recorded and seems to be relevant for the analysis of the ongoing activity.

By choosing the same meeting type for the analysis it was possible to address the variations in the actions within the same team and eliminate potential analytical considerations that might have arisen if each meeting under investigation would have been from a completely different context or for a completely different purpose. Each meeting in the material had its unique features even if the majority of the participants were the same and the general purpose of the meeting was the same. Thus it was possible to see what kind of issues might cause interactional variations in this same meeting type.

6.3.2 Supplementary material

The technical topic which was handled in the meeting was presented in the form of PowerPoint slides or a Word document. This material was sent to the participants before the meeting so that they can familiarize themselves with it. The material was also displayed on a screen during the meeting using a projector so that all participants could see it together. (This is not visible through the camera used for recording the meetings). The participants orientated to this material during the discussion and it structured the progression of the meeting as they referred to particular slides, figures or sections and chapters. In this way the material formed a kind of agenda for each meeting. These figures were used to describe the conceptual relationships or relationships between the product's software components. Indexical references were made to this material; for instance, requests for going back on some specific slide or page caused some of the longer pauses when the presenter started scrolling backward or forward. No minutes were written of the meetings. Instead, a simple mail was sent to the whole organization and other interested parties to communicate the decisions. These materials are used for the analysis of this study only to support the details and accuracy of the transcripts, not as a source for analysis.

6.4 Method of analysis

This is a qualitative case study. The research design is data-driven and inductive. The main focus is in the ongoing analysis of the primary data, the transcribed meeting talk. The transcriptions are done according to established conventions CA (Atkinson & Heritage, 1984a). The transcriptions were done fully by the researcher. Analytic induction as an approach peculiar to CA is discussed in Silverman (1985: 122, 1993, p. 128; Heritage, 1995, p. 399).

The data gathering and first analysis and transcription were done in the spirit of qualitative, ethnomethodological approach. The meetings were recorded and the analysis was started as "unmotivated inquiry", while transcribing, by looking

into what is going on while the participants interact, and why some turns are taken at a specific point in conversation. Although decision making was the initial point of interest, the analytic categories in the end arose from the actual data (Wetherell, 1998). Thus the final categories for the data reflect the regularities and peculiarities arising from these specific meetings.

The central theoretical concepts that provide the framework for the analysis, using conversation analysis as a method of inquiry, are the following:

- Sensemaking as an act of collaboratively constructing understanding
- Decision making as a social accomplishment of collective and collaborative sensemaking
- Identity and epistemic authority used as resource for affiliation and alignment to achieve the above

These analytic concepts were identified based on the organization of the participants' sense-making processes as they interacted. The concepts are empirically grounded on the analysis of the data (Pomerantz, 2005; Sacks et al., 1974; Schegloff, 1988; Wetherell, 1998). The original idea prior to data analysis was to address decision making only but that kind of predefined approach soon proved unsatisfactory (more on this in chapter 10). The analysis is constructed around sequences which initiate a new action or topic for the purpose of sense-making or decision making or which exhibit a clear change of perspective for the ongoing topic. Some of the sequences are long and therefore broken into more than one excerpt, and in some cases topics which are side sequences to the main topic are omitted.

6.5 Validity and reliability

Validity in the scope of qualitative research assumes truth and accuracy of the representation in terms of generalizations that can be made about the phenomenon which is described (Hammersley, 1987; Moisander & Valtonen, 2006). It is concerned with credibility of the findings in explaining the phenomenon. One often claimed weakness of qualitative research is that it is based on data extracts chosen by the researcher. Given the material gathered for this study, particular sequences were selected as representative of the phenomenon that are investigated as the concise material of close to 11 hours could not be described. Each meeting and each sequence is by nature unique. The claims that are made are generalizations about the macro processes. Unlike in more linguistically oriented CA studies, no recurring linguistic phenomena or structures in this study were picked for systematic investigation. The phenomena which represent such organizational activities as sensemaking and decision making are always representing similarities in the interactional trajectories they construct.

The process of transcribing is selective also and modified to support the interest of a particular research (Ochs, 1979). Selections are made about the level of detail (Stubbe et al., 2003). The level of detail of the transcripts in the current study is also selective: it was decided during the analysis which issues in the

interaction were considered relevant for the analytic claims that were made. Selections have been made with regard to the level of detail of what is hearable in the recordings. As an example, all of the participants in the meeting are non-native speakers of English, and some of them have a distinctly unique accent but this is not shown in the transcription, as it is not a relevant feature for the current analysis. Somewhat simplified transcripts have been used, but enough detail maintained for the purpose of analysis.

Reliability refers to the systematic and transparent way of conducting research. For qualitative research this means “the degree of consistency with which instances are assigned to the same category by different observers or by the same observer on different occasions” (Hammersley, 1992, p. 67). It concerns the degree to which the findings can be generalized without letting too much attention go to deviant cases (Moisander & Valtonen, 2006). This is often seen as a weakness of qualitative research, where categorization can be difficult or vague.

When using authentic data, the quality of the recordings is naturally important. The technical quality of the recordings, and the limitations of the video recorded material were described in section 6.3.1. Minor pieces of meeting talk were missed in most of the meetings while changing the tape, or due to technical disturbances, which was also explained in 6.3.1. There were also some instances where some of the participants were speaking so quietly that some of the words could not be heard. However, the parts that were lacking did not have an effect on expressing the main phenomena that are the concern of this study.

This study does not aim to build on statistical reliability. It is not easy to quantify interactional conduct and its outcomes (Heritage, 2004). Although some recurrent patterns of interaction and language use have been identified in the analysis, the units of talk are often multifunctional, thus they do not easily fall into unambiguous categories. Therefore the categories used in the study are not mutually exclusive and one-to-one quantitative mapping is not possible or reasonable. The higher level activities of sensemaking and decision making overlap. The results overall are therefore not quantitative but indicative.

It is often claimed that it is useful for the researcher to understand the institutional discourse and the institutional practices involved in social encounters that are studied. It helps if the researcher has knowledge “from within”, “thinking-from-within” or “witness-thinking” (Shotter, 1993, p. 19, 2006a, p. 585, 2006b). The context may be unfamiliar to the researcher although it is intersubjective for the participants (Edwards & Mercer, 1989, p. 92). The way knowledge about the context is used by the participants may go unnoticed or even cause misinterpretations if not understood. The ability of the researcher to act in different roles can enable sound contextualization of the research phenomenon (Johns, 2001). Hutchins (1995) familiarized himself with the theory of marine navigation for his anthropological research on a marine ship crew. He quite rightly states that knowing the theory and knowing the nature of the practice in a particular setting are two different things. Hutchins & Klausen (1996) state about their study on the airline crew that it is difficult to transcribe discourse from a technical domain without having some knowledge about the domain of

discourse (Hutchins & Klausen, 1996, p. 18). The fact that I was a researcher working in the company at the time when the material was collected and during the analysis is naturally an issue that needs consideration. I have come to know most of the participants on almost daily basis and I would have participated in some of the meetings even without my research intentions, although most of them I joined just for the sake of collecting the material. Knowing the context and the topic helped in forming some preliminary assumptions as well as in understanding what was going on during the meeting. Since the conversation in the meetings was highly technical in nature, containing an abundance of abbreviations that are very specific to the technologies or the company, even the transcribing of the talk would have been difficult if not impossible for someone not at all familiar with the field. CA makes a point of setting categories that are based on member categories, not set by the researcher a priori (Wetherell, 1998). Although the actual analysis is done according to the ethnomethodological belief on emic perspective, I believe that knowledge about the context was however a great asset to conducting the analysis.

6.6 Summary

In this chapter the general characteristics of software engineering were described to explain the context and as explanation for the data which is dense with software engineering terminology. The case company and the organization from which the meeting data was collected was then described to enable better understanding of the material under analysis. The data collection method and the method of analysis were then described with reference to the main theoretical concepts. Finally, the validity and reliability of the methodologies used was explained. .

7. Pursuing individual agendas

This chapter explores how participants pursue their personal agendas through interaction in the meetings. The agendas are designed as epistemic stances which express private opinions or personal preferences, and which aim to exhibit the personal experience or expertise of the speaker. The research question for the analysis in this chapter is: how do the acts of pursuing personal agendas influence collaborative sensemaking?

The meetings in this study concern discussions and decisions on technical software solutions which are, in all but one case, presented by one of the system architects. In pursuing their personal agendas, the participants in the meetings take epistemic authority to evaluate and challenge the sense of what is being presented, documented or said earlier in the meeting. Such conversational practices display epistemic certainty toward a proposition or doubt toward the claim made in the prior turn for which the recipient is held accountable (Keisanen, 2007, p. 253). The participants position themselves as having authority to define what is – or is not - accurate or significant regarding the topic which is under discussion. They express an epistemic stance in the design of turns at talk by positioning themselves high (K+) on the epistemic gradient relative to the coparticipants when asserting or requesting information (Heritage, 2012b). This notion of gradient is also displayed by the degree of certainty expressed in the epistemic stance taken. Positioning also relates to sequential as well as topical positioning. Sequential positioning of an utterance refers to the positioning of the turn of talk in which the epistemic utterance is made relative to the adjoining turns: greater epistemic authority is taken in going first rather than taking second position in a sequence. Sequence-initiating epistemic claims display more epistemic authority, as they set a topical agenda (Schegloff & Sacks, 1973). Second position statements are responsive to ongoing talk and therefore weaker than first position statements which establish a new topic. Sequential positioning reveals how the participants in interaction position themselves as deliverers or receivers of knowledge. It is also related to the speaker selection: higher epistemic stance is displayed by self-selecting, i.e. by responding or going first without having been invited to do so.

The analysis explores how contests for epistemic authority influence sensemaking among the participants. When the primary purpose is to promote the opinion of the one who is claiming epistemic authority, it is often done without considering the knowledge that is possessed by the participants in the meeting. The patterns of stance taking in this chapter are mostly designed as

disaffiliative actions. Disaligning can become an impediment to collective sensemaking, and competitive situations are formed when the participants introduce their preferences which are in contradiction with what has been presented. Epistemic authority is played out and the conversation becomes focused on whose knowledge matters. This imbalance in the relationship regarding the epistemic authority needs to be resolved.

This chapter focuses on three different types of conversational practices which are deployed to promote the agendas of the speaker and challenge the propositions by some other participant. These are expressed as 1) negative evaluations and problem statements, 2) counterproposals and position statements, and 3) challenging questions. The analysis explains the constative and regulative nature of these conversational practices, or speech acts, in multiparty situations.

7.1 Negative evaluations and problem statements

As explained earlier (in Chapter 4), all utterances contain an evaluation of some degree, even when they are seemingly neutral. This analysis concerns evaluations which involve moral and social orders, systems of accountability, responsibility, and causality (Jaffe, 2009). The purpose of making this type of evaluation is to claim knowledge about the issue being evaluated (Pomerantz, 1984a). It is a practice of talk that is used to present a personal opinion or a more impersonal assessment about a state of affairs (Pomerantz, 1984a). By offering such an assessment the speaker expresses certainty, obligation or desirability of the proposition that is made, in a form of account. Koskinen (1999) distinguishes between evaluations that are done in mundane conversation and those that are done in institutional circumstances. He maintains that in mundane conversation, evaluations express an opinion from a personal perspective which can be emotionally loaded. Evaluative activities in institutional settings, on the other hand, are designed as more disciplined, impersonal, and non-emotional (Koskinen, 1999, p. 45). The properties of evaluations in institutional settings are not random, but grounded in the organizational processes that provide the foundation for the evaluation. Evaluations are used for “sorting” people and objects and other targets in terms of their fit to the expectations, standards and norms of the institution (Koskinen, 1999, p. 44). These targets are characterized as *x* or *not-x*, and based on that characterization, subjects of some kind of treatment (Agar, 1985; Koskinen, 1999, pp. 44-45).

The analysis in this section shows how self-initiated evaluations are designed to establish the highest degree of epistemic authority. These kinds of voluntary claims for epistemic authority are enhanced when evaluations are made in first position, because by offering an assessment in first position the speaker claims primary rights to evaluate (Raymond & Heritage, 2006). By going first in evaluating something, the opinion is put out in the open for other participants to challenge or acknowledge (Sacks, 1992a, p. 340-347). In particular, when assessing something that is equally accessible to all recipients, the initial assessment provides the relevance for second assessment (Pomerantz, 1984a).

Two types of turns of talk involving negative evaluations are explored to demonstrate the type of trajectory they lead to. In section 7.1.1 evaluations which are designed by using evaluative verbs and adjectives are analyzed. Section 7.1.2 analyzes the types of evaluations which classify issues as problematic in a more elaborate manner. These evaluative statements concern something that has been said before in the meeting, or the document or topic that is being discussed. These evaluations shift the attention to some problematic issue with the ongoing topic.

7.1.1 Deterministic negative evaluation

The excerpts in this section describe the most direct and categorically designed negative evaluations. These types of evaluations threaten the face and epistemic authority of the one whose statement or work is being evaluated. Therefore it is not surprising that such evaluations lead to resistance, defense and long-winded arguing. These two excerpts are from a meeting [CLIF] in which the participants are reviewing a document written by Philip who is the presenting architect in this meeting. The topic of the meeting concerns a design for a CLI framework (CLI stands for command line interface). The episode is triggered by Paul's evaluation of another study which is used as a reference in Philip's document. Paul initiates his evaluation while Philip is in the process of guiding the audience through the chapters of the document that the participants are looking at, either on the screen or on their paper copy. The evaluation leads to a lengthy sequence of claims and counterclaims between Paul and Philip.

Excerpt 1 [CLIF] Worthless1

- 1 Jer -> then I've tried to introduce concepts ehm (.) related to command line
 2 interface and and okay,
 3 Pau 1-> Ehm,
 4 Phi [Yes]
 5 Pau 1-> [Have] you
 6 (2.0) ((pointing with hands generally to the direction of other
 7 participants))
 8 have any of you looked at that state of the art study that you are
 9 referring to
 10 [because I] I **consider**
 11 Joh [(no I haven't)]
 12 Pau 1-> it as a <**worthless information source**>.
 13 ((Thomas walks in)) (0.5)
 14 Phi **But** [this is] somehow
 15 Pau 1-> [(about CLI)]
 16 Phi **Okay** if you look bit only CLI things and
 17 then it's kind of missed that subject **but** (.) **but** there are definitely
 18 some useful information at least they have compared all these kinds of
 19 management interfaces and [and]
 20 Pau 2-> [Well] they have a study study about
 21 different management interfaces and frameworks very superficial and
 22 they are totally concentrating on the computer interfaces. This has

23 **absolutely nothing to do with CLI interfaces** and standardization of
 24 CLI concepts CLI implementation of CLI (0.3) NOthing
 25 Phi [aa-a]
 26 Pau 3-> **[it's] worthless**
 27 Phi And with CLI you are assuming only interactive work or also
 28 scripting which would mean then (.) computer interface.
 29 Pau 4-> **Well** computer interface (.) ((clearing throat)) on top of CLI is
 30 basically the script. and **of course** you can you can build let's say
 31 SNMP interface or SOAP interface WBEM interface or any-any kind
 32 of network or network element management standard interface but hh
 33 **it has no more anything to do with CLI** (0.5) it is about object
 34 modeling, (1.0) and (.) utilization of protocols and so on.
 35 (1.0)
 36 Phi O-okay so it's about this state of the art study but ehm-
 37 Pau 5-> **I don't understand how** how **they** have accepted this kind of study
 38 because
 39 ((Moritz walks in))
 40 (.)
 41 it has obviously been made by some-somebody
 42 who hasn't really understood the problem or [concept.]
 43 Phi [Or]
 44 or probably maybe it was not enough precisely stated or-or they have
 45 not [clear requirements] or-or
 46 Pau 6-> [(I-I don't (-) it] ((shaking his head))
 47 (.)
 48 Mar [(like in) this]

The episode is initiated when Paul interrupts Philip, using a minimal token ehm (line 3) which indicates that he wants a turn. Ehm also projects that there is something problematic coming up, which is also signaled by the long pause (line 6) before he goes on after having been granted the floor by Philip (line 4). Paul then sets his topical agenda by drawing attention to a particular detail in a document that is being reviewed in this meeting by his pre-expansion question (lines 5-9). The question formulation as such seems neutral and thus it works as a seemingly open invitation to share opinions on another study which is used as a reference in the document that is being reviewed in this meeting. John, for instance, seems to take Paul's question as a genuine one because he immediately responds to this question (line 11). Paul, however, continues directly, in overlap with John, to make a direct negative evaluation (starting in line 12 and continuing in line 15), pointing out that in his opinion the reference is worthless. At this phase it becomes evident that Paul's initial question was designed merely as a preface to establish and to soften the context for the evaluation to follow. As Paul evaluates Philip's primary domain of knowledge, he creates relevance for second assessment by Philip. Philip acknowledges this and prefaces his next turn with a responsive okay which signals understanding of Paul's prior criticism (line 16). However, he continues with a disagreement by qualifying

that criticism (cf. Pomerantz, 1984a, p. 75) as defensive reasoning for his position (lines 16-19) which is upgraded (definitely). Paul responds by making his second evaluation (line 20), starting with well, and he also upgrades his opinion with overstaters (totally, absolutely, in Watts, 2003, p. 184). Philip tries to intervene (line 25) but Paul's third evaluation (line 26, it's worthless) further upgrades the epistemic strength of his previous assessment. Philip also continues in defensive mode (line 27) by downgrading Paul's evaluation and by formulating both Paul's definition for CLI and complementing it with his own in a factual manner.

Until this phase in the sequence, Paul has kept repeating evaluative statements without much factual reasoning. In his fourth turn (line 29 onwards), he labels Philip's interpretation of computer interface as common knowledge (of course) and then rejects its validity in the scope of the current with upgraded certainty and repeats his evaluation once more. Philip's response (line 36) is marked with preferred agreement and hesitation (o-okay) but it is followed by a transition to defensive disagreement (Pomerantz, 1984; Sacks, 1987) signaled by the contrast conjunction but.

Paul's 5th strong evaluation (line 37) draws explicitly on the asymmetry on who is entitled to claim knowledge, and who is not. He uses understand as an evaluative verb, not as a sensemaking verb. By making reference to an absent 3rd party (they) Paul externalizes the responsibility of the deficiencies in the study that is being criticized. This makes the evaluation somewhat less hostile and not a personal criticism towards the presenting architect Philip, as it is a more indirect complaint about absent party (Jefferson, 1984b). He uses a strong commitment by intensifying his high epistemic stance with obviously (Watts, 2003, p. 184). He produces that by downgrading the epistemic strength of Philip's evaluation. This type of contrastive second assessment is typically used to claim knowledge about the topic which is being critically assessed (Pomerantz, 1984a).

All through the sequence, Paul positions himself as having the primary rights to evaluate the study which is mentioned as a useful reference in the primary document under discussion in this meeting. Paul's evaluations make a second assessment (Pomerantz, 1984a) conditionally relevant, and since there is no uptake by anyone else, Philip as the presenting architect is made accountable for a response. The sequence overall has become distinctly combative at this stage, and there is no or minimal mitigation of disagreement. This extended exchange has developed into a duel between Paul and Philip, and Philip is put in defensive mode while Paul keeps reinforcing his evaluation by repeating claims it is worthless and it has nothing to do with CLI almost word by word (bolded). The two points of view are pushed vehemently until Marco, the chairperson attempts to intervene. Other participants refrain from commenting and there is no sign that collective sensemaking would have been reached.

The episode above is followed by a short insertion sequence which is excluded from here. Philip then resumes to the topic of the external reference over which they have argued in Excerpt 1 and which they now refer to as "that study" in Excerpt 2 (CLIF, Worthless2). The relevance of this study has been the main

point of disagreement. Philip as the presenting architect actively renews his epistemic stance and pursues the topic further. By taking the topic up again, he shows that the issue has not been resolved yet. Paul, on the other hand, continues to recycle strong, polar and non-hedged arguments by simply repeating it is not CLI as justification. The arguments by both parties become more pronounced.

Excerpt 2 [CLIF] Worthless2

- 1 Phi -> That study was okay the study was basically meant to find out what
2 would be the-the technology for the command line interfaces and,
3 Pau 7-> **Yeah but(h) (ha-ha)** it-it really has it really has **nothing to do with**
4 **comman-command line interfaces**
5 Mar Is it are you discussing now about the study o:r let's say (.) he
6 ((pointing at Philip)) he's saying that he found the (study) **valuable**
7 Pau 8-> It cannot be it **cannot be valuable** if you if you are doing study on
8 CLI. It is **worthless**.
9 (2.0)
10 Mar So (.) he says it has **nothing to do with** CLI. ((looking at Philip))
11 Pau 9-> The study has nothing to do with CLI.
12 Mar Philip.=
13 Phi =**Okay** so it's bigger than CLI and I just say there are some parts
14 which a:re (1.0) which are useful.
15 Pau 10-> It contains one chapter concerning CLI and it also has one paragraph
16 Phi concerning concerning shell-based interface where it says something
17 like ehm UNIX shell interface is probably state of state of the art CLI
18 (.) ha-ha-ha
19 ((common laughter))
20 Phi Ok↑ay I can it's okay so no problem
21 [ha-ha]
22 Mar==> [I you] CAN maybe I propose that you tune down=
23 Phi =**Yeah ((laughs)) good**.
24 Pau 11-> I wouldn't accept that as a reference it is it cannot be used as a
25 reference because **it is worthless**.
26 (1.5)
27 Phi Okay I think I can keep it among (.) references
28 but I will okay [reduce its importance]
29 Joh [then say that] there is one sentence which
30 [is (-)]
31 Mar [Play it] down=
32 Phi =Yeah.
33 (5.0)

By taking the topic up again (in lines 1-3) Philip attempts to claim primary rights for himself to assess the value of the study which has been criticized. Paul's yeah but (evaluation turn #7, lines 3-4) is uttered with laughter, which as such ridicules what Philip is saying. Marco joins in and tries to formulate the status of the discussion and Philip's description of the study as valuable (line 6).

Paul declines this in lines 7-8, using a complete contrast worthless. This is followed by a longer break (line 9) after which Marco (line 10) formulates the gist of Paul's opinion about the study as having nothing to do with CLI and expects Philip to respond. Paul reiterates this word by word again in his evaluation (9th evaluation, line 11) before Philip responds, thereby enforcing his opinion. Marco makes Philip accountable by requesting explicitly his response (line 12). Philip does not reject Paul's claim directly but uses a qualifier just (line 13) to indicate the maximal property or intention for what is described in the document (Drew, 1992). In his 10th evaluative turn (begins in line 15), Paul finally applies another strategy and expresses yet another counterargument by quoting directly the study that is being discussed. This is meant as an ironic statement (Paul himself is smiling while saying it), and it is assumed to be obvious to all technical experts that the technological substance is outdated. By this change of footing (Goffman, 1981) Paul evokes taken-for-granted commonly shared knowledge of the participants and undermines the value of the original statement and even ridicules it. He succeeds in using the familiar cues in a way which triggers common laughter. This sort of irony is close to a type of idiomatic expression that typically appears in situations where the speaker does not get support for a complaint that is being attempted, and the figurative quality given to the expression makes it more difficult to challenge (Drew & Holt, 1989, in Potter, 1996, pp. 63-64). Paul's statement is also recipient-designed for the purpose of making common sense. This puts Philip's expertise into jeopardy and to save his face he has to accept this - and laugh together with the rest of the team. Marco (in line 22) makes a suggestion to resolve the conflict and Philip accepts this. Paul, however, still refuses to relinquish (I wouldn't accept that as reference) and provides a dispreferred expansion-relevant turn (Schegloff, 2007a). Philip produces a preferred sequence-closing turn (Schegloff, 2007a) by which he commits to the change although somewhat submissively.

The two extended excerpts above form an episode which is quite a unique in terms of the strength, directness and length of the negative evaluations in the material of this study overall. They also portray most distinct resistance and conflict. The episodes reveal quite typical signs of aggravated dispute (Kangasharju, 2009) which is signaled by the recycled arguments and pejorative assessments such like the ones Paul is using: he keeps repeating evaluations it is worthless and it has nothing to do with CLI several times throughout these sequences. These are a resource for enforcing the effect of his argument.

It is interesting to consider this kind of disagreement sequence, with distinctly opposing opinions, from sensemaking point of view. Paul expresses his opinions without any hesitation, doubt or ambiguity. He practically rejects the claims made by Philip and even ridicules the writers of the referenced study about which they argue. They both need to maintain their point of view which could ideally lead to overall accumulation of common sense. However, in this case both parties refuse to give in and other participants in the meeting refrain from commenting or from taking sides which is typical of disputes in multiparty situation (Rovio-Johansson, 2007). It is therefore more likely that collective

sensemaking is hampered rather than supported by this kind of oppositional setting, and the atmosphere is certainly not collaborative. The episode demonstrates that strong counterarguments can block the sharing of ideas and leads to prolonged negotiations before any conclusion reached. The end result is a compromise which means that the two arguing parties agree on the outcome but not necessarily personally with the content.

One could also think that these kinds of blunt and direct negative evaluations are possible because the actual document which is being criticized is not owned by anyone in this team but it has been written in another department of the company. Therefore the evaluation does not pose a direct threat to the face of anyone present in this meeting. Additionally, Paul is claiming epistemic rights to evaluate something for which all participants had equal epistemic access, because everyone in the meeting basically had an opportunity to read the document prior to the meeting. No one else takes a stand, however, and Philip, being the one who has chosen to refer to this document, is now responsible for defending his case. The episode also has an overall interactional effect on this particular meeting: the episode is from the very beginning of the meeting, and it seems to create a more contentious atmosphere for the meeting overall compared to the other recorded meetings in this study.

7.1.2 Evaluative problem statements

Another way of taking an evaluative stance is to define a particular issue or topic as problematic. This section explores the sequences which are initiated by some sort of explicit problem statement which points to a shortcoming in the technical solution or its effects on the organization and usability of the product. To problematize is a way to claim centrality to the topic, and to claim epistemic primacy to make such an evaluation.

In Excerpt 3 (CLIF, UIAdapter1), Paul points out a problem in a figure in which some of the basic concepts are described. He self-selects to produce an elaborate factual and matter-of-fact description of a problem that he sees in the way the concepts are used. Actually the excerpt consists of two sequences. The first sequence is a flow of counterarguments between Paul and Philip, and a transition happens in line 27 where Moritz steps in and opposing arguments continue between him and Paul.

Excerpt 3 [CLIF] UIAdapter1

- | | | |
|----|--------|---|
| 1 | Pau | Can you can you return to the figure where you discuss the basic |
| 2 | | concepts. |
| 3 | Phi | Uhu. ((searches the figure and then looks at Paul)) |
| 4 | | (7.0) |
| 5 | Pau -> | There ((clears throat)) there's one one pro:blem basically. (1.0) Ehm |
| 6 | | typically CLI is utilized by by scripts so that (.) hhh there's no UI |
| 7 | | adapter of any kind in that or there's no (.) other type of scripts than |
| 8 | | s uch that are ehm transferred >whether or not they are local or |
| 9 | | remote< they are transferred (.) from @anywhere@ to a target system |
| 10 | | and they are executed in the context of the target system and they (.) |

11 they directly interact with the CLI interface and there's-there's no UI
 12 adapter of any kind and that that that kind of UI adapter is related to
 13 ehm some kind of upper level management concept in which the CLI
 14 is hidden (.) by some kind of management model or interface protocol.
 15 Phi **Yeah-yes** I got this comment from you **but here the point is that**
 16 ((clearing throat)) **just** to to enable this future unified (.) user interface
 17 whatever it means so i-idea here would be that we don't try to to
 18 choose any technology which is (.) which is different than our most
 19 natural and native UNIX command line interface. And one day when
 20 when somebody comes up with something which we should follow on
 21 kind of unified level then we have to adapt just to adapt to this (.)
 22 choice.
 23 Pau But the adaptation **as far as I can understand** does not does not go
 24 like that that you have some kind of external script but in that case you
 25 are adapting also in network element ((Moritz raises his hand and
 26 looks at Paul)) when you access the uniform interface via local scripts.
 27 Mor -> **It's not true** what you are saying ((looking at Paul)) for example take
 28 hhh perhaps one is the best example of ehm ehm scripting CLI
 29 interface like ((commercial provider of networking systems)) IOs so
 30 (.) **↑we ↑don't ↑know** how basically what we can see is kind of user
 31 interface adapter we don't know what is inside [because]
 32 Pau [But (you can)]
 33 Mor we have the same adapters for we don't know what (-) for different
 34 part but for them we can have scripts that manage I don't know [(-)]
 35 Pau Yeah [but] script is not external
 36 Mor It's ext[↑]ernal
 37 Pau Script is ex[↑]ecuted in the net[↑]work
 38 e[↑]lement [(-)]
 39 Mor [Ehm] It's external to network element.
 40 Pau **Well** it's external to the network e[↑]lement but but like any script it is
 41 executed in the network element it is discussing with the CLI interface
 42 interface provided by the network element. So it is executed there if it
 43 is executed somehow externally then then you have some kind of
 44 network management protocol
 45 Phi **[Ok[↑]ay]**
 46 Mar ==> [Does it] does it help if we mark this UI adapters as let's say optional
 47 only if needed.
 48 Mor **I-I think** it's an [↑]essence of propo[↑]sals
 49 [that] UI adapter
 50 Phi [Yes so]
 51 Mor is kind of another level of abstraction.
 52 (.)
 53 Mar But like it is=
 54 Pau =Yeah=
 55 Mar =not it's not there let's say in most of the cases it's not there unless
 56 there is really something to adapt to
 57 Phi -> Exactly so unless there is something (.) some syntax which we don't
 58 support I don't know then we have to adapt to it by by for example this

Once Paul is granted the floor he describes the problem at length (lines 5-14). He claims epistemic primacy in this domain of knowledge by providing factual reasoning in an authoritative manner without any signs of hesitation and by using polar case formulations. His accounts are given as externalized facts. Philip indicates that what Paul is saying is familiar information to him (Komter, 2001) by repeating his acknowledgement (yeah-yes, line 15), and Paul is violating the norm that one should not say what is already known to the recipient (Stivers et al., 2011). Philip proceeds to provide a counter to Paul's statement. Paul makes another counter-argument, with slightly downgraded certainty in line 23 (as far as I understand), i.e. his epistemic access.

There is a distinct interactional change in line 33 when Moritz self-selects to disaffiliate with Paul by making an epistemic claim which bluntly rejects the epistemic value of Paul's statement. Polar counters continue between him and Paul. Paul ridicules what Moritz is saying and shows frustration by laughing while making factual statements (lines 40-44). The chairperson, Marco, finally intervenes with his resolution proposal in line 46. This proposal is a first pair part of a conversational sequence which projects agreement or disagreement as response. He uses inclusive we, thereby creating a sense of collaborative resolution. Moritz (in line 48) takes epistemic primacy to decide on the matter by rushing to agree, despite the epistemically hedged version of agreement. The presenting architect Philip is left out of this conversation until he attempts to align with Marco and Moritz (line 50) and finally formulates a statement which aligns strongly with Marco's preceding statement, although it is designed with hesitation (I don't know).

This excerpt overall, and Paul's reasoning in particular, is a prime example of how epistemic and normative statements become intertwined and how they are used to construct engineering issues as factual. Using fact construction (Bolander & Sandberg, 2013; Potter, 1996,) which is based on factual engineering knowledge and reasoning is a typical way for engineers to perceive knowledge. From the point of view of sensemaking, however, this type of fact construction can become interaction-wise problematic. Paul indeed provides factual reasoning but he does not encourage other opinions but is more likely constraining them. Moreover, there is no actual owner defined for the problem that is identified in this excerpt (Angouri & Bargiela-Chiappini, 2011). Philip does not receive acknowledgement for his final formulation and the issue is not resolved during this excerpt. They have not been able to reach common understanding and the sequence continues in Excerpt 8 (CLIF, UIAdapter2) in section 7.3.1.

The excerpt below is another example of how evaluative problematic statements are managed. This excerpt is again from meeting [CLIF]. The participants have been discussing at length the meaning of the concept user interface adapter, when Jeremy takes the floor to describe the problem from a different perspective, i.e. that of product management.

Excerpt 4 [CLIF] ProductMgmt

- 1 Jer -> Basically from **product management point of view the problem**
 2 really is that we don't have any clear rules or instructions how to write
 3 CLIs
 4 Mor =**But** what does [it]
 5 Jer [and] and then okay we see the results the CLIs they
 6 behave differently the syntaxes are very different, and some of them
 7 may be considering (-) situations some not (.) and this is what we
 8 wanted to improve that you have this kind of documentation when you
 9 do CLIs you have to consider this and this then that's it and ↑then that
 10 way we can have CLIs that have the same look and feel (-) [(-)].
 11 Mar [This] is
 12 coming.=
 13 Jer =Yes but that is the whole point **I mean** if then (.) or when the
 14 operators want to build some systems utilizing these CLIs @that can
 15 be anything@. But the problem is that if they have CLI or there is no
 16 CLI framework and they get very different way it's a lot of WORK to
 17 do that kind of system.
 18 Mor -> But **I think** even bigger question is who is ↑user of CLI. Because if
 19 user is human ehm it's very different if user is kind of script or
 20 another application (they will) understand them differently different
 21 design constr↑aints
 22 Mar ==> May-maybe we can get Philip like present more
 23 so that] the picture
 24 Phi [uhu]
 25 Mar comes [(-)]
 26 Jer [(-)]

Jeremy uses self-categorization (from product management point of view) to take explicit authorship on behalf of product management (cf. Goffman, 1979, 1981), and assesses the general state of affairs on behalf of that organization. As a product manager, he is not a regular member in this meeting but an agenda-based participant. This time the topic belongs to his area of responsibility in the product management organization. Here, he brings in a new perspective to preceding discussion around the problems of CLI syntax. He also takes the epistemic authority to continue describing the problem (line 5), without allowing Moritz to intervene. Marco, the chairperson, labels this comment as irrelevant by stating that this has already been considered, as if there was also commitment to future state of affairs. Jeremy continues to pursue his point further (in line 13) and brings another new perspective to preceding discussion around the problems of CLI syntax by speaking emphatically as a representative of the end users, the operators. Moritz takes the opportunity to expand with his candidate answer (lines 18-21), based on the different types of users, by this way taking a wider architectural system as a user into consideration. He takes epistemic authority to redefine the actual topic of importance. He claims higher epistemic primacy as a member of the team of system architects and reframes the problem (I think even a bigger question is). Marco as a chairperson then

takes actions in line 22 to end the discussion on this topic and to proceed on the agenda. He transfers the responsibility of the problem back to Philip who is the owner of the topic in this meeting. However, the issue is left ambiguous in this open-ended sequence, nullifying the immediacy of the problem.

The above episode shows how various organizational identities are played out and used as a source of epistemic authority. Both Jeremy and Moritz pursue their own agenda and claim epistemic primacy based on their respective roles. The participants use category-bound resources to make accounts in terms of their membership categories. There is no explicit disagreement as such, but other opinions are not acknowledged either except in Philip's short uhu (line 23) towards the end of the sequence. However, the example shows how the contributions, especially by secondary (optional) participants, can become isolated and there is no active uptake by anyone. Here Marco as a chairperson takes the role-based authority to control discussion and also to define what is relevant and what not. From sensemaking point of view, however, expectations are presented but the common view is suppressed at this stage of the meeting conversation, and collaborative sensemaking is not pursued.

7.2 Counterproposals and position statements

In this section it is demonstrated how various ways of making counterproposals are used to pursue personal preferences and ideas to express something counter to what has been presented or discussed prior to the proposal. The counterproposals are produced as alternative proposals in response to something which is regarded as unacceptable or unsatisfactory. When designed this way, they become topic-opening and they need to be rejected or endorsed only after lengthy disagreement.

Proposals refer to a variety of actions such as suggestions, requests, and invitations to do something (Houtkoop, 1987; Maynard, 1984). They can also be considered as types of accounts whose purpose is to resolve some problem or to propose some action to be taken. Maynard (1984) separates proposals that suggest a solution (e.g. How about three months, in Maynard, 1984, p. 79) from position reports which describe a personal perspective, idea, or preference (e.g. I think she should be placed on probation and do jail time, in Maynard, 1984, p. 82). For both it is necessary that the recipient understands the function of the utterance, and both are designed in ways which make an acceptance or rejection by the recipient relevant. This distinction seems particularly interesting from sensemaking point of view. A proposal that suggests a solution is designed more generally and therefore it leaves the floor open for elaboration and discussion on possible solutions when the position report constrains the range of possible responses to mere acceptance or rejection.

As proposals are attempts to determine future actions, they have the potential to initiate decision making. In his study, Stevanovic (2012) shows how proposals lead to joint decisions, nondecisions or unilateral decisions in a framework which shows the moves through which proposals are steered into a decision: the required moves are access to subject matter, agreement about it, and a

commitment. This demonstrates that proposals alone are not yet decisions; they work as invitations to others to approve the proposals, which then can initiate a decision-making episode. Proposals that are blocked are implicitly rejected or marked as non-decisions. Stevanovic (2012) describes these events in dyad situations which are sequentially different from multiparty situations where one cannot expect commitment by all participants. Proposal needs to be approved by the recipient in order to become a joint decision. Therefore proposals are also different from simple information sharing in which case a decision has already been made.

Asmuß & Oshima (2012) distinguish between actions that are proposed to be taken in the meeting, and actions that are proposed to be taken later outside the scope of the meeting. They demonstrate how the participants actively negotiate one another's entitlement to make proposals. The entitlements relate to their institutional roles but the hierarchical roles (CEO vs. HR Manager of the company) can also be rendered neutral. The different linguistic forms in which proposals or requests are designed mark different entitlements: negative interrogatives mark the speaker's strong entitlement, while positive interrogative or pure statements mark low entitlement (Asmuß, 2007; Asmuß & Oshima, 2012). They claim that participants may choose to align and/or disaffiliate with the terms of entitlement while at the same time disaligning and/or disaffiliating with the actual proposal, or vice versa (Asmuß & Oshima, 2012: 69).

This section explores proposals as epistemically authoritative actions because by self-selecting to propose something the speaker goes first and claims higher rights to define what the state of affairs should look like. The kinds of proposals that are explored here are designed to point out a problem, and the given proposal thus expresses a solution. There is thus a negative undertone which may explain the resistance by their receivers.

Excerpt 5 (CLIF, Remote4) below is an example of alternative proposals which are produced collaboratively by several participants. The example is again from meeting [CLIF] and the discussion concerns the concept of remote CLI. Paul has questioned the overall relevance of this concept already earlier in the meeting, and he begins this sequence by suggesting that the concept is removed from the document completely. The excerpt includes suggestions by several parties. However, the various suggestions create completely different trajectories.

Excerpt 5 [CLIF] Remote4

- 1 Pau ->1 Yeah I still ((clears throat)) **I still suggest that you completely**
 2 **remove this concept of remote CLI** because it is a misunderstanding
 3 and it is out of the scope of this document.
 4 Phi It's **just** an explanation of how we how we unify with unified
 5 interface once it
 6 (.)
 7 Mar ->2 But describe it in [(two or three)]
 8 Pau **[But it] has nothing to do with CLI**
 9 Joh **Yeah but** if you want to describe it]

- 10 Phi
- 11 Joh ->3a **Just** put the UI adapter like like here in out of the shell so it uses the
 12 shell ((pointing to a picture on own print copy of the presentation
 13 material))
- 14 Pau [Yeah]
- 15 Joh ->3b then [you] can say the user uses the adapter which uses the shell
 16 which uses the command (.) [then]
- 17 Pau [Yeah.] in this case the user can be
 18 replaced by computer program be it script or whatever. it is (.) it is
 19 th(h)at(h) what(h) situation what we have.
- 20 Joh **But from the CLI point of view** it's quite the same who uses it
- 21 Pau Yeah
- 22 Joh **from system point of view** it's a different use case but
- 23 Pau And and **from the management point of view** it is important to
 24 recognize that if if the scripts (.) are accessing the CLI commands, if
 25 the scripts belong to the software delivery software build the same
 26 software build as as the CLI command it can acces then they are
 27 always up to date ehm with the command versions that they access
 28 (.)=
- 29 Phi =Yeah=
- 30 Pau =But if they are brought from somewhere else let's say from
 31 ((proprietary product for network management)) or something like
 32 that or from our testers then it is beneficial that the version of the CLI
 33 is somehow indicated and managed in this interface so that if some
 34 external thing is accessing CLI and it drops the shell script into our
 35 box and starts talking with the CLI commands then it should be
 36 somehow synchronized with the [version] of the CLI and so on.
- 37 Phi [°Yeah°] ((nodding))
- 38 Pau this is probably something that should be (discussed) but this is also
 39 out of the scope of remote CLI it's just a computer program that
 40 accesses CLI and this computer program can be implemented by us
 41 or by anyone else.
- 42 (3.5)
- 43 Phi Okay.
- 44 (1.5)
- 45 Pau If it is only implemented by us there is no versioning problem, if it is
 46 defined by anyone else, there is a versioning need.
- 47 (3.0)
- 48 Phi Okay so I will then put it somewhere else=

In his first turn (lines 1-3), Paul proposes that the concept is removed and argues his point by voicing a highly evaluative stance which rejects the description produced by Philip. The adverb still expresses that he is coming back to an issue that he has proposed already before. Philip defends himself by providing an account including a minimal condition (it's just an example) as reason for keeping the concept in the document. Marco then intervenes (line 7) with an alternative proposal in directive form. His suggestion, however, is

overtly and strongly rejected by Paul (line 8), in direct overlap. John picks up on Marco's proposal and shows affiliation although he at the same time conditionally modifies it. Philip accepts this proposal and explains in overlap how he plans to describe the concept. John (line 11) continues to explain his proposal in more detail, as a collaborative act, and Paul acknowledges this in overlap. Paul and John continue to complement each other's understandings. Paul (line 17, yeah in this case...) takes epistemic authority to define what is important and relevant. John continues Paul's statement with CLI point of view and system point of view, and Paul collaboratively affiliates with his line of reasoning by producing further explanations, using the same wording (point of view). This becomes a rhetorical strategy by which the argument is strengthened and common sense is enforced. This is a way of forming an alliance collective production of counter-arguments which are not exactly oppositional (Kangasharju 2002, p. 1448) but these participants begin to support the point of view of one of the participants. In this case they do not do it solely to form an oppositional alliance but to enforce the way of understanding the issue at hand, and Philip is pressed to align with their view.

Paul continues with a post-expansion (lines 30-36 and 38-41) to reiterate his individual judgment and to authenticate the agreement for which Philip keeps providing minimal acknowledgements. The long pauses leave room for Paul continue establishing his epistemic authority until Philip reinforces his agreement by explaining the concrete actions he will take.

From sensemaking point of view, this sequence continues the discussion on the meaning of remote CLI, a concept that has been made topical throughout this meeting. From decision-making point of view, this is a discussion on whether the concept of remote CLI is valid or not in the context of this document. It becomes a matter of whose epistemic stance counts. The duel between Paul and Philip is transformed into various accounts provided by John and Paul, which to some degree increases the sense of common understanding. However, the conclusion remains somewhat ambiguous. In this way, it is left up to the author of the document and presenter to make final conclusions, and Philip makes a decision on his own after the meeting to separate the point into an appendix (as he says in line 48: I will then put it somewhere else). The chairperson Marco stays out of this discussion after his proposal (line 7) is rejected.

As a summary, the sequence starts out as conflictual because Paul exercises high epistemic authority to define what is important and relevant and at the same time makes a highly negative evaluation which is a threat to Philip's face. There is resistance towards Paul's statements because he focuses on the negative evaluation whereas John comes up with a solution; the proposal by John is oriented to in an affiliative manner and it leads to collaborative reasoning and resolution although John basically aligns with Paul that the definition needs to be modified. However, the position statements are produced in alliance by several participants, which increases their epistemic strength, and therefore Philip needs to give in.

Excerpt 6 (ErrMsg, DifferentOpinion) below describes a position statement which is formulated in a more positive tone when compared to the previous one. Here, Paul is describing the format of error logs when Moritz asks for a turn and reiterates his earlier stance that it should be mandatory to include both a number and a textual description to error codes. The participants are building factual and epistemic grounds by membership category entitlement and experiential witnessing, etc. (Frankel, 1989, in Edwards, 2007). By this way they resort to epistemic primacy and access. Paul and Moritz both use various membership categories to argue their stance based on epistemic primacy and access.

Excerpt 6 [ErrMsg] DifferentOpinion

- 1 Pau this is ((refers to the slide which is displayed)) what an application
 2 will write to the log here's the error code and the text and the first part
 3 of it contains the error text re-retrieved from from the error code
 4 definition file or it can be retrieved from there
 5 Mor -> ehm ((hand up)) basically if okay as we agreed <it should be
 6 **required not recommended**> and **in my opinion it would be nice to**
 7 **provide some facilities** which would make developer life easier
 8 because if you will ask every developer to record this error description
 9 text manually ££ we will make (subtle) [difference]
 10 Pau [it's included]
 11 Pau it's included there
 12 Mor okay
 13 Pau -> but **Thomas said that it might be an overkill he had a different**
 14 **opinion than you ££**
 15 (5.0)
 16 Mor **I just (2.0) remember my experience with logs** from (.) at the (--)
 17 operating systems where error code were recorded as numbers you
 18 have to remember something like few thousand software or you
 19 should have printed manuals around you just to understand what's
 20 really happened

Above, Moritz produces a position report and continues with an indirectly formulated solution that he would want some mechanism which would make it simpler for the developers to implement error codes (lines 5-9). Paul responds by saying that what Moritz wants has already been changed in the document, and Moritz accepts this. In a way, there is a decision embedded in Paul's response (lines 10 and 11), and it is acknowledged by Moritz. Paul then continues, changes his footing, and builds a contrast between the position that Moritz has taken and that of another architect Thomas, who is not present in this particular meeting. In this way he signals that the stance presented by Moritz is not the only valid one, and the identity of Thomas is made relevant (although not consequential). By this way he gives credit to another party and makes himself an animator of this epistemic stance (Goffman, 1979, 1981). This way of attributing knowledge to someone else is also close to what Huttunen (2010) calls "tactical tagging", the references used (about the rest of the organization or persons not participating in the meetings) by the participants in

meetings to solve the problematic situations. Here, however, the tagging is used to build contrast and by doing so gain epistemic authority, and not primarily to create common sense and understanding. Moritz continues to argue his point based on his personal experience, by this way attempts to enhance his epistemic primacy (lines 16-20).

To summarize, the issue is resolved during the sequence interaction-wise, but organization-wise from sensemaking point of view, the outcome remains ambiguous: plausibility is expressed over accuracy, and it remains unclear whether both views can be explained in the same document. Discussion on this topic does not seem to lead anywhere, i.e. the different opinions are not explicitly resolved and no actions are taken regarding the effects of it to the contents of the document. This may be due to the fact that Thomas is not present to defend his point and no one else sees the need to press this point further. The episode ends here and Paul moves on to next topic.

Another example in which experience and professional role are used to argue a point of view is explored in Excerpt 7 (EIA, SeparateMilestone1) below. Professional roles and identities are important for establishing epistemic authority in professional settings. The excerpt is from the meeting in which the timing (milestone) of announcing SW changes of External Interface [EIA] can be declared. The sequence starts as epistemic primacy is pursued by Paul's self-initiated proposal which opens up a new topic. The suggestion is not immediately accepted which leads to lengthy accounts. Here Goffman's (1979, 1981) concept of footing is useful: by referring to his colleagues (and including himself) as experts, Paul claims authority as an animator. Jeffrey, on the other hand, refers to business reasons and claims authorship on the basis of his role as a program manager. Furthermore, Marco also refers to his dilemma as having a dual role in the process of accepting the description which is being presented here.

Excerpt 7 [EIA] SeparateMilestone1

- 1 Pau **May I give a correction proposal**
- 2 Jef Yes
- 3 Pau -> **Would it be more appropriate** to state the specific milestone instead
4 of M1 after which you need to use the change request.
- 5 Jef It is basically defined by our process at the moment **but of course** we
6 can make an exception here in external interface change if we want in
7 [this]
- 8 Pau [because]
- 9 Jef external interfaces approved milestone.
- 10 Pau -> **As all these ~~most of th(h)ese experts~~ told to you** ehm we don't
11 have the interfaces declared at M1 it is **a fact**.
- 12 Jef Yes but the **business reason** why why after M1 those change
13 requests should be used because those product items are frozed in in
14 M1 milestone
- 15 Mar but [actually]
- 16 Jef [and] then the external interface changes are approved also at that
17 point of time

- 18 Mar Jeffrey we had it here we had the milestone EI F-
 19 Hel External int[erfaces freezed]
 20 Mar [External interfaces] freezed which is after M1 after that
 21 you start using change requests
 22 Jef But basically if if you change (.) ehm okay when the product item
 23 with the external interfaces changes are approved at M1 and frozen at
 24 M1 then if something changes for example that also affects product
 25 items (.) also
 26 Mar But there is a **fact although I have seen this material before but**
 27 Jef Uhu
 28 Mar but the **fact** which is here like only (.) one to maximum two months
 29 after M1 then we have the design at the level that we can say that this
 30 is our interfaces. So the-this ehm EI milestone ((pointing at slide)) is if
 31 you want to be on the safe side it's two months after M1 (.) and I think
 32 that's the natural place from after which to: (.) ehm to do the change
 33 request process
 34 Hel [How]
 35 Mar [because] we don't have them at M1 ready that's **the problem**

Paul produces a hybrid question to request for a floor. He then makes a suggestion for a specific milestone to be defined. The proposal is formulated as a yes/no question for which an agreement would be the preferred response. However, Jeffrey rejects this by saying that it has been defined on higher level but he is willing to affiliate. Paul pursues his point by making reference to architects as an expert group and designs his argument as a position statement on behalf of these experts. Jeffrey as a presenter in this specific meeting is not however an architect but a program manager. In this role he is responsible for agreeing on milestones with the company-internal customers, and therefore his reference to business reasons is category-bound. Also, Paul characterizes his arguments as epistemic facts, a characterization carried further by Marco. Engineers tend to treat problems as something that can be scientifically and objectively justified. They declare their stance as scientific or pragmatic facts.

After being rejected, Paul takes another approach (line 10) and uses category-bound resources (experts' experience) to justify his claim. Marco aligns himself through several turns with Paul. He picks up the same term fact as a means to rationalize and argue his position by reference to his experience-based epistemic authority. Marco also makes explicit reference to his dual role in the meeting (line 26). He introduced the topic in the beginning of the meeting by saying that the purpose was to share the information with the AT team members, about this topic on which a decision had been made in the product management meeting a day before. Both Marco and the presenter Jeffrey had participated in that meeting. Thus Marco identifies himself with the product management team in which the decision was made, but at the same time he should have been the representative of the architects' opinions. Now, he is in a difficult situation when he has to shift his opinions and identification from that

of a manager in the PDB to that of a manager who is attentive to his team members. This becomes visible in the way he begins to affiliate with Paul.

From sensemaking perspective, Excerpt 7 above exhibits a conflict between action and expectation. Organizational events are framed as factual, and these facts are argued retrospectively by implying that the way development has proceeded before will also hold true in the future, i.e. the same organizational constraints apply. Retrospective sensemaking is used to argue that things cannot change in the organization: the milestone for the readiness of design cannot be changed because it has always been that way. This is given as an experimental factual evidential in a similar manner as engineers would use technical engineering solutions as facts. The problem of defining a feasible time for the milestone is still left open when the episode above ends. Discussion continues in a more collaborative manner immediately after this sequence (see Excerpt 14, EIA, *SeparateMilestone2*, in chapter 8).

7.3 Challenging questions

This section explores challenges which are designed as questions to negatively evaluate or question the validity of what has been asserted (Pomerantz, 1984b). Epistemologically, this practice challenges the social condition of knowledge of the earlier turn or the topic at hand. Even when designed as an interrogative, the primary action done by these questions is to challenge or point out a shortcoming in what has been discussed before. Despite the question form used, these utterances express one's own epistemic authority over the topic. Position-wise, they are typically made in second position which means that they are responsive to the ongoing topic but at the same time reject the validity of previous statements. Thus they align with the topic at hand but authority is taken to evaluate the state of affairs described in the preceding turns. The primary purpose of questions is not to topicalize anything out of the topical agenda but rather to challenge and shift the focus into the specifics of the ongoing topic. In this way challenging questions become sequence-initiating actions. Thus, these sequences where the question sets the direction and scope for the developing topic are not as strong as the first-position evaluations or proposals that were presented in the preceding sections.

Challenging is a way of overtly exposing a problem in what is being said or discussed. They work as challenges toward preceding statements and expand on the ongoing topic or on what has been said. When they are designed as questions, it is the questioner who is in control of the turn-taking although the floor must be given to the potential answerer (Komter, 1991, p. 177). The questioner treats the issue as being in his or her domain of knowledge (Koshik, 2005). Therefore these kinds of questions display the knowledge of the questioner and they set preference for agreement or acknowledgement of the implied epistemic position.

Ford (2008) identifies three particular points in her study of women's usage of question forms as a practice to pursue topics in meetings. Firstly, questioning actions served to bring the questioner, as well as other participants in multiparty

situation, into participation. Through questioning the questioner takes an opportunity in the subsequent turn to accept or expand upon the topic. Secondly, questioning actions become a way to display expertise of the questioner. Thirdly, questions were used to challenge or to indicate a problem with what had been said before. The analysis here will show how similar practices become treated in meetings represented predominantly by men. When doing challenging, questions are designed as responses to extended stories or other types of actions in prior turns (Keisanen, 2007). Such challenges can be related to something exogenous or to something in the interaction (Koshik, 2005). Opinionated and assertive questions have an expectation for a specific type of preferred or correct answer (Clayman & Heritage, 2002a, p. 15).

The challenges in this section represent two different topical orientations although they have similar interactional consequences. In the first two excerpts (8 and 9), described in section 7.3.1., the challenges concern issues that are in the immediate context of discussion and they are thus second-position reactions to the immediately preceding turn. This creates an immediate threat to the face of the one whose turn is being challenged. The two excerpts described in section 7.3.2 (excerpts 10 and 11 challenge a wider context of discussion and in that way confront the topical point in a more impersonal manner. The key for categorizing these questions as challenging is that they are responded to as doing such activity.

7.3.1 Immediate challenge to preceding turn or statement

The most prototypical way to challenge is to produce wh-questions. Wh-questions are questions which start with why, what, how, where, when or who (Clayman & Heritage 2002). The challenge is included in the question itself, and in this way the epistemic and normative claims become intertwined.

Excerpt 8 (CLIF, UIAdapter2) below is from meeting [CLIF], and the episode is a direct continuation of a discussion concerning the problematic nature of concept UI Adapter in Excerpt 3, (CLIF, UIAdapter1) in section 7.1.2. Here, Marco attempts to come up with a proposal which would satisfy everyone's opinion on how the concept of UI adapter should be presented in the architectural figure they have been discussing. Henry quickly rejects Marco's suggestion for solution, making Philip and Marco accountable for a response.

Excerpt 8 [CLIF] UIAdapter2

- | | | |
|----|-------|---|
| 1 | Mar | Maybe in the figure you can put the UI adapter with <dashed line> |
| 2 | | indicating that= |
| 3 | Hen-> | =But where would we need that kind of adapter because we have only |
| 4 | | this (.) single system. |
| 5 | Mor | [Aaa] |
| 6 | Phi | [Yeah] yes but if somebody in ((business unit)) |
| 7 | | level decides that we should provide for example web services |
| 8 | | interface then then this would be |
| 9 | | [web services] |
| 10 | Pau-> | [It's not] a CLI |

- 11 Phi ↑Yes but web services are scriptable.
 12 Mor Ehm-ehm-ehm **I can imagine** that for example our gateway customers
 13 may want to have some ehm-ehm kind of ehm adapter that will adapt
 14 not so native than ((the product)) tries to represent in form of let's say
 15 (.) tradition in ((another company-internal product))
 16 (0.5)
 17 Hen But that's (-)
 18 Phi So it's always unified interface and since unified interface is not
 19 defined unified means unified in ((company))

In Excerpt 8 above the participants engage in two overlapping issues that are intertwined but both become challenged. Henry first challenges the proposition that has been made earlier (by Philip and Marco) about the role of adapters, and he motivates his question with an epistemic assessment of the current state of affairs (we have only this single system). The question (where would we need that kind of adapter) challenges the need for defining adapters as proposed in the earlier turns. This effect is enhanced by the contrast marker but prior to the question form. Henry does not select who should answer, and Moritz attempts to comment simultaneously with the primary presenter (Philip). Philip indicates that Henry's interpretation is not new information to him (yeah yeah, repeated). He then provides reasoning for his solution. Paul interrupts and declines to engage with Philip's reasoning in overlap. Philip continues to defend his point with an interactionally consequential yes but (Schegloff, 2007a) in line 11. Moritz then provides another point of view with a hedged epistemic claim as a response to Henry's original question.

From the point of view of its grammatical form, it is worth noting that the question form alone does not lead to Philip's defensive mode; Henry could have formulated his claim as a proposition, and the interactional effect would presumably have been the same. This shows that context and mood seems to matter. Also, it is not CLI is not enough of an argument to resolve the conflict. The explanation given by Philip remains ambiguous, and it is unclear whether collective sense has been reached. This is also indicated by the fact that there remains a need to resume this topic time and again in the meeting (in Excerpt 12, CLIF, UIAdapter3).

In Excerpt 9 below (CLIF, UIAdapter5), Oscar's challenge is a direct and immediate continuation of previous episode (see Excerpt 46, CLIF, UIAdapter4 in section 9.4) in which Philip has been trying to conclude the discussion on UI adapters. The excerpt is preceded by Paul's account in which he calls the given description of CLI and UI Adapter as recursive. Philip denies this and explains that the purpose is to generalize the framework for potential future needs. He tries to close the discussion on this topic by laughing and saying in humorous tone we try to enable whatever is coming in the future (lines 2-4 repeated here). The challenge is enhanced by oppositional alliance which is constructed by Oscar and Paul against Philip.

Excerpt 9 [CLIF] UIAdapter5

- 1 Phi Aa (.) okay I would not say that this is recursive but (.) anyway here

- 2 this we try to enable ehm (.) whatever is coming in the future.
 3 [Ha-ha] ((common laughter))
 4 Osc -> **How can you** enable [some]thing which
 5 Mor [hhh]
 6 Osc you don't know.
 7 (1.5)
 8 Phi Just by putting this box here which can be
 9 [(ha-ha)]
 10 Pau -> [But it is] **trivial** you can you can implement anything on top of the
 11 CLI it can be it can be a script that runs locally and it can be
 12 something that adapts the network element to some other management
 13 interface. But it **doesn't belong to the CLI framework**
 14 [it's a management interface]
 15 Phi [Okay ↑ FINE so]
 16 **you are saying** it's more than CLI
 17 **I'm [just saying** that]
 18 Mar ==> [I - I - I] even suggest the UI adapter the color can be
 19 different so it's to isolate them that it is not like you port we CLI
 20 (problem) it's something on top of for other purposes
 21 Pau Yeah
 22 Phi Yeah
 23 Pau It's out of the scope of this document.

The evaluative question by Oscar comes immediately after that statement and ignores the humorous tone at the end of the preceding sequence. He sounds serious when he challenges the relevance of the proposal, running counter to the proposition about the future. The question type that is used here (how can you) is almost accusing in nature (cf. Koshik, 2003) although it is less aggressive than if a past tense (how could you) had been used (Clayman & Heritage, 2002b). Philip defends his claim but continues to use the humorous tone. Paul joins in oppositional alliance with Oscar, adding his unhedged evaluation which runs counter to Philip's defense. He also ignores Philip's humorous tone and makes his statement in a very matter-of-fact manner. Here Philip's affective stance also changes when he uses louder voice and higher pitch to defend his opinion (in lines 15 and 17). The humorous tone in which he has attempted to conclude this topic has failed (here and in Excerpt 46, UIAdapter4, preceding this sequence). Marco makes a decision proposal as an attempt to resolve the conflict by making a decision formulation to conclude the topic. This is accepted first by Paul, then also by Philip. Paul then takes the last word to close the sequence. He uses externalized facts for reasoning. As for collective sense, a resolution is found but it does not happen in a very collaborative manner but rather through maintaining an individualistic epistemic stance.

Overall, questions of the type presented in this section disrupt the consensus that might be otherwise forming. Therefore the question is a way to seize the moment and make the recipient accountable for the sensemaking.

7.3.2 Topicalizing challenge as a question

Topical challenges are similar to the challenging questions of the previous section by virtue of being typically designed as questions, and by doing so they cast doubt on the topic at hand. However, compared to the challenging questions discussed in the previous section, which were immediate and quick reactions to what had been said in the preceding turn, the topical questions are formulated by the questioner to challenge the topical issue in a wider context than just the preceding turn. Therefore they exhibit more specifically the epistemic understanding of the questioner.

The excerpt below is a direct continuation of Excerpt 22 (EIA, Challenging) and continues the discussion on the problem of having the two program milestones so close to one another. The discussion concerns the timing of a certain program milestone so early. It is an episode during which multiple participants claim epistemic authority. However, the actual challenging question is prefaced by Moritz himself when he requests a turn and explicitly prefaced his question as challenging (lines 1-2). In that respect, this approach is similar to challenging wh-questions but this challenge opens a new topic or perspective in a more elaborate manner.

Excerpt 10 [EIA] Counterarguments

- 1 Mor ==> I would like to ask or perhaps **challenge** ehm placing this milestone
 2 close to M1. **So what is the purpose** of documenting change of
 3 external interface as I understood basically it's not allowed do not
 4 allow breakage in customer application. (.) But=
 5 Jef =((product))(customer)
 6 Mor customer by our process=
 7 Jef =users
 8 Mor is not going to use our system at M1 milestone or it will not be
 9 delivered to customers at that stage so it makes no sense in my
 10 opinion to have this kind of external interface defined milestone
 11 placed close to M1. In reality it's it's much closer to module testing
 12 [ready.]
 13 Jef [!]-it was quite close M1 in ((program name)).
 14 (.)
 15 Mar [but actually]
 16 Jef [like] I said in ((project)) we can when we are defining that milestone
 17 schedule we need to know what are the changes that are expected
 18 expected in that milestone
 19 Mar -> **There- there are also two counterarguments** to to what you said **So**
 20 **you ((gazing at Moritz)) took you took you took the view of the (.)**
 21 **((product)) users** and and you are absolutely right at which what is
 22 the latest point in time when we can freeze our interfaces before they
 23 start using it
 24 (.)
 25 [but]
 26 Pet [also] internal ones
 27 Mar **And yes** this is one **this is one** like also these interfaces are used

28 internally eh by other let's say other subdomains in our system so
 29 let's say if m+m interfaces the new interfaces is defined okay if they
 30 say this is this one in TimesTen and they start to make assumptions
 31 ((looking and pointing at Thomas)) and to use them in the load
 32 balancers and then then in the middle of the process they change them
 33 so then these guys ((pointing at Thomas)) have to rework so internally
 34 we are we will be using the interfaces much sooner **the second**
 35 **argument** also countering in favor of bringing it this close to M1 is
 36 that before you implement you are supposed to design and the first
 37 thing in the design is to design the interfaces (.) [and] then implement
 38 them

Moritz takes the first position and makes a preliminary which overtly projects his question to be meant as a challenge although it is designed in a mitigated form. Without pausing to be granted the floor, he produces a post-question expansion as reasoning for the problem. Marco directly reserves the epistemic right to define at least two claims that are counters to the problem indicated by Moritz although he first affiliates positively with the point of view regarding the user needs. Marco takes the authority to formulate Moritz's version of the state of affairs and frames it as reflecting the membership category of end users. Marco's turn is designed in a way which might imply that he was prepared for this challenge. Peter takes the opportunity to chip in that company-internal customers (internal users) are just as important as end customers, which Marco immediately accepts and formulates as being his second argument. It is Marco who by his accounts gives sense to the necessity of keeping the timing of the milestone as it has been described.

In the episode below (Excerpt 11, CLIF, Confusing) the participants are discussing the conceptual categorization which is used in the document. The tone of the question projects a problem and the description of concepts are evaluated negatively as being confusing, which has similarities to the excerpt presented in the previous chapter. However, the episode is constructed in a way which displays effort towards collective sensemaking. Oscar takes more effort to explain his evaluation and also the responsibility to propose an alternative solution. The sequence-initiating question has led to expansion by several participants, and epistemic authority and sensemaking are negotiated together among five of the participants.

The episode begins when Oscar, another architect, takes epistemic authority to assess the conceptual classification used in the document (as bullet points) as confusing. In the end, he makes an effort to create common sense by giving an alternative proposal which he explains in a factual manner. Oscar thus continues on-topic talk but goes first in assessing a specific detail in the document. He finds the classification of the terms confusing. Paul and Thomas affiliate and their negative evaluation is designed in collaboration. However, Oscar continues to reason his position in more detail and proposes an alternative solution.

Excerpt 11 [CLIF] Confusing

- 1 Osc -> [First] first bullet in this case is it the same thing as node-local CLI
- 2 Phi Ehm
- 3 Pau-> Yeah ((nodding))
- 4 Phi **[but** it can be]
- 5 Tho -> [(I don't' know)] actually how do you understand these things
- 6 Phi Yeah
- 7 Tho [(it's a matter of)]
- 8 Osc -> [Anyway] this was **very confusing** I was not able to fully
- 9 follow the idea of these concepts so **I think** that it would be better if
- 10 you clearly separate the node-local CLI and cluster-local CLI here and
- 11 **not** have this kind of mixed thing so I would propose that in the node
- 12 local CLI just remove the other node there so the user gets gets logged
- 13 in one node and executes commands locally in that node and in
- 14 cluster-local CLI it is actually the second bullet which is the idea
- 15 Phi Yeah but=
- 16 Osc =You execute something in one node which might might
- 17 communicate with with the service agent in some other node
- 18 (.)
- 19 Phi **Yeah okay but** in our physical (.) configuration it's so that user
- 20 cannot login from from outside to [(-) node]
- 21 Osc [But that's] that's actually not relevant here=
- 22 Phi =Ahhah=
- 23 Osc when you are creating a script so it's out of the scope of CLI so the
- 24 user somehow gets logged into the [node]
- 25 Phi [Okay] good good
- 26 Mar ==> So we remove the second box,
- 27 Mor -> But is it better to differentiate simply by (-) object of this operations or
- 28 by object of this command is it local on the same node or is it
- 29 somewhere else and I think this I don't know why we need to
- 30 differentiate but this provides more than enough ehm
- 31 (1.0)
- 32 Tho [Actually]
- 33 Phi [Maybe] I don't have to differentiate [at all]

By using a question Oscar first claims not to be knowing and therefore appears to be seeking to confirm his understanding. The sequence-initiating question also provides Philip an opportunity for epistemic primacy to explain his point of view. However, there is clearly a problem of understanding. The ambiguity is enhanced in concert by Paul and Thomas who align with Oscar, even in overlap, thereby nullifying Philip's chance to respond. This topic is centralized as a common problem, a sensemaking issue. These turns anticipate the negative evaluation, and Oscar produces it in line 8 where he defines the contents as confusing. He then proceeds immediately to initiate a proposal (line 9 onwards). Philip attempts to reject the proposal (line 15) but Oscar continues to explain his point. Philip acknowledges Oscar's explanation but provides a counter (lines 19-20). Oscar rejects the counter by assessing it as not relevant. Philip's ahhah response is a display of a change of state token (Heritage, 1998) which means that this was new information to him and his epistemic stance has been shifted

from K- to K+ (Heritage 2012a). Oscar continues to argue his point with more technical details (lines 23-25). Philip accepts this more emphatically. Marco attempts to conclude the discussion on this topic by making a retrospective and future-oriented decision announcement, using his mandate as a chairperson to attempt to ratify the outcome. This is however not fully accepted by Moritz. However, the sequence ends when Philip a change of stance by saying Maybe I don't need to differentiate at all (in line 33) before another sequence starts. The discussion digresses from this particular topic and ambiguity regarding its details remains.

One can see how the kind of interactional practices which are used here may facilitate common agreement. Although Oscar begins with a negative evaluation, that evaluation is softened by the preliminary question. Also, the evaluation is accompanied by a proposal to solve the issue. In addition, the fact that other participants affiliate with his evaluation here makes it harder for the presenting architect Philip to reject the evaluation. Thus, while being combative, this episode also shows a more explicit search for collaborative sensemaking. Several participants agree that the terms are unclear and there is lack the necessary cues that would help them to understand the conceptual scope of the document. There is a desire to come up with a satisfactory classification system.

Simple requests for clarification may also signal potential disagreement (Pomerantz, 1984a) and challenge the understandings. Excerpt 12 (CLIF, UIAdapter3) below illustrates an episode in which Oscar and Paul collaboratively request an example of UI adapter. They pursue a response to a question (cf. Llewellyn, 2005). However, their question displays doubt and disaffiliation with the preceding statements rather (or more) than genuine request for an example.

Excerpt 12 [CLIF] UIAdapter3

- 1 Osc -> Do you have some [↑]reference in your mind when you have specified
 2 this UE-UI adapter.
 3 (1.0)
 4 So (0.5) some example where this: approach (.) might might-might
 5 have been applied previously.
 6 Pau -> so that you actually have a CLI as remote. ((smiling))
 7 Phi **Yeah okay the-ehm** (.) I don't know by heart the-the-the-the exact
 8 names but I saw some that the-they are going to kind of adapt syntax
 9 of some network element to something else and they are going to
 10 make adapters for kind of thin layer on top of their syntax to transfer it
 11 to: to (.) required syntax. (0.5) This kind of
 12 things [(-)]
 13 Pau -> **Yeah [but]** this kind of this kind of adaptation is local to the
 14 network element because we we could do an ((command name)) CLI
 15 command on top of ((command name)) CLI and it would
 16 reflect some [(-)] and so on
 17 Phi [O[↑]kay]
 18 Pau and it's local=
 19 Phi =Yeah [↑]FINE it is inside here so you just provide a different interface

20 for for for this network element so this U-UI adapter is (.) here inside
 21 network element
 22 Pau Yeah [it] (.) we are not then talking about
 23 Mar [(that)]
 24 Pau external scripts they are they are still local=

Oscar formulates a question which, despite its seemingly neutral wording, works in this context as a counterargument and challenges the relevance of positions taken just before. His tone of voice is somewhat aggravated, displaying doubt, which makes Philip highly accountable for answering the question (Clayman & Heritage, 2002b). In other words, while orienting to the epistemic right of Philip as a presenter and writer of the document to come up with an example, he is implicitly casting doubt on the argument produced by Philip earlier. In this way the seemingly genuine question becomes contextualized as a challenge although the question as such does not explicitly include a challenge (as in the examples given in how can you etc.).

Paul produces the second part to the question by elliptical collaborative question design & completion, expansion to coauthoring question. He also limits the substance of the type of possible answers. He is smiling, which enhances the effect that there is doubt concerning the relevance. Oscar and Paul establish together a counter-claim towards what has been proposed just before (UIAdapter1). The collaborative construction of the counter-claim enhances the level of aggravation, making their question a challenge. Philip hesitates but acknowledges the in-built doubt in the question. His dispreferred response (I don't know) disrupts the flow of question-answer preference although he provides the best information he has available while downgrading certainty at the same time. Paul takes the epistemic authority to define what is to be regarded as the (factually) correct description (lines 13-16). Philip's choice of words in his response displays preference for alignment but higher pitch and louder voice (okay, yeah fine in lines 17 and 19) shows that he is aggravated while he continues to defend his position.

Throughout this sequence, engineering reasoning is used as normative factual base for arguments. From sensemaking point of view, common understanding of the issue is not reached. This becomes evident during the ensuing discussion which is occupied by the conceptual meaning of UI Adapters several times.

7.4 Summary

This chapter has explored some of the ways in which participants in multiparty meetings pursued personal agendas and how that influenced the collaborative sensemaking among the participants. When pursuing personal agendas, the speakers favored their individual epistemic stance and claimed strong epistemic rights to influence the meaning that was being developed through interaction. Often these agendas were designed to challenge some specific topical detail, but in the end, they also had an impact on the organizational decisions made by the team.

It has been demonstrated how various linguistic resources such as negative evaluations, counterproposals and challenging questions were used for the purpose of driving individual opinions. All these practices projected an evaluative epistemic stance and they were disaffiliative by nature. Challenges were designed as extensive and elaborate statements, but also the shortest words such as *why* or *no* were used to display doubt. As for the strength of the epistemic stance expressed, direct negative evaluations demonstrated the strongest type of epistemic stance. They were also the most disaffiliative and face-threatening actions. Counterproposals were epistemically stronger than challenging questions which continued on-topic talk. By proposing something in first position, the speaker claimed higher rights to define how things should be, whereas challenging questions were simply responsive: they rejected the statement made by someone else without adding new information into the actual substance. Furthermore, proposals not only presented a point of view but also aimed to change or enhance the understanding that had existed so far. However, the level of resistance compared to challenging questions was typically stronger. Negative evaluations were furnished with one-sided opinions which tend to accommodate for competition and divergent understandings rather than an increase of common understanding.

The analysis has drawn light on how the participants in a meeting orient to acts of epistemic authority, and how authority is negotiated in the situation rather than predefined by their institutional roles. The excerpts showed that the roles of the participants did not seem to matter that much when negotiating the epistemic status between the participants: anyone was allowed to express their opinion and opinions of the presenter (particularly in Excerpts 1 and 2), chairperson (for instance Excerpt 5) and colleagues (Excerpt 4) were equally challenged. It also seems that the opinions expressed by those who were not regular participants and members of the team were challenged more, and the primary participants in the meeting were given more opportunities to assert their epistemic stance. Also, if oppositional alliances were formed there was less resistance by the presenter or the one whose proposal was opposed.

While being free to comment, the participants were attentive to the professional identities of their coparticipants. Overt attempts to take over or claim epistemic authority, especially on areas which were someone else's primary responsibility, tended to lead to some degree of disagreement and conflict. These kinds of episodes became longer and required more effort from the participants to reach a resolution. Collective sensemaking became vague at best, which was evidenced in particular in the meeting CLIF, in which a specific topical detail was revisited in several phases during the meeting. The understanding of whose knowledge counts is a delicate matter among professional peers. This chapter has demonstrated that strong counterpositioning and strong expression of epistemic authority among professional equals leads to a more competitive and lengthy path towards common understanding. This is most prominent in meeting CLIF which abounds with framing contests (this is about CLI vs. this is not about CLI). Also, the sequences tend to become combative and the propositions that are possible

about the topic become constrained, thus narrowing rather than expanding opportunities for collective sensemaking.

The strongest and most direct claims of epistemic authority tended to lead to overt conflict and disagreement before the issues were solved. Negative evaluations are normally considered to be dispreferred actions by nature. Similarly to findings in some earlier studies (Kangasharju, 2009; Kotthoff, 1993), the analysis of the meetings in this study also showed that when a context for arguing was established, preference for agreement was no longer valid and disagreement became the preferred action until the chairperson or someone else intervened to resolve the conflict. This was the case when accusations or complaints were displayed as first position actions, and the respondent in second position was expected to defend his or her point.

The analysis also showed that disaffiliative episodes tended to pose threats to the status of the one whose proposals were challenged which brought negative emotions into surface. Negative emotions have implications to sensemaking. In line with some earlier studies (Maitlis & Christianson, 2014), it seemed that negative or moderately intense emotions may have triggered more active sensemaking in organizations. However, this type of sensemaking could be seen as more superficial and less collaborative than discussions which show more positive emotions between the participants (Liu & Maitlis, 2014). Moreover, the analysis here shows tendencies similar to those in the study of Rovio-Johansson (2007): disaffiliative and combative situations make other participants stay silent although they still stay as active listeners. This, as such, conveys very little information about reaching common sense about the actual substance matter among the team.

Evaluations can be seen as a resource to trigger decision making by pointing out a problem through evaluation and proposing a solution (Huisman, 2001). Evaluations and other similar conversational practices pursue personal agendas, which means that in multiparty situations they call for either acknowledgement or rejection – a decision of sorts – by the coparticipants. In his study, Koskinen (1999) placed evaluations in a larger workplace framework using both talk and texts of different kinds as data. Most of the evaluations in his data were done in formal “decisional” context of departmental meetings. In these managerial meetings, the participants were aware that they had the duty to make decisions and evaluations were used as a way to legitimize these decisions. They also explicated the relationship of the evaluation to the overall activity in the scope of their project’s overall status. During less formal encounters the same participants used evaluations at the level of minor sequences which oriented to other minor tasks (Koskinen, 1999, p. 48). The excerpts of the current study also contained arguments which needed to be resolved. The decisions mainly concerned specific details of the wider topic in the meeting. Argumentation orients the sensemaking process into the present moment rather than to the future effects, although the resolution as such might have a larger than expected effect in the final overall decision on the wider technical solution. The strongest negative evaluations concerned even minute details of the presented topic, and their connections to higher level effects or the

overall topic were merely implied. This could be seen as another indication that accuracy of fact-based technical details are important for software architects. Koskinen's data concerned evaluations of people's performance, which should also be fact-based but are more subjective by nature as well. When the software architects and the other participants in the meetings in this study were problematizing more process-related issues (such as the topic in meeting EIA), they did explicitly motivate their arguments by their implications to the larger activity concerned.

In many respects the conflicts that surfaced in these excerpts could be regarded as acts of sensemaking as they aimed to clarify and explain a point of view. When speakers were preoccupied with getting their personal point of view accepted, the act of sensemaking became limited as the possible understandings were constrained rather than widened. The sequences did not lead to common understanding or agreement of how things should be. Intersubjective understanding may have been reached but no mentally oriented shared understanding of the substance. The episodes become competitive and although the arguing may include information which increases the general level of knowledge, the focus is on holding on to one's own perspective. Personal perspective overrides the capacity to increase the common understanding, and therefore topics are left hanging there as ambiguous, and clear decisions or resolutions are not made. The shared way of seeing and understanding things becomes subordinate to expressing personal epistemic stance.

To summarize, the methods discussed in this chapter demonstrated a self-oriented focus of epistemic authority, and limited acts of collaborative sensemaking. In all of the sequences in this chapter, there were at most three coparticipants and the chairperson contributing to the handling of the topic. The chairperson's role was mainly to act as a mitigator. The following chapter takes a different perspective and discusses the methods that are produced in a more other-oriented or collaboratively oriented focus to epistemic equality.

8. Pursuing mutual agendas

Previous chapter focused on practices by which the participants pursued personal agendas and self-proclaimed epistemic authority by taking a strong and mostly disaffiliative epistemic stance towards the opinions expressed by the other participants. On such occasions, sense became generated through struggle and conflict, and common understanding or stance was not always achieved. This chapter shall draw light on the interactional practices by which the participants express an affiliative stance to constructing agendas collaboratively by pursuing sharing of opinions and knowledge. This means that sensemaking is treated as a collective effort, and epistemics is accomplished in cooperation and collaborative dialogue between the participants. As far as epistemics is concerned, the interactants position themselves as equally knowledgeable or less knowledgeable than their coparticipants (Heritage, 2012a,b). The participants in talk strive to align themselves with the knowledge and expectations of the others. Common intelligibility is pursued by sharing opportunities for involvement. Epistemic stance becomes an enabler of collective sensemaking, as the participants construct themselves as co-experts. The orientation in the sequences that are analyzed in this chapter is to enhance collective sense through collaborative interaction. The primary research question to be explored in this chapter is: how is sharing of knowledge used for achieving mutual sense or understanding?

The sensemaking practices in this study are deeply grounded on institutionally-defined or technically-defined categories that frame the discourse. The sensemaking processes in the meetings concern technologies and technical details and their organizational effects. Sensemaking is regarded as a practice whereby some topical issue is made relevant and treated as a joint problem.

The analysis in this chapter is divided according to the source of knowledge or expertise that is used for sensemaking. Firstly, the chapter explores how the knowledge of specified experts is called upon, or how experts self-select to contribute to understandings. Secondly, the practices by which the participations framework opened by inviting anyone to contribute are explored. Thirdly, it is explained how self-selection is used to formulate understandings which invite acknowledgement by others.

8.1 Inviting and offering expertise knowledge

This section discusses the ways in which participants build on common organizational cues such as organizational roles and other familiar organizational elements to create understanding of the topics under discussion. Organizational cues, work as implicit category-bound references and common denominators for sensemaking. These types of cues are used when specific persons are called to participate, based on their role or area of expertise which is known to the rest of the participant. Everyone or most of the participants recognize what – or whom - is being referred to, and who is thereby made accountable to respond. These persons are the source of knowledge and entitled to ratify or confirm a final resolution for a topic that has been problematic or has caused disagreement. Furthermore, participants can use their category-bound authority to self-select and offer their understanding of the issue based on their organizational identity.

Category-bound epistemic authority refers to situations in which specific identity is used as a resource of privileged knowledge or experience (e.g. Raymond & Heritage, 2006). In this data, this is more specifically related to the various roles and responsibility areas that the participants in the meeting have, or the roles and responsibilities that pertain in the organization, and these categories are used as reference during the discussion regardless of the presence of that particular role in the meeting. Both epistemic authority as well as responsibility is assigned to particular people, based on their area of responsibility and organizational role. Such responsibility can also be actively taken. In addition, other people or groups of people who are affected by the decisions in the AT meeting, are referred to as a way to reason one's point of view.

Excerpt 13 (Python2) is from the meeting [CLIF]. Before this sequence, the participants have discussed one particular programming language, Python. Here the architects orient to their roles as experts in their particular areas of responsibility and comment when referred to by that particular area while discussing the problems related to the usage of Python. Organizational knowledge is used implicitly as a common frame of reference, and sense develops in harmony while everyone respects the epistemic authority of their colleagues for their respective areas of responsibility.

Excerpt 13 [CLIF] Python2

| | | |
|----|--------|---|
| 1 | Tho | But if you write Python there we also need to make sure we have |
| 2 | | developers who can write Python debug Python and understand |
| 3 | | Python which means we have to send some of them on a <u>course</u> read a |
| 4 | | book or whatever |
| 5 | Mar | But let's say in ((product)) we have only shell scripts |
| 6 | Pau -> | In the commissioning we use shell scripts and small amounts of Perl |
| 7 | | and I have also seen pieces of Python |
| 8 | Mar | Okay |
| 9 | Pau | and [<u>t</u> esters] testers use Perl quite extensively |
| 10 | Tho | [who was writing them] |
| 11 | Pau | I don't know if they use Python at all |

- 12 Mar -> **How is it** in software management ((looking and pointing at Oscar))
 13 Osc They have Bash scripts.
 14 Mar Okay
 15 (2.0)
 16 Tho -> ((name of database)) it's also Bash.
 17 (.)
 18 Mar **But I mean** [it can be]
 19 Tho -> (((name of operating system))) it's Python

Thomas begins this sequence by pointing out that developers might not be familiar enough with Python and they need to have training. In his response Marco (lines 5) rejects this concern by suggesting that Python as a language is not used but only shell scripts are used instead. Paul then self-selects to reaffirm that Python is indeed used to some extent in his areas of responsibility but he rejects responsibility for knowing the situation in the testing area. Marco then asks about the software management and points and looks directly at Oscar who is the responsible architect for that particular domain. Oscar responds immediately (line 13) by saying that another type of shell script (bash) is used, and thereby acknowledges his epistemic responsibility for this particular domain. Thomas then collaborates and elliptically self-selects to define the status in his area, the database solutions. He also continues to explain the status in another area, operating system.

The participants use both organizational roles (developers) and various software areas of the product (commissioning, software management) as references based on which they construct their reasoning and understanding of common needs. The discussion runs smoothly and turns are taken in alignment, because the references are common and known to everyone in the meeting. In his first turn (line 5) Marco attempts to express higher level of knowledge on the types of programming languages used in the product, but he then acknowledges the imbalance and allows the experts to fill in the details. In the end the gap is filled and the epistemic imbalance is equalized.

Excerpt 14 (EIA, SeparateMilestone2) below is an example in which organizational identities are used as category-bound resources for the purpose of making sense of an issue regarding a suitable time for a milestone. This is a direct continuation of Excerpt 7 (SeparateMilestone1, in section 7.2) where the proposed tight schedule and the limited time span between two program milestones were criticized. This sequence begins when Helen asks the Program Manager Peter to clarify how the schedule has been defined in the ongoing program. When Peter is unable to come up with an exact response, the sequence continues with self-initiated contributions by other participants.

Excerpt 14 [EIA] SeparateMilestone2

- 1 Hel -> **How is it currently** is it one or two months ((looking at Peter))
 2 Pet I don't know how it has been (.)
 3 Tho [It's MTR]
 4 Pet [I know that] we have formal milestone and we can adjust of course in
 5 the calendar time where we see it relvant

- 6 Tho Currently it's so that actually only when module testing is ready we
7 are sure relatively sure that the interfaces don't change which means
8 that from then on we could employ the change request procedure. And
9 what we are aiming now for is to: to have like one two or three
10 months earlier this this situation (.) before MTR which means two
11 months after M1.
- 12 Pet But MTR is is from the internal operations point of view it is
13 relatively late. That is from my point of view.
- 14 Tho Yeah=
15 Mar =Okay. But it can be it can be like between M1 and the MTR that's
16 this there is this milestone
- 17 Jef -> Yes it is between between those milestones (.) **Helen, what do you**
18 **think** about [from] PDB point
19 Mor
20 Jef of view [product manage]ment point of view
21 Mor **[I have]**
22 Hel ((looking at Moritz)) **For me at least the freezing point is okay**
23 because in PDB decision we don't have the technical specifications
24 for interfaces but (1.0) well (.) if there is a remarkable changes in
25 work estimations that affect then we should handle in PDB but
26 [for] me that external
- 27 Jef [(-)]
28 Hel interface freeze milestone is okay and we take change request after
29 that
30 Jef Only after that.
31 Hel Yeah that's okay for me.
32 (.)

Helen seeks for the epistemic experience of Peter, but his I don't know acknowledges incongruence in the question directed to him by Helen but affiliates by coming up with the best knowledge available at the moment. He then stresses further that whatever the milestone might be currently, it can now be adjusted according to need. Thomas begins to explain in overlap with Peter (lines 4 and 6) that change requests can be done with reasonable accuracy only after module testing has been completed and not two months earlier, which is being proposed. Peter then makes a counterargument, explaining that making these change requests after module testing (MTR) is too late. Peter also intensifies rather than downgrades his epistemic stance by referring to it as his personal point of view. Thomas acknowledges this comment which means that no agreement has been reached and the timing remains a problem. Marco then rushes to acknowledge this and comes up with a suggestion which is a compromise (lines 15-16). This is approved by Jeffrey who goes on and seeks for Helen's opinion and addresses her specifically as a representative of product management (PDB refers to Product Management) which implies that she in this role has the authority to ratify the decision. Moritz interrupts this question/answer sequence but he does not succeed in getting attention right away because he breaks the rule 1a of Sacks et al (1974, p. 704): when current speaker selects the

selected speaker (and no one else) should take the next turn. Helen, on the other hand, aligns with this rule and proceeds to respond. Jeffrey then pursues additional confirmation (line 36) from Helen that she really accepts this practice. A decision is constructed for this particular item through this confirmatory sequence.

In Excerpt 15 (WUIF, ConcurringThoughts), Marco makes a shift from general discussion on the topic and orients to decision and conclusion of the meeting. He selects Paul to state his opinion and makes a commitment by him an accountable action.

Excerpt 15 [WUIF] ConcurringThoughts

- 1 Mar -> But I guess it's not tested maybe one question also like to Paul. Paul
 2 more than a year ago was hoping to see the direction of GUIs
 3 towards visualization. So: is this concurring with your thoughts on
 4 [(-)]
 5 Pau [Yeah] yes this framework is really a step a big step towards that
 6 direction
 7 Mar because I see like under each we are able to put like pictures maybe
 8 video I don't know
 9 Pau Well of course there are lot of things to be specified yet because this
 10 whole (.) look and feel area how we should provide let's say this
 11 kind of (.) data refresh for the users and so on how are these get and
 12 (post) operations actually implemented and=

Marco makes Paul's opinion relevant by mentioning the future ambitions that Paul has expressed for the user interface framework. The purpose is to make sure that he acknowledges that the current proposal supports those ambitions. Paul affiliates and agrees that this solution is a step towards the overall vision. Marco continues with further description of the vision. Paul responds by further defining what is lacking in the current solution. Both admit that what is defined at the moment is only a partial vision for the future but enough as a starting point for the implementation.

The excerpts of this section show how particular people – or professional identities – are called upon and made accountable to ratify understandings for the common good. Participants also self-select and offer their knowledge when they feel accountable for doing so. There are also ways to open the participation framework without calling anyone in particular. This type of open participation is explored in section 8.2.

8.2 Open invitation to share knowledge

This section explores the kind of sequences which invite open sharing of knowledge on common issues or problems. No particular person or role is selected as having epistemic primacy but epistemic status is considered to be shared equally among the participants. The topical issues are introduced in a way that makes them more readily open for discussion and common problem-

solving. This leads to more collective sensemaking, as recipients are treated as having equal capacity, which is responded to as an affiliative act.

One typical way of opening topics for collective sensemaking is to formulate a question which leaves room for diverse opinions. A common opener is a question what about. Turn-initial what about implies that it is connected to earlier talk and in this way continuation on the earlier topic and an attempt to solve it collaboratively. This is a way of making the topic open for discussion and for building understanding collectively. These types of open-ended questions aim to solicit information and opinions of other participants.

In Excerpt 16 (CLIF, Wrappers₁) several participants take the opportunity to contribute to the collaborative definition of shell, a type of user interface. Six participants contribute during 11 turns of talk to expand on this topic. The turns of talk signal respect to other coparticipants and seek for their opinions. The sequence is a concerted activity of collective sensemaking in which sharing of special knowledge is enacted and invoked by the open what about question.

Excerpt 16 [CLIF] Wrappers₁

- 1 Hen -> **what about** if the native client CLI is not UNIX like (.) (-) it for
 2 example at the moment switch for (-) management
 3 [it's actually not UNIX like]
 4 Pau [Yeah it has] sort of shell of its own
 5 Joh Yeah it's not (.) Cisco shell (.) (But what then if it is)
 6 Jer but **we can** do it.
 7 ha-ha-ha
 8 Mar **we** [↑]**can** do actually we can
 9 Phi **we can** do wrappers
 10 Hen **we can** require but not with [existing]
 11 Pau [**we can**] (-) wrappers
 12 Mar and **we can** require in (--)=
 13 Joh =actually we are going to have towards switches you can use hascli
 14 for that quering the management status and operational status and then
 15 we will have another tool which you can get the configuration so these
 16 will be CLIs for for the switches

Jeremy makes a statement about what can be done as a joke, but Marco reaffirms by using a modified repeat in a more serious tone, and orients to his entitlement to assess what should be done (Stivers, 2005a). Philip affiliates and provides further details (line 11). Henry tries to partly reject the idea but he is overriden by others who continue in concert.

This is an example of shared voicing of terms or their definitions which are used as a common knowledge base to upgrade the sense of common understanding. We can is repeated in concert by several participants six times. This kind of choral completion (Lerner, 1993, 2002) during which participants repeat almost word by word what the other participant has said enhances the sense of common understanding and emergence of mutual agreement.

In the following excerpt (CLIF, User) Marco points out a potential problem in how applications, i.e. other company-internal organizations that develop software on top the framework which is defined in this meeting. He introduces the problem for open discussion by designing a what about question. Furthermore, epistemic verbs are used to emphasize the ongoing sensemaking.

Excerpt 17 [CLIF] User

- 1 Mar 1-> **But what about** application related CLIs if they have their own CLIs
 2 (--) cluster local.
 3 (.)
 4 Mor 2a-> It's again
 5 Tho 3-> It's a matter of **who is the user** of the CLI=
 6 Mor 2b-> **=who is the user** so CLI most of the users are not humans for
 7 example if application run on S node would need cluster local CLI it
 8 definitely should be (-) without any fancy stuff on hhh specific
 9 location just using one command
 10 Phi 4-> So only if you think that this is not cluster this is node-local
 11 (.)
 12 Joh 5-> Yeah (-) is that you actually login to that node even though you are are
 13 actually starting but from the CLI point of view it will be executed on
 14 that remote node.
 15 Mor But **I think** the confusion of this basically kind of explain where this
 16 locality is not where target of action but there is kind of initiation of
 17 action=
 18 Phi =yeah=
 19 Mor =(-) happens and if you go for kind of locality of target it would be
 20 much easier to understand it is strictly on this node object to which
 21 this command applies or is it somewhere else.
 22 Pau 6-> It's kind of SSH binding that makes it not not(h) very clear where this
 23 concept of initiation
 24 Mar Yeah actually [(-)]
 25 Pau [does] it initiate any command on one node
 26 Mar ==> if you just (-) the picture coming (--)

This excerpt is similar to the previous Excerpt 16 (Wrappers₁) in the same meeting. Marco's open question orients to collective sensemaking and problem solving (*what about*), leaving the floor open for knowledge demonstrations by other participants. After a minimal pause Moritz begins to respond (line 4, it's again) and Thomas takes the floor before Moritz completes his utterance, using a similar type of utterance (line 5, *it's a matter of who is the user*). Moritz rushes to expand on what Thomas has said. The repetition of Thomas's claim word by word (line 6, *who is the user*) demonstrates collaboration and the same degree of evaluation, which expresses full agreement with Thomas's statement (Pomerantz, 1984a). Hence the repetition has a reinforcing effect on this claim which is made in alliance. In using the same wording as Thomas, Moritz not only aligns with what Thomas is saying but also displays that what was said was something he had been thinking himself as well.

The topic in this excerpt is problematized but brought for common resolution in a collaborative manner. Potential explanations are not given in first position but they leave room for other opinions. This is different from the more direct formulations of problems where the formulations are followed by a justification for the claim, but not inviting common problem solving.

What about type of turns are also close to some of the proposals studied in chapter 7 (e.g. Excerpt 7, EIA, SeparateMilestone1). However, the proposals explored in the previous chapter were more oriented to pointing out personal wishes (position reports), whereas these *what about* turns invite other opinions.

In Excerpt 18 below (CLIF, MgmtInterface1), Henry's question includes an indirect candidate proposal. However, if compared with the counterproposals that were discussed in chapter 7, this one is more collaborative in tone. The question is designed to solicit common resolution rather than present his personal opinion.

Excerpt 18 [CLIF] MgmtInterface1

- 1 Hen -> But for example in ((HW release)) **should we** now require that the
 2 management interface in the switches is UNIX-like
 3 Pau No.
 4 Joh No [no no no no]
 5 Pau [NO]
 6 (.) we **MUST** require that it remains
 7 [the same]
 8 Hen [because]
 9 Pau or backwards-fully backwards compatible because otherwise we are in
 10 deep [trouble]
 11 Hen [But] we can make a wrapper ((smiling))
 12 Pau No [ha-ha-ha]

The sequence begins when Henry makes a proposal in a question form. This question format works in a similar vein to the *what about* –type of questions in the previous excerpts. However, it provides a narrower scope to sensemaking than the more open *what about* above. When the proposal is designed as a yes/no question, it limits the alternatives for response. Paul rejects the proposal immediately. John also produces an upgraded rejection after Paul. Paul intensifies his rejection by using an upgraded deontic modal (*must*), thereby claiming epistemic authority. Interestingly, neither the presenter nor the chairperson is involved in the conversation in the above episode; actually Philip as a presenter completely cedes the floor.

The episode remains affiliative despite disalignment and intense rejection. The participants find a common frame in which the sense is made. The rejection is handled in a collaborative manner without actual conflict.

These open invitations are designed in a way that they express a certain epistemic proposition or proposal by the speaker while they at the same time invite the knowledge and opinions of the recipients. They are designed to express and invite equalizing of the knowledge among the participants. Thus the intent is quite different from the counter-proposals that were discussed in section 7.2,

the purpose of which was to promote personal propositions in a more deterministic manner.

8.3 Collaborative management of overt disagreement

There are several episodes in the meetings in this data during which disagreement is explicitly verbalized (I disagree/agree with you) by the participants. However, the nature of these disagreements, from interactional point of view, is somewhat different from the ones explored in the previous section. The sequences in the previous section revealed general preference for disagreement, whereas the episodes in this section display preference for agreement although disagreement is brought up explicitly as a matter of opinion or knowledge on the substance matter. This is a clear indication that the participants are treating the meeting as a place for sharing opinions, and epistemic authority is equal. Disagreement becomes a more collaborative route to sensemaking, and the participants are oriented in finding a solution although through conflicting understandings.

In Excerpt 19 below (ErrMsg, Integer2) Paul makes an explicit remark that Moritz may have a different opinion on the topic of using integers for the identification of error messages. The sequence overall, however, is oriented to collaborative resolution of potential disagreement in ways which invite collaborative sharing of opinions.

Excerpt 19 [ErrMsg] Integer2

- 1 Pau -> Well anyway ehm (.) **I understood Moritz**
 2 **that you disagree** with the practice
 3 concerning usage of integers
 4 as [error codes]
- 5 Mor -> **[No I] don't disagree but** basically ehm I there there are two
 6 places one place where we have source of basically where we have
 7 this log record being called to syslog or whatever log wrapper we're
 8 writing this log record. And it's perfectly fine and perhaps it's even
 9 better to use identifier for logs this makes things more formal but in
 10 produced log records in syslog file these integers might be redundant
 11 (.) or they should not be the only source of identifying ehm error ehm
 12 description because this makes ehm reading of syslog impossible and
 13 it's not self-contained anymore.
- 14 Pau **But** from the point of **point of view of testers** this £this kind off£ code
 15 practice was explicitly requested because it it would make sense from
 16 test automation point of view and so on.
 17 (1.0)
- 18 Mor **Aa-ehm as good compromise** this in-information is as I said it should
 19 not be only way of indicate getting information about log record .hh it
 20 should be always (.) accompanied by textual ehm formal error
 21 description.
 22 Pau and so so it is in-in this suggestion.

Paul resumes to the original topic which Moritz attempted to take up earlier during the meeting. It was agreed then that the topic would be discussed later in the meeting when Paul's presentation would have progressed to that particular topic on the slide set. The presentation has now reached that phase and Paul begins the sequence by formulating Moritz's epistemic stance, which he formulates as being in disagreement with what is proposed in Paul's presentation material. Moritz, however, denies Paul's version and explains his point of view. Paul makes another counterclaim but refers to another party, the testers, thus making himself an animator of their requirement (Goffman, 1981) and not presenting an epistemic stance of his own. In this way, he claims epistemic authority based on having access to other organizational needs of other experts. Moritz provides further reasoning, as a compromise, and Paul claims that this has been considered in his document.

The episode continues in Excerpt 20 below when the chairperson Marco seeks for agreement by selected participants (ErrMsg, Integer3). Respondents are invited by referring to the respective area of responsibility on which they have epistemic primacy. The knowledge is used to expand common understanding. Questions are used in an affiliative manner for organizational purposes and common agreement.

Excerpt 20 [ErrMsg] Integer3

- 1 Mar -> Does the operability front have and usability front have any comment.
 2 ((looking at Philip))
 3 Phi **For me** these numbers are **quite fine** and-and
 4 actually [this is]
 5 Mor -> [I] I can explain the **problem** what
 6 Mar [if you just (-)]
 7 Phi [yes]
 8 Mor -> [POTENTIALLY] it's a usability **problem** you are getting let's say
 9 you as error reporter e-mail from testers or operator with syslog
 10 attached. It has only numbers times [times ten]
 11 Pau [yeah] ((nodding))
 12 Mor numbers and so on but you CANNOT GET THIS INFORMATION
 13 what is really happening without access to error description files
 14 Pau [yeah]
 15 Mor [THAT] are SPECIFIC TO SOFTWARE installed in operator premise
 16 in particular release and so [on]
 17 Pau [yeah]
 18 Mor so you need a lot of a lot more context information than ehm this
 19 syslog file provides [so it's]
 20 Phi [**Paul**] **Paul is not suggesting** that you have only error [numbers]
 21 Pau [**yea-**] **yeah** as I as I mentioned I was I was myself totally £ignoramus
 22 and£ and I suggested originally a practice that you are opposed to but
 23 the **£HAS guys£** and ha-ha **other guys** with which I [discussed]

Marco tries to engage other experts and invites Philip as the expert and architectural owner of usability and operability. This is a way to try to find a resolution and reach a decision on a particular topic. It is also a way to keep additional disagreement at bay. Philip confirms that he accepts the solution and attempts to elaborate on the topic. Moritz, however, ignores Marco's selection of next speaker and interrupts Philip, and challenges his expertise. Philip defends his stance by taking epistemic authority to formulate Paul's earlier stance, which Paul accepts. However, Paul again makes himself accountable only for citing accurately a third party opinion, resorting to testers opinions as evidence for his claim (Pomerantz, 1984b), but he also adds his own position. Paul is also laughing while referring to the "other guys" used for expert evidence. This may be a sign of him acknowledging a dilemma between the opinions of two different expert parties.

The episode continues further in the following Excerpt 21 (ErrMsg, Interger4) in which Moritz proposes a compromise and Marco pursues Paul's agreement.

Excerpt 21 [ErrMsg] Integer4

- 1 Mor **[we are] going in rounds we already discussed that solution** is
 2 basically to change just single word recommended to required and
 3 that's [it].
 4 Pau [So] so (.) so I think this presentation just uses one false word in
 5 there.
 6 Mor Yeah
 7 Pau °Okay.° ((quietly))
 8 Mar ==> **So you agree** that we change from recommended to required.
 9 (0.5)
 10 Pau **Y:es I suppose so.**

In the excerpt above, Moritz actually makes a decision formulation and Paul produces a gist of it in his own words, and this is acknowledged by Moritz. Marco formulates the gist of Paul's acknowledgement for final agreement. Paul produces an agreement with some hesitation, and quietly, but that is enough to signal that the discussion on this topic is over, and the acknowledgement can be considered a decision for this particular topic.

Excerpt 22 below (EIA, Challenging) begins with a more indirect implication that there is some sort of problem. Paul presents a seemingly neutral and practical question which at the same time projects a problem and steers the discussion to a topic he finds central.

Excerpt 22 [EIA] Challenging

- 1 Jef ((long multiunit turn deleted)).
 2 (.)
 3 Pau -> I have one practical question.
 4 Jef ((nods))
 5 Pau -> Ehm **do we assume** that when we create a new feature (.) its interfaces
 6 should be specified finally at M1 phase.

7 (0.5)
8 Jef **Ehm (.) okay** finally in in external interface approved state but so
9 practically so those are so close that (.) that
10 (.)
11 Pet -> **Might be very challenging** for the new ones as Paul mentioned
12 Jef **Yes. It's challenging but** at some some point in time as early as
13 possible those should be specified
14 (.)
15 [and frozen]
16 Tho -> [At least] at least in the past we have not been able to do this **never**
17 (.)
18 **[never] ever**
19 Joh **[yeah].**
20 Jef yes
21 Joh -> It might make things difficult because we might end up in a situation
22 that when we make a wrong decision in M1 phase it's quite im-hard to
23 fix it. So we end up with quite bad designs and that kind of stuff. So if
24 this external interface freezing point would be close to more closer to
25 some module testing ready phase it would be okay I guess because if
26 interface change request doesn't serve the purpose
27 Mor [Ehm] ((hand raised))
28 Mar ==> [Well] I think this is this would be executed the first time in
29 ((program)) like more specifically in ((release name))
30 Joh Yeah=
31 Jef =Yes and when you are defining those milestone dates scheduled for
32 ((release)) then we just have to know what is the right phase for that
33 milestone but basically it means that after that change request should
34 be should be used

Paul pre-announces his question to reserve the floor in line 3. His second turn (line 5) is initiated by a hesitation marker *ehm*, which as such projects that something problematic is being expressed. The actual question (in lines 5-6) is neutral in form but indeed seems to project a challenge. Paul actually implies that it would be problematic to specify the interfaces in such an early phase of the development (M1). Jeffrey's response also begins with a hesitation marker before he acknowledges the question but he then describes that and Peter then aligns with the problematic nature of the issue and describes Paul's statement explicitly as *challenging* although the challenge was only implied by the way Paul designed his turn. His formulation *Do we assume* is designed in a way which involves others into the decision. However, Jeffrey's hesitant response indicates that some problem might be implied by Paul. Peter aligns himself with the trajectory of a challenge insinuated by Paul's question and formulates the problem as challenging. Jeffrey agrees that it is challenging but defends his original proposal and reiterates the need for a specified date for the milestone. Thomas upgrades the challenge with an emphatic extreme case formulation (Pomerantz, 1986) *never ever* which intensifies the problem. John then comes up with a description of how things could go wrong if the interface is specified

too early, and he then proposes a certain later date for the announcement. Marcos' well indicates that he does not agree, and he then announces the program and software release in which this practice would be exercised. John accepts this, and Jeffrey rushes to acknowledge the agreement as well and explains that the milestone dates can be adjusted in the forthcoming releases according to need.

From sensemaking point of view, the Excerpt 22 above highlights the mustness of future expectations, and the necessary organizational actions are topicalized. The arguments are based on temporal reasoning: what was never possible in the past cannot be possible in the future. This is similar to what the study by Gephart et al. (2010) has shown: Thomas takes the expert authority to make sense of the future, and his reasoning is grounded in past routines and structures to produce an image of an impossible future. He gets support from other technical experts, which further legitimates these future-oriented projections. Thus the problematic nature of the situation becomes constructed in collaboration between six coparticipants and the chairperson.

The feature which is common for all the excerpts in this section is that differing opinions are expressed openly, with the intention of collaboratively seeking for an understanding or compromise which is acceptable to all. The participants orient to understanding each other's opinions, which is different from the expressions of opinions in chapter 7 where the participants focused on gaining support for their personal stance only.

8.4 Formulating understandings

This section explores the ways in which various types of formulations are expressed to clarify understanding or to fill existing knowledge gaps. The fact that someone takes the opportunity to formulate the essence of preceding discussion or argument is as such a claim of understanding and a display of epistemic authority. However, formulations are at the same time conveyed for the purpose of enhancing common understanding, and acknowledgement by other participants is expected.

Formulation is a method that speakers use, as conversation proceeds, to describe in other words what it is that has been said or negotiated during the preceding conversation (Heritage & Watson, 1979, p. 126): when formulating, conversation is treated as "an occasion to describe that conversation, to explain it, or to characterize it, or explicate, or translate, or summarize, or furnish the gist of it, or take note of its accordance with rules, or remark on its departure from rules" a description of what is being done or talked about, by whom, or where, or about who we are (Garfinkel & Sacks, 1970, pp. 350 & 351, in Heritage & Watson, 1979, p. 124). According to Clifton (2006a) and Barnes (2007), formulating is also a way of influencing and doing leadership: the one who is formulating takes the liberty of constructing his or her version of events and therefore gets an opportunity to control the meaning. The formulation can become a decision for the whole team if it is acknowledged by the receivers.

Formulations are used to demonstrate understanding and to make confirmation of that understanding relevant (Heritage & Watson, 1979, p. 123). The conversation virtually becomes the topic in its own right. Formulations make the gist of that talk thus far negotiable or explicit for confirmation. Thus they are sequentially more complex than simple recapitulations or summaries, the purpose of which is simply to reiterate what has been talked about and which do not necessitate a confirmation or disconfirmation, as formulations do (Heritage & Watson, 1979). Typically, an acceptance of a formulation is preferred, but in case of accusatory formulations a rejection becomes the preferred response (Heritage & Watson, 1979).

Clifton (2006a, 2009) and Svennevig (2008) have investigated the communicative functions of formulations in managerial discourse. While using formulations generally for establishing common understanding of the talk, formulations by leaders can in more subtle ways be interpreted as instructions or decisions. They formulate the gist or upshot of the talk, not only to establish common understanding but to make their version of it open for confirmation (Clifton, 2006a). Chairpersons can use formulations strategically as a way to conclude topics or to close agenda items. Through formulation, decision is made open for collaborative processing (Svennevig, 2008). In this way the chairperson can downplay the directive force or direct task-setting by using formulation.

Formulations are used, as talk is seldom unambiguous, even for the participants in talk. Any interactional situation lends itself to multiple interpretations, meanings which are not necessarily verbalized but simply assumed by the interactants. "Display is not a matter of what the participants happen to bring to the conversational surface, but it is in itself a social and interactional phenomenon" (Komter, 1991, p. 26). By displaying the interpretation of the speaker, a formulation can also establish grounds for common understanding about the ongoing topic. It is a way to negotiate the problems that are inherent in the management of descriptions (Heritage & Watson, 1979). When the situation is such that one speaker is the more knowledgeable on the topic, a common turn pattern is that of lengthy descriptions by the primary knower, followed by a short formulation by the listener(s) to demonstrate and confirm understanding of the meaning overall, whereas minimal receipts such as uh-huh or okay, however, can be used to claim understanding only of the immediately preceding talk as definitive or uncontested.

Formulations may strongly designate decisions, especially when they are produced by a chairperson (Barnes 2007; Clifton 2009). The preceding talk can be formulated retrospectively as a decision, by explicitly stating that "we decide to do x" (Heritage & Watson, 1979). However, such explication is quite rare in the context of decision making (Huisman, 2001). Clifton has studied how formulations are used as acts of "doing leadership" (Clifton, 2006a). They are also linked to the decision making, as they make 2nd turn agreement or disagreement relevant. Clifton (2006a) describes the sequential effect of formulation as decision, where the 2nd turn agrees with formulation, and in the 3rd turn closure a decision can be implied, as it fixes the state of affairs. Nonresponse, on the other hand, provides an opportunity for transition to the next topic with minimal

break (Barnes, 2007). Absence of action (in this case, response) can be consequential in shaping the trajectory of talk (Schegloff, 1995, p. 192).

A particular subclass of formulations which has been shown to be employed mainly by the chairpersons is candidate preclosing (Barnes, 2007). It consists of utterances which are linked to previous discussions but at the same time gloss the preceding talk as something for which common understanding is assumed to have been reached (Barnes, 2007). This kind of activity serves the purpose of proposing closure or decision on a topic at hand and it provides an opportunity for topic transition, i.e. moving on from one topic to another but leaves it open for collaborative achievement. Formulations, in this sense, work for knowledge sharing and orientation to decision making. Pre-closings can be used on topical level, when it adds to the “cumulative import” or prior conversation (Heritage & Watson, 1979) or conversational level, when it summarizes the immediately preceding utterance (Barnes, 2007). In institutional settings like meetings, formulations can mark formal acceptance of on-task contribution (Barnes, 2007, p. 284). It contributes to the establishment of common understanding (Barnes, 2007).

Formulations are peculiar to institutional interaction and not that common in everyday talk (Barnes, 2007; Drew, 2003; Heritage, 1985). They abound particularly in meetings where explications of intersubjectivity are crucial so that the goals of the meeting can be achieved. Formulating is about doing sensemaking, as a formulation is a way to fix a meaning for everyone (Heritage & Watson, 1979). It can also become a decision if acknowledged by the receivers.

Various meaning verbs and particle *so*, for instance, are used to formulate the meaning of ongoing conversation for the purpose of common understanding. Formulations, as they are treated here, differ from overt problem statements or challenges, found in the previous chapter, in a sense that the point is to expose a problem for common problem solving or creation of understanding instead of simply exhibiting asymmetry in authority as seems to be the case in challenges or problematizing activities. Formulations are used as a way to check understanding (Heritage, 1984b).

Section 8.4.1. explores formulations which basically summarize in other words the propositions made by another participant in the previous turns at talk. While taking the authority to formulate a personal understanding of what somebody else has said, these formulations are anyway designed in the way which calls for confirmation by the other participant or the person in charge of the topic. Therefore these types of formulations are called candidate understandings. Section 8.4.2. describes formulations which are designed together in collaboration by several participants who offer their explanations, and section 8.4.3. concludes by exploring formulations which offer an understanding of another participant’s understanding.

8.4.1 Formulating candidate understandings

Previous research shows how formulations are used especially by the chairperson to provide a summary of what has been talked about (Barnes, 2007; Clifton,

2009). By making topical summaries the chairperson also takes the right to formulate the outcome according to his or her desire.

This section also explores formulations which are indeed initiated by the chairperson. However, the purpose of these formulations is not to push the chairperson's own version as the correct outcome but to conclude the topical discussion on some detail by inviting confirmations. This is a way to influence the actual sensemaking process for the participants.

Excerpt 23 below (HWC, Recap1) is initiated by the chairperson Marco's recapitulation for which he then continues to produce an upshot which presupposes potential effects of the understanding. Other participants formulate their understandings in second position, but at the same time they promote their own epistemic authority.

Excerpt 23 [HWC] Recap1

- 1 Mar -> So so let me try to to: recap here in the ATC- for ISN in ATCA
 2 blade one we are putting the PACAM on every card whether it is
 3 service card or line card. ((Looking at George))
 4 Geo If there is something to off-load on the server side.
 5 Mar -> And and if we put the PACAM on the service card then we are
 6 expecting from your analysis a one gigabit per second per card. And
 7 if we don't put it how much we would be expecting from each
 8 service card.
 9 (3.0)
 10 Geo We are expecting the same (.) with or without but use PACAM to
 11 offload security protocols if [they] are needed
 12 Joh [So] so if the IPSec is needed then we have to HAVE something
 13 there because the performance will (-)
 14 Mar -> But my point here it is we are adding physical cost to the product by
 15 putting it on every service card.
 16 Joh Yes
 17 Mar [So:]
 18 Geo [if] needed
 19 Joh if needed
 20 Mar -> O-okay **that's my point** are we able to do the function like what the
 21 whole CPUs are doing **I mean** if I offload them so I offload them
 22 from the IPSec and possibly other functions but if the CPU is ten
 23 percent loaded after that the main CPU what I will do.
 24 Joh **So so** it goes so that for example for IPSec we have the software of
 25 course we have it currently even today so if there is high need we
 26 can charge them from the operator (.) I guess
 27 Mar -> Yeah **but my point** like the CPUs on those service cards should be
 28 busy or busy enough
 29 Joh [Well]
 30 Geo [Heh-heh] for one gigabit performance they will be busy those parts
 31 who participate
 32 Joh Eyes

The sequence begins by Marco's overt recapitulation of what has been explained by George who provides a tentative acknowledgement of Marco's description. By formulating his version for an understanding check, Marco has created space for himself to keep the floor through a modified topical agenda. His turn-initial and and (line 5) is designed as a natural continuer in agreement with George's statement, thereby collaboratively enhancing the sense of common agreement and understanding so far while at the same time producing an upshot of the understandings. This excerpt develops into a collaborative creation of summary. Although Marco has shown epistemic stance by summarizing the topical issue he does not take full authority to define what is meant. George and John produce provisional agreements in which they revise or refine Marco's formulations, keeping themselves as primary owners.

In the excerpt above (HWC, Recap1) Marco displays more epistemic authority than in the following Excerpt 24 (HWC, Recap2) in which he formulates the ongoing topic but designs his turn explicitly as a question for confirmation. Thus, although he takes the opportunity to formulate, he does not claim primary rights to knowledge but seeks for collective understanding. George as the presenter maintains overall epistemic primacy.

Excerpt 24 [HWC] Recap2

- 1 Geo [the] architecture is not meshed inside this box just that it has only
 2 ten gigabit links available which are not so good
 3 [for our servers.]
 4 Mor [Aah-aah] ((raising his hand))
 5 Mar -> **So can I can I is this a correct recap** by te- by using only the
 6 switch blades from ATCA blade two we basically convert ATCA
 7 blade one to a ten gigabit in the backplane.
 8 (.)
 9 Geo That is one option if we can live with the single links to server slot
 10 concept.
 11 (.)
 12 Mar Ehm
 13 Nn [(-)]
 14 Geo [Which] is worse than in ((previous release))
 15 Mar Yeah single links but they are ten giga links
 16 Geo Yes ten gigabits for the server. There's no such server blade in the
 17 pipe that can eat ten gigabits
 18 Mar -> **Okay so** what we need like is to have a balanced evolution we need
 19 we need CPU which is able to consume ten gigabit [(-)]
 20 Geo [Ye-]well but it
 21 depends on which route we take if we will be playing with CPU
 22 blades or some other blades.
 23 Joh So if we for example for ISN use for service cards (-) blade then
 24 gigabit link is quite okay.
 25 Geo Uhu
 26 Joh But if we continue with the CPU blades that can eat one one point
 27 two gigabit then gigabit link is quite inefficient.=

- 28 Mar =Is this coming in this material forward
 29 Geo #Yes#
 30 Mar Okay so we can wait until then

Through several turns, George and Marco develop collaboratively an understanding about the potential hardware capacity. Marco then formulates an up-shot in lines 18-19 which George acknowledges (lines 20-21) with reservations by using a downgraded assessment yeah well, which signals he is not fully satisfied with Marco's version of the evolution path. John then joins with his version of the situation by providing two alternative scenarios as examples which are acknowledged by George while John continues his turn. Marco then checks if this description is available later in the material that they are covering during the meeting, and once this is confirmed he accepts the explanation so far.

The excerpt 25 below (AA, WhoCan) concerns another topic in another meeting in which the participants have been discussing the level of security of the solution. The preceding discussion has been lively, and here Marco requests a summary by anyone, which is a way to admit that he is not himself able or willing to make a synopsis. He builds on equal epistemic status and gives anyone the right to claim epistemic authority. The purpose of summary is to narrow the focus for the purpose of collective sensemaking.

Excerpt 25 [AA] WhoCan

- 1 Mar => **But okay** like (.) **who can summarise th(h)is** ha-ha
 2 -> **(4.0)**
 3 Tho The summary is that this is not a secure solution but it still helps in
 4 secure in preventing certain accidental (.) use.
 5 (.)
 6 Tho Ehm. Yes.
 7 (2.5)
 8 Mar -> Okay. Maybe.
 9 (.)
 10 (.)
 11 Tho Ehm. Yes.

Marco invites explicit summary by anyone. There is a long pause (line 2) after which Thomas as the presenting architect produces a summary in which it is admitted that the proposed solution is sufficient despite its known deficiencies. Marco expands the summary and receives acknowledgement by Thomas. There is another long pause (line 9) after which Marco closes the discussion on this specific topic with a tentative approval. The long pauses, together with the tentative conclusion, highlight the plausibility of the solution from sensemaking point of view. Also, the turns of Marco and Thomas are designed in a way which provides an equal opportunity for anyone else to contribute but this does not happen.

It appears that the kind of formulations which are designed simply to be confirmed by the other parties lead to competition. One could assume that in typical

situations, if a person with power and predetermined epistemic status and authority formulates something for other to be confirmed, that would be confirmed by more or less simple yes or no, and if negative, some explanation. However, in the meetings in this study, most summaries are followed by additional explanations by the recipients, which shows that participants have equal epistemic rights to contribute to the subject matter. This also shows that there is a need for sensemaking and clarity of even minute details.

8.4.2 Collaborative formulation of explanations

When the participants in these multiparty meetings get immersed into the substantive matter they begin to construct various descriptions for the problem or topic at hand. Epistemic understandings are embedded in the formulations which become interactively treated as alternative explanations for the same thing. Several participants cooperate by displaying their epistemic stance, to establish common understanding. They keep feeding mutual knowledge base by accepting equal or higher knowledge of the coparticipants.

Excerpt 26 below (CLIF, Node/ClusterLocal) is an example of a chain of descriptions through which several participants pursue their version of understanding and also compete to maintain their epistemic authority. The participants use so-prefaced declaratives and sensemaking verb (I mean) for clarification, which enforces the sensemaking effect. The particle so is used as a turn-initial inference marker (Schegloff, 2005) in five out of 13 turns in the sequence.

Excerpt 26 [CLIF] Node/ClusterLocal

- 1 Phi Okay and then (.) I just introduce these concepts I don't know whether
 2 they are most appropriate but anyway I call it node-local command
 3 line interface which would be something that you have to log-in to (.)
 4 to particular node in order to execute. (2.0) and Thomas was
 5 suggesting that I put also here some examples.
 6 (1.0)
 7 Mar -> **So** you **can't** execute a command unless you are really executing on
 8 that particular node.=
 9 Mor **=Ehm so what** is difference between node local and cluster local is it
 10 the place where you are executing or is it object of this command that
 11 it will,
 12 Phi **So** in node-local objects are local to-to your node and if you want to
 13 execute some command on this ehm object which is in another node
 14 you have to login to another node really.
 15 Jer -> **So** it's always executed in one specific node.
 16 Phi **No** it is executed on on on this node if it's on this node so they're (.)
 17 it's always I mean commands are alw- commands are always executed
 18 on local node (.) ((John's phone rings, he leaves the room)) but the
 19 point that it's not local you have to login you have to be there you
 20 have to have a shell there with cluster-local you don't have to be
 21 really there ((John returns))
 22 Jer-> [**so**]
 23 Phi [you] can use this for example SSH minus and node name so you can

24 be on one node and execute commands on another node
 25 Jer-> **So** all are executed in the node which you are currently logged into (.)
 26 and only in that node.
 27 Mor Aaa, **I mean** [if you],
 28 Mar -> [You] you have you have to log into one node if you
 29 want to execute commands on multiple nodes
 30 Jer -> That's what I was **saying** it's always executed on local node
 31 Phi Yeah and it is so called cluster-local you can be on one node and still
 32 execute all commands on other nodes.

Philip's turn-initial okay indicates a readiness to move on (Beach, 1993). He opens a new sequence to explain the meaning of concept node-local. Starting in line 7, Marco self-selects to formulate the gist of preceding talk in a form of negative question which works as an upshot of the description and anticipates confirmation. It is a B-event statement which signals that the primary epistemic authority is with Philip. Moritz intervenes (in line 9) and his hesitant turn-initial ehm indicates that he is doing so as well as marking that there is a problem of sorts; he produces a question in which he also provides alternative candidate answers and leads the discussion back to the actual definition of the concepts. Philip responds (line 12) to the second question.

Jeremy then formulates a gist of the explanations as a recapitulation of what Marco has stated before (line 15). Philip rejects this formulation with another explanation of meaning of node-local and cluster-local (line 16). Philip's response is dispreferred but it is delivered without delay or hedging. Jeremy tries to intervene (line 22) while Philip continues his explanation, but Jeremy reformulates his understanding in lines 25-26. Marco self-selects to explain the gist. Jeremy repeats his formulation, in this way metapragmatically expressing that his earlier turn was intended as an expression of opinion rather than a question. The sequence develops into an interesting exchange of opinions between the three participants, as Philip keeps responding as if was doing questioning, whereas Jeremy co-constructs himself as an expert and basically keeps on responding to Marco's original question. The sequence ends when Philip acknowledges Jeremy's statement and makes final formulation to confirm common understanding.

The Excerpt 27 below (HWC, PacketsInOut) is another example of equal sharing of knowledge. Moritz wants to confirm his understanding of the kind of data traffic and the expected capacity consumption by giving his candidate answer. George as the presenting architect responds until other participants also start to furnish their understandings.

Excerpt 27 [HWC] PacketsInOut

1 Mor -> Ehm did I understood correctly that this is capacity on external
 2 interface and this does not include potential application specific
 3 internal traffic (.) So, (.) it might be so that ISN decides that for
 4 every external pipe or it will generating internal (.) or whatever
 5 ((slide 9))

- 6 Geo This is throughput for the element which is a router. Packets in=
7 Mor =Okay=
8 Geo =and packets out.
9 Mor -> **So** packets in packets out then very little traffic is
10 genera[ted in] between
11 Geo [Well the] well
12 (2.0)
13 Geo **I think** there's not much (.) overhead if you mean on top of the ehm
14 payload traffic
15 Mor ehm [there]
16 Geo **[there] is** some of course but[not so much]
17 Mor **[There is some]** as in ISN application
18 there is a need for ehm routing information=
19 Geo =Yeah but I don't think that is
20 Mor this scales not linearly with number of nodes
21 Joh ->R1 Yeah but that's another issue so
22 Vin ->R2 That's mainly related to signaling actions
23 Joh Yes
24 Vin the higher availability for user plane it shouldn't be [any] any
25 Joh **[So so]**
26 **Vin** normal circumstances any
27 Joh so for user plane the overhead
28 Vin [additional]
29 Joh is [I] don't know one percent
30 Geo **So**
31 Vin there is LIG or lawful interception that depends on country and
32 operator it might be it usually (requires one -)
33 Mor Okay
34 Vin So that's one.

Moritz produces two upshots. The negative formulation of the question (... this does not include potential application specific internal traffic) by Moritz works as an upshot and projects a potential problem. George's response in lines 6 and 8 partially reject Moritz's understanding by explicating in more detail the issue that is being discussed. Moritz then produces another upshot (line 9) which is disconfirmed by George. Moritz continues to produce another version to display his epistemic understanding of potential problem areas. George again makes another attempt to reject this problem as irrelevant (line 19). John and Vincent join in alliance with George. The formulations are finally accepted by Moritz. It is worth noting that despite the rejections the topic is handled in a manner which respects collective sensemaking and equal sharing of knowledge.

8.4.3 Formulating other participant's stance

Formulating other participant's stance is a situation where the speaker makes a B-event statement on an emotional or epistemic state of recipient who has primary access to such knowledge (Heritage, 1985; Labov & Fanshell, 1977, p. 100;

Pomerantz, 1980). The speaker takes epistemic authority to formulate something on behalf of another person who gets primary access to confirm or reject the formulation. Such statements can also be used for constructing a common ground.

Excerpt 28 below (AA, CLIAuth2/Objects1) is an example of how such a formulation can be used for the purpose of sensemaking in a situation where no one alone has enough knowledge on the topic and the participants accept uncertainty regarding the topic. Paul and Moritz collaborate in constructing the meaning for information which is currently lacking. They challenge each other's understandings but it is done in an affiliative manner. Moritz makes a metaphoric evaluation as a response to preceding discussion in which concerns have been raised about the degree to which the proposed solution will improve security.

Excerpt 28 [AA] CLIAuth2/Objects1

- 1 Pau May I say something. I somehow **understood** that you ((looking at
2 Moritz)) wanted to ask whether authorization is needed (.) ehm to
3 operations or to objects that are subject to operations
4 Mor or-o:r real security and not just ehm perception=
5 Pau =yeah
6 Mor that security are needed to authorization at objects
7 Pau Yeah and-and the authorization concerning the target objects that can
8 be manageable to users (1.0) ehm (.) the subject area there is not very
9 clear and there is not company wide agreement what to do and
10 Thomas's ehm specification has sort of postponed (.) the (.) the field
11 of authorization concerning objects.
12 Mor -> Ehm I've agreed with Thomas that he will insert in this document
13 insert a statement that describe a solution for CLI authorization it
14 indeed improves security but also may give >how to say< sense of
15 false false sense of security because in reality it just looks like a
16 secure solution but it's more like having house with one door is
17 heavily guarded and all windows open.
18 [((some general laughter))]
19 Hel [first step]
20 Pau £Maybe not quite so but£
21 ((louder common laughter))
22 Tho Actually that's that's a good description I think
23 [((more common laughter))]

Paul takes the authority to define what Moritz has meant. Moritz aligns and affiliates but he provides his own slightly modified and refined version of what is meant. Paul then takes the opportunity to describe how unclear the situation is in the company. Moritz makes reference to earlier discussions and agreements (tagging primary source), thereby claiming primary rights for himself. His evaluation is strengthened by the metaphor which he uses to draw attention to the deficiencies in the architectural description which is being reviewed (cf. Cornelissen, 2012). This kind of evaluation is received more positively than a

direct attack. It is positioned as a response to Paul's formulation of Moritz's earlier statement, thus aligned both sequentially and substance-wise with the general sentiment. The metaphor is appreciated and triggers affiliative laughter by several participants. Paul also smiles and affiliates with the rhetoric remark, but not fully with its content which he downgrades. Thomas, on the other hand, displays overt appreciation and acceptance of the statement.

From sensemaking point of view, both Paul and Moritz pursue clarity by elaborating on factual descriptions, and Moritz also constructs an allegorical description which other participants find entertaining. Uncertainty is visible and it is acknowledged that decision needs to be postponed. However, epistemic status is still played out with regard to the knowledge available at the time of the meeting. All participants orient to the issue in affiliative manner and they commonly accept the pitfalls in the current solution which is so well constructed through the metaphor.

Excerpt 29 below (CLIF, ExternalScript) is an example of various practices that work towards collective sensemaking. Affiliative and disaffiliative stances fluctuate but there is a general orientation towards expanding common understanding. The conclusion, however, remains ambiguous.

Excerpt 29 [CLIF] ExternalScript

- 1 Mar 1-> =Actually actually has definition **you** often say here with this
 2 (definition) external script is a script running in the CLI environment
 3 (.) that's outside so it's executing, (0.5) not in the network element
 4 it's executing on the client machine, and then issuing one command
 5 after the other [(and)] ((reading from the document))
 6 Mor 2-> [How] what do **you** mean issuing one command.
 7 (.)
 8 Joh 3-> **So** you may have a script running in a management workstation
 9 saying SSH our cluster ((command name)) minus shutdown
 10 something.
 11 (.)
 12 Mor Okay=
 13
 14 Mar =And you adapt to (-) that's security language and **then** the next line
 15 is saying something else and **then**
 16 Joh 4-> **Then** the script is on external machine but
 17 still you run the commands
 18 locally [(-)]
 19 Phi 5-> [Okay] **you** ((looking at John)) are assuming that SSH is kind
 20 of a
 21 [this] unified interface
 22 Joh [But **I**] **don't know** which way they typically
 23 use it is it so that you actually write the script external or do you just
 24 download the script file to our machine
 25 and then [run]
 26 Phi [But] here I assume that this this that they select for
 27 example web services as a as a as a interface=

- 28 Joh =yeah=
 29 Phi =so if you run some script which will (.) invoke web services and
 30 will have adapter for web services
 31 [so that] you will not
 32 Pau 6-> [But] but it is an adaptation to the unified management framework
 33 unified management interface
 34 that has **not anything to do with CLI** you see
 35 it is quite [(-)]
 36 Joh [(but)]
 37 Phi [Yes] so I accept this comment that it is generic it's more
 38 than just CLI=
 39 Pau =Yeah it is [(-)]
 40 Joh [But] are **we** actually sure that unified management
 41 interface is not a CLI
 42 Pau Ha-ha
 43 Joh It ↑could be.
 44 Mar ==> Then put external script put you put in the (document) in brackets
 45 for example web services
 46 Phi Yes so I will
 47 Joh yeah an example=
 48 Phi =generalize this.
 49 (7.5)

In the above, several participants proffer different possible explanations. Marco begins with an upshot of document's contents. Moritz produces a retro-sequence expansion to the first pair part (Schegloff, 2007a) as a repair by which he seeks for a clarification of formulation in question four. It relates to clarifying the meaning of formulation technically, while repairing interactional understanding. Response is not given by the chairperson but another architect (John), and it is acknowledged.

Marcos' next turn (line 14) pursues to furnish the general gist of the understanding for which John then constructs a collaborative completion. Philip then continues the collaboration by formulating John's understanding of a definition as defense.

John's *I don't know* makes it clear that he has been constructing sense as he goes along, indicating that this is a collaborative task for which he has no right answer. He is thinking out loud rather than expecting an answer. Philip then reformulates his specific understanding which is accepted by John (line 28). Paul, however, joins in and produces a counterargument to Philip's claim without any hedging in lines 32-35. Philip claims to accept Paul's comment and Paul pursues to explain his epistemic stance further. Philip (*yes I accept this comment*) shifts the discussion from the sensemaking frame (about scripts) to the task-oriented frame of getting agreement on correct phrasing for the document. Sensemaking frames fluctuate from general technologies to the process of reviewing a document.

John's rhetorical question (*are we actually sure*) is an attempt to close down the topic with humor about a circular definition. By choosing the collaborative 1st person plural he also marks the alternative explanations as everyone's business again. It also displays the common uncertainty about the topic. The conflict is resolved and concluded by humorous statement which still has direct relevance to the substance matter. It invokes laughter by some participants, which can be taken as indicative of irony (irony related to the difficulty and circular nature of the discussion. No response is in fact expected, and John continues to respond himself. Laughter clears up the tension and disagreement that has been arising. Marco then concludes this sequence by summarizing a decision proposal which gets accepted by Philip, then by John. Philip confirms what he will do (generalize the phrasing in the document) as a conclusion of this decision.

Excerpt 29 above is an example of sensemaking with several of its features. There is disagreement but no one takes clear authority, and sharing of opinions and varying positions is collaboratively resolved. The tension that has been there is released by John's humorous statement which still has direct relevance to the substance matter. By using a plural form *are we sure* he makes the uncertainty a shared common state. Discourse marker then can also function as an initiator for formulation, or a conclusion of sorts (Schiffrin, 1987, p. 246, in Weber, 1993, p. 111).

8.5 Summary

This chapter has explored episodes in which the participants pursued mutual agendas and collaborative sharing of knowledge by inviting other participant's opinions and by using formulations as ways to clarify understandings among the participants. The episodes were designed for projecting affiliation and alignment through equal sharing of knowledge and expertise. Topics were offered for collaborative construction of understanding. Sensemaking practices triggered contributions by other experts. When participants self-selected to make contributions they did not make themselves the sole authority. Epistemic opinions and positions remained relatively equal and also displays of uncertainty were shared.

This chapter has demonstrated how identities are used as a resource to resolve arising conflicts or unclear situations. The excerpts exemplified how differences of opinion were respected and there was an ambition to find a common understanding. When the situation became ambiguous, it was common that the opinion of some particular participant or some non-present person was made relevant or consequential. This enabled decisions and worked as an act of collective sensemaking, the purpose of which was to remove the ambiguity and potential conflict.

The linguistic forms as such have not been a focal point of this study, but a curious detail stood out in the analysis of the sequences in this chapter. All sequences and practices which initiated the affiliative construction of sense and collaborative sharing of knowledge were in fact interrogatives of some sort by form. This concerned also formulations which were received as something for

which a confirmation or rejection was expected as response. Unlike the challenging questions in the previous chapter, however, questions were used in this chapter for opening new topics to be explored together whereas in the previous chapter they worked as counterarguments which led to conflicting opinions. The questions in this chapter were mostly oriented to topics on which the recipient or recipients were assumed to have the epistemic authority. Similarly to various earlier studies, these types of questions worked as openers for sequences of multiple subsequent turns to elaborate on the topic (Ford, 2008; Sacks et al., 1974; Schegloff, 2007a).

From sensemaking point of view, the sequences were motivated by the need to normalize the situation or to find harmony even if the sequences would be triggered by unexpected or conflictual events. The episodes displayed generally more positive emotions than the ones in chapter 7. One could therefore claim, in line with Liu & Maitlis (2014) that acts of collaborative sensemaking tend to enhance positive emotions among the participants and could be seen to lead to stronger agreement. The sequences were also collaborative, as at minimum three coparticipants, in addition to the chairperson, engaged in the creations of understanding in the sequences of this section.

It is worth noting that the distinction between the categories used for the excerpts in this chapter and the previous one is not so black and white. The analysis has focused on the primary orientations and tendencies that dominate the interaction in the excerpts. When looking at epistemic gradients (Heritage, 2012b), the sequences in this chapter displayed an orientation to equalizing the level of knowledge among the participants as they anticipate affirmation or confirmation by the coparticipants. The excerpts were from the middle of the meetings and the topical discussion was still actively ongoing, and therefore the participants could still influence the outcome. Chapter 9 explores the final phases of the meetings in which the participants are already oriented to concluding the meeting and making overarching remarks on the topic.

9. Pursuing decisions

Chapters 7 and 8 examined the sensemaking activities through which the participants moved their agendas forward in incremental fashion while discussing the topics in the meetings. This chapter focuses on the closing phase of the meetings to describe the interactional moves that are designed as enactments of sensemaking to produce final decisions. This is the summary phase in which the decision is encapsulated (Kangasharju, 2007). These sequences demonstrate a transition from general topical discussion into the final decision-making phase. As described, the meetings in this study are largely monotopical and the main purpose is to make a decision on the particular topic which may be discussed for two hours before the final decision⁴. It seems important to study what kind of actions are taken to reach a conclusion and close the meeting. This chapter answers the research question: how is sensemaking used for the interactional achievement of decisions?

The primary purpose of the meetings in this study was to review and make a decision on technical topics. The duration of each meeting was around two hours, so most of the discussion was focused on the actual substance matter without making the actual references to the need to make a decision in the end. Usually there was one solution which was presented as the preferred alternative (or sometimes the only one), and most of the discussion concerned the details of that specific proposal. After the material that was used during the presentation had been covered, the chairman began to take actions to close the meeting in ways which explicitly summarized its outcome for decision.

This chapter incorporates the notion of sensemaking and decision making. The relationship between the two is shown in the way the discussion reflects temporal orientation. For the purpose of studying these concepts as part of interaction, a distinction has been formed between collective and collaborative sensemaking in the process of decision making. As described earlier, collective sensemaking often refers to an event carried out by multiple actors, and it relates to the shared way of understanding and seeing things (e.g. Maitlis & Christianson, 2014). However, interaction does not necessarily reveal this aspect, as not everyone expresses his or her opinion during discussion. In a meeting with a large number of participants it is not necessary for everyone to take a stand.

⁴ All meetings have one topic with the exception of one during which three topics are handled: EIA, AA and TPC. These closing phases of the topical discussion on these topics are reviewed separately in this Chapter.

This study takes the perspective that the level of participation, as contributions to the emerging decision, demonstrates much more about the collaborativeness and actual commitment to the decision. This is in line with the approach taken by Huisman (2001) who also uses the term collaborative sensemaking although without making a difference to collective sensemaking. In this chapter collective sensemaking as an act of decision making is also related to the epistemic authority the participants assume they have for making an influence. Although it is the identity of the chairperson which is crucial in leading the team into a decision, the other participants can take the authority to modify or constrain the scope of the decision through their contributions.

This chapter is divided into four sections. The first two sections cover the closing sequences of six topics presented in five meetings. This covers six out of the total of seven topics that were analyzed. One topic (HWC) was presented with the understanding that it was not ready for decision yet. The first section presents the closing sequences of those meetings and topics which demonstrate primary orientation to collective commitment. The second section discusses sequences which are primarily focused on announcing the decision. Furthermore, the third section explores some of the sequences in which the ephemeral nature of decisions is overtly reasoned, and the fourth section discusses sequences which topicalize the availability of choice. The last section provides a summary of the findings.

9.1 Orienting to collective commitment

Several previous studies have already shown that creation of a shared sense of commitment is one essential part of decision making in multiparty situations, and explicit acceptance is required for proposals or agreements to become decisions or for a decision announcement to be successful (Clifton, 2009; Stevanovic, 2012). Huisman (2001) claims that decisions cannot be reached without commitment by other participants to the expected future shape of the organization. This means that temporally decisions are essentially said to involve commitment to their future effects. The analysis in this section shows that decision-making phase integrates the temporal orientation of past and future at the moment of the commitment. It is typical that commitment is first sought retrospectively to what has been discussed, and then the future effects are announced. Sensemaking is conceptualized as an act which establishes retrospective agreement for what is deemed to be the outcome of the meeting discussion. While focusing on the past activities, the decision formulates commitment for future actions at the same time.

This section discusses those decision-making phases in the material which seem to orient primarily to the collective sense of agreement on the issue at hand. This agreement is then considered a satisfactory indication that a decision has been made. Commitment is constructed by building a retrospective bridge between agreement about the topic, as it has been discussed in the meeting so far, and future actions required based on the understanding that has emerged. The chairperson takes the epistemic responsibility to seek for commitment but

the final epistemic authority is given to the participants who are called upon to commit. The commitment in the meeting becomes an integration point of past and present.

Meeting [ErrMsg]

The following two excerpts are from the very end of meeting [ErrMsg]. The presenting architect has guided the participants through the slides which describe the architectural solution, and a lively discussion on the various details of that solution has ensued as the team has proceeded to go through each slide. The two consecutive sequences below (Excerpts 30 and 31) form a closure for the meeting. After a long pause preceding Excerpt 30 (ErrMsg, Satisfied), the chairperson Marco takes the opportunity to move on to the decision-making phase.

Excerpt 30 [ErrMsg] Satisfied

- 1 Mar->1a **Okay so are we satisfied.**
 2 (1.5)
 3 Mar->1b Are you **John** satisfied.
 4 Joh Yeah.
 5 Mar Heh-heh
 6 (.)
 7 Pau Yeah I recorded at least eight eight points worth with correc-
 8 correcting here during this session.
 9 (8.0)
 10 Mar ->2 **So if if nobody has objection then** the architects now start to coach
 11 their target groups that this is coming (.) and Ralf will take will take
 12 this from this point onwards he's on vacation this week (.) so so I
 13 guess you need to somewhat to bring him into:
 14 Pau Yes
 15 Mar closer to the contents.
 16 Pau Yes and I'll update update this document and circulate at least with
 17 Mo(h)ritz and others who gave comments

Marco's question on line 1 signals that this is a preclosing sequence for the meeting. He solicits general acceptance for the system design that has been presented. The question *are we satisfied* actually signals that an affiliative response would retrospectively generate an agreement about the documented solution and the preceding meeting discussion. He is generally incorporating the preceding meeting discussion retrospectively as a matter of collective agreement. The use of *we* enhances the sense of group decision. As there is no immediate response Marco selects John to explicitly confirm if he accepts the solution or not (line 3). It is not clear why he selects John, specifically, although John has been relatively active in pointing out problematic issues in the details of the solution throughout the meeting. Here, John generally accepts that the description is good enough, to which Marco responds with laughter – an indication that John's acceptance as such is not a decisive factor for a collective decision. However, it

shows that explicit acceptance by at least one participant is generally expected in order to be able to announce a decision. The retrospective agreement also projects a commitment to future.

There is a brief pause after the exchange between Marco and John. Paul who is the architect responsible for the document seems to also take that exchange as a signal of final decision and summarizes what needs to be done by him in the immediate future based on the comments received during the meeting (line 8). After another long pause, Marco then moves on to announce the more general future actions required based on the decision by identifying specific tasks based on the organizational roles. By embedding a negative expectation if nobody has objections in the announcement Marco sets preference for no objection and expects no response. He continues immediately to announce the future actions which further implies that consensus has been reached. Paul aligns and complements by stating what he as the architect in charge needs to do. Decision making is focused on future actions. Marco orients to his identity as a chairperson and focuses on achieving consensus, while Paul as the presenting architect keeps control by stating what has actually been agreed during the meeting discussion and orients to the meeting as a review of his document. The sequence develops as the chairperson and presenter together announce and acknowledge the required future actions.

Excerpt 31 (ErrMsg, EverybodyAgree) below follows directly the Excerpt 30 (ErrMsg, Satisfied) above. In the previous excerpt the participants have agreed on the contents of the solution and they have committed to the short-term actions. Here Marco takes a wider future perspective and orients to the organizational effects of how and when to implement the solution. He invites contributions for defining the most optimal timing for the execution of the decision in the forthcoming software releases. Collaborative sensemaking ensues as Marco opens the topic with a more specific question.

Excerpt 31 [ErrMsg] EverybodyAgree

- 1 Mar->3 but the target proposed release is it **does everybody also agree that**
 2 **we are proposing** this to the ((release b)) (.) or **do you want to make**
 3 it (-) and propose it for ((release a)).
 4 (.)
 5 Joh If you can make the facility sooner it's better.
 6 [(then they can)] everybody can start to
 7 Mor [Yeah it's basically]
 8 Joh utilize in ((release b))
 9 Mor I think that we can make it into steps and in ((release a)) we have all
 10 basic facility and in ((release b)) we will convert all logging
 11 Pau [Yeah]
 12 Mar [So]
 13 Mor [because] facilities it's prerequisite you can't do anything else so it's
 14 [better to have stages]
 15 Mar [Okay so you are saying] let's make the changes in these few
 16 wrappers and subsystems and so on first in ((release a))
 17 Mor Yeah yeah

- 18 Mar and then universally change all the users in [((release b))].
- 19 Mor [Exactly]
- 20 Mar->4a But that's an important split **is this what everybody wants**
- 21 (5.0)
- 22 Mar->4b **What do you think Ted.**
- 23 Ted Well the sooner the better so if you can do already something for
- 24 ((release a)) so why not
- 25 Mar -> **Okay we need to bring Helen** into the context as a release manager
- 26 for ((release a))
- 27 (.)
- 28 Pau [Yeah.]
- 29 Mar [She] she selected not to come because she thought this does not affect
- 30 ((release a)) ((smiling))
- 31 Mor Basically you can start using interface that you're introducing in the
- 32 same release so it's better to have them split
- 33 Pau Yi:eah and well this is quite easy because this does not pose any
- 34 backwards incompatible changes in the interfaces and so on
- 35 Mar -> Okay then I think you can bring this if you make it what's in the slide
- 36 before the last slide like you make the split
- 37 Pau yeah
- 38 Mar so that you improve one improve two so that you facilitate the work of
- 39 the product managers
- 40 Pau yeah
- 41 Mar and for for **since Ralf is not here** for the ((release a)) I will trigger
- 42 Helen to connect with you because she has to take the items on the
- 43 roadmap approval this Friday so there is only one day in between
- 44 (2.0)
- 45 Pau **Okay.**
- 46 (2.0)
- 47 Mar **Okay I think that's it this time. We're done.**

In this excerpt, Marco shifts the orientation fully to the future and solicits opinions on the possible software release in which the implementation could be done. John responds immediately this time (lines 5-6) and proposes that some parts of the work are started as soon as possible, which Moritz acknowledges in overlap (line 7). Moritz continues to explain how the activities should be divided across two releases, and this is supported by Paul as well. Marco attempts to start a formulation (the overlapping turn-initial so), but Moritz proceeds to explain his point further. In this way the three architects construct sense for the execution of the design solution. Marco then takes the floor to formulate the suggestion (lines 15-16 and 18) on behalf of everyone and receives emphatic affirmative responses from Moritz. After this Marco emphasizes the importance of the suggested split and designs this as a matter of consensus (line 20). This is followed by a long pause without any explicit confirmation by anyone of the participants. Marco then begins to seek for specific commitment of Product Man-

ager Ted (line 28). When Ted accepts this suggestion Marco moves on to describe the effects to the forthcoming software release. Moritz points out that a lot of the work can begin in the first release although it continues in the next releases. Paul agrees with this despite his turn-initial downgraded assessment (yeah well). Marco then requests that this consecutive design is described in the document and Paul agrees to do so. Marco then moves on to describe the next steps and again makes reference to absent stakeholders (Release Managers Helen and Ralf), thereby marking their non-presence an accountable action. However, the decision as such is ratified without their presence. After this Marco as the chairperson then seeks for final consensus and commitment by the present parties after which he declares the meeting adjourned. Note that throughout this sequence Paul keeps taking turns using minimal tokens like yeah or yes, to confirm what has been said, and in doing so he enacts as the person in charge and in position with power and knowledge (e.g. Ford, 2008). Chairperson and the presenting architect together announce and acknowledge the future actions before Marco announces the meeting adjourned.

In these two consecutive Excerpts (30 and 31), all the elements of sensemaking, decision making, and epistemic authority are played out: decision about the solution becomes refined and collective sense is created in collaboration as a result of discussion. The announcing of the decision acknowledges this fact retrospectively, and this creates a springboard for stating the future effects and actions, for which commitment is also sought. Chairperson controls the discussion and directs it towards conclusion by soliciting commitment from several participants.

Topic [AA]

The following two Excerpts (32 and 33) are from the end of discussion on the topic of authorization and authentication [AA]. Excerpt 32 (AA IndicativeInput) is preceded by discussion on some details of the solution. The presentation material has been covered and there is a long pause (6.0 seconds) during which people are either in thinking mode or rather waiting for the chairperson's action. And indeed, Marco takes actions to end the general discussion and begins to announce the future requirements and commitments that are required.

Excerpt 32 [AA] IndicativeInput

| | | |
|----|-----|--|
| 1 | | (6.0) |
| 2 | Mar | But okay I-I think like from our point of view like from SAT we don't |
| 3 | | stop so much on this like this is indicative ehm input information for |
| 4 | | Helen primarily ((looking at Helen and Helen looks back)) |
| 5 | Mor | Ehm [Thomas] |
| 6 | Mar | [So] I think that the new I think the new items here which were |
| 7 | | not covered before (.) ehm |
| 8 | Mor | [ehm] |
| 9 | Mar | [so] the process goes as usual to get project commitments this seems |
| 10 | | to spread every[where] |

- 11 Mor [Ehm] especially the CLIs are developed everywhere
 12 in our: (.) so I think we need all the project managers
 13 Hel Yeah if we can phase it do this in phases and then that one thousand
 14 hours is not going to fit in the ((release)) current content.
 15 Mar But the good news is that they spread over everybody so it's there is
 16 some more concentration in the O&M area but.

Marco begins the sequence with a pre-closing signal (*okay*), preceded by a contrast marker *but*, to indicate a topical shift as a signal that he wants to end the general discussion which he now describes as not relevant in the context of the ongoing meeting. He then announces the future effects which he says concern Helen, the Product Manager. He seeks for Helen's acknowledgement by looking at her, and Helen looks back without saying anything which could be interpreted as weak acknowledgement. He then describes how the process should go and makes it explicit that commitment is needed from project management and development effort will be needed from experts across the R&D organization. Moritz affiliates and makes a more specific comment about the needed commitment. As Helen has been called up earlier in the sequence, she now becomes more active and agrees and proposes that the work could be done in phases, in consecutive releases of the product, because there will not be enough resources to implement the solution during one release development cycle.

Excerpt 32 (AA, IndicativeInput) above is followed by a brief exchange between Moritz and Paul about a specific detail which is excluded from here as it is a side sequence not related to the closure of the decision. When that sequence is over Marco rushes to make another serious attempt to conclude the discussion and to solicit commitment for the solution in Excerpt 33 (AA, Issues).

Excerpt 33 [AA] Issues

- 1 Mar ->1a **But okay** like does like concluding like does **anybody have still like**
 2 **issues how** you deal with authorization in ((product)) like primarily
 3 Tho ((release))
 4 Mar ((release)) and primarily like using the sudo approach now (-) in the
 5 CLI. (2.0) so-so-so this is different than if you recall the discussion a
 6 month ago (.) we are not using user groups directly and so on by the
 7 CLI command so it is still based on user role permission (.) principle
 8 (0.5) and CLIs have to adapt a little bit to this approach so
 9 -> 1b **is-is this like (.) good enough and gets your support or**
 10 (0.5) ((somebody clearing his throat))
 11 Osc->R1 Yes it is with the disclaimer which Moritz said that this is not a really
 12 secure solution
 13 Mor Ehm
 14 Mar Yes I mean it's this highlighted statement here this bolded statement
 15 that what
 16 Mor I think [the prolem is]
 17 Mar [I - I can] bring it out in the AT decision that.
 18 Mor It's kind of semantic problem and extends from how this roles was
 19 thought authorization for CLI-command line interface that this indeed

20 provides authorization for command line interface ((Thomas
 21 laughing)) but my assume-understanding that the intention of this
 22 requirement is something else what was not properly stated in this
 23 requirement
 24 Hel->R2 For ((release)) this is okay.
 25 Mor Okay.
 26 Mar -> Yes but I think also like everybody knows that in the security we are
 27 taking we have just started to move step by step towards improving
 28 the situation over [[[product]])
 29 Tho [I hope] you actually believe that and hopefully in ((future release))
 30 we will have a couple of man years working on this as a secure
 31 solution (.) and the only reason why we now have this kind of non-
 32 secure solution is because we don't have the resources.
 33 Hel Yeah.
 34 Tho so that's what I took into consideration here
 35 Mar Okay you are working with the roadmap for security so with Helen so
 36 that's the right place.
 37 Hel Yeah this is ok for ((release)) the work estimations are so=
 38 Mor =Another problem=
 39 Hel =huge=
 40 Mor =with security is that it's extremely hard to add this afterwards it
 41 should be designed in the first phase.
 42 (1.0)
 43 Mar Let's say we are designing we are (.) if-if you **if you have a better**
 44 **approach just let us know** but >one step at a time but< I wanted here
 45 like Thomas to still like ten minutes to quickly present this TPM ehm

Marco's turn-initial *but okay* (line 1, turn 1a) marks the previous discussion as complete, and he proceeds to invite final comments without selecting anyone in particular. He continues in his second turn (1b) to summarize retrospectively the current solution and describes how it is different from when the same issues was discussed in an earlier meeting. He seeks for explicit support for decision and marks the decision as a matter of consensus. After a pause Oscar self-selects to produce a conditional acceptance by reformulating Thomas's earlier reservations. Marco explains that the issues has been mentioned in the document. Moritz attempts to reserve the floor at the same time when Marco says he will explain the limitation mentioned in the document when he sends out the mail in which the decision is summarized to all stakeholders. Moritz points out further limitations in the requirement for which this solution is meant to provide a solution (lines 18-25). Helen however approves the proposal as a product manager for the software release in which the solution is intended to be implemented. She directs her comment specifically to Moritz (she is looking at Moritz when saying this), and Moritz acknowledges this (line 25). This could be also interpreted as her acceptance of Marco's original solicitation of approval. Marco then proceeds to give sense and recognizes the fact that the organization does not have enough resources to implement a full-fledged security solution and

therefore the work needs to continue in an incremental fashion. Thomas picks up on this and displays doubt toward the possibilities of executing on the solution. The ephemeral nature of the current decision regarding the future is also made clear. In his last turn (lines 43-45) Marco blocks further discussion on the ongoing topic by rushing to introduce the next and last topic of the day.

It is noteworthy that the solution is approved as a decision by this team despite the resistance and doubts about any possibilities to enhance the currently agreed solution in the near future. Everyone admits the limitations of executing on the approved solution and the topic is allowed to leave the stage in somewhat vague manner.

Meeting [WUIF]

The following two excerpts from the closing sequences for the meeting and discussion on [WUIF]. The excerpt is preceded by a lively discussion on additional functionalities that could be added to the specification the team is reviewing. Philip acknowledges this and, to conclude the discussion, Marco explains that this is the first version and begins signaling closure of the meeting. The closing moves in Excerpt 34 (WUIF, AnybodyHaveProblem) are somewhat similar to Excerpt 33 (AA, Issues). He seeks for commitment by stating the wider future consequences of the decision but assumes that there is a common agreement and does not seek for explicit commitment retrospectively.

Excerpt 34 [WUIF] AnybodyHaveProblem

- 1 Phi Yes there are really a lot of things that are not specified a lot of
 2 things that has to be designed and decided
 3 Mar-> 1 So this is the first step towards the Web UI but like the key question
 4 like endorsing this framework **does anybody have a problem from**
 5 **the architects or anybody else also here** to to promote that this is
 6 the way that whenever web UI way because we are not doing Web
 7 UIs only for the O&M services there is a big likelihood that we are
 8 making Web UIs for any other services in the IP management has
 9 popped up lately **does anyone have a problem with that that this**
 10 **is the default ehm framework that we apply**
 11 Mor Ehm
 12 Mar when building new UIs
 13 Mor -> **But how** we are going to introduce can we really make introduction
 14 of framework and UIs based on this one release or first we make
 15 framework in one release and only next we will start
 16 Wal I think the
 17 Mor introducing tools
 18 Wal the framework first ((release name)) we will provide some
 19 framework with particular amount of requirements achieved at that
 20 level
 21 Mar So
 22 Wal but I thinking interfaces definitely achieved at that time so it cannot
 23 fully replace the element manager

- 24 Mar [Yeah we have other reasons actually to maintain the element
25 manager
26 Wal Yeah
27 Mar for legacy reasons but our approach has been always to do enabler
28 first then proper usage so the next open x for **((release name)) so**
29 **this is where the framework goes** it maybe like web UIs may go
30 hand in hand I mean
31 Phi Yeah there is nothing that forces sequential approach here because
32 you can develop some components which can be then reused and
33 they can be moved to framework then made available to others and
34 this kind of stuff so there is no (.) no need for sequential approach

Philip emphasizes the fact that his specification for web user interfaces is not complete and that there are issues that need to be specified later or during actual software design and development. Marco continues on the same track and explains that the current solution is only the first step towards a more concise solution. However, he moves on to seek for commitment for the solution as it is at the time of the meeting by inviting anyone to comment now if they disagree. He formulates his solicitation for commitment by designing twice a question (*does anyone have a problem*) for which a negative response would be preferred. This works as an act of sensegiving while he at the same time seems to assume that commitment probably exists (*like endorsing*, line 5). There is no preferred response but instead Moritz overlaps in lines 16 and continues in line 18 to raise a concern whether the framework solution as well as the interface software that will be applying it can be done in the next release, or if development should be done in phases instead. Marco and Walter take sensegiving actions to collectively describe the future effects and steps (lines 23-39). Philip affiliates and takes epistemic authority to confirm that development can proceed without sequential dependencies between the various areas.

The discussion continues after the above Excerpt 34 (WUIF, AnybodyHave-Problem) among several participants who express a wish that design and prototyping on the area of Web user interfaces should start as soon as possible (transcription excluded from here). In Excerpt 35 (WUIF, Magic) below chairperson then resumes to closing the meeting.

Excerpt 35 [WUIF] Magic

- 1 Mar->2 but okay like **is it that there aren't any like major issues here and**
2 **we consider this one approved.** (.) Magic as ha-ha
3 Phi It's magic ha-ha
4 Mar But the other thing like if this pop up (.) Philip if this pop-up like if
5 there is something intuitive here we should try IPRs I would I will
6 show you Yahoo page and you can tell me if it's the same or is it
7 different but when I'm moving pops up for me which to do things for
8 me which I don't know where it comes from but it just comes
9 Mor used to be
10 Mar I don't know

- 11 ((people start leaving))
 12 Sus se varmaan (---)
 13 Mar Nice nice
 14 Mor We used to have some patents
 15 Mor ((gets up to look at Philip's screen))

Marco's *but* works as a turn-entry device and a contrast marker regarding the preceding discussion. Although Marco formulates his turn as a question, the turn becomes designed more as a statement and retrospective announcement that consensus has been reached, and the floor is no longer opened for actual comments. After pausing shortly he selects the term *magic* (line 3) which refers to an earlier phase of the meeting when Philip demonstrated the current version of the framework and described it in a humorous way as this is the magic, the beauty of the framework so that it's never seen before. Philip (line 4) as the presenter and owner of the solution picks up on this. There are no other comments and the participants seem to assume that agreement has been reached even though there is no explicit confirmation, as Marco changes the participation framework and addresses Philip specifically by coming back to the topic which had been put aside earlier in the meeting as it was not relevant for the actual decision. Discussion continues among a restricted number of participants interested in that particular topic and others start leaving the room.

All of the closing sequences for the topics explored above showed a distinct orientation by the chairperson to either solicit explicit acknowledgement of commitment for the decision, or to signal that opportunities to oppose the decision are offered. This creates a sense of yet ongoing collaborative commitment, whereas in the closing sequences of section 9.2, the chairperson orients to announcing the decision.

9.2 Announcing decisions

Decision announcing is the formal way of stating the decision verbally. However, previous literature shows that the actual decision, as such, is usually not made explicit in talk, but the process of decision making is embedded in the actions and reactions of the participants (Boden, 1994, p. 22). The participants depict from the context that they are in the process of decision making without necessarily making explicit reference to it by saying, for instance, that we decide *x*.

This section explores the decision-closing sequences in which the announcing of the decision is central and the chairperson does not explicitly solicit agreement. Clifton (2009) shows in his study how decision announcement becomes a category-bound activity: typically it is the chairperson who is expected to retrospectively formulate the prior talks as a decision for it to be accomplished. This is close to what Robichaud, Giroux, & Taylor (2004) call the act of "meta-conversation": metaconversations are used by managers to summarize or formulate earlier discussions (or turns of talk) and point out their effect to the organization at large.

The forthcoming analysis draws light on the reflexive nature of decision announcing: the announcement is an act of sensegiving at the intersection of talk which reflects on the past while orienting to future actions.

Meeting [CLIF]

Excerpt 36 (CLIF, InSummary) below occurs towards the end of the meeting during which there has been ample disagreement on the scope of the solution which is expected to be reviewed and approved in the meeting. Here the chairperson moves on to summarize the meeting procedures as a candidate pre-closing of the meeting. However, he has to make an effort and go through several announcement attempts as the discussion digresses without acknowledgement by other participants.

Excerpt 36 [CLIF] InSummary

- 1 Mar=>(1) But okay but let's say let's say like to be serious **like in summary** we
 2 had a few issues around the concepts in the beginning but let's say
 3 (now) I think it's clear. We stopped quite a bit on it. Ehm and then I
 4 think in the concrete part more or less I think more or less it is as you
 5 propose here. with some exceptions where you had doubts related to
 6 the options for example, nobody has raised any issue on data this list
 7 of data types,
 8 Mor But there is one big (-)
 9 Mar the locales yeah the support for locales,
 10 Phi And by the way date type is missing here
 11 Mor Okay
 12 Mar=>(2) But for me like I don't know how it is but for me this is very close to a
 13 user guide so this but but (2.0) and we agreed to remove this thing
 14 about XML, and I think the other sections were
 15 Phi in future I will move this
 16 Mar very clear so.
 17 Mar=>(3) So (.) and with these changes like **I think we can agree this will**
 18 **become our documentation** for (.) the CLI for [[[release]]]
 19 Mor -> [So what is] the title is
 20 it a guideline or
 21 Phi It was a philosophical title.

Marco begins by summarizing the outcome of the meeting and recontextualizes the whole meeting procedure. His turn-initial statement (*But okay but let's say let's say like to be serious like in summary*, in line 1) marks a shift from general discussion phase and produces an explicit procedural summary about the achievements of the meeting so far. Marco clearly attempts to maintain the epistemic status and entitlement of the chairperson to give sense to the outcome of the meeting. His summary labels the preceding discussion as a decision but he becomes interrupted by Moritz (line 8) whose turn-initial but marks disalignment. He is immediately picking up on Marco's statement that *nobody has raised any issues* implies that commitment has been established, and he indeed tries to make additional issues topical. Marco basically ignores

this and continues in line 9. Philip makes another minor comment about the contents (line 10) which seems to satisfy Moritz who acknowledges this (as a side comment). In his second longer turn (beginning in line 12), Marco disassociates himself from the responsibility of defining alone what type of document the material that has been reviewed should be. He announces, with some hesitation, that the document seems to be a user guide, a type of document which is often produced as part of software product development. As there are no other comments Marco continues to summarize the other changes that were agreed on during the earlier discussion and Philip affiliates and explains how he will modify the text. In his third turn (beginning in line 17), Marco makes an announcement which is intended as candidate pre-closing of the meeting and declares that general agreement has been reached on behalf of everyone about the future actions. Moritz, however, overlaps and picks up on Marco's hesitant comment about the type of document and makes it a topical issue; thereby he also indicates that the situation is not yet ripe for final decision and closing of the meeting. A long discussion of roughly six minutes ensues about the title of the document after Excerpt 38, and then Marco renews his closing moves by making an action-oriented decision formulation in line 1 of Excerpt 37 (CLIF, YouModify) below.

Excerpt 37 [CLIF] YouModify

- | | | |
|---|-----|---|
| 1 | Mar | Okay so [you you modify] this |
| 2 | | (((John, Henry, Oscar stand up and leave))) |
| 3 | Mar | you modify this and I think when you publish that list people can |
| 4 | | check the part which is interesting for them |
| 5 | | ((most participants stand up and leave the room)) |

Excerpt 37 (CLIF, YouModify) combines the decision announcement with a directive for future actions immediately affecting the document. The participants orient to this turn as a final decision and conclusion for the meeting. They seem to tune in on the earlier decision announcement (Excerpt 38, CLIF, In-Summary) as a pre-closing. Thus, Marco's short and straightforward statement is enough here to indicate that the meeting is over. There is no explicit commitment received for this final announcement, unless the fact that people start leaving the meeting room is taken as a silent acceptance.

The two excerpts above are sequentially intertwined and show that the chairperson alone cannot take the epistemic authority to announce the decision without first seeking for the commitment by the participants. The participants do not directly sanction such behavior but they do, in subtle ways, resist self-proclaimed announcing. Thus, it seems that commitment is an integral part of collective sensemaking.

Topic [EIA]

The following two excerpts are from the end of the discussion on topic [EIA]. Excerpt 38 (EIA, InReleaseX) is an exchange between the presenter Jeffrey and chairperson Marco, and it shows that the announcement of the decision is

tightly bound to the role of the chairperson. Jeffrey as the presenter of the topic takes partial epistemic responsibility to describe the outcome of the meeting discussion but he designs his announcement as a question for the chairperson to acknowledge.

Excerpt 38 [EIA] InReleaseX

- 1 Jef -> in ((project/release)) we use it use this first time and for coming
 2 releases then we have to update it if needed is we see this is too heavy
 3 or or this is not enough then we can change \$
 4 ((Oscar walks in)) Okay but **is it so that** only issue that should be
 5 changed here is that to make change that change requests for external
 6 interface changes are used only after that external interface approved
 7 milestone.
 8 Mar **Yes.** I think that would help and then it will the project's input at
 9 which point in time they put the external interfaces change the
 10 external interface approval point. (.) It should not be very close to M1
 11 (0.5) experience shows it's about two months
 12 (2.0) ((a lot of talking and movement in the background))
 13 so that they finish design and so on.
 14 Jef **Yes.** (.) If it's okay >**I will take it for product managers and PDB**
 15 **decision< it's fine for me.**
 16 ((discussion in the background))
 17 Mar Yeah
 18 Jef **Okay.**

Excerpt 38 (EIA, InReleaseX) is initiated by the presenter Jeffrey who first explains that the process description which has raised a lot of resistance in the meeting will be applied in the next software release but it can be modified later if that should be needed. Jeffrey announces the future actions as a summary of preceding discussion. He formulates the suggestion in a way which solicits confirmation for the change which will be needed in the process description based on the discussion. Marco as the chairperson of the meeting takes the epistemic authority to confirm this and makes the final rationalization as a way of contextualizing collective understanding of practicalities. Jeffrey (lines 14-15) then describes what actions would make the modified decision acceptable for him, which is again confirmed by Marco. This means that as the outcome of this meeting, the description which was already once approved by another decision-making body (PDB) will need to be taken there again.

After the Excerpt 38 above, the chairperson produces an open invitation for final comments in Excerpt 39 (EIA, OtherComments) which leads to more participation and collaborative sensemaking of the future actions. This formulates a collaborative conclusion and announcement of the decision. Excerpt 39 is a direct continuation of Excerpt 38 (EIA, ReleaseX). Marco as the chairperson takes the leading role and signals it is time for final comments before the topic can be considered closed.

Excerpt 39 [EIA] OtherComments

- 1 Mar **Any any other comments or**
- 2 Mor -> **What's view on this of project managers** because is this milestone
- 3 may force some projects to reschedule their work to get design ready
- 4 before this explicit milestone (1.0) or what for example many things
- 5 about this
- 6 (0.5)
- 7 Jef 1R Ehm heh-heh
- 8 Joh 2R **So** this should be part of program or project planning so that we will
- 9 get the view of each project that when they think that design=
- 10 Pet 3R =Mm hm.=
- 11 Joh =is ready
- 12 Mor 4R Yes
- 13 Jef Yeah
- 14 Pet Yeah
- 15 Joh because it doesn't make sense that you say okay it's now and then
- 16 design planned to be ready five months after that.
- 17 Pet [exactly]
- 18 Jef [yes]
- 19 Joh **so** basically you put this milestone per project
- 20 Pet But then it indeed it works as an input between the prjects.
- 21 Joh Yes
- 22 Jef Yes [each project defines this milestone]
- 23 Mar -> [**So so** then-then-then] the recommendation is that in
- 24 the project plans each project states this very explicitly (.) in his
- 25 project
- 26 Pet Yes
- 27 Mar and this is a very good synchronization point
- 28 Pet >**Yeah**<=
- 29 Jef =**Yes**. It's a projects level milestone we make necessary schedule
- 30 planning for this specific milestone
- 31 Mor [ehm]
- 32 Mar [And] I think Jeffrey will be (-) projects
- 33 Jef ye:s
- 34 Mar to communicate this yeah
- 35 Jef yes [(-)]

Marco's general question is an implicit way of seeking commitment while at the same time signaling that the meeting is about to end. Moritz responds by asking what the opinion of the project managers might be on this topic. He formulates the effects of the decision to ongoing projects as a problem. Jeffrey is the Program Manager for those projects, thus responding with hesitant laughter (*Ehm heh-heh*, in line 7). Hesitation marks a break in understanding. John takes the epistemic authority to describe what should be done in the projects which is rationalized in collaborative agreement: approvals are signaled by several participants. Marco formulates the mutual agreement more explicitly in lines 23-24 as an act of sensegiving after mutual sensemaking has taken place. He then requests Jeffrey's commitment for actions that he will need to take, and Jeffrey

accepts this. Marco then seizes the moment and constructs a procedural summary (line 26, *this is a very good synchronization point*).

Interestingly, it is the topic [EIA] out of all the data which requires most effort to get everyone's commitment. The chairperson takes a particularly active leading role in the [EIA], presumably for two reasons. First of all, as mentioned, the presenter, Jeffrey, is not an architect or a member of the immediate team. Secondly, the topic is introduced as something which has already been approved in another meeting (PDB), which Jeffrey points out in his introductory turn. Both Jeffrey and Marco have attended that meeting and supported the approval of the decision which is now delivered to AT members as something which is no longer for them to decide. Thus, Marco is in a situation where he needs to defend the solution, because he has already approved it elsewhere. This leads into a situation where he at times needs to think and even make it explicit in whose side he is. Marco also comments on this after the public discussion on the topic is over: he says in the background that he was not anticipating such a lively and long discussion on this topic.

Topic [TPM]

The two sequences below take place towards the end of a long extraordinary meeting in which three different topics have been covered. The topic TPM is the last one, and it concerns security functions that could be provided for hardware and software. This technical solution is something quite unfamiliar to the participants, and the topic has been introduced in the beginning of the discussion by Marco as being on the agenda mainly for information sharing. This implies that no decision as such is expected. However, Marco as the chairperson anyway proceeds to formulate a decision at the end of the meeting in the following two sequences, in Excerpts 40 and 41. These sequences show that a unilateral announcement without solicitation of commitment leads to resistance.

Excerpt 40 [TPM] NoStrongOpinion

- 1 Mar ==> But I propose then I propose then that if it seems that nobody has let's
 2 say strong opinion in either direction ehmn
 3 Hen [but] this Thomas's comment on the first line I think it indicates that
 4 we are not we are not ready to make any decisions yet
 5 Tho But you will not
 6 Hen [we don't know what's actually needed]
 7 Tho [we will not the situation]
 8 Mar the situation will not improve over the next half a year
 9 Mar or next year even
 10 Tho next year
 11 Mar ==> because **the problem** here is that that this is just (.) this is two sides
 12 the bigger part is what will come next like what software solutions we
 13 will implement in platform that will utilize this and other stuff we
 14 have so maybe if we if we endorse if we endorse preliminarily so that
 15 we want this chip in hardware like designed but the blades can be as
 16 you have proposed blades will not be equipped with that chip (.) when

- 17 it goes to manufacturing like if we know after two years that we will
 18 not use it then we can say we don't want the blades to have this chip
 19 there and we saved a couple of dollars of course but if we know we
 20 are using it we say okay it will be equipped with this chip so we have
 21 it the footprint for it there
- 22 Tho Yes there's also some I think some design time we need to dedicate to
 23 make sure this TPM is correctly taken into use so for this we
 24 probably have to pay
- 25 Mor [(-)] attached
- 26 Tho if it's more than I don't know if it's a million we probably shouldn't
 27 Joh we have to change first the (-)
- 28 Mor Ehm
- 29 Tho Yes but it's likely that this will be anyway incorporated in the ((3rd
 30 party vendor)) (-)
- 31 Mor ((3rd party vendor)) already provides support in their (-) basically the
 32 solution that they are proposing for use provide support for TPM
- 33 Hen I think they use ((commercial HW provider)) CPUs instead of (-)
- 34 Mar ==> and I think **my expectations** after ((release name)) ((Moritz and
 35 Henry talking in the background quietly)) will be primarily working
 36 on very advanced kind of features like this thing (.) because the basic
 37 functionality we already have in ((name of hardware release)) so (2.0)
 38 but (2.0) **if nobody have strong opinion against it** seems there is no
 39 harm from having this endorsed by us as a requirement
- 40 Mor what will be ST opinion on this
 41 ((some laughter))
- 42 Mar ST ((pointing to Larry))
- 43 Lar I have a question is if ((product)) hardware business is at all part of
 44 this
 45 (.)
- 46 Mar Well actually ((product)) now does not own the hardware cycle any
 47 more after since half a year it belongs to hardware platform
 48 organization but they are very much expecting information from us
 49 like what they should do
- 50 Lar there are also some opinions that ((company)) should not be producing
 51 this kind of blades instead buy them from third parties
- 52 Joh But anyway we have to specify
- 53 Mar **Yeah so we are not taking a position on who does this**

Marco attempts closure by using a composite construct which implies that the document has been conditionally approved when he says that *if it seems that nobody has a strong opinion* and leaves no space interactionally for further discussion (cf. Sacks's 1992 may I help you as composite vs construct, in the analysis of emergency center calls). This turn is designed as a decision announcement with an expectation that commitment has been reached. Henry disagrees immediately (line 4) and claims that a decision cannot be made. Marco defends the decision by formulating a problem concerning the future effects of decision.

Moritz seeks for the opinion of “ST” (line 55), an organization which does not normally send its participants into AT meetings. This time Leo is present, but Moritz does not refer to him by name, but by the organization he represents (ST). This marks a shift in participation framework and gives specific relevance to the opinion of the member of this organization. The question triggers some laughter among the participants and Moritz himself is smiling during the turn. It seems that the question is considered proper as to elicit professional knowledge; Leo used to be a member of this organization before, and he is involved in this specific domain in his new organization. However, the laughter seems to indicate that the question was still to some degree improper from the point of view of participation framework that needs to be sought. It was also known to most of the audience that Leo is a person with strong opinions, causing heated arguments when he used to be a member of this team of architects. Perhaps laughter implies that the team does not need to care about Leo’s opinion any longer, no matter how controversial it might be, although they still respect his knowledge. Marco invites him to respond, and Leo does so by asking another question regarding the opinion of the hardware department, another organization not having a representative in this meeting. Marco responds by saying that they are a separate organization who however is expecting input from this team. Leo poses further questions about the hardware solution. John attempts to respond but Marco intervenes and as an act of sensegiving states that this solution which is being discussed in this meeting does not need to take a stand on detailed specification.

Overall, the sequence-initial attempt to announce the discussion as concluded leads to resistance and the chairperson needs to take sensegiving actions to describe the future effects. This leads to a lengthy multiparty sensemaking sequence and a second attempt by the chairperson to conclude the discussion. Further commenting ensues and this excerpt is followed by a discussion concerning the linkage between hardware development and software development (excluded from here). In Excerpt 41 (TPM, Endorse), however, Marco goes on to announce the outcome of the meeting.

Excerpt 41 [TPM] Endorse

- 1 Tho and those kind of things and that’s pretty much I guess this will
 2 develop over next year and hopefully in one year we can sit down and
 3 see
 4 Mar But [I-I]
 5 Tho [what] we need to do
 6 Mar ==> =But **I would say** like let’s say to close the official meeting people
 7 who want to discuss more you can discuss more this can be discussed
 8 the full day but like the option **I think we can close it and (.) let’s**
 9 **endorse this on hardware level only we are not taking position on**
 10 **how we will use it in the software** ((people start leaving the room))

Most participants leave the meeting room after this sequence but the presenting architect Thomas, chairperson Marco, Product Manager Helen and another

architect Moritz stay and continue discussing the future effects of not making a full decision at this point. I let the camera run until Thomas suddenly asked if I had it still running. I confirmed that this was the case to which he responded smilingly that this was *the most secret information*, and the chairman continued in similar footing by calling their continued talk *afterthoughts*.

Meeting [HWC]

The discussion on [HWC] differs from other topics as it was announced in the beginning of the meeting that there are still too many open issues regarding the long-term effects and therefore no decision is to be made in this meeting, and the presentation is simply meant to give the participants an understanding of the alternative evolution paths. Excerpt 42 (HWC, “Tiedontasaus”) is from the end of the meeting, and here the chairman reiterates that the team will not be making a decision in this meeting. Since the general purpose of these types of meetings is to make decisions on the software solutions, this excerpt shows that it is just as important to announce when the commitment cannot be made and therefore no decision can be reached.

Excerpt 42 [HWC] “Tiedontasaus”

- | | | |
|----|--------|---|
| 1 | Mar | But okay I have a proposal like you can continue offline it's |
| 2 | | interesting discussion but since we are not deciding about the |
| 3 | | future here the idea was to bring (.) ehm tiedontasaus ⁵ (.) |
| 4 | | \$information sharing\$ so so so that the action the people who have |
| 5 | | the relationship to this topic starts to be aware and and impact the |
| 6 | | evolution of the first part today and I think now especially like |
| 7 | | James is the our ((customer)) account manager so you can arrange |
| 8 | | meeting at earliest convenience for sharing this with ((customer)) |
| 9 | | and Helen will bring us feasibility on backup which is something we |
| 10 | | need in these coming months and actually she is the key person like |
| 11 | | to drive this to get commitment from R&D like to put in in the |
| 12 | | pipe. But we have not committed anywhere basically to |
| 13 | | ((release)) so it is not at any higher or lower priority we did not |
| 14 | | push any single item which is for ((release)) (.) <u>yet</u> so. But if |
| 15 | Joh | So the commitment remains zero. |
| 16 | Mar | NO but like [[our our]] |
| 17 | Les | |
| 18 | Mar | our ((release)) is roughly like 2007 x which need a very long calendar |
| 19 | | time we have not problem |
| 20 | Joh | Yeah I agree we have to really sit |
| 21 | | ((10 turns omitted)) |
| 22 | Mar -> | Okay but I close the option we can continue these discussions offline |

Marco signals that he wants to conclude the discussion and then announces that no decision about the future can be made and therefore no commitment about long-term future actions can be made either. Instead, he announces the

⁵ Marco is doing word search: “tiedontasaus” means information sharing in Finnish

actions that need to be taken in the near future to become better prepared to make an actual decision on the solution which has been presented with long-lasting effects for years to come. John formulates this by stating that the commitment remains zero at this stage which Marco attempts to deny and Leslie who is a Line Manager in the development (R&D) formulates his understanding that R&D development cannot do anything at this stage. Marco continues giving sense by stating that some actions will be taken but long-term commitments are impossible. The ten turns to follow concern general vendor status (omitted from here) after which the chairperson announces the meeting closed.

The analysis of the excerpts in the section shows how decision announcing becomes an act of sensegiving, taken by the chairperson, on behalf of the team. Acts of sensegiving are used by the chairperson also in the earlier phases of the meetings, to make it possible for at least partial decisions to be reached despite the doubts that are expressed towards the maturity or solidness of the decision. The sensegiving acts used in such ephemeral decision-making situations are described in section 9.3.

9.3 Giving sense to ephemeral nature of decisions

This section explores the phenomenon of fluid and ephemeral nature of decision making. This aspect of decision making was not to be the primary point of inquiry for this study. However, it appeared that decision-making literature maintains the view that the future is inherently uncertain, which makes decision making a contingent activity (Boden, 1994; Dant & Francis, 1998; Huisman, 2001). Boden (1994, p. 22), for instance claims that decision making in organizations has a fluid nature, as “neither decisions nor their ‘reasons’ stand still”. When the ephemeral nature of decisions is conceptualized like this, it generally means that the process of decision making as talk-in-interaction is fluid and that decision cannot be spotted into one particular utterance. This section will extend the analysis to literal formulations of passing nature of decisions in which the “fluidity” of decisions becomes the actual topic. Such formulations are used as acts of sensegiving the purpose of which is to enable at least some sort of decision at the moment of talk. Here the ephemeral nature of decision is not implied but its fleeting nature is explicitly announced and actually used to argue for making a decision, there and then, even if it may need to be changed later. The ephemeral nature of decision becomes a tool to abate resistance and sensegiving.

Organizations today are prepared for rapid and almost constant changes, which is particularly true in the area of IT and telecommunications business in which the AT team works. The decisions made by the AT team should reflect customer needs and possible technological offerings, but their execution relies on the R&D development capacity. Hence also the ephemeral nature of organizational decisions is made more explicit. These episodes overtly mention that future is uncertain and will look different from how it is seen at the moment of decision, and therefore whatever decision is made now will need to be modified later.

Excerpt 43 (EIA, ConcreteWalls) is from a meeting in which there has been a lot of resistance to modifying a process which sets a particular milestone after which any changes in the planned software interfaces need to be documented. Here the chairperson strives to abate further disagreement concerning the proposed process by announcing its ephemeral nature (*it's not in concrete walls*).

Excerpt 43 [EIA] ConcreteWalls

- 1 Mar -> But I think because **the wish is** that when we start to the idea is to try
 2 to apply the process and if we find cases is this in concrete walls?
 3 ((gazing at Jeffrey))
 4 Jef Uhu ((nodding))
 5 Mar is it,
 6 (.) ((Jeffrey looking puzzled, smiling))
 7 Mar not in concrete walls or is it ((smiling)) like **so we can we can this is**
 8 **the first revision of the process**
 9 Jef **yes ((nodding))**
 10 Mar **so it will be adapted based on experience**
 11 Pet **Exactly exactly**
 12 Jef that's the case
 13 Jef -> in ((project/release)) we use it use this first time and for coming
 14 releases then we have to update it **if** needed is we see this is too heavy
 15 or or this is not enough then we can change \$

Marco first takes the epistemic authority to speak on behalf of the organization and explains that it is important to try to execute the changes that have been challenged in this meeting. Although the reference is passive, he includes himself in the group of members who want this. To abate potential further resistance, he then implies that if the process does not work it can be changed. He does this by directing a question for Jeffrey. His question (*is this in concrete walls*, line 2) is designed with preference for a negative response. However, Marco uses a literal translation of an idiom which leads to a pragmatic failure and misunderstanding. His intention is to argue for the ephemeral nature of the decision (I believe he is attempting to use an idiom *carved in stone*). Jeffrey provides a weak acknowledgement for this but Marco notices that the intended meaning is misunderstood. He self-repairs by repeating his point as a negative statement accompanied by a positive tag (*it's not in concrete walls is it*, in line 7), which indicates that this is a rhetorical statement rather than a question (Levinson, 1983). This is also an example in point of sensemaking as it is done on the micro-level of conversation: ambiguity of meaning needs to be resolved to reach collective understanding by repairing the discrepancy in expectations. After this repair, Peter produces upgraded support, and Jeffrey aligns himself with this. He as the presenter then goes on to take sensegiving actions to explain the future steps and how those can be modified in case they do not work.

The ephemeral nature of decision making becomes quite apparent here, and the overt nature of such statements gives has interesting implications from the point of view of sensemaking. Engineers are more inclined to make factual decisions about technical solutions, but this specific topic concerns organizational

procedures rather than the technical product itself. One might argue that it is easier for the engineers to accept the ephemeral nature of organizational operations than it for them is to accept similar opacity for the technical solutions.

Excerpt 44 (AA, ComingBack) is from meeting [AA] in which the participants attempt to agree about future effects of the architectural specification to the product and its evolution in the forthcoming software releases. The preceding discussion has concerned details that participants argue should be documented but Marco interrupts to describe that these details are not necessary at this stage.

Excerpt 44 [AA] ComingBack

- 1 Kev There must be some copy of some at least some most used system
 2 libraries in environment file
 3 Mar -> So but let's say it is like
 4 Tho in the worst case you disable core dumps for those
 5 Joh yeah
 6 Mar -> **Isn't it like what** you listed here ((on slide)) as not possible in
 7 ((release name)) so they are topics for further investigation
 8 Tho ehm many of them yeah
 9 Mar -> I mean they are **not like it's not like we are closing a chapter on**
 10 **them we are just for ((release name)) we say that they are not**
 11 **there. Coming back. to them**
 12 Thomas ((nodding))
 13 Mar Okay

Here Marco formulates his understanding and anticipates confirmatory response from Thomas. He describes the issues that are lacking from the specification at this stage, which means that what is agreed on now is still partial and more study will be needed later. This makes the ephemeral nature of the decision plainly clear. As an act of sensegiving, this type of reasoning is used as a way to abate resistance and to get the wheels in the organization moving already at this stage, even with limited design.

Both excerpts are preceded by resistance and doubts about the decision that is about to be made. The chairperson of the meeting then argues that the decision can be changed or expanded later if required. This type of rationale is given as an act of sensegiving and it also implies that some decision needs to be made here and now. This type of explicit reasoning is quite rare, but it supports the view presented by Clifton (2012, p. 153) that it is not the decision itself that is important in decision-making talk “but the accounting for the decision and framing it in a morally acceptable way”.

9.4 Orientation to a choice

This section explores how the element of choice manifests itself as part of meeting interaction. The traditional behavioristic studies on decision making often describe decision as a matter of evaluating the acceptable outcome based on a

rational and quantifiable methods. Particular rules or standard operating procedure of the organization may also govern what is acceptable (e.g. March, 1997). If there is no choice to be made there is no decision to be made.

The analysis of the current data shows that choice is usually implicit and not directly visible in interaction for the types of decisions made in these meetings. Final closing formulations of the decision made in the meetings in this material include scant verbal reference or expression of choice. On the other hand, there are sequences in the earlier phases of the meetings where an explicit agreement regarding some details for which various alternatives have been expressed.

In the next lengthy Excerpt 45 (CLIF, MoreOrLess) the details for standardizing command formats are discussed. The contradicting opinions are made explicit to highlight the fact that a choice between them needs to be made.

Excerpt 45 [CLIF] MoreOrLess

1 Mar -> But but do you agree that should this be done more (.) (--) or there
 2 should be like less. ((gazing towards Paul and John))
 3 Mor **In my opinion** basically uh-hh we should care much less about putting
 4 standardizing these commands POSIX style with just one dash
 5 because already systems are very different we can put=
 6 Joh =yeah=
 7 Mor =this minus V minus W (.) It's al^uready very little standardized on
 8 this dash dash long form I think we can standardize always and utilize
 9 the same approach that most of our new tools are using.
 10 (2.0)
 11 Mar Okay
 12 (.)
 13 Tho **I think** those three are okay.
 14 Pau [Yeah I]
 15 Mor [Because] we don't want to make (product) very different from what
 16 we will get from other agencies I mean from SS or whatever.
 17 Tho yeah but this was just additional kind of feature everything that starts
 18 with SS we know that (--)
 19 Joh Yeah.
 20 Mar but if you put nothing then (--) you get the help (.) at least with most
 21 Linux commands when you press enter it will tell what you should do
 22 (.) just the enter.
 23 (10.0)
 24 Pau -> **Now we have different views here** Thomas says that these are
 25 completely okay Moritz says that it might be okay only to standardize
 26 the long form minus minus dummy or something like that.
 27 (1.0)
 28 Mor But in ^ugeneral this is a good idea to have some standards but they
 29 should not be very extensive in my opinion they should not have [(-)]
 30 Mar [but we can]
 31 Mor what we have right now
 32 Mar -> we can go in one direction not two or three directions so what is (.)
 33 Paul is right like you say standardize the dash dash and Thomas say

34 and I think you are saying ((gazing and pointing towards Paul)) not to
 35 standardize dash dash
 36 Pau **Well either** don't standardize these **or** then do like **Moritz** says just
 37 standardize the long forms we already have existing implementations
 38 they exist in customer documentation they exist in code in scripts also
 39 in product lines probably testing, [everywhere] if
 40 Mar [(-)]
 41 Pau we change them it's great impact
 42 Osc but it might make sense for new new command line interfaces
 43 Pau But then [((frustrated laughter))]
 44 Mor
 45 Mar but you will take in the (new) form in all the new ones so you will
 46 have less (-)
 47 Tho and in the next product they will type this in the beginning
 48 Pau Yeah sure ha-ha
 49 Mar ==> But I think it seems we found it seems we found the conclusion here
 50 so standardize the long format and the short the short ones only for the
 51 new commands
 52 Tho Yeah.
 53 Pau I think that could be okay ((deep sigh))
 54 Mar Then we don't need to repeat the existing command we don't need to
 55 change those and the reason is this like that for the existing commands
 56 which are used in the customer side we don't need to initiate any
 57 changes

In line 1, the chairperson invites opinions on whether the formats should be more strictly standardized (*should there be more*) or less so (*should there be less*). At the same time commitment is sought. Moritz self-selects to give the first response and argues for standardization (lines 4-7 and 9-10), whereas Thomas (line 15), is satisfied with the way they are defined in the document. Marco himself provides a third candidate response in line 24 (*if you put nothing*).

There is a very long pause of ca. 10 seconds, which indicates that the conversation has run into an impasse (line 28). Then Paul self-selects in line 29 and takes the epistemic authority to formulate the conflicting positions that have emerged. He takes a seemingly deferential role which is often category-bound to the chairperson (Pomerantz & Denvir, 2007) in orienting to the fact that conflict remains and needs to be resolved. He uses present tense (*Thomas says, Moritz says*) which marks the proposition as negotiable (in fact facilitative role, as defined by Pomerantz & Denvir, 2007) but yet limiting alternatives and speakers. Moritz defends his epistemic stance further (lines 28-29). Chairperson aligns with Paul and reformulates even more explicitly that a choice needs to be made. He addresses Moritz and Thomas with some hesitation markers. Before either one of them responds, Paul again self-selects to explain the organizational effects and constraints and reformulates the possible alternatives. Use of just for the other alternative marks it as a minimal condition. Oscar partly

disagrees by chipping in with his point of view (line 42) which Paul rejects immediately (line 43). Moritz also challenges Oscar's proposal in overlap with Paul and competes for the turn by raising his voice. Marco then makes the first decision announcement attempt to formulate that a choice has been made and thus a conclusion is found (line 49). No immediate acceptance is received, but Thomas does this indirectly by making an ironic statement about the potential future effects of the decision, and Paul aligns with this. Humor is often used as a way to release tension at the end of longer difficult or conflictual talk, thus this could already be regarded as an indirect acceptance of Marco's formulation. However, Marco explicitly announces the decision once more (lines 56-58). For decision announcing to be successful, a retrospective agreement in the second turn is expected, and this is achieved, as both Thomas (line 59) and Paul (line 60) accept the announcement.

The above sequence is also an example of the fact that the roles are not completely preallocated in AT meetings. Paul takes initiative to express in a very definitive manner that a choice needs to be made although this type of activity would generally belong to a chairperson.

The need to make a choice becomes apparent also when there are differing opinions on some details and extensive disagreement, and the situation needs to be resolved by selecting one of the proposals. Excerpt 46 (CLIF, UIAdapter4) is a case in point. This episode is not from the closing phase of the meeting but it takes place earlier in the meeting when the participants are arguing about the scope of certain concepts. Marco initiates the episode by attending to Paul's face and pointing out that he has objected to using a concept web UI at all in the document which is being presented.

Excerpt 46 [CLIF] UIAdapter4

- 1 Mar -> **So I I see Paul is not happy** does not want to see, (.) CL↑I is web UI
 2 CLI. If you bring web services they are not part of the CLI: (.) case.
 3 Pau yes [CLI is]
 4 Phi [yes they are] more than [CLIs]
 5 Pau -> [CLI] is basically something that is that is
 6 provided locally by by the network element. And if you if you arrange
 7 some kind of adaptation to to some interface and then ehm (.) I have
 8 some kind of client interfaces (-) interface then if you have
 9 anything in that [client]
 10 Phi [yeah can have] also CLI
 11 Pau it doesn't have to be it doesn't have to be CLI interface it's just
 12 another implementation of that. and and then we have a recursive
 13 specification you should concentrate just on the CLI and not
 14 ((pointing by fingers and looking mainly at Marco throughout the
 15 turn)) go towards this object-based management interface frameworks.
 16 (0.5)
 17 Phi Aa (.) okay I would not say that this is recursive but (.) anyway here
 18 this we try to enable ehm (.) whatever is coming in the future.
 19 [Ha-ha] ((common laughter))

Marco's statement about the evaluative stance of Paul creates a topic expansion which is related to the earlier discussion but introduced from a different perspective. This exemplifies how participants are given prominence as "experts" in a particular topic, and therefore get greater influence in the topical discussion. Here Paul's commitment is made topical, and although choice is implied it gains secondary status.

Marco's question (in lines 1-2) is a B-event statement on the emotional state of Paul as a recipient (Heritage, 1985; Labov & Fanshel, 1977, p.100; Pomerantz, 1980) who has primary access to such knowledge. It is a declarative formulation of Paul's affective stance, enhanced by formulation of substance matter. In this way the chairperson attends to Paul's face (Brown & Levinson, 1987; Goffman, 1955) and seeks for a collaborative resolution of the episode. According to Labov & Fanshel (1977) this type of statement of another person's internal state receives a questioning force, as the one whose affective state is described has the primary right to respond. Paul indeed responds, but the response is highly rational; it only takes a stand on the substance part of the formulation and it does not directly confirm or reject the proposition on affective state as such. Paul begins to respond but Philip overlaps to defend his point of view with his epistemic stance. He immediately acknowledges Marco's statement, but Paul continues to elaborate more. This argument goes on. Paul objectifies and distances himself in his statement (you should concentrate instead of a more direct form), but at the same time he attacks non-verbally by pointing his finger at the direction of Philip. Overall, Paul's claims are designed without any hesitation and in a very matter-of-fact manner throughout the above sequence. Philip does not agree with Paul's statement but attempts to conclude the argument by using humor. This is immediately challenged by Oscar, and the discussion continues (ref. Excerpt 9, UIAdapter5, in section 7.3.1).

9.5 Summary

In this chapter, the closing phase of topical discussions in the meetings have been examined for all of the meetings and topics in the material. In all of the meetings, a specific trajectory could be found in which the focus is turned into summarizing the outcome of the discussion for mutual agreement, and it was the chairperson who opened this sequence in which it was signaled that it was time to end the general discussion on the topic and to make a decision. The purpose of this chapter has been to analyze what kinds of acts of sensemaking these sequences become and how they enable the organizational process of decision making. It is also reviewed how those acts relate to the findings made in the earlier studies concerning decision making in meetings.

The first two sections focused on two features that are considered central for decision making, namely solicitation of commitment and decision announcing. Earlier studies have claimed that there needs to be commitment before it can be deemed that a decision has been made. Clifton (2009) distinguishes between decision announcing and decision making sequences, but in this data these features of interaction seemed to become closely intertwined even when there was

a tendency of one of these orientations to override the other. Nevertheless, the talk within the decision-closure sequence seems to take a different trajectory, depending on which element of decision making is presented as primary: the announcing or the need for commitment. Table 1 below summarizes the main findings of the decision-making phases, focusing on the activity which seems to be the primary one in the final decision-making phases for each topic.

Analyses in section 9.1 showed that commitment is expected to realize itself as an explicit act of collaborative sensemaking in the types of meetings in which a team is sharing their professional knowledge and aims to come up with a fitting and most satisfying solution for further development in the R&D. Solicitation of commitment was a category-bound activity in which the chairperson had the leading role. This is similar to findings in previous studies (e.g. Clifton, 2009). The chairperson often opened a wider participation framework when soliciting for general commitment. If there is no response, however, the chair selects someone specifically to acknowledge the commitment. The selection is not random, but the selected person is either a stakeholder, or someone who has general expertise in the domain. Moving from general solicitation of commitment to a category-bound one is a play with the participation framework, as the acknowledgement by the selected person entails that it represents the view and approval of all the participants. Elicitation of commitment also works as somewhat of a ritual, designed to close the meeting by summarizing it as a whole, or a commitment to actual details.

The analysis showed that the chairperson took effort to solicit commitment for all but two topics: CLIF and HWC. The meeting concerning discussion on CLIF involved a lot of disagreement and contradictory opinions on several of its details. It seems that the chairperson was therefore not taking his chances by asking for a final compromise but instead took the authority to announce the outcome himself. Thus decision announcing became the primary driver for concluding the meeting CLIF. In the meeting about HWC, on the other hand, it was explicitly stated that no commitment was possible yet, and the meeting was concluded only with partial guidance for future. However, and explicit announcement about no commitment became a relevant activity.

From sensemaking perspective, commitment to a decision established a link between past, present and future: it creates a synthesis of the presentation material written by the presenting architects before the meeting with the effects of the meeting discussion on that material and the future actions that are stated based on the latter two. Thus commitment was also tightly intertwined with the activity of announcing the organizational effects of the decision. The announcing seemed to succeed smoothly if explicit commitment had been sought and received first. However, if the commitment was heavily prepackaged and commitment was assumed to exist without it having been checked first, there tended to be more resistance, which also meant that more collaborative sensemaking was required before the commitment actually becomes clear. This became evident in meetings in which explicit commitment was ignored and the chair attempted to move directly to decision announcing without acknowledgement by the participants. Hence one could conclude that commitment to a decision, in

general, is a collective and explicit effort and something that cannot be unilaterally labeled by the manager or chairperson. This is the focus of the following section.

The analysis in section 9.2 showed that announcing a decision is a category-bound activity. It is the responsibility of the chairperson to announce the outcome and future effects of the decisions although it is a different expert who is presenting the actual software solution in the meeting. Decision announcing became an act of sensegiving which the chairperson took the epistemic authority to formulate the meaning of the decision on behalf of everyone. In addition to using sensegiving to announce the decision, the chairperson also used it generally as a way to abate resistance. However, if the act of announcing the decision was done in a straightforward manner, without an explicit solicitation of commitment by the participants, resistance easily arises. Interestingly, in the meetings studied here, this type structure seems to occur for topics which have raised most discussion and even resistance during the discussion phase of the meeting. The chair seems to wish to take the authority to conclude the discussion and label it as a decision, to abate further resistance. This leads to more collaborative sensemaking and especially acts of sensegiving, as the chair needs to defend the position that he has announced as a decision. Announcing can also be done as a collaborative act of sensemaking when the participants in the meeting together define the future actions which then form the decision, as in Excerpt 39 (EIA, OtherComments).

Not surprisingly, unilateral acts of decision announcing in which the chairperson or someone else would have attempted to announce the decision without seeking for commitment were not common, and the few such attempts were made futile by strong resistance. However, the data gives reason to believe that opinions are better expressed during the actual substance discussion, on the spot, early and promptly. It is much more difficult to go back to detailed substance in the end when the closure activities have started.

The findings in this chapter support the view taken by Huisman (2001) that indeed decisions need to be explicated in interaction for them to become organizationally meaningful although it is rare for them to be formulated literally by specifically saying that “we decide to do x”. Comparing the examples in her study and the current one, however, it appears that the announcing as well as the solicitation of commitment were much more explicit and pronounced in the current study. This gives reason to argue that more complex topics may have similar interactional features and procedures to the simpler ones, but in addition to becoming lengthier, they also require more explicit solicitation of commitment as a collective agreement.

Section 9.3 discussed two sequences in which the ephemeral nature of decisions did not only refer to the generally emergent nature of decisions through interaction but their ephemeral nature as organizational outcomes. As said, the ephemeral nature of decision making was not a specific point of inquiry in this study. It also seemed clear that the ephemeral nature is rarely explicated. The excerpts in this chapter revealed how statements about the ephemeral nature of

decisions were used as a resource to put pressure on the urgency of making a decision despite its ephemeral nature.

This chapter has also considered the element of choice in decision making in section 9.4. The traditional behavioristic studies of decision making maintain that there needs to be a choice to be made; i.e. if there is already knowledge about what or how to decide, there remains no choice, and no decision is required. The findings in this study support the wider view of several more recent studies within organizational theories which argue that a decision is not necessarily about making a choice (Mintzberg & Waters, 1990; Chia, 1994). In the meetings of this study, choice does not seem important for decision making, because a choice has already been made before, in discussions between the primary experts. However, when discussing the common problems in the meeting, they treated decisions concerning even seemingly minor details of the solutions as more complex affairs than that of just making a choice. This shows that decision, in the minds of professionals who are working out a complex solution, is not a matter of choice but rather an evolution of collective and collaborative sensemaking.

The table below summarizes the primary activities of decision making explained in this chapter with respect to their interactional implications to epistemics and sensemaking.

Table 2 Decision-making activities

| ACTION TYPE | INTERACTIONAL EFFECT | |
|---|----------------------|---|
| Collaborative decision making | <i>Epistemics</i> | The chairperson has the formal epistemic authority to close the decision making episode he does so by seeking for collegial and collective approval. |
| | <i>Sensemaking</i> | Chairperson encourages high level of participation and sharing of knowledge. |
| Decision announcing | <i>Epistemics</i> | Chairperson takes has the formal epistemic authority to close the decision making episode and does so by formulating the outcome on behalf of the team without seeking for approval. Resistance by other participants implies that sharing of epistemic authority and stances are expected. |
| | <i>Sensemaking</i> | Chairperson takes the role of the sensegiver. |
| Stating the ephemeral nature of decisions | <i>Epistemics</i> | Taking the stance which explicitly formulates the emerging decision as being likely to change. |

| | | |
|------------------------------|--------------------|---|
| | <i>Sensemaking</i> | An act of sensegiving to argue for the need to make a decision even with limited knowledge. |
| Stating decision as a choice | <i>Epistemics</i> | Epistemic stance as either or |
| | <i>Sensemaking</i> | Rarely articulated but if so becomes an act of sensegiving |

If we consider the temporality of sensemaking, decisions are designed as retrospective agreements about the issue that has been discussed. This is the phase which positions this type of decision making as a collaborative sensemaking activity. For a decision to become an active part of organization's future, the next steps and future actions or implications of the decision need to be announced and acknowledged. It shows that – from the point of view of decision making – sensemakers as decision-makers orient neither into past nor to the future, but both are integrated at the point when decision-making. All the dimensions of temporality meet at the point of decision-making. The preceding discussion becomes labeled as a decision but only by integrating it into feasible organizational actions that need to be taken in the future. Thus sensemaking precedes as well as follows decision making.

10. Discussion

This study has explored meeting interaction as a building block for sensemaking in organizations. Sensemaking has been treated as an interactive social phenomenon which, among other effects on the organizing, works as an enabler of organizational decision making. Furthermore, both sensemaking as well as decision making have been analyzed through the lens of epistemic authority.

Originally, the study set out to explore those interactional resources which are used in meetings specifically for decision making. A series of regular meetings within the same organization were recorded for this purpose. Decision making appeared to be an interesting starting point, because the primary purpose of these particular meetings was to make a decision on a specific topic. However, the exploratory analysis of the material seemed to suggest that identification of such sequences of talk in which a decision or a need to make a decision would be literally exposed in terms of interaction were rare. The interaction in the meetings was focused on building an agreement about the topic without making the decision as such explicit. Any statements that would convey direct references to a need to decide appeared mainly at the very end of the meeting, even when the meeting lasted two hours. Also the literature pertaining to decision making in meetings seemed to suggest that it is not easy to point out any exact type of sequence that would signal decision per se (cf. e.g. Huisman, 2001). Thus it seemed evident that one must explore the overall interactive process of decision making in meetings from a wider perspective and consider other parallel social actions. The social actions which seemed most interesting for understanding the overall phenomenon were sensemaking and epistemic authority. Finally the overall theoretical framework was developed around these three related phenomena which were at play in the meetings, namely sensemaking, decision making and epistemic authority. Of these, sensemaking has been used as an umbrella term to depict how the actual essence of the meeting, both in terms of its macro level goals and the micro level interaction, comes about during the meeting. The overall macro level goal of the meetings was to construct common understanding about the topic of the meeting, which in this material was a software architecture solution. The analysis has explored how understanding was constructed through micro level interactional resources. It is also shown how epistemic authority was used as a resource to drive the understanding into a desired direction. Decision making, then, was considered as the final potential outcome of the sensemaking process, required for the organization to go forward.

The overall research question was: how is collective sensemaking produced in conversational interaction in professional meetings? To form a link to epistemic authority and decision making, and to establish the categories for the analysis, the additional research questions were formed as follows:

- How does epistemic authority as a resource influence sensemaking?
- How do sensemaking efforts enable the organizational process of decision making?

To answer these questions, Conversation Analysis (CA) was chosen as a method of inquiry to explore the details of actual authentic interaction in meetings. CA has been used in this study to analyze the macro flow of sequences from the point of view of their interactional import for sensemaking, and the minute details of talk were reviewed only when relevant for this purpose. This has made it possible to show how language and social actions such as sensemaking, decision making and epistemic authority are realized in the details of meeting talk, in this case a meeting in a software R&D department. CA has been used to identify how specific language practices are associated with these social outcomes (Heritage, 2013).

This chapter discusses the findings from the following aspects. First, observations about the organizational context are summarized. Second, the types of sensemaking that were identified during the analysis are explained. Third, the findings regarding sensemaking as a driver of decision making are described. Fourth, observations on the forms of organizing talk are described. Finally, the findings are discussed in terms of participation framework.

10.1 Observations about the context

The context of this study has been meetings of a software R&D team in a telecommunications company. Generally all participants were speaking English as a foreign language, with the majority having Finnish as their native language. The meetings were from among a series of regular meetings among participants who had been colleagues for a relatively long time. The goal of the meetings was explicitly to make decisions, and the premises based on which the business of decision making can proceed seemed to be clear to the participants. The participants considered the overall organization as a context and they made it relevant while discussing the implications of the decisions to the organization. The participants treated the organization in which their technical solutions were to be implemented as exogenous to the actual solution technically although relevant procedurally for a decision.

The ultimate goal of the meetings was to review a documented version of system architecture descriptions, and it was vital that this architectural solution was also understood by the architectural experts in the meeting who were then to coach the software engineers during the actual implementation of the solution. The ways in which issues were recorded in the document or presentation

material became the final records themselves. The document formed in retrospect “a considered, reasoned production of all those present in making... thus regarded as truly representative of the institution’s achievement” (Cook-Gumperz & Messerman, 1999, p. 170). These descriptions therefore had a legitimating power as they became the springboards for the software development activities in the organization. Therefore the ability to succinctly formulate, in this meeting, what should go into the document and what not, is an essential skill.

10.2 Collaborativeness of sensemaking in meetings

This study has taken the position that sensemaking is the enabler of intersubjective meaning creation in meetings. From this aspect, it was the collaborativeness of the interaction which surfaced during the analysis as relevant for the sensemaking process. The degree of collaborativeness influenced the decisional outcomes and the level of common understanding about their suitability for the organization.

The results of this study show that sensemaking is affected by the ways in which epistemic authority is managed by the participants. Epistemic authority refers to the relative control to the information as it is displayed in interaction (Heritage & Raymond, 2005), and this control is either taken or shared through the epistemic stances of the participants. In this study, control was displayed in the ways in which personal agendas and preferences were pursued, or in the ways in which the knowledge of the other participants was pursued for constructing mutual understanding. The excerpts for the analysis were distinguished between sequences of high collaboration and equal sharing of epistemic authority and sequences of minimal collaboration and displays of high degree of individual epistemic authority⁶.

10.2.1 Collaborative sensemaking actions

The concept of collaborative sensemaking was depicted to describe how the various resources used for displaying epistemic stance affect or the intersubjective sensemaking process. It refers to an activity which draws on the multitude of participation framework and the source of epistemic authority as features of sensemaking. The study has shown how this type of sensemaking is influenced by the degree and type of epistemic authority taken during meeting interaction. Epistemic authority realized itself in the varying levels of engagement demonstrated towards coparticipants, as high or low effort of collaborativeness.

The sequences which were highly collaborative and affiliative in nature reflected equal sharing of epistemic ground. The participants sought for open sharing of knowledge during such sequences. The sense was constructed by displaying epistemic stances which left room for expanded or even different views.

⁶ The division between collaborative and competitive sensemaking activities is applied from the study Holmes (2006) in which the episodes involving humor are divided into collaborative and contestive contributions.

Affiliative expressions were used to seek for collaboration and to promote equal participation in the act of sensemaking.

The episodes which were strongly oriented to collaborative sensemaking usually involved several participants and were supported by verbal displays of affiliation, such as *okay, yeah*, and clarifying epistemic verbs, such as *I/you mean* or *I think*. One could argue that highly collaborative and affiliative situations create a sense of consensus which makes it easy for the participants to content themselves with the easiest solution, without looking deeper into the alternatives or pitfalls of the dominant path. However, it seemed on the contrary that during these episodes an environment was built in which everyone could participate and thereby increase the mutual as well as each individual's understanding.

Accounts that were highly factual were used as discursive constructions for the purpose of interpreting or explaining the situation or issues at hand (Antaki, 1994). Elaborate accounts were used to enhance the sense of common understanding. From sensemaking perspective, supportive repetitions of what someone else had already said did not necessarily provide any additional value in terms of increasing common knowledge but they seemed more important for sustaining a generally affiliative working atmosphere in the team.

10.2.2 Competitive sensemaking actions

Sequences of minimal collaboration were usually initiated by one or more participants who took the epistemic authority to pursue their personal agendas and explanations. These were contrary to the one proposed by the presenter of the topic or to that of another participant or participants. These types of episodes were competitive contributions to the floor and more likely to lead to conflicts, and they also displayed tendencies for negatively laden emotions. They were by nature disaffiliative and marked expressions of strong personal epistemic stance. The discussions were prone to become duels and the remainder of the participants abstained from participating. Duels frequently lead to polar reasoning during which the participants produced competing interpretation of what is accurate in ways such as *it's x – it is not x*, to argue a singular point. These types of “framing contests” are known to develop between peers as they attempt to persuade each other to adopt their perspective and, eventually, one viewpoint emerges as dominant (Kaplan, 2008). Situations called for lengthy accounts by the participants as they attempted to argue their point through various ways of elaborate sensemaking. This type of insistence was seldom enough to push one's agenda to a successful end. Also, these types of contest took a lot of time and effort while at the same time even distracting the focus and energy of the participants into issues that may have been irrelevant in the scope of the overall solution. The results show that this type of sensemaking did not necessarily increase mutual understanding although the sequence would end in a compromise based on which the specification could be approved and work in the organization continue.

The act of sensemaking became more laborious when disaffiliative epistemic authority was displayed. However, accounts that lead to conflicts and preference

for disagreement could be regarded to have the potential to mobilize all parties in the construction of understanding and therefore more likely to increase the overall understanding of the actual topic being argued about. This study has shown that this is the case when the team was able to resolve the conflict through interaction. If not, the understanding about what was achieved was left ambiguous. So actually it seemed like conflicts were more likely to narrow down the participation framework. Thus the other participants were more likely to engage less in resolving the actual conflict, although they may have become more active listeners (cf. Rovio-Johansson, 2007).

The primary objective of this study was not to investigate conflictual situations or disagreement per se. However, this feature surfaced itself so pervasively throughout the analysis that one could not avoid giving it some consideration. This observation gave reason to look into the ways in which divergent interpretations and disagreement are managed and what their import was to sensemaking. It seemed more relevant to explore how these conflicting opinions became to be used as a resource for organizational development.

The meetings in this study convened for the purpose of reviewing and agreeing on a specific architectural solution among professional experts. Sharing of opinions and exchange of points of view was the essence of these meetings, which explains the high degree of disagreement. The setting offered a natural scene for exhibiting differing opinions and pointing out potential problems or deficiencies with the solution at hand. It is therefore not surprising that the analysis revealed a high degree of confrontational talk during which topics were problematized.

Since there was an ultimate need to achieve common understanding, the disaffiliative frames where participants stubbornly held on to their personal or allied perspectives caused unnecessary hindrances to the general exchange of opinions and construction of collective sense. This seemed a waste of valuable time especially when they revolved around relatively minor minute details which didn't seem so important with respect to the overall solution that was being designed and discussed.

Disagreement seemed to cause a break in driving a topic forward. Disaffiliative actions did not pursue common understanding. Instead, they focused on expressing the personal opinion as the correct one and undermined the propositions or arguments put forward by other participants. Disputes in dyadic conversations are usually resolved by the parties themselves, and even in multiparty situations, it is often the accused party who seeks for the reconciliation (Kangasharju, 2009). In more formal setting such as televised news interviews (Greatbatch, 1992), the interviewees who run into dispute wait for the interviewer to intervene. In the current data, overt confrontations were usually resolved by the chairperson. This study shows that in extended or overt disagreements the chairperson was the one who intervened and discontinued the disagreements. However, the disagreements which concern a substantive matter or which are handled more constructively are resolved by the parties in disagreement.

Despite the fact that disagreement and conflicting opinions abounded, the interaction overall ran in alignment and remained cooperative. It was possible even for rather direct attacks to be made without them being considered a breach of politeness, presumably because the participants knew one another quite well and were in daily contact with one another. Also, one could say that displays of professional expertise through epistemic stance were not used just as ego trips, but they became the essence of organizational existence, as they construct common understanding.

Sensegiving was used actively by the chairperson in the decision closure phase, which is more or less in line with earlier findings which demonstrate sensegiving as an act of influencing others used especially by leaders (Maitlis & Lawrence, 2007; Weick, 1995; Whittle et al., 2015). Interestingly, in this study sensegiving was used primarily for resolving disagreements. It was also applied as retrospective reference to past interactions (Cooren, 2004) and tagging (Huttunen, 2010) but for a particular purpose: to argue for a point which had been challenged or to proactively minimize the risk of challenge or long-winded debate. For instance when opening the topic [AA], Marco pre-frames the topical discussion by saying that he hopes it will go without much debate, which makes the other participants laugh (in Appendix 2). In saying so he basically refers to the preceding discussion on topic [EIA] which took place earlier in the same meeting, and which took much longer than expected due to several questions challenging that proposal. In [ErrMsg], the presenter makes references to opinions of the people who are not present in the meeting (Excerpt 6 in section 7.2). The sole purpose of these types of “taggings” was not to increase the common intelligence of the team on the substance matter but it was used as a rhetorical device to defend one’s point of view and to dilute possible further arguments on the issue. Thus, if we consider power in the scope of decision making as commitment to future state of affairs, then influencing the decision making is a way to get others committed to the desired future reality (Clifton, 2009). In the meetings analyzed in this study, this is visible in the way the chairperson seeks for the commitment in the decision-oriented way the discussions are concluded in the meetings (collaborative decision making).

With regard to sensemaking, issues of power and conflict seemed to be more pronounced in this data than what has been demonstrated earlier in sensemaking literature. The reason for this might be that sensemaking literature has mainly focused on high reliability organizations and tightly knit organizations where the expectations for the team are clear and unified. In a team like the one examined here, opinions diverge and the alternatives discussed are complex, which might explain the high amount of power conflicts.

One can align with Weick (1995) and say that disagreement is a natural part of organizational life. Decision-making situations, in particular, are a very likely target for disagreement. However, there is reason to suggest that opinions need to be managed but not prohibited. Conflict resolutions should orient to achieving common sense. As Fisher (1974, p. 59) puts it: how the tension is managed matters more than its existence. The participants in the meetings for this study

were able to confront tension and conflict and continue in a constructive manner after the tensions were resolved. The analysis also supports the findings in the study of Huttunen (2010) which was done with relatively similar type of material: voicing the problem is essential for organizational growth and learning. Problematic situations should not be considered obstacles but building blocks and therefore disagreement is an integral part of sensemaking. Disagreement is a way to provide a new perspective to discussion and can even lead to common understanding. It is a matter of choosing the right resources for doing so. Sensemaking is about politics and identity, it is about controlling the sensemaking efforts to own advantage which may or may not be to the advantage to the team or organization as a whole.

To summarize, taking an evaluative epistemic stance is a natural way of participatory problem solving and decision making. One could say that this is even the *raison d'être* of meetings which convene to agree on complex topics. It can be even be crucial that someone takes a strong stance if it is evident that something is incorrect or a bad decision is about to be made. However, more often organizational decisions are so multifaceted that there is no one optimal solution over others. It is therefore often better to try to express opinions in ways which leave room for various ideas if one wants to come up with a solution that satisfies the collective understanding.

10.3 Sensemaking as a driver of decision making

The second objective of this study was to explore how sensemaking efforts enable the organizational process of decision making in meetings. The analysis shows that decision making as an activity was tightly intertwined with the collective and collaborative nature of sensemaking. The need for decisions was articulated when it was time to wrap up the topical discussion and close the meeting. During these sequences, the chairperson took the leading role and bid for consensus-type acceptance for the technical solution. He often asked generally if the participants agreed with the solution, and if there was no response, he selected one of the participants to acknowledge if he or she agreed. However, if the chair attempted to announce a decision without explicitly requesting such agreement, resistance occurred. Participants began to exercise their epistemic authority to challenge self-proclaimed announcements and avoided commitment by prolonging the final decision with additional comments. This indicates that gaining explicit commitment for a decision was essential although a commitment by one might have been enough. Collective sensemaking signaled unified agreement on future actions without explicit involvement by multiple parties. These episodes were marked by lower level of collaboration and participation which was demonstrated for example in some of the closing sequences in which the chairperson announced the decision by stating that if there are no objections we do x, or by generally asking if there were further comments before announcing the decision, and he got only minimal responses.

The notion of decision in general carries an implication that it is a matter of choice. However, the present data show that in organizational settings decision

making is more complex than that. The findings support the views taken in some theories of organizational decision making: organizations seem to be more concerned with forming interpretations than with the making of actual choices (March, 1997). Decision-making did not concern the making of choice between two or more distinct alternatives but the purpose was rather to refine the details of how something should be understood. It seemed to be accepted that decisions must remain practical and they sometimes need to be made with incomplete information. Partial decisions were triggers for the next step of activities in the organization for which the business was constantly evolving. Instead, decision making becomes an act of sensemaking by which the participants strive to define the necessary path and actions for future. Collective decision could be stated if the discussion preceding it had been collaborative.

The material also generally supports the view taken by Huisman (2001) that decision making is about agreeing on future state of affairs. She relates the decision-making process with the act of sensemaking and treats it as a satisfying solution bounded by the situation (Simon, 1945). The current study shows more specifically that decision making is the phase in which the acts of retrospective and prospective sensemaking become intertwined for the construction of collective understanding. The meaning has evolved as a result of the meeting interaction, in retrospect, and that meaning defines the future effects to the organization at large. The decision becomes a formulation of what has been agreed about the future. In this way, the act of decision making is just as much about looking back as it is about defining the future.

The analysis also supports the view of previous studies which have explained that decision making is discursively dispersed and fragmented (Atkinson, 1999). There is no unified way to identify which kind of elements in the talk constitute a decision as a linguistic construct. Decision making appears as a process with "a loose collection of ideas rather than a coherent structure" (Cohen, March, & Olsen 1972, p. 1). Also, if one looks only at the linguistic constructs which explicate the decision, one ends up with a relatively limited view about the decision-making process in organizations overall. In this data, the participants in the meetings talked for two hours about the technical solution on which they were expected to take a decision. In meetings of this length, the fragments in which the actual need for decisions were topicalized were short and they were typically placed at the end of the meeting. These fragments could be found in all meetings and proved therefore to be mandatory for legitimizing the decision although the explicitness of their enactment varied. In all, the meetings seemed to be more concerned with constructing common understanding and sense of the solution that was being discussed, and the statement of the decision seemed to come as a by-product, in passing. This supports the view that decisions emerge through the sensemaking process; even the long topical discussions such as the ones in the data of this study, there is no great finale for the meeting where a choice of some sort would be announced, but rather the ending of the topical discussion becomes a mundane and diluted summary of the discussion that has taken place.

It is also worth considering the forms of sensemaking processes that the meetings and topical discussions in the current material present, using the categories of Maitlis (2005). One could roughly describe the nature of sensemaking for two topics in two meetings as guided: EIA and ErrMsg. The topic of EIA was introduced by the chairperson as an item for information sharing only, but the participant began to actively criticize the description in the form that it had been already approved in another meeting, and the chair had to make an effort to promote his understanding. The discussion on the topic ErrMsg, on the other hand, was highly controlled by the presenting architect although the other participants were also quite active. One of the meetings (CLIF) could be described as fragmented in form. The other participants participated actively in formulating understandings of the topic and the presenting architect had to accept a fair amount of changes to what he was presenting. The topics AA and HWC were handled in a restricted form: the other participants were generally less familiar with these topics, which meant that they were not actively involved in contributing their knowledge but mainly used turns to check they had understood what was presented and talked about. Therefore the discussion was more controlled by the presenting architect, and the sequences covering these topics contained the longest monologues by the presenters. The topics TPM and WUIF could be described as minimal from sensemaking point of view, as there were even less comments or understanding checks by the other participants. These results with the limited set of data are somewhat contrary to the findings of Maitlis & Christianson (2014) which suggested that organizational sensemaking was predominantly restricted, and the leaders controlled the process of sensemaking.

Generally, the purpose of a meeting is to make interaction possible, to clarify understanding and to come up with common understanding. Common understanding, does not automatically mean common agreement on the actual decision taken; it only means that an understanding of the chosen direction has been set, and even this is arguable (ref. e.g. the survey comments). Sensemaking in meetings thus refers to the intersubjective understanding of the substance matter, not to the actual direction of the decision or its outcome. However, common agreement is often explicitly sought, which is visible in the explicit decision-oriented questions of the chairperson in the meetings examined in this study. There were several sequences in the data in which multiple members participated in constructing common understanding and by that way influenced the decision which unfolded.

10.4 Observations on the forms of organizing talk

For the purpose of making the analytical claims that were aspired in this study it was relevant to look at some of the forms of organizing meeting talk. In this section some general observations about the sequential structures and action formation in the data are discussed in terms of conversation analytic theory and literature which was described in more detail in chapter 5.

10.4.1 Sequential structures

The analysis of sequential structures is concerned with the design of turns at talk, types of sequences, and repair. Meeting talk in general is naturally designed using similar conventions as used in mundane everyday conversations. However, literature has shown that institutional contexts set special and particular constraints to the allowable contributions (Drew & Heritage, 1992). Meetings usually display various degrees of formality, depending largely on the practices and cultural expectations of the institution in which they take place. One could assume that company-internal meetings between peers that are in daily contact with one another would be relatively informal and in this respect display several of the features of ordinary conversation. This seemed to be the case in the data of this study as well. The nature of conversation in the meetings of this study was relatively informal. Speaker selection, for instance, was mostly free in these meetings; anyone could add to the common stock of knowledge, and the participants could speak without negotiating for a turn. There were several occasions where some other participant rushed to respond to a question although a respondent would have been selected by the questioner, and this was not sanctioned. Overlapping talk and self-selection were allowed without being sanctioned, even when bypassing a selected speaker. One member of the team applied a practice of raising his hand when bidding for a turn. More often, the participants simply took the opportunity at a transition relevance place. Occasionally the participants would bid verbally for a turn. This metacommunicative resource was most explicitly used in EIA, a topic which was exceptionally presented in a meeting by a program manager who was not a regular member of the team, nor a regular participant in these meetings. Thus the participants in this meeting displayed more formality and metacommunicative awareness by using explicit and formal request for a turn by saying e.g. May I ask something (ref. e.g. Excerpts 7 and 11).

The sequences for the analysis in this study were identified based on marked topical shifts which were triggered by conversational practices such as questions, evaluations, proposals, requests, formulations, or combinations thereof. These sequential shifts were also the potential points for change in epistemic authority. The positioning as well as the strength of the epistemic claims seemed to be consequential to the development of the sequence. Strong epistemic claims by other participants had the tendency to lead to more explicit and lengthy sensemaking processes.

In the meetings of this study, the contributions were focused on the topic at hand, and also restricted to that topic, with minor digressions allowed. The turns at talk generally displayed relatively strict orientation to the task at hand as well as to the identities of the participants.

The architect who was in charge of presenting the topic was the one who also had the longest monologues and led the topical discussion forward. However, other participants could take the epistemic authority to initiate new topics or to expand on the existing one. They could also monopolize the floor for an extended time and did so especially in some conflictual situations (e.g. Excerpts 1, 2 and 3 from meeting CLIF).

Turn-internal repairs such as mispronunciations by the speakers themselves were fairly frequent in this data, but repairs initiated by recipients were relatively rare despite the fact that (most) of the meeting participants were speaking English as a foreign or second language. This might be due to the fact that the participants had a common frame of reference: they mostly had a similar professional and technical background. The organizational practices were also known to all. This is in line with the survey done by Louhiala-Salminen & Kankaanranta (2011) among employees working in different globally operating companies; the survey showed that shared vocabulary of the profession is more important than grammar and general vocabulary.

10.4.2 Action formation

Action formation refers to the general activities that are performed in turns at talk. The most dominant actions which triggered the sensemaking sequences in this study were questions, evaluations, proposals and formulations, and some observations on these four actions will be summarized in this section.

Questions as a conversational practice were used for various purposes and had a relation to both sensemaking and epistemic authority. Questions were naturally used for their most obvious purpose of requesting more information or clarification, and to establish better or common understanding. However, interrogative formats were used extensively for other pragmatic purposes than for genuine solicitation of information that would be lacking from the questioner. Questioning seemed to work as an accepted form of interrupting a presentation. As Schegloff (2007a) points, out, using a question can be a way to avoid disagreement, but in this data they are often used to display disagreement in form of challenging questions (cf. section 7.3). They were used to create counterproposals or counterarguments toward the preceding claims. Their purpose was to cast doubt on the proposals that were discussed, and in this way they were primarily designed to express the questioner's high epistemic status relative to the respondent. Requests were also often linguistically designed using a question form, and they seemed to work similarly also as social actions.

Questions which were designed in open form to invite collective sensemaking had the tendency to expand the participation framework: more participants were likely to contribute. For instance questions which were recapitulating something that had been said earlier seemed to stimulate more collaborative discussion in which more participants become engaged. In this way questions opened up sequences which often lead to extended accounts and elaboration. Questions also allowed the questioner to keep the floor as they gave an opportunity to reserve the floor to either acknowledge or reject the response which was given (cf. Ford, 2008).

This study supports the view of previous studies that questions take a variety of roles. Questions embody presuppositions about the aspects of the topic at hand and about the level of background knowledge and preferences that the questioner has (cf. e.g. Heritage, 2002b). The analysis also showed that meetings which are governed by monotopical agendas, the questions often continue

on the ongoing topic rather than introduce a new topic, which is more typical for mundane conversation.

From the point of view of sequence organization, questioning realized itself as a practice which continued or extended the on-topic talk, but rarely introduced a completely new topic. This reflects the constraints which are set by the agenda for this type of institutional talk. There is less freedom compared to ordinary conversations during which questions are abundantly used for moving from one topic to something completely different. In this data, the questions were constructed to argue a point without disrupting or disaligning with the trajectory of talk on topical level. Therefore questions were more likely to generate answers or responses than the evaluations which tended to generate resistance or defensive responses.

The treatment of evaluations by the recipients seemed to depend on the level of epistemic stance and the degree of certainty they portrayed. Evaluations which were asserted with high epistemic certainty tended to lead to more overt arguing and competition over whose epistemic stance counts. Evaluations which were designed as common problems seemed to lead to more collaborative pursuit for sensemaking. The participants could also evaluate the epistemic stance of another participant in relatively blunt manner. Such evaluations were accepted as not being impolite when they concerned engineering knowledge, not the person himself. However, when they concerned personal opinions or personal technical contributions, they were considered to violate politeness and lead to conflict of opinion.

Proposals which were designed as position reports (Maynard, 1984), to display personal agendas or as counterarguments to previous proposals, led to lengthy argumentative sensemaking among the participants. This finding is somewhat contrary to the implications of position reports as Maynard (1984) explains them. In his view, position reports constrain the range of possible responses to mere acceptance or rejection. This may have been the intention of the speakers making the proposals in this material as well, but the consequences were unanticipated. Furthermore, proposals which suggested a solution for the other participants to approve or disapprove could also lead to lengthy sensemaking but the tenor remained more collaborative.

Formulations are related to various social actions. They are a way to describe in other words something in order to confirm understanding. Formulations can also be used to describe states of affair in a light which enables the speaker to achieve the desired change in those states of affair as a decision (Huisman, 2001). In this study, formulations were more strictly defined as recapitulations of what had been said or proposed by somebody else prior to the formulation in the meeting (Heritage & Watson, 1979). In the current data formulations were often designed as questions that sought for confirmation of the understanding embedded in them. They gave an opportunity for the participants to negotiate the common interpretation of what had been discussed, and to demonstrate that the conversation had been "self-explicating" (Heritage, 1984b). This supported the collective sensemaking. Formulations also expressed a certain epistemic stance as speakers demonstrated their level of certainty or doubt toward the

matter being discussed. They also marked the degree of commitment and attitude towards the issue (Kärkkäinen, 2006). Formulations also signaled epistemic authority as they were used for explaining issues even on behalf of others.

An additional observation was that certain linguistic devices tended to predominate a single meeting. The participants began to adopt similar linguistic resources that were used by someone else. For instance, some meetings became dense with *wh*-questions and some with formulations. However, the study also shows that the same linguistic or grammatical form could lead to different trajectories, depending on their context and positioning in the sequence.

10.5 Participation framework and epistemic authority

In this section the findings related to epistemic authority are discussed from the point of view of participation framework (Goffman, 1981). The analysis is based on the idea that participation in the meeting discussion is a reflection of epistemic authority.

As mentioned, participation in conversation was generally democratic. However, since the number of participants in each meeting was relatively large (varying between 11 and 21), it is clear that not everyone participated equally. The orientation of participants to some specific goal and role is a typical characteristic of institutional talk, also meeting talk (Drew & Heritage, 1992). In the data studied for this research, the orientations were towards the role of the presenter, participant (primary or “in listening mode”) and chairperson. In all of the meetings there were participants who did not say anything. This also means that the solution description which was presented and discussed in the meetings became to be interpreted as the “collective” decision which was actually designed by those who actively participated in the meeting discussion.

Contributions by any participant were generally allowed, and obviously most often it was the one whose domains of expertise were being affected who were either invited to participate in the discussion or who voluntarily did so. The participants engaged themselves by asking questions, volunteering their opinions, and by requesting further clarifications.

More participants engaged in the discussion in situations in which the opportunities for sharing epistemic stances were left open for anyone. There was more equal distribution of turns and more active involvement when the participants were immersed in technical details and attempting to collaboratively brainstorm a common understanding of the task or topic at hand (cf. similar findings by Holmes et al., 1999).

It was common for alliances of two or more participants to be formed to argue their point when conflicts of opinion manifested themselves, which is typical in decision-making situations (Kangasharju, 2002). This was also a way to enforce their common understanding. This was the case in Excerpt 5 (CLIF, Remote4) in which three participants aligned as a team to form a common counterproposal and the collaboration was enhanced by the use of similar expressions. Sometimes this seemed to happen almost implicitly and unintentionally, when for instance the participants picked the same kind of phrase or statement as

someone else, in this way “echoing” another participant’s interactional practices. Similar types of choral completions which echoed other participants’ wording was also used in Excerpt 17 (CLIF, User). These completions have some similarity to Nikko’s (2009) findings in her study of collaborative completions. In her study, collaborative completions were used to complete a yet uncomplete utterance of another participant, which was seen to express shared understanding, share professional knowledge, and a desire to work together. In this study, collaborative completions were quite rare, but the echoing types of affiliative expressions were used as acts of affiliation and sensemaking.

The participants oriented to the various roles and responsibilities that were present in the meeting but also to other members of the organization who were not present. This made their identity and expertise locally relevant to the issues that were being discussed or debated. Epistemic authority became locally negotiated. The sequential organization of the interaction casts some light on issues of multi-party interaction, participation and membership categorization by taking into account the local, collective and interactionally emergent orientations of the co-participants.

10.5.1 Orientation to the source of epistemic authority

In addition to the sequential positioning of the statements (discussed in section 10.3.1.), it was worth considering who was the source of epistemic authority, as the study showed that the participants were attentive to the expertise of their coparticipants. The source of epistemic authority was given to self, a selected participant, or a non-present member or group in the organization. The authority was constructed and reasoned by making implicit or explicit reference to some membership category, and this membership category is treated as relevant source of knowledge. The participants took epistemic authority by implicitly or explicitly claiming category-bound relevance to their statements.

Professional status and expertise seemed to matter more than institutional rank in the type of collegial meetings in the data studied for this research. Epistemic authority concerned the management and competition over who had the relevant knowledge. By using category-bound resources as self-reference, the speakers indicated that as the member of a specific category he or she was entitled to make the claim and possess epistemic authority. The speakers also took epistemic primacy by drawing on the access they had to someone else’s knowledge.

Self-selection was typically driven by subjective cognitive sensemaking and the desire to pursue personal agendas. The more subjective epistemic positions seemed to be used to construct the subjective identity of an expert, and they were more prone to lead to conflicts and disaffiliation. The statements positioned for collective sensemaking were used to trigger common knowledge, and they lead to more affiliative and social effects, contributing to the knowledge base of the organization as a whole.

The selection of someone else as a source of knowledge also transferred the higher epistemic authority to that person, which also gave indications of more powerful individuals or roles in the organization. This was done by implicitly or

explicitly referring to that person or role. The importance of non-present members as sources of epistemic authority were typically used for sensegiving, or to argue a point. Reference to absent members of the team and stakeholders were also made by the chairperson as institutional pretalk when opening the meetings. This seemed to imply that the meeting had convened to make a decision and a need for some sort of quorum was relevant.

The relevance of some of the roles of the participants as well as non-present members was made explicit throughout the discussions. However, the discussion as such is relatively relaxed and allows contributions by all participants without being strictly category-bound. The findings about decision-making practices support those by Clifton, (2009): the chairperson seemed to be the one who was both entitled and expected to announce the decision, and the other participants expressed sensitivity to the sequential resources made available to them, to support or reject such announcements.

The participants also challenged and modified past decisions, which became evident in the EIA meeting in particular. The topic which concerned requirements for a specific program milestone was introduced for them in this meeting after it had already been approved in a managerial board, and it was introduced in this meeting for information sharing only. However, the participants confronted the decision as it had been made by a managerial board and the prior decision needed to be amended based on the comments given in the EIA meeting.

10.5.2 Interactional identities

There were two fixed roles in the meetings: that of the chairperson and that of the presenter. The role of a chairperson in meetings is generally the one which embodies category-bound activities (Sacks, 1992). At minimum, chairperson has the role of opening and closing the meeting. Chairperson usually moderates the talk during the meeting, or as Boden (1994) puts it, the chairperson acts as the “switchboard” of the meeting. In the meetings in the data of this study, the other role which was category-bound was that of the presenting architect. The rest of the meeting participants were commentators.

The chairperson was the same in all of the meetings of this study. He had an omnirelevant identity (Sacks, 1992a, p. 312) of acting as the chairperson as well as the solid line manager for the primary participants (the architects). He was an active listener but he also kept himself in charge of maintaining and managing the interaction throughout the meetings. He also used his technical expertise and got quite immersed into the technical details while at the same time moderating the talk.

The chairperson took the most active role in initiating acts of collective sense-making. In some sense it is understandable as it supports the idea that chairperson has the responsibility to control the flow of discussion as well as to bring together the ideas so that mutual understanding can be reached. Other participants are responsible for sharing their specific expertise.

The chairperson was the one with authority and responsibility to ratify the decisions at the end of the meetings. However, this did not necessarily succeed

without resistance if commitment was not explicitly sought from the participants prior to announcing the decision. The decision-making sequences showed that it was relevant for the chairperson to address all participants as a whole to check whether everyone agreed with the outcome (Barnes, 2007).

The chairperson's power was also played down at times, and the other participants could raise new themes to be discussed without being sanctioned. The chairperson also intervened to resolve disputes and conflictual situations but could stay in the background during collaborative episodes. However, the chairperson participated actively in the actual technical matters as well. He made formulations but also asked several technical questions in K-position, meaning that the higher epistemic status was given for the technical experts, and he himself was not taking the role of the most knowledgeable.

The other role which involved category-bound activities was that of the architect who had designed the architectural solutions and who was responsible for presenting that solution for the rest of the team. The presenter of the topic was expected to have certain epistemic status and responsibility over the substance.

Other participants in this study refer to the colleagues and stakeholders who were not presenting the topic or chairing the meeting. They were participants who were there to listen and comment – and hence to contribute to the decision making. They had no predefined activities and therefore it was important to explore how these participants engaged themselves in the sensemaking and decision making during the meeting interaction. They were in the meeting to collaboratively shape the future software solutions which were to have an effect on how the organization would use its development resources.

Silence can be a sign of agreement although one cannot say that just sitting in the meeting silently is an indication of true participation. This would be similar to the analysis in the domain of doctor-patient interaction where Charles, Gafni, & Whelan (1997) claim that it is not enough to consider it participation in the actual activity of decision making if the patient simply agrees with the decision proposed by the doctor (summarized in Ijäs-Kallio, 2011). Conversely, Stivers (2005b, 2006) sees that the actual activity of decision making is a more complex phenomenon and therefore if the patient has the right to agree or disagree, then even more minimal interactional signs should be considered as participatory. The notion of participation becomes even more complex when considering multiparty meetings. In the meeting of the current study, the participants orient to freedom of participation. They are not only receivers or deliverers of knowledge, but these are mutual activities. But it would be quite futile to expect everyone to explicate their opinion, especially if affiliating with the decision. Additionally, silence does not reveal to which degree collective sense has been achieved.

As the other participants did not have any specific responsibility, they usually needed to work harder to position themselves as co-experts with the presenter. They claimed epistemic authority by building an agenda for what should be considered important. They enacted their professional expertise to reason their claims by using institutionally/organizationally-defined or technically-defined categories and use those as a common frame of reference. From sensemaking

point of view, participants enact their roles by taking epistemic responsibility to comment on their specific area of responsibility.

The type of analysis conducted for this study cannot reveal much about the sensemaking processes of the silent participants. That notwithstanding, one can influence or advance the collective sensemaking of an organization only by taking a stance.

10.6 Summary

This chapter has discussed the findings from various aspects in order to make a link toward the theoretical framework. The types of sensemaking that were identified during the analysis were explained by intertwining them with the observed practices of decision making. Moreover, observations about the forms or organizing talk were described in order to make a link toward the theoretical notions that are common in the core CA literature. Moreover, disagreement as a feature of the meeting conversation and component of sensemaking was separately explained as it seemed such a prevailing feature, with implications to sensemaking. Finally, the findings were discussed in terms of participation framework, which was seen as an indicator of collaborativeness of sensemaking.

Figure 1 below summarizes the primary tendencies explained based on the theoretical framework.

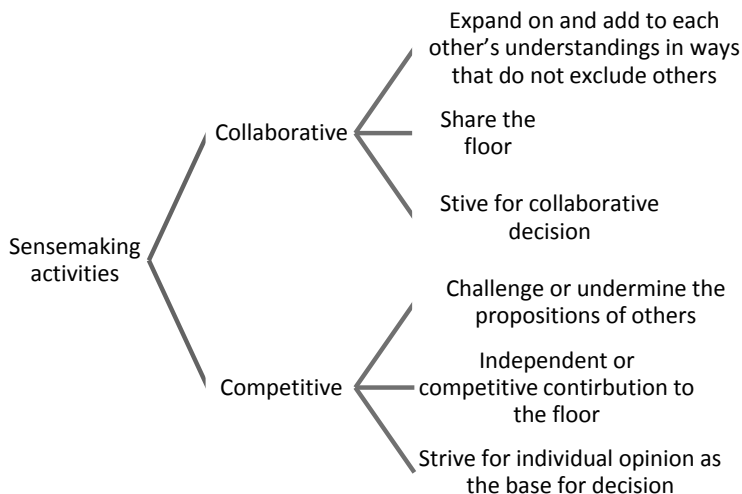


Figure 1 Sensemaking activities

Why is important, to strive for collaborative sensemaking and why is it important to understand that as a research topic? It has been claimed that institutional or workplace talk reveals the nature of the institution or workplace (Hutchby & Wooffitt, 1998). The way in which topics are handled in the meetings therefore reveals how the organization cooperates. To take an example, there are several studies which have demonstrated how humor and laughter are associated with the solidarity of the group and its performance (Holmes, 2006;

Kangasharju & Nikko, 2009; Vuorela, 2005). By the same token, one could say that the more affiliative actions of sharing understandings would lead to better sense of solidarity and performance of the group. This is an insight which is succinctly formulated by Kwon et al. (2014, pp. 286-287) who propose that “to be efficacious, consensual discussion needs to deepen understanding, balance empowering others to join in with discussion with control over discussion, and simplify understanding to integrate perspectives and provide a basis for constructing common ground”.

11. Conclusions

The purpose of this study has been to gain insight to the various ways in which sensemaking happens in professional meetings. The epistemic position taken in this study is that sensemaking is socially constructed and achieved through interaction. It is an ongoing activity, observable as it happens. This is contrary to the mainstream literature in sensemaking in which sensemaking is mainly concerned with how to create sense for what has happened in the past, or with explaining what needs to change in the future. This study has also shown that when sensemaking realizes itself among professional colleagues, it is highly influenced by the interactional management and control of epistemic authority. In the context of meetings which are set out for making decisions, sensemaking becomes an enabler of the decisions.

11.1 Contributions of this study

The analyses presented in this study have drawn light on a variety of communication features associated with those sequences of meeting talk which either promote or constrain the collaborative sensemaking and decision making. In this respect the study contributes to the emerging field of studies on meetings as interaction. More specifically, the study has drawn light on sensemaking as an interactional accomplishment. It also extends on the studies on decision making as a talk-based activity (Boden, 1994; Clifton, 2009; Huisman, 2001).

The study also expands on the field of organizational sensemaking by integrating its primary notions with those of conversation analysis through the lens of epistemic authority. The study shows that meetings are important for meaning construction and success arises from the ability to construct common understanding. Common understanding does not necessarily mean common opinion, but it means that there is enough common ground based on which organizational activities can continue. By focusing on interaction, this study has constructed a more refined meaning for what is commonly referred to as collective sensemaking. This study has focused on the collaborativeness as a resource for sensemaking and decision making which engages the participants into a participation framework through which their commitment to decisions becomes activated.

The study also demonstrates how interaction is an ongoing sensemaking process: sensemaking is not only about making sense of disruptive situations but also affiliative or “normal” situations involve collaborative sensemaking.

In this study sensemaking is enacted through language in interaction – words. According to Weick (1995), words are always approximations, which as such is a thought that might disturb engineers who are used to exact properties and conceptualizations of things. This is made apparent in many of the debates in the meetings of this study which often concerned specific concepts and how they should be applied in the architectural solutions. However, even in such situations the meanings needed to be established in collaboration.

Earlier studies on epistemics in interaction focus on some micro-level features of interaction such as the use of knowledge verbs (I know, I think), or the use of some specific adverb as reflection of epistemics (for instance Stivers et al., 2011). This study has focused on longer sequences of talk in which the epistemic positions that are taken either enable or constrain sensemaking. Furthermore, epistemic gradients have been applied to describe the dynamics of multiparty conversation when the typical applications to date have concerned dyadic conversations. This study has also applied the epistemic gradient (Heritage, 2012a,b) to reflect on of the speakers’ epistemic stances. When professionals are exchanging knowledge on complex issues, there is seldom one perfect answer. The balancing of epistemics then concerns the balancing of opinions and the need to find a somewhat collective, and hopefully collaborative, solution for a common problem. The interaction in the types of meetings presented in this study are essentially about the procedural balancing of epistemics, including factual knowledge as well as opinions.

The approach taken in this study adds to the general field of organizational communication where little attention has been paid to how communication is organized; the major areas of research have focused on the controlled organization of communication⁷.

The study strongly supports the view of Huttunen (2010) that problematic situations are necessary for enhancing organizational knowledge and support the learning of its members. To achieve this, the participants in meetings work out differences in understanding. The current study has drawn on the notion of epistemic authority as consequential in the problematic situations: collaborative learning is more likely to happen when opportunities for equal sharing of knowledge are encouraged.

This study also provides an enhancement to the previous studies on the practices of decision making. This study has demonstrated that it is not only through decisions but also through the more complex sensemaking processes that participants collaboratively shape the future of the organization. The study has formed a link between the micro processes of interaction with the more macro level intentions that the team has to make sense about the required decision.

⁷ Christianson & Cornelissen (2011) claim that actual communication practices have been ignored and research has focused on larger organizational events such as corporate strategy and top-down messaging.

Literature has typically treated sensemaking as an act of removing ambiguity on the macro level of organizational events. This study has taken a perspective that participants do not engage in sensemaking only when there is a conflict or disruption in understanding. They also expand on their mutual understanding about complex issues under discussion. The study of micro level interaction reveals this in the participants' efforts to achieve preference order and agreement through affiliation and alignment. The aim has not been to claim that agreement is always necessary. On the contrary: it is absolutely necessary to point out flaws in the organization, whether they concern the product or the process. However, the point has been to say that it matters for the organization sensemaking how you express it. It is important to construct and maintain good relations and construct their social relationships with their colleagues. This requires understanding of the different pragmatic force that various ways of expressing one's stance have on the fellow colleagues.

What can these findings offer for the technical professionals from the point of view of sensemaking? The findings of this study can be used for communication skills training, to enhance their awareness of making a difference through interaction. For the professionals, it is useful to understand that using language is not only a way to describe the events but to actually do things that have an effect on the course of actions. In this data, this means that the meeting discussion becomes a way of influencing and constructing the product design. It is therefore essential to enhance the engineers' skills at speaking up in meetings and build sensitivity to certain strategies used or available to them. By using this company-internal data it has been possible to show that a skilled use of general interactional resources is relevant regardless of the role or position in the company. General interactional practices and features of communicative competencies seem to apply despite the highly technical and context-specific nature of the topical matter.

Language as such is inherent to sensemaking, because language and concepts are required for a person to make sense of an event. Whether it takes place cognitively, in one person's head, or in interaction with others. It is through interaction that issues become explained in organizations. This also relates to the software solutions which are discussed in the AT team in more or less abstract terms before they become concrete software products through software development.

11.2 Limitations and future research

Although this study is solely grounded on interaction and CA is used as a research method, it must be admitted that "the truth of the interaction is never entirely contained in the interaction" (Bourdieu, 1977, p. 84; Maynard, 2003, p. 71). Being completely focused on words and utterances, and on what they mean, CA cannot easily describe such factors as emotions, motives, stress which can affect the participants' behavior or opinions in the meetings. Nor can it take a stand on power struggles that can be hidden from the surface level interaction. Fay & Moon (1994) point out that to know what someone said and what it means

is not to know why he or she said it. One of the methodological rules of CA is that the researcher should avoid attempts to see into people's minds. Such factors are most likely relevant in the acts of sensemaking as well. Being a practitioner as well as a researcher gave me a chance to realize such issues more easily although they weren't actively used for the analysis.

The analysis of the current data features a dichotomy between the strategies which pursue personal epistemic authority and those which pursue equal sharing of epistemic authority. It is clear that such strategies do not always fit cleanly into one type of category. Such interactional types as formulating, questioning and proposing do not fit into one or the other of the strategic categories. There is overlap, especially when the sequences of events that are described are quite long. This is what is described by Maynard (2003) as the pigeonhole problem. The approach taken here aligns with Garfinkel (1967): "instead of regarding these strategies as literal descriptions of complex modes of behavior and relationship, a better approach may be to regard them as contingent accomplishments developed in real time (Garfinkel, 1967, in Maynard, 2003, p. 64). Otherwise the strategies ... remain glosses and weak descriptions for the actual procedural orderliness of everyday life".

The systemic functional linguistic approach to exchange structures developed by Ventola (1987) addresses messages as actions or knowledge (Berry, 1981; Ventola, 1987) and would therefore suit well for demonstrating the multiple speech functions with different moods contained within the turns. This approach would enable a representation of the longer episodes as descriptive flowcharts (Martin, 1985, in Ventola 1987). However, CA was chosen for the purpose of this study as its analytic focus has advanced from the original adjacency pairs into multiunit turns, it was chosen for the purpose of this study.

The current body of research on meeting interaction has turned its lens towards multimodal activities, the ways in which nonverbal activities such as gaze, texts, images and other embodied actions become consequential local activities. For instance Markaki & Mondada (2012, p. 32) show how these nonverbal resources become an integral part of the actions taking place in meetings and by this way draw light on the importance of such "embodied activities". This study has considered these aspects sparingly although analysis would have been useful in explaining some of the longer monologues during which other participants remained verbally idle but may have expressed their level of participation through nonverbal activities. The participants were also often orienting to the PowerPoint slides and Word documents that were used as presentation material through nonverbal actions. This type of referencing would be an interesting aspect to study although the participants tended to forget about this material when they became immersed in exchanging opinions about some particular issue.

The latest literature on multimodal activities also demonstrates how the bodily orientation of the participants is largely defined - and constrained - by the physical aspects of the meeting room and the placement of the technical apparatus used (Asmuß & Oshima, 2012; Markaki & Mondada, 2012). As said, this kind of approach was not possible with the recording capacity at hand during

the collection the current data. However, there would definitely be a reason to extend this type of research from local multimodal resources to virtual meeting environments because, increasingly, professional meetings take place in virtual format over teleconference lines where no or limited video is available to the participants about the other participants. The challenges faced in such contexts would certainly deserve attention.

This study provides a view to only one type of reoccurring meeting between more or less the same participants, in the same organization. As Huisman (2001) states, all teams have different patterns of decision making, and the interpretation of what counts as a decision also varies from team to team. This study provides one additional view to the peculiarities of decision making through this specific team and organization. Furthermore, the analysis shows that similar negotiation primitives apply generally as in previous studies.

This data and analysis provides grounds for comparative study. It is likely that similar findings could be found in other similar types of settings with professionals. It is also likely that similar strategies are used in mundane situations: even among friends one would find resistance to unilateral decisions or defensive counterargument if someone was strongly challenging or even overriding another one's opinion. No doubt the need for sensemaking abounds everywhere.

One could question the validity of the data for the analysis as several years have passed since it was recorded and finally analyzed. However, although the type of meeting that was explored no longer exists in the exact same form, and the organization has changed, the types of interactional practices and needs have not changed. In fact the most fascinating part of this study has been the richness of the actual interaction afforded by the authentic data. It could be explored from a variety of perspectives, despite the time that has passed since its recording.

11.3 Concluding remarks

It is often claimed that meetings are useless if a decision has already been made and the meeting just becomes a formality to label such a decision as a collective one. However, based on this study it can be argued that it indeed makes sense to have meetings as a forum for professional discussions. The questions and responses, and the arguments which are expressed form the base for the emerging common understanding. It must be kept in mind, however, that common understanding does not necessarily imply common opinion, and not even the need for everyone to agree at all times. However, organizational solutions and decisions are usually so complex – and even ephemeral – that a single person's opinion or a single solution is seldom solid enough. Therefore it is important to find the ways in which one can find solutions and make decision which enable the functioning of the organization. Everyone does not always need to agree but finding ways through which one can maintain good relations and sense of solidarity in tightly knit groups is likely to enable more efficient functioning of the organization.

References

- Agar, M. (1985). Institutional discourse. *Text*, 5(3), 147-168.
- Andersen, N. (2003). The undecidability of decision. In T. Bakken, & T. Hernes (Eds.), *Autopoietic organization theory: Drawing on Niklas Luhmann's social system perspective* (pp. 31-52). Oslo, Norway: Copenhagen Business School.
- Angouri, J., & Bargiela-Chiappini, F. (2011). So what problems bother you and you are not speeding up your work?' problem solving talk at work. *Discourse & Communication*, 5(3), 209-229.
- Antaki, C. (1994). *Explaining and arguing : the social organization of accounts*. London: Sage.
- Antaki, C., & Widdicombe, S. (1998). Identity as an achievement and as a tool. In C. Antaki, & S. Widdicombe (Eds.), *Identities in talk* (pp. 1-14). London: Sage.
- Arminen, I. (2005). *Institutional interaction: Studies of talk at work*. Aldershot: Ashgate.
- Asmuß, B. (2007). What do people expect from public services? requests in public service encounters. *Journal of Language and Communication Studies*, 38, 65-83.
- Asmuß, B. (2011). Proposing shared knowledge as a means of pursuing agreement. In T. Stivers, L. Mondada & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 207-234). Cambridge: Cambridge University Press.
- Asmuß, B., & Oshima, S. (2012). Negotiation of entitlement in proposal sequences. *Discourse Studies*, 14(1), 67-86.
- Asmuß, B., & Svennevig, J. (2009). Meeting talk. an introduction. *Journal of Business Communication*, 46(1), 3-22.
- Atkinson, J. M. (1982). Understanding formality: The categorization and production of 'formal' interaction. *British Journal of Sociology*, 33(1), 86-117.
- Atkinson, J. M. (1992). Displaying neutrality: Formal aspects of informal court proceedings. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 199-211). Cambridge: Cambridge University Press.
- Atkinson, J. M., & Heritage, J. (Eds.). (1984a). *Structures of social action: Studies in conversation analysis*. Cambridge: Cambridge University Press.
- Atkinson, J. M., & Heritage, J. (1984b). Preference organization. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 53-56). Cambridge: Cambridge University Press.
- Atkinson, P. (1999). Medical discourse, evidentiality and the construction of professional responsibility. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 75-107). Berlin: Mouton de Gruyter.
- Baird, B. F. (1989). *Managerial decisions under uncertainty. an introduction to the analysis of decision making*. New York: John Wiley.

- Balogun, J., & Johnson, G. (2004). Organizational restructuring and middle manager sensemaking. *Academy of Management Journal*, 47(4), 523-549.
- Bargiela-Chiappini, F., & Harris, S. J. (1995). Towards the generic structure of meetings in British and Italian management meetings. *Text*, 15(4), 531-560.
- Bargiela-Chiappini, F., & Harris, S. J. (1996). Interruptive strategies in British and Italian management meetings. *Text*, 16(3), 269-297.
- Bargiela-Chiappini, F., & Harris, S. J. (1997a). *Managing language: The discourse of corporate meetings*. Amsterdam: John Benjamins Publishing Company.
- Bargiela-Chiappini, F., & Harris, S. J. (Eds.). (1997b). *The language of business: An international perspective*. Edinburgh: Edinburgh University Press.
- Barnes, R. (2007). Formulations and the facilitation of common agreement in meetings talk. *Text & Talk*, 27(3), 273-296.
- Bass, L., Clements, P., & Kazman, R. (1998). *Software architecture in practice*. Boston, MA: Addison-Wesley.
- Beach, L. R., & Connolly, T. (2005). *The psychology of decision making*. Thousand Oaks, CA: Sage.
- Beach, W. (1993). Transitional regularities for “Casual” okay usages. *Journal of Pragmatics*, 19(4), 325-352.
- Berger, P. L., & Luckman, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. Garden City, NY: Anchor Books.
- Berry, M. (1981). Systemic linguistics and discourse analysis: A multi-layered approach to exchange structure. In M. Coulthard, & M. Montgomery (Eds.), *Studies in discourse analysis* (pp. 120-145). London: Routledge.
- Billig, M. (1989). *Arguing and thinking. A rhetorical approach to social psychology*. Cambridge: Cambridge University Press.
- Boden, D. (1994). *The business of talk. organizations in action*. Cambridge: Cambridge University Press.
- Boden, D. (1995). Agendas and arrangements: Everyday negotiations and meetings. In A. Firth (Ed.), *The discourse of negotiation: Studies of language in the workplace* (pp. 83-99). Oxford: Pergamon.
- Boehm, B. (1995). Engineering context [for software architecture]. *Proceedings of the First International Workshop on Architecture for Software Systems*. Available as CMU-CS-TR-95-151 from the School of Computer Science, Carnegie Mellon University, April 1995, Seattle, WA.
- Bolander, P., & Sandberg, J. (2013). How employee selection decisions are made in practice. *Organization Studies* (01708406), 34(3), 285-311.
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge: Cambridge University Press.
- Boyce, M. E. (1995). Collective centring and collective sense-making in the stories and storytelling of one organization. *Organization Studies* (Walter De Gruyter GmbH & Co.KG.), 16(1), 107-137.
- Brey, P., & Søraker, J. H. (2009). Philosophy of computing and information technology. In A. Meijers (Ed.), *Philosophy of technology and engineering sciences* (pp. 1341-1407). Amsterdam: Elsevier.
- Brockriede, W. (1974). Rhetorical criticism as argument. *Quarterly Journal of Speech*, 60, 165-174.
- Brown, P., & Levinson, S. C. (1987). *Politeness. some universals in language usage*. Cambridge: Cambridge University Press.

- Brown, A. D. (2000). Making sense of inquiry sensemaking. *Journal of Management Studies*, 37(1), 45-75.
- Brown, A. D., Colville, I., & Pye, A. (2015). Making sense of sensemaking in organization studies. *Organization Studies* (01708406), 36(2), 265-277.
- Brown, A. D., & Humphreys, M. (2003). Epic and tragic tales: Making sense of change. *The Journal of Applied Behavioral Science*, 39(2), 121.
- Bucciarelli, L. L. (2003). *Engineering philosophy*. Delft, The Netherlands: DUP Satellite.
- Charles, C., Gafni, A., & Whelan, T. (1997). Shared decision-making in the medical encounter: What does it mean? (or it takes at least two to tango). *Social Science & Medicine*, 44(5), 681-692.
- Choo, C. W. (1998). *The knowing organization : how organizations use information to construct meaning, create knowledge, and make decisions*. New York: Oxford University Press.
- Clayman, S. E., & Heritage, J. (2002a). *The news interview: Journalists and public figures on the air*. Cambridge: Cambridge University Press.
- Clayman, S. E., & Heritage, J. (2002b). Questioning presidents: Journalistic deference and adversarialness in the press conferences of eisenhower and reagan. *Journal of Communication*, 52(4), 749-777.
- Clegg, S., Carter, C., & Kornberger, M. (2004). 'Get up, I feel like being a strategy machine'. *European Management Review*, 1, 21-28.
- Clift, R. (2006). Indexing stance: Reported speech as an interactional evidential. *Journal of Sociolinguistics*, 10(5), 569-595.
- Clifton, J. (2006a). A conversation analytical approach to business communication: The case of leadership. *Journal of Business Communication*, 43(3), 202-219.
- Clifton, J. (2006b). Going with the flow: Predicting and aligning with the group consensus in business meeting. *Lodz Papers in Pragmatics*, 2(1), 33-51.
- Clifton, J. (2009). Beyond taxonomies of influence: "Doing" influence and making decisions in management team meetings. *Journal of Business Communication*, 46(1), 57-79.
- Clifton, J. (2012). A discursive approach to leadership: Doing assessments and managing organizational meanings. *Journal of Business Communication*, 49(2), 148-168.
- Cohen, M. D., March, J. G., & Olsen, J. P. (1972). A garbage can model of organizational choice. *Administrative Science Quarterly*, 17(1), 1-25.
- Colville, I., Brown, A. D., & Pye, A. (2012). Simplicity: Sensemaking, organizing and storytelling for our time. *Human Relations*, 65(1), 5-15.
- Cook-Gumperz, J., & Messerman, L. (1999). Local identities and institutional practices: Constructing the record of professional collaboration. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 145-181). Berlin: Mouton de Gruyter.
- Cooren, F. (2004). The communicative achievement of collective minding: Analysis of board meeting excerpts. *Management Communication Quarterly*, 17(4), 517-551.
- Cooren, F. (2006). Arguments for the in-depth study of organizational interaction. A rejoinder to McPhee, Myers, and Trethewey. *Management Communication Quarterly*, 19(3), 327-340.

- Cooren, F. (2007). Strategies of decision making: Competencies and coherences. In F. Cooren (Ed.), *Interacting and organizing: Analyses of a management meeting* (pp. 127-132). Mahwah, NJ: Lawrence Erlbaum.
- Corley, K. G., & Gioia, D. A. (2004). Identity ambiguity and change in the wake of a corporate spin-off. *Administrative Science Quarterly*, 49(2), 173-208.
- Cornelissen, J. P. (2012). Sensemaking under pressure: The influence of professional roles and social accountability on the creation of sense. *Organization Science*, 23(1), 118-137.
- Coulter, J. (1990a). Elementary properties of argument sequences. In G. Psathas (Ed.), *Interaction competence* (pp. 181-203). Washington DC: University Press of America.
- Couper-Kuhlen, E., & Selting, M. (2001). Introducing interactional linguistics. In E. Couper-Kuhlen, & M. Selting (Eds.), *Studies in interactional linguistics* (pp. 1-22). Amsterdam/Philadelphia: John Benjamins.
- Cunliffe, A. L. (2001). Managers as practical authors: Reconstructing our understanding of management practice. *Journal of Management Studies*, 38(3), 351-371.
- Dant, T., & Francis, D. (1998). Planning in organisations: Rational control or contingent activity? [<http://www.socresonline.org.uk/3/2/4.html>] *Sociological Research Online*, 3(2) Retrieved from <http://www.socresonline.org.uk/3/2/4.html>
- Drew, P. (1991). Asymmetries in knowledge in conversational interaction. In I. Marková, & K. Foppa (Eds.), *Asymmetries in dialogue* (pp. 29-48). Hemel Hempstead, UK: Harvester Wheatsheaf.
- Drew, P. (1992). Contested evidence in cross-examination: The case of a trial for rape. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 470-520). Cambridge, U.K.: Cambridge University Press.
- Drew, P. (1998). Complaints about transgression and misconduct. *Research on Language and Social Interaction*, 31(3 & 4), 295-325.
- Drew, P. (2012). What drives sequences? *Research on Language & Social Interaction*, 45(1), 61-68.
- Drew, P., & Heritage, J. (1992). Analyzing talk at work: An introduction. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 3-65). Cambridge, U.K.: Cambridge University Press.
- Drew, P., & Holt, E. (1989). Complainable matters: The use of idiomatic expressions in making complaints. *Social Problems*, 35, 398-417.
- Drew, P., & Sorjonen, M. (1997). Institutional dialogue. In T. A. van Dijk (Ed.), *Discourse as social interaction: Discourse studies 2-A multidisciplinary introduction* (pp. 92-118). London: Sage.
- Edwards, D. (2007). Introduction. *Research on Language and Social Interaction*, 40(1), 1-7.
- Edwards, D., & Mercer, N. (1989). Reconstructing context: The conventionalization of classroom knowledge. *Discourse Processes*, 12(1), 91-104.
- Edwards, D., & Potter, J. (2005). Discursive psychology. mental states and descriptions. In H. te Molder, & J. Potter (Eds.), *Conversation and cognition* (pp. 241-259). Cambridge: Cambridge University Press.
- Ekström, M., & Kroon Lundell, Å. (2011). The joint construction of a journalistic expert identity in studio interactions between journalists on TV news. *Text & Talk*, 31(6), 661-681.

- Enfield, N. J. (2011). Sources of asymmetry in human interaction: Enchrony, status, knowledge and agency. In T. Stivers, L. Mondada & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 285-312). Cambridge: Cambridge University Press.
- Fairhurst, G. T. (2007). *Discursive leadership: In conversation with leadership psychology*. Thousand Oaks, CA: Sage.
- Fairhurst, G. T., & Putnam, L. L. (2004). Organizations as discursive constructions. *Communication Theory*, 14(1), 5-26.
- Farkas, K. R. (2013). Power and access in the public hearings of city council meetings. *Discourse and Society*, 24(4), 399-420.
- Fay, B., & Moon, J. D. (1994). What would an adequate philosophy of science look like? In M. Martin, & L. C. McIntyre (Eds.), *Readings in the philosophy of social science* (pp. 21-35). Cambridge: MIT Press.
- Fisher, B. A. (1974). *Small group decision making : communication and the group process*. New York: McGraw Hill.
- Ford, C. E. (2008). *Women speaking up : getting and using turns in workplace meetings*. Basingstoke: Palgrave Macmillan.
- Frankel, R. M. (1989). Microanalysis and the medical encounter. In D. T. Helm, W. T. Anderson, A. J. Meehan & A. W. Rawls (Eds.), *The interactional order: New directions in the study of social order* (pp. 21-49). New York: Irvington.
- Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, NJ: Prentice Hall.
- Garfinkel, H., & Sacks, H. (1970). On formal structures of practical actions. In J. C. McKinney, & E. A. Tiryakian (Eds.), *Theoretical sociology* (pp. 337-366). New York: Appleton-Century-Crofts.
- Gephart, R. P. (1993). The textual approach: Risk and blame in disaster sensemaking. *Academy of Management Journal*, 36(6), 1465-1514.
- Gephart, R. P., Topal, C., & Zhang, Z. (2010). Future-oriented sensemaking: Temporalities and institutional legitimation. In T. Hernes, & S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 275-312). Oxford: Oxford University Press.
- Giddens, A. (1984). *The constitution of society. outline of the theory of structuration*. Cambridge: Polity Press.
- Gioia, D. A., & Chittipeddi, K. (1991). Sensemaking and sensegiving in strategic change initiation. *Strategic Management Journal*, 12(6), 433-448.
- Gioia, D. A., Corley, K. G., & Fabbri, T. (2002). Revising the past (while thinking in the future perfect tense). *Journal of Organizational Change Management*, 15(6), 622-634.
- Gioia, D. A., & Thomas, J. B. (1996). Identity, image, and issue interpretation: Sensemaking during strategic change in academia. *Administrative Science Quarterly*, 41(3), 370-403.
- Gioia, D. A., Thomas, J. B., Clark, S. M., & Chittipeddi, K. (1994). Symbolism and strategic change in academia: The dynamics of sensemaking and influence. *Organization Science*, 5(3), 363-383.
- Goffman, E. (1955/1972). On face-work: An analysis of ritual elements in social interaction. (reprinted in J. Laver & S. Hutcheson (eds.), *communication in face-to-face interaction* (pp. 319-326). Penguin Books. *Psychiatry*, 18, 213-231.
- Goffman, E. (1959). *The presentation of self in everyday life*. New York: Doubleday Anchor Books.

- Goffman, E. (1967). *Interaction ritual: Essays in face-to-face behavior*. Chicago, IL: Aldine.
- Goffman, E. (1971). *Relations in public: Microstudies of the public order*. New York: Harper and Row.
- Goffman, E. (1974). *Frame analysis: An essay on the organization of experience*. New York: Harper and Row.
- Goffman, E. (1979). Footing. *Semiotica*, 25(1), 1-29.
- Goffman, E. (1981). *Forms of talk*. Oxford: Blackwell.
- Goodwin, C. (1981). *Conversational organization. interaction between speakers and hearers*. New York: Academic Press.
- Goodwin, C. (1987). Forgetfulness as an interactive resource. *Social Psychology Quarterly*, 50(2, Special Issue: Language and Social Interaction), pp. 115-130.
- Greatbatch, D. (1992). On the management of disagreement in news interviews. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 268-301). Cambridge: Cambridge University Press.
- Hall, C., Sarangi, S., & Slembrouck, S. (1999). The legitimation of the client and the profession: Identities and roles in social work discourse. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 293-322). Berlin: Mouton de Gruyter.
- Hammersley, M. (1987). Some notes on the terms "Validity" and "Reliability". *British Educational Research Journal*, 13(1), 73-81.
- Hammersley, M. (1992). *What's wrong with ethnography? methodological exploration*. London: Routledge.
- Hardy, C., Lawrence, T. B., & Grant, D. (2005). Discourse and collaboration: The role of conversations and collective identity. *Academy of Management Review*, 30(1), 58-77.
- Hatch, M. J. (1999). Exploring the empty spaces of organizing: How improvisational jazz helps redescribe organizational structure. *Organization Studies (Walter De Gruyter GmbH & Co.KG.)*, 20(1), 75-100.
- Heath, C. (1992). The delivery and reception of diagnosis in the general practice consultation. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 235-267). Cambridge, U.K.: Cambridge University Press.
- Helms Mills, J. (2003). *Making sense of organizational change*. London: Routledge.
- Hendry, J., & Seidl, D. (2003). The structure and significance of strategic episodes: Social systems theory and the routine practices of strategic change. *Journal of Management Studies*, 40(1), 175-196.
- Heritage, J. (1984a). *Garfinkel and ethnomethodology*. Cambridge: Polity Press.
- Heritage, J. (1984b). A change of state token and aspects of its sequential placement. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 299-345). Cambridge: Cambridge University Press.
- Heritage, J. (1985). Analyzing news interviews: Aspects of the production of talk for an overhearing audience. In T. A. van Dijk (Ed.), *Handbook of discourse analysis, volume 3* (pp. 95-119). New York: Academic Press.
- Heritage, J. (1987). Ethnomethodology. In A. Giddens, & J. Turner (Eds.), *Social theory today* (pp. 224-272). Cambridge: Polity Press.

- Heritage, J. (1995). Conversation analysis: Methodological aspects. In U. M. Quastoff (Ed.), *Aspects of oral communication* (pp. 391-418). Berlin / New York: Walter de Gruyter.
- Heritage, J. (1997). Conversation analysis and institutional talk. In D. Silverman (Ed.), *Qualitative research: Theory, method and practice* (pp. 161-182). London: Sage.
- Heritage, J. (1998). Oh-prefaced responses to inquiry. *Language in Society*, 27, 291-334.
- Heritage, J. (2002b). Designing questions and setting agendas in the news interview. In P. J. Glenn, C. D. LeBaron & J. Mandelbaum (Eds.), *Studies in language and social interaction* (pp. 57-90). Mahwah NJ: Lawrence Erlbaum.
- Heritage, J. (2002c). Oh-prefaced responses to assessments: A method of modifying Agreement/Disagreement. In C. E. Ford, B. A. Fox & S. A. Thompson (Eds.), *The language of turn and sequence* (pp. 196-224). New York: Oxford University Press.
- Heritage, J. (2004). Conversation analysis and institutional talk. In K. L. Fitch, & R. E. Sanders (Eds.), *Handbook of language and social interaction* (pp. 103-146). London and New Jersey: Lawrence Erlbaum.
- Heritage, J. (2005a). Cognition in discourse. In H. te Molder, & J. Potter (Eds.), *Conversation and cognition* (pp. 184-202). Cambridge: Cambridge University Press.
- Heritage, J. (2012a). Epistemics in action: Action formation and territories of knowledge. *Research on Language and Social Interaction*, 45(1), 1-29.
- Heritage, J. (2012b). The epistemic engine: Sequence organization and territories of knowledge. *Research on Language and Social Interaction*, 45(1), 30-52.
- Heritage, J. (2013). Language and social institutions: The conversation analytic view. *Journal of Foreign Languages*, 36(4), 2-27.
- Heritage, J., & Clayman, S. E. (2010). *Talk in action: Interaction, identities and institutions*. Malden, MA: Wiley-Blackwell.
- Heritage, J., & Greatbatch, D. (1991). On the institutional character of institutional talk: The case of news interviews. In D. Boden, & D. H. Zimmerman (Eds.), *Talk and social structure: Studies in ethnomethodology* (pp. 93-137). Cambridge: Polity Press.
- Heritage, J., & Raymond, G. (2005). The terms of agreement: Indexing epistemic authority and subordination in assessment sequences. *Social Psychology Quarterly*, 68(1), 15-38.
- Heritage, J., & Raymond, G. (2012). Navigating epistemic landscapes: Acquiescence, agency and resistance in responses to polar questions. In J. de Ruiter (Ed.), *Questions: Formal, functional and interactional perspectives* (pp. 179-192). Cambridge: Cambridge University Press.
- Heritage, J., & Sefi, S. (1992). Dilemmas of advice: Aspects of the delivery and reception of advice in interaction between health visitors and first-time mothers. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 331-358). Cambridge: Cambridge University Press.
- Heritage, J., & Watson, R. (1979). Formulations as conversational objects. In G. Psathas (Ed.), *Everyday language: Studies in ethnomethodology* (pp. 123-162). New York: Irvington.

- Hernes, T., & Maitlis, S. (2010). Process, sensemaking, and organizing: An introduction. In T. Hernes, & S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 27-37). Oxford: Oxford University Press.
- Hill, R. C., & Levenhagen, M. (1995). Metaphors and mental models: Sense-making and sensegiving in innovative and entrepreneurial activities. *Journal of Management*, 21(6), 1057-1074.
- Hindmarsh, J., & Pilnick, A. (2007). Knowing bodies at work: Embodiment and ephemeral teamwork in anaesthesia. *Organization Studies* (01708406), 28(9), 1395-1416.
- Holmes, J. (2006). Sharing a laugh: Pragmatic aspects of humor and gender in the workplace. *Journal of Pragmatics*, 38(1), 26-50.
- Holmes, J., & Stubbe, M. (2003). *Power and politeness in the workplace: A sociolinguistic analysis of talk at work*. London: Prentice Hall.
- Holmes, J., Stubbe, M., & Vine, B. (1999). Constructing professional identity: "doing power" in policy units. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 351-385). Berlin: Mouton de Gruyter.
- Holt, R., & Cornelissen, J. P. (2014). Sensemaking revisited. *Management Learning*, 45(5), 525-539.
- Hopkinson, G. C. (2001). Influence in marketing channels: A sense-making investigation. *Psychology & Marketing*, 18(5), 423-444.
- Houtkoop, H. (1987). *Establishing agreement : an analysis of proposal-acceptance sequences*. Dordrecht: Foris.
- Huber, G. P., & Daft, R. L. (1987). The information environments of organizations. In F. M. Jablin, L. L. Putnam, K. H. Roberts & L. W. Porter (Eds.), *Handbook of organizational communication* (pp. 130-164). Beverly Hills, CA: Sage.
- Huisman, M. (2001). Decision-making in meetings as talk-in-interaction. *International Studies of Management & Organisation*, 31(3), 69-90.
- Hutchby, I., & Wooffitt, R. (1998). *Conversation analysis: Principles, practices and applications*. Oxford: Polity Press.
- Hutchins, E. L. (cop. 1995). *Cognition in the wild*. Cambridge (Mass.): MIT Press.
- Hutchins, E. L., & Klausen, T. (1996). Distributed cognition in airline cockpit. In Y. Engeström, & D. Middleton (Eds.), *Cognition and communication at work* (pp. 15-34). Cambridge: Cambridge University Press.
- Huttunen, S. (2010). *Problematic talk. the role of multiple understandings in project meetings* (PhD Thesis). Helsinki: Aalto University, School of Economics.
- Ijäs-Kallio, T. (2011). *Patient participation in decision making process in primary care: A conversation analytic study* (PhD Thesis). Tampere: Tampere University Press.
- Jabs, L. B. (2005). Communicative rules and organizational decision making. *Journal of Business Communication*, 42(3), 265-288.
- Jacoby, S., & Ochs, E. (1995). Co-construction: An introduction. *Research on Language and Social Interaction*, 28(3), 171-183.
- Jefferson, G. (1984a). Notes on a systematic deployment of the acknowledgement tokens "Yeah" and "Mm hm". *Papers in Linguistics*, 17, 197-206.
- Jefferson, G. (1984b). On stepwise transition from talk about a trouble to inappropriately next-positioned matters. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action* (pp. 191-221). Cambridge: Cambridge University Press.

- Jefferson, G. (2004). Glossary of transcript symbols with an introduction. In G. H. Lerner (Ed.), *Conversation analysis: Studies from the first generation* (pp. 13-32). Philadelphia: John Benjamins.
- Johns, G. (2001). In praise of context. *Journal of Organizational Behavior*, 22(1), 31-42.
- Kangasharju, H. (2001). Keskustelunalyysi kokousten ja neuvottelujan tutkimuksessa [Conversation analysis in the study of meetings and negotiations]. In M. Halonen, & S. Routarinne (Eds.), *Keskustelunalyysin näkymiä* (pp. 185-207). Helsinki: Helsingin yliopiston suomen kielen laitos [University of Helsinki, Department of Finnish].
- Kangasharju, H. (2002). Alignment in disagreement: Forming oppositional alliances in committee meetings. *Journal of Pragmatics*, 34(10-11), 1447-1471.
- Kangasharju, H. (2004). Monenlaista vuorovaikutusta. suomalaiset ja ruotsalaiset kohtaavat kokouspöydässä. In O. Kangas, & H. Kangasharju (Eds.), *Sanojen valta ja vallan sanat (unpublished)* (). Helsinki: Suomalaisen Kirjallisuuden Seura (SKS).
- Kangasharju, H. (2007). Interaktion och inflytande. finnländare och svenskar vid mötesbordet. In O. Kangas, & H. Kangasharju (Eds.), *Ordens makt och maktens ord* (pp. 341-377). Helsinki: Svenska Litteratursällskapet i Finland.
- Kangasharju, H. (2009). Preference for disagreement? A comparison of three disputes. In M. Haakana, M. Laakso & J. Lindström (Eds.), *Talk in interaction: Comparative dimensions* (pp. 231-253). Helsinki: Finnish Literature Society.
- Kangasharju, H., & Nikko, T. (2009). Emotions in organizations: Joint laughter in workplace meetings. *Journal of Business Communication*, 46(1), 100-119.
- Kaplan, S. (2008). Framing contests: Strategy making under uncertainty. *Organization Science*, 19(5), 729-752,802.
- Kärkkäinen, E. (2003). *Epistemic stance in English conversation: A description of its interactional function, with a focus on I think*. Amsterdam: John Benjamins.
- Kärkkäinen, E. (2006). Stance taking in conversation: From subjectivity to intersubjectivity. *Text & Talk*, 26(6), 699-731.
- Kärreman, D., & Alvesson, M. (2001). Making newsmakers: Conversational identity at work. *Organization Studies (Walter De Gruyter GmbH & Co.KG.)*, 22(1), 59.
- Keisanen, T. (2006). *Patterns of stance taking : Negative yes/no interrogatives and tag questions in american english conversation*. Oulu: University of Oulu.
- Keisanen, T. (2007). Stancetaking as an interactional activity. In R. Englebretson (Ed.), *Stancetaking in discourse: Subjectivity, evaluation, interaction* (pp. 253-281). Amsterdam: John Benjamins.
- Knorr Cetina, K. (1999). *Epistemic cultures: How the sciences make knowledge*. Cambridge, MA: Harvard University Press.
- Komter, M. (1991). *Conflict and cooperation in job interviews*. Amsterdam/Philadelphia: John Benjamins.
- Koshik, I. (2003). Wh-questions used as challenges. *Discourse Studies*, 5(1), 51-77.

- Koshik, I. (2005). *Beyond rhetorical questions: Assertive question in everyday interaction*. Amsterdam: John Benjamins.
- Koskinen, I. (1999). *Managerial evaluations at the workplace: Ethnographically situated conversation analytic study of evaluations in a research institute*. Helsinki: Hakapaino.
- Kotthoff, H. (1993). Disagreement and concession in disputes: On the context sensitivity of preference structures. *Language in Society*, 22(02), 193-216.
- Kroes, P., Franssen, M., & Bucciarelli, L. L. (2009). Rationality in design. In A. Meijers (Ed.), *Philosophy of technology and engineering sciences* (pp. 565-600). Amsterdam: Elsevier.
- Kuhn, T. (2009). Positioning lawyers: Discursive resources, professional ethics and identification. *Organization*, 16(5), 681-704.
- Kwon, W., Clarke, I., & Wodak, R. (2009). Organizational decision-making, discourse, and power: Integrating across contexts and scales. *Discourse & Communication*, 3(3), 273-302.
- Kwon, W., Clarke, I., & Wodak, R. (2014). Micro-level discursive strategies for constructing shared views around strategic issues in team meetings. *Journal of Management Studies*, 51(2), 265-290.
- Labov, W., & Fanshel, D. (1977). *Therapeutic discourse: Psychotherapy as conversation*. New York: Academic Press.
- Latour, B. (1987). *Science in action : how to follow scientists and engineers through society*. Milton Keynes: Open University Press.
- Lerner, G. H. (1993). Collectivities in action: Establishing the relevance of conjoined participation in conversation. *Text*, 13(2), 213-246.
- Lerner, G. H. (2002). Turn-sharing: The choral co-production of talk-in-interaction. In C. E. Ford, B. A. Fox & S. A. Thompson (Eds.), *The language of turn and sequence* (pp. 225-256). New York: Oxford University Press.
- Levinson, S. C. (1983). *Pragmatics*. Cambridge: Cambridge University Press.
- Levinson, S. C. (1992). Activity types and language. In P. Drew, & J. Heritage (Eds.), *Talk at work: Interaction in institutional settings* (pp. 66-100). Cambridge: Cambridge University Press.
- Lindholm, C. (2003). *Frågor I praktiken: Flerledade frågeturer I läkare-patientsamtal*. Helsinki, Finland: Svenska litteratursällskapet i Finland.
- Liu, F., & Maitlis, S. (2014). Emotional dynamics and strategizing processes: A study of strategic conversations in top team meetings. *Journal of Management Studies*, 51(2), 202-234.
- Llewellyn, N. (2005). Audience participation in political discourse: A study of public meetings. *Sociology*, 39(4), 697-716.
- Llewellyn, N., & Spence, L. (2009). Practice as a member's phenomenon. *Organization Studies*, 30(12), 1419-1439.
- Louhiala-Salminen, L., & Kankaanranta, A. (2011). Professional communication in a global business context: The notion of global communicative competence. *IEEE Transactions on Professional Communication*, 54(3), 244-262.
- Luhmann, N. (1990). Anfang und ende: Probleme einer unterscheidung. In N. Luhmann, & K. Schorr (Eds.), *Zwischen anfang und ende: Fragen an die pddagogik* (pp. 11-23). Frankfurt am Main: Stihrkam.
- Liotard, J. (1985). *The postmodern condition : A report on knowledge* (3. pr. ed.). Minneapolis, Minn: University of Minnesota Press.
- Maier, G. W., Prange, C., & von Rosenstiel, L. (2001). Psychological perspectives of organizational learning. In M. Dierkes, A. Berthoin-Antal, J. Child

- & I. Nonaka (Eds.), *Handbook of organizational learning and knowledge* (pp. 14-34). Oxford: Oxford University Press.
- Maitlis, S. (2005). The social processes of organizational sensemaking. *Academy of Management Journal*, 48(1), 21-49.
- Maitlis, S., & Christianson, M. (2014). Sensemaking in organizations: *The Academy of Management Annals*, , 57-125.
- Maitlis, S., & Lawrence, T. B. (2007). Triggers and enablers of sensegiving in organizations. *Academy of Management Journal*, 50(1), 57-84.
- Maitlis, S., & Sonenshein, S. (2010). Sensemaking in crisis and change: Inspiration and insights from weick (1988). *Journal of Management Studies*, 47(3), 551-580.
- Maitlis, S., Vogus, T. J., & Lawrence, T. B. (2013). Sensemaking and emotion in organizations. *Organizational Psychology Review*, 3(3), 222-247.
- March, J. G. (1984). How we talk and how we act: Administrative theory and administrative life. In T. J. Sergiovanni, & J. E. Corbolly (Eds.), *Leadership and organizational culture* (pp. 18-35). Urbana, IL: University of Illinois Press.
- March, J. G. (1988). *Decisions and organizations*. Oxford: Blackwell.
- March, J. G. (1997). Understanding how decisions happen in organizations. In Z. Shapira (Ed.), *Organizational decision making* (pp. 9-32). Cambridge: Cambridge University Press.
- March, J. G., & Olsen, J. P. (1976). *Ambiguity and choice in organizations*. Bergen: Universitetsforlaget.
- Markaki, V., & Mondada, L. (2012). Embodied orientations towards co-participants in multinational meetings. *Discourse Studies*, 14(1), 31-52.
- Martin, J. R. (1985). *Factual writing : Exploring and challenging social reality*. Victoria: Deakin University.
- Maynard, D. W. (1984). *Inside plea bargaining : the language of negotiation*. New York (N.Y.): Plenum.
- Maynard, D. W. (2003). *Bad news, good news: Conversational order in everyday talk and clinical settings*. Chicago: Chicago University Press.
- Maynard, D. W., & Clayman, S. E. (2003). Ethnomethodology and conversation analysis. In L. T. Reynolds, & N. J. Herman-Kinney (Eds.), *The handbook of symbolic interactionism* (pp. 173-202). Walnut Creek, CA: Altamira Press.
- McHoul, A. (1978). The organization of turns at formal talk in the classroom. *Language in Society*, (7), 183-213.
- McHoul, A. (1990). The organization of repair in classroom talk. *Language in Society*, 19, 349-377.
- McLaughlin, M. J. (1984). *Conversation: How talk is organized*. Beverly hills, CA: Sage.
- McPhee, R. D., Myers, K. K., & Trethewey, A. (2006). On collective mind and conversational analysis: Response to cooren. *Management Communication Quarterly*, 19(3), 311-326.
- McPhee, R. D., & Zaig, P. (2000). The communicative constitution of organizations: A framework for explanation. *The Electronic Journal of Communication*, 10
- Mills, J. H. (2003). *Making sense of organizational change*. London: Routledge.
- Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper and Row.

- Mintzberg, H., Raisinghani, D., & Théorêt, A. (1976). The structure of "unstructured" decision processes. *Administrative Science Quarterly*, 21(2), 46-75.
- Mintzberg, H., & Waters, J. (1990). Does decision get in the way? *Organization Studies*, 11(1), 1-6.
- Moisander, J., & Valtonen, A. (2006). *Qualitative marketing research: A cultural approach*. London: Sage.
- Mondada, L. (2011). The management of knowledge discrepancies and of epistemic changes in institutional interactions. In T. Stivers, L. Mondada & J. Steensig (Eds.), *The morality of knowledge in conversation* (pp. 27-57). Cambridge: Cambridge University Press.
- Mulkay, M. (1991). *Sociology of science: A sociological pilgrimage*. Milton Keynes: Open University Press.
- Mumby, D. K. (1988). *Communication and power in organisations: Discourse, ideology and domination*. Norwood, NJ: Ablex.
- Nassehi, A. (2005). Organizations as decision machines: Niklas Luhmann's theory of organized social systems. *The Sociological Review*, 53, 178-191.
- Nikko, T. (2009). *Dialogic construction of understanding in cross-border corporate meetings* (PhD Thesis). Helsinki: Helsinki School of Economics.
- Ocasio, W. (2011). Attention to attention. *Organization Science*, 22(5), 1286-1296.
- Ochs, E. (1979). Transcription as theory. In E. Ochs, & B. Schieffelin (Eds.), *Developmental pragmatics* (pp. 43-72). New York: Academic Press.
- O'Leary, M., & Chia, R. (2007). Epistemes and structures of sensemaking in organizational life. *Journal of Management Inquiry*, 16(4), 392-406.
- Patriotta, G., & Brown, A. D. (2011). Sensemaking, metaphors and performance evaluation. *Scandinavian Journal of Management*, 27(1), 34-43.
- Patriotta, G., & Spedale, S. (2009). Making sense through face: Identity and social interaction in a consultancy task force. *Organization Studies* (01708406), 30(11), 1227-1248.
- Peräkylä, A. (2002). Agency and authority: Extended responses to diagnostic statements in primary care encounters. *Research on Language and Social Interaction*, 35(2), 219-247.
- Pfeffer, J. (1981). *Power in organizations*. Marshfield, MA: Pitman.
- Polanyi, M. (1967). Sense-giving and sense-reading. *Philosophy*, 42(162), 301-325.
- Pomerantz, A. M. (1980). Telling my side: "Limited access" as a "Fishing" device. *Sociological Inquiry*, 50(3/4), 186-198.
- Pomerantz, A. M. (1984a). Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action* (pp. 57-101). Cambridge: Cambridge University Press.
- Pomerantz, A. M. (1984b). Pursuing a response. In J. M. Atkinson, & J. Heritage (Eds.), *Structures of social action: Studies in conversation analysis* (pp. 152-163). Cambridge: Cambridge University Press.
- Pomerantz, A. M. (1984c). Giving a source or basis: The practice in conversation of telling 'What I know'. *Journal of Pragmatics*, 8(5/6), 607-625.
- Pomerantz, A. M. (1986). Extreme case formulations: A way of legitimizing claims. *Human Studies*, 9(2/3), 219-229.

- Pomerantz, A. M. (2005). Using participants' video stimulated comments to complement analyses of interactional practices. In H. te Molder, & J. Potter (Eds.), *Conversation and cognition* (pp. 93-113). Cambridge: Cambridge University Press.
- Pomerantz, A. M., & Denvir, P. (2007). Enacting the institutional role of chairperson in upper management meetings: The interactional realization of provisional authority. In F. Cooren (Ed.), *Interacting and organizing: Analyses of a management meeting* (pp. 31-51). Mahwah, NJ: Lawrence Erlbaum.
- Pomerantz, A. M., & Fehr, B. J. (1997). Conversation analysis: An approach to the study of social action as sense making practices. In T. A. van Dijk (Ed.), *Discourse studies: A multidisciplinary introduction, vol. 2, discourse as social interaction* (pp. 64-91). London: Sage.
- Poncini, G. (2004). *Discursive strategies in multicultural business meetings*. New York: Peter Lang Publishing.
- Potter, J. (1996). *Representing reality : discourse, rhetoric and social construction*. London: Sage.
- Potter, J., & Wetherell, M. (1987). Discourse analysis. In J. S. Smith, R. Harré & L. Van Langenhove (Eds.), *Rethinking methods in psychology* (pp. 80-92). London and Thousand Oaks, CA: Sage.
- Pratt, M. G., Rockmann, K. W., & Kaufmann, J. B. (2006). Constructing professional identity: The role of work and identity learning cycles in the customization of identity among medical residents. *The Academy of Management Journal*, 49(2), 235-262.
- Putnam, L. L. (2007). Contradictions in the meta-talk about feelings in "After mr. sam". In F. Cooren (Ed.), *Interacting and organizing: Analyses of a management meeting* (pp. 95-111). Mahwah, NJ: Lawrence Erlbaum.
- Putnam, L. L., & Fairhurst, G. T. (2001). Discourse analysis in organizations. In F. M. Jablin, & L. L. Putnam (Eds.), *The new handbook of organizational communication : Advances in theory, research, and methods* (pp. 78-136). Thousand Oaks, CA: Sage.
- Raymond, G., & Heritage, J. (2006). The epistemics of social relations: Owning grandchildren. *Language in Society*, 35(5), 677-705.
- Robichaud, D., Giroux, H., & Taylor, J. R. (2004). The metaconversation: The recursive property of language as a key to organizing. *Academy of Management Review*, 29(4), 617-634.
- Rouleau, L. (2005). Micro-practices of strategic sensemaking and sensegiving: How middle managers interpret and sell change every day*. *Journal of Management Studies*, 42(7), 1413-1441.
- Rovio-Johansson, A. (2007). Post-acquisition integration: Ways of sensemaking in a management team meeting. *Qualitative Research in Organizations and Management. An International Journal*, 2(1), 4-22.
- Sacks, H. (1972/1986). On the analyzability of stories by children. In J. J. Gumperz, & D. Hymes (Eds.), *Directions in sociolinguistics: The ethnography of communication* (pp. 325-345). New York: Holt, Rinehart and Winston.
- Sacks, H. (1973). The preference for agreement in natural conversation. paper Presented at the Linguistic institute. Ann Arbor, Mich.
- Sacks, H. (1992a). In Jefferson G. (Ed.), *Lectures on conversation, volume I*. Oxford: Blackwell.
- Sacks, H. (1992b). In Jefferson G. (Ed.), *Lectures on conversation, volume II*. Oxford: Blackwell.

- Sacks, H., Schegloff, E. A., & Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language*, 50(4), 696-735.
- Samra-Fredericks, D. (2003). Strategizing as lived experience and strategists' everyday efforts to shape strategic direction. *Journal of Management Studies*, 40(1), 141-174.
- Samra-Fredericks, D. (2005). Strategic practice: 'Discourse' and the everyday interactional constitution of 'Power effects'. *Organization*, 12(6), 803-841.
- Samra-Fredericks, D., & Bargiela-Chiappini, F. (2008). Introduction to the symposium on the foundations of organizing: The contribution from garfinkel, Goffman and Sacks. *Organization Studies*, 29(5), 653-675.
- Sandberg, J., & Tsoukas, H. (2015). Making sense of the sensemaking perspective: Its constituents, limitations, and opportunities for further development. *Journal of Organizational Behavior*, 36, S6-S32.
- Sanders, R. E. (2007). The effect of interactional competence on group problem solving. In F. Cooren (Ed.), *Interacting and organizing: Analyses of a management meeting* (pp. 163-183). Mahwah, NJ: Lawrence Erlbaum Associates.
- Sarangi, S., & Roberts, C. (1999a). The dynamics of interactional and institutional orders in work-related settings. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 1-57). Berlin: Mouton de Gruyter.
- Sarangi, S., & Roberts, C. (1999b). Introduction: Discursive hybridity in medical work. In S. Sarangi, & C. Roberts (Eds.), *Talk, work and institutional order: Discourse in medical, mediation and management settings* (pp. 61-74). Berlin: Mouton de Gruyter.
- Schegloff, E. A. (1982). Discourse as an interactional achievement: Some uses of 'uh huh' and other things that come between sentences. In D. Tannen (Ed.), *Analyzing discourse: Text and talk* (pp. 71-93). Washington DC: Georgetown University Press.
- Schegloff, E. A. (1987a). Between micro and macro: Contexts and other connections. In J. C. Alexander, B. Giesen, R. Münch & N. J. Smelser (Eds.), *The micro-macro link* (pp. 207-234). Berkeley, CA: University of California Press.
- Schegloff, E. A. (1988). Presequences and indirection: Applying speech act theory to ordinary conversation. *Journal of Pragmatics*, 12(1), 55-62.
- Schegloff, E. A. (1991a). Conversation analysis and socially shared cognition. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 150-171). Washington DC: American Psychological Association.
- Schegloff, E. A. (1992a). On talk and its institutional occasions. In P. Drew, & J. Heritage (Eds.), *Talk at work* (pp. 101-134). Cambridge: Cambridge University Press.
- Schegloff, E. A. (1992b). Introduction to Sacks. In G. Jefferson (Ed.), *Lectures in conversation, volume 1* (pp. ix-lxii). Oxford, UK: Basil Blackwell.
- Schegloff, E. A. (1995). Discourse as an interactional achievement III: The omnirelevance of action. *Research on Language and Social Interaction*, 28(3), 185-211.
- Schegloff, E. A. (1999). Schegloff's texts as 'Billig's data': A critical reply. *Discourse and Society*, 10(4), 558-572.
- Schegloff, E. A. (2007a). *Sequence organization in interaction: A primer in conversation analysis*. Cambridge: Cambridge University Press.

- Schegloff, E. A. (2007b). Categories in action: Person-reference and membership categorization. *Discourse Studies*, 9(4), 433-461.
- Schegloff, E. A. (2007c). A tutorial on membership categorization. *Journal of Pragmatics*, 39, 462-482.
- Schegloff, E. A., Jefferson, G., & Sacks, H. (1977). The preference for self-correction in the organization of repair in conversation. *Language*, 53(2), 361-382.
- Schegloff, E. A., & Sacks, H. (1973). Opening up closings. *Semiotica*, 8(4), 289-327.
- Schiffrin, D. (1987). *Discourse markers*. Cambridge: Cambridge University Press.
- Schön, D. A. (1983). *The reflective practitioner : How professionals think in action*. New York: Basic Books.
- Schwartzman, H. B. (1989). *The meeting: Gatherings in organizations and communities*. New York: Plenum.
- Shotter, J. (1993). *Conversational realities: The construction of life through language*. London: Sage.
- Shotter, J. (2006a). Understanding process from within: An argument for 'Witness'-thinking. *Organization Studies*, 27(4), 585-604.
- Shotter, J. (2006b). On the edge of social constructionism: Wittgensteinian inquiries into organizations and management. *Qualitative Research in Organizations and Management. An International Journal*, 1(3), 189-203.
- Silverman, D. (1985). *Qualitative methodology and sociology: Describing the social world*. Aldershot: Gower.
- Silverman, D., & Jones, J. (1976). *Organizational work. the language of grading, the grading of language*. London: Macmillan.
- Simon, H. A. (1945). *Administrative behavior: A study of decision-making processes in administrative organization*. New York: Free Press.
- Simon, H. A. (1955). A behavioral model of rational choice. *Quarterly Journal of Economics*, 69(1), 99-118.
- Smircich, L., & Morgan, G. (1982). Leadership: The management of meaning. *The Journal of Applied Behavioral Science*, 18(3), 257.
- Stevanovic, M. (2012). Establishing joint decisions in a dyad. *Discourse Studies*, 14(6), 779-803.
- Stivers, T. (2005a). Modified repeats: One method for asserting primary rights from second position. *Research on Language and Social Interaction*, 38(2), 131-158.
- Stivers, T. (2005b). Parent resistance to physician's treatment recommendations: One resource for initiating a negotiation of the treatment decision. *Health Communication*, 18(1), 41-74.
- Stivers, T. (2006). Treatment decisions: Negotiations between doctors and patients in acute care encounters. In J. Heritage, & D. W. Maynard (Eds.), *Communication in medical care. interaction between primary care physicians and patients* (pp. 279-312). Cambridge: Cambridge University Press.
- Stivers, T. (2008). Stance, alignment and affiliation during storytelling: When nodding is a token of affiliation. *Research on Language and Social Interaction*, 41(1), 31-57.
- Stivers, T., & Heritage, J. (2001). Breaking the sequential mold: Answering "more than the question" during comprehensive history taking. *Text*, 21(1/2), 151-185.
- Stivers, T., Mondada, L., & Steensig, J. (2011). Knowledge, morality and affiliation in social interaction. In T. Stivers, L. Mondada & J. Steensig (Eds.),

- The morality of knowledge in conversation* (pp. 3-24). Cambridge: Cambridge University Press.
- Stokes, R., & Hewitt, J. P. (1976). Aligning actions. *American Sociological Review*, 41(5), 838-849.
- Stubbe, M., Lane, C., Hilder, J., Vine, E., Vine, B., Marra, M., . . . Weatherall, A. (2003). Multiple discourse analyses of a workplace interaction. *Discourse Studies*, 5(3), 351-388.
- Svennevig, J. (2008). Exploring leadership conversations. *Management Communication Quarterly*, 21(4), 529-536.
- Svennevig, J. (2012b). The agenda as resource for topic introduction in workplace meetings/Interaction in workplace meetings. *Discourse Studies*, 14(1), 53-66.
- Taylor, J. R. (2011). Organization as an (imbricated) configuring of transactions. *Organization Studies* (01708406), 32(9), 1273-1294.
- Taylor, J. R., & Van Every, E. J. (2000). *The emergent organization : communication as its site and surface*. Mahwah (N.J.): Lawrence Erlbaum.
- ten Have, P. (1995). Disposal negotiations in general practice consultation. In A. Firth (Ed.), *The discourse of negotiations: Studies of language in the workplace* (pp. 319-344). Oxford: Pergamon.
- ten Have, P. (1999). *Doing conversation analysis: A practical guide*. London: Sage.
- Tracy, K. (2009). How questioning constructs judge identities: Oral argument about same-sex marriage. *Discourse Studies*, 11(2), 199-221.
- Ulijn, J., O'Hair, D., Weggeman, M., Ledlow, G., & Hall, H. T. (2000). Innovation, corporate strategy, and cultural context: What is the mission for international business communication? *Journal of Business Communication*, 37(4), 293-317.
- Ventola, E. (1987). *The structure of social interaction: A systemic approach to the semiotics of service encounters*. London: Pinter.
- Vuorela, T. (2005). *Approaches to a business negotiation case study: Teamwork, humour and teaching*. (PhD Thesis). Helsinki: Helsinki School of Economics.
- Watson, T. J., & Bargiela-Chiappini, F. (1998). Managerial sensemaking and occupational identities in Britain and Italy: The role of management magazines in the process of discursive construction. *Journal of Management Studies*, 35(3), 285-301.
- Watts, R. J. (2003). *Politeness*. Cambridge: Cambridge University Press.
- Weber, E. G. (1993). *Varieties of questions in English*. Amsterdam: John Benjamins.
- Weick, K. E. (1969/1979). *The social psychology of organizing*. New York: McGraw-Hill.
- Weick, K. E. (1977). Enactment processes in organizations. In G. R. Salancik, & B. M. Staw (Eds.), *New directions in organizational behavior* (pp. 267-300). Chicago: St.Clair.
- Weick, K. E. (1990/2001). Technology as equivoque: Sensemaking in new technologies. In P. S. Goodman, & L. Sproull (Eds.), *Technology and organizations (reprinted in K. weick, making sense of the organization, pp. 148-175. oxford: Blackwell)* (pp. xx-xx). San Francisco, CA: Jossey Bass.
- Weick, K. E. (1990/2001). Technology as equivoque: Sensemaking in new technologies (reprint of P. S. Goodman & L. Sproull (eds.), (1990) technology and organizations. San Francisco, CA: Jossey Bass. *Making sense of the organization* (pp. 148-175). Oxford: Blackwell.

- Weick, K. E. (1993a/2001). Sensemaking in organizations: Small structures with large consequences (reprint of J.K. Murnighan (ed.) *Social psychology in organizations: Advances in theory and research*. Englewood Cliffs, NJ: Prentice hall). *Making sense of the organization* (pp. 5-31). Oxford: Blackwell.
- Weick, K. E. (1993b/2001). The collapse of sensemaking in organizations: The Mann Gulch disaster (reprinted in K. weick, *making sense of the organization*, pp. 100-124, Oxford: Blackwell). *Administrative Science Quarterly*, 38(4), 628-652.
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks, CA: Sage.
- Weick, K. E. (2001). *Making sense of the organization*. Oxford: Blackwell.
- Weick, K. E. (2012). Organized sensemaking: A commentary on processes of interpretive work. *Human Relations*, 65(1), 141-153.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing the process of sensemaking. *Organization Science*, 16(4), 409-421.
- Wetherell, M. (1998). Positioning and interpretative repertoires: Conversation analysis and post-structuralism in dialogue. *Discourse and Society*, 9(3), 387-412.
- Whittle, A., Housley, W., Gilchrist, A., Mueller, F., & Lenney, P. (2015). Category predication work, discursive leadership and strategic sensemaking. *Human Relations*, 68(3), 377.
- Wiebe, E. (2010). Temporal sensemaking: Managers' use of time to frame organizational change. In T. Hernes, & S. Maitlis (Eds.), *Process, sensemaking, and organizing* (pp. 213-241). Oxford: Oxford University Press.
- Wodak, R., Kwon, W., & Clarke, I. (2011). Getting people on board': Discursive leadership for consensus building in team meetings. *Discourse and Society*, 22(5), 592-644.
- Wooffitt, R. (2005). *Conversation analysis and discourse analysis: A comparative and critical introduction*. London: Sage.
- Zimmerman, D. H. (1998). Identity, context and interaction. In C. Antaki, & S. Widdicombe (Eds.), *Identities in talk* (pp. 87-106). London: Sage.
- Ander- sen, N. (2003). The undecidability of decision. In T. Bakken, & T. Hernes (Eds.), *Autopoietic organization theory: Drawing on niklas luhmann's social system perspective* (pp. 31-52). Oslo, Norway: Copenhagen Business School.

Appendix 1: Transcription symbols

Jefferson's (2004) system and symbols are used in the excerpts (see Atkinson and Heritage, 1984a).

Speakers are identified with the speakership symbols consisting of three initial letters of the first name. E.g. Marco is identified in transcripts as Mar. Speakers' names, as well as some other details, have been changed in order to secure the anonymity of the persons involved. Excerpts have been identified based on the code ID given for each topic in the meetings, such as [EIA]. Ref. chapter 6 for a full list of IDs.

Standard orthography is used, not phonetic transcriptions.

| | |
|-------|---|
| [] | simultaneous speech and voices, its start and end |
| [| overlapping or simultaneous speech starts |
| = | latching: immediately continuous talk with no perceivable interval or pause between turns |
| (1.5) | pause and its length in seconds |
| (.) | micropause, shorter than 0.5 seconds |
| .h | in-breath |
| hh | out-breath |
| t | tongue click |
| — | emphasis |
| : | stretch |
| :: | longer stretch |
| YES | loud |
| . | falling intonation |
| , | continuing or slightly rising intonation at the end of tone unit |
| ? | high rising inflection at the end of tone unit, not necessarily a question |
| ?, | weak rise in intonation |
| ↑ | marked rise in pitch |
| ↓ | marked fall in pitch |
| da- | production of word is cut off |
| >< | pronounced faster than the surrounding speech |
| <> | pronounced slower than the surrounding speech |
| \$ | laughter in the voice |

| | |
|-------------|---|
| £ | smiling |
| @ @ | animated voice, also animation of quoted written text (on the presented slides) read out loud |
| “” | reported speech or speech quoted directly from some document (e.g. the presented slides or documents under discussion) |
| ◦ ◦ | diminishing voice |
| # # | shivering voice |
| hah-hah | loud, clear laughter |
| heh-heh-heh | laughter |
| (word) | unclearly heard |
| (()) | non-linguistic information, researcher’s comment on events or descriptions of omitted confidential terminology such as product or product release names, etc. |
| -> | target line; crucial instance for the analysis |
| ==> | target line for analysis; crucial action by the chairperson |
| bold | boldface highlights a phenomenon of interest |

Some further symbols may be used to mark special features. These symbols have been defined separately.

| | |
|-----------------|--|
| Uh huh Yeahm | affirmative response and display of understanding which signifies that one is listening attentively (Frankel 1989) |
| Hm Ahah | a change of state token, sign of having reached new information (Heritage 1998) |

Appendix 2: Excerpt 47

Excerpt 47 [AA] Beginning the topical discussion on AA

1 Mar ==> Okay so (.) actually this this topic I think we
2 we attempted to handle it couple of times and I
3 hope this time it will ehm (1.0) it will work
4 with (1.5) not so big debates,
5 (2.5)
6 Tho ((leans back and laughs))
7 ((some laughter))
8 Mar \$\$so\$\$ ((looking at Thomas))
9 ((common laughter))
10 (1.0)



ISBN 978-952-60-7015-5 (printed)
ISBN 978-952-60-7014-8 (pdf)
ISSN-L 1799-4934
ISSN 1799-4934 (printed)
ISSN 1799-4942 (pdf)

Aalto University
School of Business
Department of Management Studies
www.aalto.fi

**BUSINESS +
ECONOMY**

**ART +
DESIGN +
ARCHITECTURE**

**SCIENCE +
TECHNOLOGY**

CROSSOVER

**DOCTORAL
DISSERTATIONS**