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## **Understanding and Managing Knowledge-intensive Conversations**

An Appreciative Reading of the Literature on Conversations in  
Organizations and an Integrative Approach for their Management

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## Abstract

This article argues for the central role of conversations in knowledge-transformation processes in organizations. Given the importance attributed to conversations in the literature, but also the many conversational routines that often prevent knowledge creation and sharing, an integrative approach for managing knowledge-intensive conversations is needed. The article reviews the academic literature on conversations in order to develop a framework for conversation management and draws on contributions from the areas of knowledge management, organizational learning, decision making, and change management. The framework is used to consolidate and structure existing prescriptive research on leading effective knowledge-intensive conversations. Implications for management as well as future directions for research on conversation management conclude the article.

## 1 Introduction: The Role of Conversations in Organizations

In recent years, interpersonal communication has become a central issue in organization studies (see for example Barry & Crant, 2000). This is especially true for the area of knowledge management, where knowledge (transformation) processes, such as knowledge creation, knowledge sharing, or knowledge integration can only take place through communication. Weick stated already in the seventies that it is through meetings, conversations, and other forms of communication that organizational members make sense of their daily actions (Weick, 1979, p.133-134). More recently, Nonaka and his colleagues stressed the fact that knowledge is created, shared and integrated in social interactions (Nonaka, Toyama, & Konno, 2000). In this approach, Nonaka et al. particularly pointed to the role of communication and dialogue. Another expression of the interconnection between knowledge and communication is the label *knowledge communication* that has been introduced by various authors (Antonelli, 2000; Engelbrecht, 1998; Eppler, 2004; Harada, 2003; Kock, 1998; Reinhardt & Eppler, 2004; Scarbrough, 1995; Weinberger & Mandl, 2003). Based on these contributions, we define knowledge communication as the (deliberate)

activity of interactively conveying and co-constructing insights, assessments, experiences, or skills through verbal and non-verbal means. Thus, knowledge communication has taken place when an individual has successfully reconstructed a conveyed insight. Conversations seem particularly suitable for facilitating this type of knowledge communication. They are an interactive and iterative form of communication that allows participants to ask clarifying questions, deepen certain aspects, and ask for the larger context of a specific piece of information: activities that lead to the re-construction of knowledge. Articulating and verbally summarizing information is another important process to strengthen understanding (Dixon, 1997). Conversations also create a shared experience (Dixon, 1997); they build trust and strengthen the relationships between the participants (Harkins, 1999) a prerequisite for effective knowledge sharing (Szulanski, 1996). All of these factors are fundamental conditions for sharing and integrating knowledge. Thus, conversations (and in the organizational context particularly meetings) are a key format for how individual knowledge is shared, created or integrated within a working group. Yet, this form of interaction also poses various challenges for the management of knowledge within organizations. Conversations are ephemeral and non-persistent (Bregman & Haythornthwaite, 2001) and the attempts to retain the content of conversations intelligently are still in their early stages. Moreover, certain conversational routines and interaction patterns, such as, for example, defensive arguing (Argyris, 1996) or unequal turn-talking (Ellinor & Gerard, 1998), do not favor social knowledge transformation processes.

In his article, we will focus on one genre of talk in organizations, namely knowledge-intensive conversations. A knowledge-intensive conversation is a synchronous, co-located or mediated interaction between two or more people who have an extensive level of expertise in often different areas (e.g. engineers and managers who have differing backgrounds,

experiences, and specialization areas). In a knowledge-intensive conversation, people deal with a topic that is complex and often ambiguous, such as strategic opportunities or technological challenges. The interaction among the participants of a knowledge-intensive conversation is long enough for more extensive argumentative chains on a topic to be possible and a common understanding on an issue to be created, a joint fact-based assessment conducted, and new ideas for problem resolution to be developed. While knowledge intensive conversations can be collocated or computer mediated, we focus in this paper on co-located interactions. Our central research question in this context is to what extent, and how such knowledge-intensive conversations should be *managed*. One could argue that the strength of conversations consists in the fact that they are highly flexible and can be easily adapted to the situation, to the topic, and the people who participate in a discussion. While some conversations could suffer from too much structure or management (like, for example informal coffee-break conversations or very emotional discussions), many knowledge-intensive conversations can benefit from a clearer structure and more consistent management. But what are the conversational patterns that favor sense-making and social knowledge processes? Which methods for the management of conversations have a positive impact on conversations without being too rigid and obstructive? This paper aims to give first answers to these questions.

## **2 Methods**

In order to answer the questions raised above, we review scientific contributions that focus specifically on conversations in organizations. In a first step, we outline the various understandings and definitions of conversations in organizations and discuss the different functions that have been attributed to talk in companies. Then, we propose a conceptual *framework* for the management of conversations, which identifies *six crucial dimensions* of

conversations that need to be considered when managing conversations. We then review various *specific ways* of how knowledge-intensive conversations can be managed, highlighting formal interventions and conversational principles and rules. For this purpose, we use our framework as an analytical lens. The analysis of the current literature enables us to point out various implications for future research. In our opinion, a literature review on conversations in organizations is of value at this point since the literature is quite fragmented and there is still potential for interdisciplinary synergies and cross-fertilization.

The present article is thus first and foremost an appreciative reading of the literature on conversations within the realm of organizations. It is appreciative in the sense that the review tries to value existing contributions with regard to our focal topic, namely knowledge-intensive conversations. To identify the relevant literature for this review, we carried out a systematic search within the electronic databases of ABI Inform, Science Direct and ACM Digital Library using the following keywords: conversation, dialogue, group communication, and group interaction. From the articles obtained, we have selected those that discuss conversations as a central subject and relate it in some form to knowledge-intensive, social processes, such as knowledge management, organizational learning, (strategic) decision making, or change and innovation management. We have thus mainly considered research regarding conversations in organizations. Groundbreaking research on conversations and face-to-face interaction from the areas of sociology and anthropology like those of Goffman (1967), Giddens (1984), or also Bateson (1972) is therefore not reviewed explicitly. It is, however, reflected in some of the more applied work we discuss. From the references of the identified articles, we have moved backwards and identified other relevant research on the subject to complement our sample (the so-called snowball method). To further complete the literature base, we have also included major book contributions (Donnellon, 1996; Frey,

Gouran, & Poole, 1999; Harkins, 1999; Isaacs, 1999; Schwartzmann, 1989; Senge, Kleiner, Roberts, Ross, & Smith, 1994; von Krogh, Ichijo, & Nonaka, 2000). We have not considered the many purely practitioner-oriented ‘how-to’ books on crucial, fierce or otherwise special conversations in organizations. In order to identify patterns, recurring issues, and research gaps within the literature and in order to communicate these in a concise manner, we have developed several synthetic tables. We use our framework to allocate and structure the various conversational principles that have been identified in the literature.

### **3 Perspectives on Conversations**

Authors who study knowledge-intensive conversations in the organizational field have differing understandings of the concept and attribute a variety of labels to it. From these labels, definitions and descriptions, we can gain a first overview of the thematic focus areas of this emergent research domain.

The main distinction detected in conversation research in organizations is the one between *descriptive* versus *prescriptive* definitions of the concept. Some authors look at conversations from a descriptive standpoint and simply outline their (multiple) functions within organizations. These authors use generic terms such as conversation (Ford & Ford, 1995; Overman, 2003), talk-in-interaction (Huisman, 2001), group communication (Hirokawa & Salazar, 1999; Poole, 1999; Sunwolf & Seibold, 1999), meeting (Schwartzmann, 1989, p.61), or team talk (Donnellon, 1996). This descriptive intent can be seen in the way these authors define and describe conversations: Huisman, for example, states that a talk-in-interaction is made up of “interactional and linguistic features that characterize the construction of a ‘commitment to future action’” (Huisman, 2001, p.70). In contrast to this approach, most authors in the realm of organizations pursue a more prescriptive aim in their studies (see Table 1) (Gratton & Ghoshal, 2002; Harkins, 1999; Ross, 1994). Researchers who

study conversations under the term “dialogue” for example share a very prescriptive understanding of their object of study. In fact, dialogue is seen as a specific conversational form in which participants collectively open up problems into multiple perspectives in order to explore the whole among the parts and see the connections between the parts (Argyris, 1996; Bohm, 1996; Ellinor & Gerard, 1998; Isaacs, 1999; Schein, 1993). The prescriptive focus is also evident in the limited body of empirical research and in the fact that authors prescribe an effective communicative behavior rather than analyzing actual conversational patterns (both issues will be discussed below).

Label	Definitions/Descriptions	Authors
appreciative conversation	A conversation in which conversers collectively share diverse ideas, try to identify positive possibilities by focusing on past or current strengths, but at the same time challenge existing thinking and organizational practices.	(Barge & Oliver, 2003)
dialogue	A specific form of conversation which conversers collectively pursue to open up problems into multiple best perspectives in order to explore the whole among the parts and the connections between the parts, to inquire into assumptions and combine inquiry with disclosure. Through dialogue, one aims to learn about the nature of the problem from everyone and to create a shared meaning among many. Its etymological roots come from the Greek word <i>logos</i> which signifies word, meaning, and <i>dia</i> which means through. Dialogue is thus a process for transforming the quality of conversation, and in particular, the thinking that lies beneath it.	(Argyris, 1996; Bohm, 1996; Ellinor & Gerard, 1998; Isaacs, 1999; McCambridge, 2003; Nonaka & Takeuchi, 1995; Schein, 1993; Senge, 1990; Tannen, 1998; Thomas, Kellog, & Erickson, 2001)
generative conversation	A conversation in which different bodies of knowledge meet the individual subject and develop new knowledge and generate innovative activities. It is a form of conversation that is creative, encourages the linking of concepts and ideas and the upholding of divergent ideas.	(Steyaert & Bouwen, 1996; Topp, 2000)
good conversation	A vocal interaction, in which people speak up and challenge views and assumptions and in which all sides participate and listen to each other’s view.	(Quinn, 1996)
good fight	A conversation that keeps a constructive conflict over issues from degenerating into dysfunctional interpersonal conflict and aims to argue without destroying the ability of the conversers to work as a team.	(Eisenhardt, Kahwajy, & Bourgeois III, 2000)
great talk	A great talk is a conversation where questioning and doubt are institutionalized and big and broad questions legitimized.	(Gratton & Ghoshal, 2002)
honest conversation	A public, organization-wide conversation about essential issues that engage in uncovering the ‘truth’ in order to allow fundamental change.	(Beer & Eisenstat, 2004)
powerful conversation	An interaction between two or more people, which progresses from shared feelings, beliefs, and ideas to an exchange of wants and needs to clear	(Harkins, 1999)

	action steps and mutual commitments.	
skillful discussion	A conversation that intends to come to some sort of closure (e.g. make a decision, reach agreement, identify priorities) but at the same time aims to explore and create a deeper meaning and insight. A skillful discussion incorporates some of the techniques and devices of dialogue, but also focuses on tasks.	(Ross, 1994)
strategic conversation	<p>– A conversation that is oriented towards the advancement of the company, to the creation of the future for the business, and to the creation, acquisition and allocation of resources for the future. It promotes a dialogue for understanding rather than an advocacy for agreement (von Krogh &amp; Roos, 1995).</p> <p>– A micro-level interaction between superior and subordinate to obtain an understanding of the actual origin of the feelings of exclusion and the presence and absence of energy around strategic initiatives (Westley, 1990).</p>	(Eisenhardt et al., 2000; Manning, 2002; von Krogh & Roos, 1995; Westley, 1990)

**Table 1: Prescriptive labels and definitions attributed to conversations in organizations**

From the prescriptive definitions represented in Table 1, we can derive focus areas of conversation research within the organizational domain. These are: (1) the role of differences of opinion and *conflict* within conversations, (2) the balance between a focus on *shared understanding* (reflection) and the moving on with tasks (i.e., talking about the past versus ‘talking the walk’) (action), and (3) the linkage between *thinking and talking*.

A first issue regards the question of how to handle *conflict* within conversations. Several authors stress the fact that differences of opinion should be viewed as opportunities for learning and not so much as obstacles (Eisenhardt et al., 2000; Topp, 2000). Topp refers to Lyotard’s discourse on the “differend” which represents a creative source for knowledge (Topp, 2000). While differences of opinion are important, conversers also have to uncover their common points. In this way, differences can more easily be integrated and a broader perspective on a debated issue can be obtained (Bohm, 1996; Dixon, 1997; Ellinor & Gerard, 1998; Isaacs, 1999).

A second main issue deals with the *difficult balance between*, on the one hand, *creating a common understanding of the past and present and*, on the other, *preparing and structuring the future* (Manning, 2002; Ross, 1994; von Krogh & Roos, 1995). Some scholars in the domain of organizational learning (e.g., Senge, 1990) stress the idea that one should, in conversations, foster a reflective capacity (even on the conversation process itself). Other authors stress the role of conversations in structuring the present, shaping new realities and involving people emotionally for action (e.g. appreciative conversation, strategic conversation). Rather than reflection and critique, conversation partners have to develop a greater affirmative and appreciative capacity.

A third thematic focus is the *interconnection between conversing and thinking*. How are cognitive dispositions, like, for example, dichotomic reasoning (black-and-white thinking), or the tendency to dissect rather than to integrate details reflected in our conversations, and how can such conversational patterns be challenged and overcome (Argyris, 1996; Barge & Oliver, 2003; Bohm, 1996)?

In this first overview of the study of knowledge-intensive conversations in the organizational context, we have outlined some differences and commonalities between the research approaches on conversations that have been conducted in the realm of organizations. Table 2 gives an overview of the major advocates of the different fields. It identifies the main functions that have been attributed to conversations and shows the methodologies employed.

	<b>Knowledge Management</b>	<b>Organizational Learning</b>	<b>Decision Making</b>	<b>Change Management</b>	<b>General Management Studies</b>
<b>Main roles attributed to conversations</b>	Through conversations and dialogue, tacit knowledge is made explicit and is shared and integrated on a group level. Dialogue is an effective way to create and share knowledge because it is an interactive, intellectual and social process, in which a shared meaning is co-created.	Conversations and dialogue favor learning that transcends typical stimulus-response learning. Dialogue is a specific form of conversation that emphasizes reflection and inquiry. In a dialogue, participants explicitly question the cognitive and relational aspects that take place within the conversation and improve their own process of learning through this activity.	The formulation and content of decisions are inextricably connected to the situations in which they are produced. Therefore, decisions depend greatly on the communicative norms that are present in the group taking a decision. These communicative patterns either favor or impede knowledgeable decisions.	Conversations do not only have the task of transmitting information, but also of constructing a meaningful organizational reality. They are a generative mechanism of change and innovation and not only a tool for it. To structure conversations means to structure the organization's reality.	Conversations and dialogue have a central role in various organizational domains like, for example, negotiations, collective reasoning, learning, etc. In a socio-constructivist perspective, conversations are one of the central mechanisms in shaping the socio-cultural system and reality of the organization.
<b>Advocates and methods used:</b>	- (Overman, 2003) - (Thomas et al., 2001) tool • <b>Purely conceptual</b> - (Topp, 2000) - (von Krogh et al., 2000)	- (Schein, 1995) - (Schein, 1993) - (Dixon, 1997)	- (Eisenhardt et al., 2000) - (McCambridge, 2003) - (Poole & Hirokawa, 1996) - (Ross, 1994) - (Sunwolf & Seibold, 1999) - (von Krogh & Roos, 1995)	- (Barge & Oliver, 2003) - (Ford & Ford, 1995)	- (Bohm, 1996) - (Donnellon, 1996) - (Ellinor & Gerard, 1998) - (Weeks, 2001) - (Quinn, 1996)
• <b>conceptual &amp; empirical</b>	- (Nonaka & Takeuchi, 1995) case study	- (Argyris, 1996) case study - (Gratton & Ghoshal, 2002) case study - (Harkins, 1999) case study - (Isaacs, 1993) case study - (Senge, 1990) case study	- (Hirokawa & Salazar, 1999) conversational analysis - (Huisman, 2001) experiment	- (Beer & Eisenstat, 2004) case study - (Manning, 2002) mini case - (Steyaert & Bouwen, 1996) case study	- (Isaacs, 1999) case study - (Schwartzmann, 1989) ethnography

**Table 2: The general functions attributed to conversations in various research contexts**

The contributions on conversations from the field of *knowledge management* mainly outline the central role of dialogue and face-to-face conversations within knowledge processes but do not analyze conversations more closely. Nonaka and Takeuchi argue for the importance of dialogue in the knowledge-creation process. They argue that especially in the knowledge-externalization phase, when one tries to find a structure for one's tacit knowledge and to express it in words, the dialogic culture of openness, trust and collaboration is crucial (Nonaka & Takeuchi, 1995). On the basis of this premise, von Krogh et al. provide some more specific indications on how conversations should be managed in order to facilitate knowledge processes. Von Krogh, Ijicho, and Nonaka outline four principles for conversations and show how they can be applied within the various phases of the knowledge-creation process (von Krogh et al., 2000). Unfortunately, these contributions do not study conversations empirically in order to identify conversational behavior that hinders or enables group knowledge processes. They mainly argue for the importance of dialogue for knowledge processes, but they do not open the black-box of conversations

Authors who view conversations from the perspective of *organizational learning* represent quite a homogeneous group of research. Almost all refer to David Bohm who sees conversations as directly related to thought and believes that the ability to adapt systemic thinking or to question mental models are dependent on how we interact with each other in conversations (Bohm, 1996). When dialogue helps to uncover assumptions, inferences and defensive routines through reflection and inquiry (Argyris, 1996), then dialogue can become central to innovation and organizational learning. This field of research has opened the black box of conversations and has reflected in-depth on various conversational mechanisms (Argyris, 1996; Harkins, 1999). Yet, these studies confine themselves to being prescriptive and lack extensive descriptive accounts on the micro-processes of conversations. Their

synthetic case-study work mainly outlines the importance of dialogue and its impact on the organizational reality, as well as how to best profit from this potential, but provides only little evidence on specific interaction patterns.

Researchers who study conversations in relation to *decision making* probably form the largest community. Nevertheless, the various scholars in this area do not share the same backgrounds and have applied different methodologies to the study of conversations. Probably the largest group of researchers is made up of social psychologists who are interested in group decision making and group communication. They adopt a rather functional perspective on conversations (e.g., conversations are instruments for dealing with tasks and making decisions). In this view, communication is just a medium of group interaction and mediates the effects of the personal traits or of the task characteristics, which impact on the decision making process and outcome. We do not review this body of research extensively as excellent reviews in this field already exist (Frey, 1996; Frey et al., 1999; Hirokawa & Poole, 1996). It is important, however, to note that scholars who study conversations from the point of view of social psychology, group communication and group decision making invest heavily in empirical research. Yet, there are still very few empirical studies that view conversations as constitutive of group decision-making (Hirokawa & Poole, 1996, p.7). Exceptions are contributions from authors who come from another background, like for example Huisman, a linguist. Huisman aims to understand how the formulation and content of decisions are connected to the situations in which they are produced (2001). Similar endeavors can be found in conversation approaches from strategic management (Eisenhardt et al., 2000; von Krogh & Roos, 1995). Von Krogh and Ross's approach, for example, prescriptively defines the characteristics of conversations that lead to high quality strategic decisions. They argue that strategic conversations (as opposed to operational conversations) should foster innovative

language and a certain level of openness and ambiguity which in return fosters hypothetical thinking (von Krogh & Roos, 1995).

Authors who approach conversations from the perspective of *change management* mainly hold a constructivist view on organizations and therefore attribute a wider role to conversations than the mere transmission of information. They argue that communication creates the reality of an organization and that conversations are the main medium in which change occurs (Ford et al., 1995). To structure conversations means to shape change directly and to form the reality of an organization (Barge et al., 2003). Further important studies outline the importance of conversations for organizations in general. They are all conceptual in nature and approach the subject in a more fundamental and philosophical manner (Bohm, 1996; Donnellon, 1996; Ellinor et al., 1998; Isaacs, 1999).

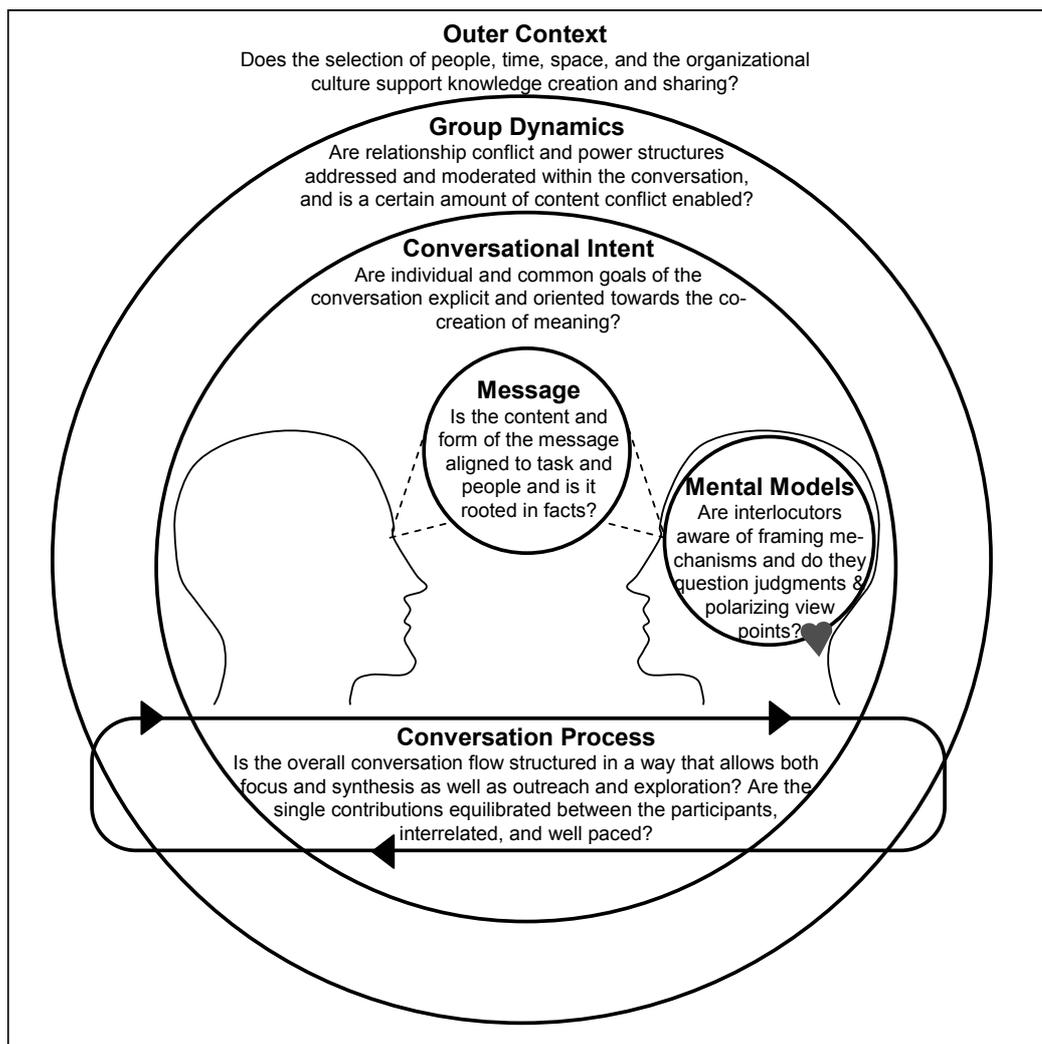
So far, we have outlined the central themes within the study of conversations in organizations. We have found that the applied science of conversation – in particular in relation to social knowledge processes – still lacks a strong empirical foundation. The research on group communication with respect to decision making constitutes the exception to this trend. Otherwise many contributions are conceptual with only anecdotal evidence. In the instances when authors have worked with case studies they mainly used them to convince the reader of the importance of the conversations, but they did not provide actual analyses of real-life conversations. For this reason, it is important to engage in greater knowledge transfer between the various disciplines, in particular between the empirically well-researched domain of group communication and group decision making and the domains of organizational learning, change and innovation management, as well as knowledge management. It is also important that future research considers studies outside the organizational field, which often

have quite interesting empirical bases (Walton, 2000; Gülich, 2003; Courthright, Fairhurst, & Rogers, 1989). Finally, given the methodological weakness of the current studies, more empirical research on the micro-interaction patterns and on their relation to larger organizational processes and structures is needed (as for example Barry & Crant, 2000). Such research must be complimentary to the currently well-positioned case-study research.

We have outlined the different orientations and approaches in the research on conversations within organizations. In the second part of this paper, we will focus on specific ways of managing knowledge-intensive conversations. We elaborate a framework for the management of conversations and start by outlining the main dimensions that need to be considered when managing conversations as well as the key questions that have to be asked for each dimension.

## **4 Towards a Framework for Conversation Management**

Managing conversations means paying attention to the key elements that have an impact on the quality of such interactions. By analyzing the existing literature on conversations, we were able to identify six key parameters of a high-quality conversation. Figure 1 shows the key dimensions that conversation management should consider. These are: the message, the conversation process, the conversational intent, the mental models of the participants, the group dynamics and the outer context. The six dimensions reflect the factual (the message), temporal (conversation process), pragmatic (conversational intent), cognitive (mental models), emotional (i.e., mental models), and social (group dynamics, outer context) aspects of conversations.



**Figure 1: Key dimensions and questions of conversation management**

We can trace these dimensions back to various communication models (Gerbner, 1956; Herrmann & Kienle, 2004; Jakobson, 1960; Merten, 1999; Shannon & Weaver, 1949). In particular, we draw on Merten's communication model (1999). From a knowledge perspective, old transmission models of communication (Shannon & Weaver, 1949) are unsatisfactory for various reasons. Firstly, they do not elucidate the sense-making process involved in the communication process. They imply that the sender 'packages' an idea or meaning into a message and then transmits it to the receiver. Yet meaning cannot be transmitted in this way, but has to be reconstructed by the receiver. Secondly, transmission models are linear and static in nature and view communication as having fixed functions. If

we are interested in how people make sense and create meaning through and within their conversations, context-rich communication models like the ones presented by Merten (1999) and also Herrmann & Kienle (2004) are more insightful. Merten refers to reflexive, circular communication structures that involve a selective elaboration of information (Merten, 1999, p.63). In his system-theoretical view on communication, communication is a social system that is characterized by *reflexivity* and *selectivity*. He distinguishes between three types of reflexivity structures: temporal, social and factual. On a temporal level, the communication process directly and indirectly refers to itself through feed-forward (creation of expectations) and feed-back structures (e.g. ex-post reactions, judgements that influence future messages).

On a social level, the reflexivity leads to the fact that communicators adapt their messages to the social context in which they are embodied (e.g. adapting their messages to the level of knowledge and expectations of their interlocutors). At the same time, the message is interpreted in relation to this social context. Finally, on a factual level, in order to make an assertion meaningful, it must lead to explicit or implicit meta-assertions. A message can only be interpreted if it is embedded in a relevant context. Meta-assertions are used or constructed by communicators to signal this context (Merten, 1999, p.107). Thus, reflexivity expresses the reciprocal interaction between the communication and the context. The context is used to make sense of a conversation, and, at the same time, the conversation itself forms the context.

Next to reflexivity, *selectivity* represents a major mechanism in communication. The recipient takes only part of the verbal and non-verbal messages to which he is exposed into consideration. The way the recipient makes the selection depends again on the various inner and outer contextual factors to which he or she is subject. According to Merten, the construction of meaning within the communication is not determined purely by the stimuli or *messages*, but is bound to the *inner* (e.g. previous experiences) and *outer* (e.g. social norms) *contexts*, and also to *the feed-forward and feed-back structures (temporal reflexivity)*

discussed above. These five factors form Merten's *Pentamodal Communication Model* (Merten, 1999).

In contrast to Merten's communication model, our intention is to present a simpler, management-oriented framework that explicitly refers to the interactive group context of conversations. Our aim is to outline the most important dimensions needing to be taken into account when managing knowledge-intensive conversations and to provide prescriptive guidelines for each dimension. By referring to Merten's communication model, we can identify the main elements conversers use when creating and making sense of a message, which can be influenced and structured more or less directly through "management" activities. The first, most apparent element of a conversation is the message itself, the information communicated by the interlocutors. Apart from the message, the other elements central to the conversation and sense-making process in interaction are: the conversational intent, the conversation process, the group dynamics, the mental models, and the outer context.

If we want to understand and manage conversations, we have to address the process through which people construct, select and interpret a message. Central to this process are the *mental models*. Mental models are (in Merten's terminology) the inner context of a conversation, based on selectivity and reflectivity. The distinction between "inner" and "outer" contexts can, in fact, be found in various communication models such as those of Merten (Merten, 1999) or Herrmann (Herrmann & Kienle, 2004). In our view, however, this distinction is useful mainly when the communicator/recipient is considered to be the unit of analysis. If the communication itself is the unit of analysis, other context distinctions are more meaningful. Since we are interested in conversations and face-to-face group communications from a knowledge-management perspective, we believe it is useful to

subdivide the context of conversations into conversational intent, group dynamics, mental models, and outer context. Together with the message and the conversational process, these context variables form the six main dimensions that nurture the sense-making process within conversations. They are therefore of particular relevance if we consider conversations from a knowledge perspective.

In the following, we will briefly describe the six elements in the order of their ease of accessibility and present the *key questions* that should be addressed in each area from a knowledge and sense-making point of view. These questions are an anticipation of our findings from the literature review on conversational principles that follows in the next section. We then outline the implications for the management of conversations.

The first element regards the *message* of a conversation. The message includes all signs that are exchanged by the conversation partners. These have verbal, para-verbal (the accent, the intonation, jargon, the intercalation, etc.), or ‘non-verbal’ qualities (gestures, physical contact, kinetic aspects, visual signs). Our focus is on the intentional exchange of signs, i.e. on the verbal, visual aspects of the message even though the non-verbal and the para-verbal signs are also of great importance, especially for the emotional and relational aspects of communication. From a knowledge perspective, the main question in this dimension is: which characteristics of a message are necessary to best enable knowledge transfer, creation, assessment or knowledge application? More specifically, we have to ask whether the message (both in its format and its content) provides enough and appropriate cues so that the conversation partners can interpret it adequately? Since interpretation activities are essential for the co-construction of knowledge, it is also important to ask whether the message in this dimension is well-rooted in facts. The message is a visible dimension of conversations

and can be addressed by interventions quite easily. For this reason, training in communication skills and practitioner contributions often focus almost exclusively on this dimension. Practitioners, for example, learn how to use non-verbal signs, such as body language and facial expressions (Knapp & Hall, 1972) intentionally in order to make their messages more salient, more accessible and more authentic.

The *conversation process* is the dimension which represents the time element of conversations and delineates the flow of a conversation in time (e.g. the agenda of a meeting). The process of a conversation is recursive and creates, on the one hand, expectations for future interactions (feed-forward) and, on the other, allows feed-back on interactions that have already occurred (see temporal reflexivity mechanisms in: Merten, 1999, p.107). The question that arises in this dimension is whether the overall conversation flow is structured in a way that allows focus and synthesis, as well as outreach and exploration. Also, are the single contributions balanced between the participants, do the single contributions build on each other, and are they paced in a way that permits silence, reflection and attentive listening? Various authors have different perceptions on how structured the conversation process should be. Some believe that natural flow (and with it flexibility and openness) is the strength of conversations (Bohm, 1996). Others are convinced that the conscious structuring of conversations through explicit principles or formal procedures (Argyris, 1996; Harkins, 1999; Isaacs, 1999; Senge et al., 1994) is a fundamental prerequisite for leading effective conversations.

From a management point of view, it is important to take into consideration the overall intent and objective that is pursued with a conversation. The *conversational intent* provides an important context on which conversers rely when producing a message or

making sense of it (Giddens, 1984, p. 29). The conversational intent includes the specific common and individual goals which are pursued with the conversation. The various participants often do not have the same or even compatible goals. Also, individual intentions often remain obscure to other interlocutors. Nevertheless, the conversational intent is one of the main elements people draw on when interpreting a message. Unshared and hidden intentions can therefore lead to misunderstandings and to conversations that lack common commitment. As Giddens suggests, we should treat the term ‘communicative intent’ with caution (Giddens, 1984). In philosophical literature, ‘intention’ or ‘reason’ have been associated with hermeneutical voluntarism, in which communicative meaning has been derived from the communicative intent. This standpoint has been strongly criticized by authors who argue that the meaning depends entirely on the structural ordering of sign systems and not on the communicative intent (Giddens, 1984, p.29). According to Giddens, however, the two approaches should be considered as a duality and not as exclusive dualisms (Giddens, 1984). In this sense, the conversational intent is a dimension that is important for the co-construction of meaning, but that is juxtaposed with the other conversational dimensions. In the next section we shall see that the main question regarding this dimension is whether the individual and common goals of the conversation are shared among the participants and are oriented towards the co-creation of meaning.

*Group dynamics* are the socio-psychological aspects that are present in the conversation and that emerge as a result of the interaction among the participants. When we create meaning out of a message, not only the mental models, but also the group dynamics play a part. Each conversation, like communication in general, incorporates both an aspect of content and one of relation (Schulz von Thun, 2003; Watzlawick, Beavin, & Jackson, 1967). In a conversation, the participants treat the factual issues, but always consider (at least

implicitly) the relations between them. The sender communicates his/her own understanding (his/her self image) and says something about the relation between him/her and the others (Schulz von Thun, 2003). The relational aspect of the communication gives the receiver indications of how to interpret the content of the message. Thus, especially in the context of group communication and conversations, we cannot disregard the group dynamics of the conversing group, if we want to understand how knowledge is co-constructed within conversations. Group dynamics are also the cause of “political” conversations and mistrust, obvious in conversations where only certain people rise to speak, particular issues remain taboo, and each participant tries to save face (Schein, 1995; von Krogh, 1998). Such dynamics are problematic and counterproductive, especially from a knowledge perspective. Groupthink can be one possible result, a situation in which participants do not dare to contribute their points since they fear to disagree with the cohesive standpoint of the group (Janis & Mann, 1977). Group dynamics are strongly dependent on the organizational context of the conversation, i.e. on the organizational structure, the formal and informal hierarchies, and on the communication culture. Conversations are not only influenced by group dynamics, but also have a strong influence on existing group dynamics. Therefore, the important question in this dimension is how to deal with informal and formal power structures and how to cope with relationship conflict (in particular how to ensure that content is not primarily understood on a relational level) so that knowledge can be effectively shared, created and integrated.

The *mental models* represent the frames and interpretive schemes with which we choose new information, interpret it and relate it to a certain situation or to other information (Kim, 1993). Mental models are the deeply anchored, internal pictures of how the world works (Senge, 1992) and consist of the values which fundamentally determine our actions. In conversations, mental models play a fundamental role both in talking and listening. They are

responsible for the selectivity of our attention, the direction of the interpretation of the message, and the construction of meaning. The conversers use their mental models to connect certain concepts with others and attribute a certain weight to a specific subject. When creating or processing a message, there are various, not only rational, but also psychological and emotional aspects, which are important (that is why in figure 1 the circles around mental models include a little heart icon). If communication in general and conversations in particular are social, then the mental models represent the individual level. If we formulate or interpret a message, we use a whole network of values, convictions, and assumptions that we apply in a nanosecond to the message in order to make it meaningful (Argyris, 1996; Bohm, 1996; Isaacs, 1993; Schein, 1993). Often, we lack an awareness of our internalized values and assumptions. From a management point of view, we have to ask whether the conversation partners are aware of the mental models and framing mechanisms that come into play in a conversation and whether they are able to suspend and question these. It is important to make implicit assumptions and values explicit in order to avoid misunderstandings. Various authors argue that face-to-face interaction, especially dialogue, is a central means of discovering one's own and the other's mental models or of changing these (Argyris, 1996; Isaacs, 1999; Schein, 1993; Senge et al., 1994).

The *outer context* represents the larger setting in which conversations take place and includes general communicative structures (e.g. reporting systems), the physical space (e.g. sitting in circles) and the organizational setting (e.g. hierarchies, guiding values, norms, and relationships within the organization or the single working groups). Conversations are embedded in a larger organizational context and use this context to make the messages exchanged meaningful (Herrmann & Kienle, 2004). At the same time, conversations shape and structure the larger organizational context (Giddens, 1984). Already Watzlawick, with his

famous assertion that one cannot not communicate (Watzlawick et al., 1967), made it very clear that the idea of a communicative context can be logically questionable and that the line between communication and context is, to a certain degree, arbitrary. Nevertheless, the concept of the communicative context has a pragmatic value insofar as not everything is of equal relevance for a specific communicative interaction. In the case of conversations, it is a little bit easier since conversations have clear beginnings and endings. With these considerations, we define the outer context of conversations as all the physical, organizational and habitual elements that are not directly activated within the conversation, but that constitute the outer frame in which conversations are embedded and that exert an influence on the conversations. The outer context includes the physical space, the organizational and cultural setting of conversations, but also the social networks and the general communicative routines. Conversations cannot be managed by focusing only on the inner five dimensions of conversations (micro-aspects) and by completely neglecting the larger context. We have to ask whether the selection of people, the allocation of time, the choice of the physical space, and the organizational culture support the creation, sharing, and integration of knowledge.

We have presented the six dimensions of conversations as distinct, but we have also referred to the reflexivity of communicative structures. In fact, the conversation dimensions presented are highly interrelated, but are not equally tangible and manageable. The dimension of group dynamics, for example, influences the conversational process. In a conversation with strong formal or informal leaders (group dynamics), the turn-taking (conversational process) is most likely to be dominated by one or two conversers. In addition to this, some of the conversational dimensions are more easily accessible than others (e.g. message or process dimension). This has implications for the management of the conversation. Conversational problems can be discovered and managed in the first place in the quite visible dimensions of

the message and process. Often, these problems are linked to more hidden challenges in the group dynamics or mental model dimensions. Thus, a task for future research could be to show that certain problems regarding less tangible and manageable dimensions (like mental models or group dynamics) can be addressed and changed by measures regarding aspects of more tangible dimensions (process, message), but that are interlinked with the deeper issues. In the following section, we shall review various approaches to how conversations can be managed, and focus on the role of conversational rules and principles in particular.

## **5 Improving the Quality of Conversations: Pragmatic Approaches to the Management of Conversations**

Conversations are guided by specific, but implicit rules or routinized (behavior) patterns between the interlocutors (Lyotard, 1984). According to Poole and Hirokawa, individual members draw on group rules and resources when they communicate and make decisions (Poole & Hirokawa, 1996). In fact, as mentioned earlier, most conversational routines are linked to cognitive or group processes. These often implicit rules and communicative behavior patterns may not be in line with certain objectives that are pursued with the conversations. Chris Argyris particularly discussed one problematic conversational pattern which inhibits learning. He labeled it ‘defensive reasoning’ on a cognitive level and ‘defensive routines’ on a behavioral one. “Defensive reasoning occurs when individuals make their premises and inferences tacit, then draw conclusions that cannot be tested except by the tenets of this tacit logic” (Argyris, 1994, p.81). Other such negative patterns are, for example, destructive argumentation (Ellinor & Gerard, 1998), dichotomic reasoning (Tannen, 1998), or groupthink (Janis & Mann, 1977). The literature does not focus at length on the analysis of conversational patterns that inhibit social knowledge processes. Rather, it defines mainly how

conversations should be characterized (mainly through conversational principles and rules) and how to overcome “unwanted” conversational behavior.

In the following, we will give an overview of the two ways to change unwanted conversational patterns that are currently being discussed in the literature. The first way to become aware of conversational patterns and to actively shape the structure and mode of conversations is by introducing *formal procedures*. Secondly, a change in conversational behavior can result from the introduction of explicit *conversational rules and principles*. We will review this second approach more extensively since it has been widely discussed in the literature and there is no review on the matter.

There is, however, a considerable amount of literature on how to change conversational behavior by introducing *formal procedures*. Such formal procedures are, for example, devil’s advocacy, idea writing, straw polls, dialectical inquiry, learning maps, or the lateral thinking approach (for an overview of a large number of these formal procedures, see (Sunwolf & Seibold, 1999)). Formal procedures offer guidelines for structuring the conversation process and supporting groups in analytic and creative tasks and in reaching agreements. Their use has various objectives, such as reducing social pressure, equalizing participation, promoting non-judgmental idea generation or fostering knowledge integration (Okhuysen & Eisenhardt, 2002; Sunwolf & Seibold, 1999). The term “formal procedure” is often used to label a variety of cognitive and interaction frameworks and techniques and many combine both cognitive and social aspects. From a cognitive viewpoint, they promote a certain way of thinking about an issue. From a communicative point of view, they propose ways in which the conversers should interact with one another. A few formal procedures work with visual formats (e.g. cognitive maps, lotus blossom, fishbone diagrams) while others

designate specific roles to certain conversation partners (e.g. devil's advocacy, external expert approach, role switching). Certain procedures shape conversations "in action". The main idea of these approaches is that the procedure or structure provided helps to eliminate unwanted conversational patterns (e.g. through the use of the brainstorming formats, conversers get rid of problematic conversational patterns like dichotomous arguing, a focus on status-quo solutions, the urge to come to solutions, or the counterproductive criticism of the ideas of others). Still other procedures are intended as reflective tools through which people are made aware of their own (conversational) behavior. Such procedures and instruments are, for example, the "ladder of inference" or the 'left-hand column'. They foster direct reflection on certain conversational routines (Senge et al., 1994) and can be used to 'freeze' (Weick & Quinn, 1999) an interaction, to pause for a moment and raise awareness of the social processes occurring. This is a crucial benefit, since a first important step in changing conversational behavior is for people to become aware of their conversational behavior during a conversation and to be able to reflect upon it (Argyris, 1990; Isaacs, 1999; Nelson & Winter, 1982; Topp, 2000). While *action*-oriented procedures have been analyzed mainly by scholars from the fields of group decision-making and group communication, *reflection*-oriented instruments have been of greater interest for people from the organizational learning domain.

Besides formal procedures, another important way of changing conversational behavior is to introduce explicit *conversational principles and rules* (Beer & Eisenstat, 2004; Gratton & Ghoshal, 2002; von Krogh et al., 2000). The idea pursued by these authors is that, with time, people substitute their implicit rules with explicit ones which they gradually interiorize until they become their new routines. Rules have the advantage of being easily memorable and through their "vividness also aid in focusing reflection" (Putnam, 1994, p.261). Moreover, rules have the advantage of not structuring conversations excessively, but

leaving them open space and flexibility. This characteristic is considered to be one of the major strengths of conversations (Bohm, 1996; Isaacs, 1999). Finally, rules are easy to handle and can be introduced as conversational etiquette in the various communicative contexts of organizations. They can only play their vital role, however, when participants use them to move beyond guideline-based behavior. Another precaution with conversational rules is that a specific rule can never be valid for all the different contexts in which conversations occur. Von Krogh and Ross argue that strategic conversations have characteristics and guiding principles that are radically different from, if not in direct contrast to, those in operational conversations. Since people in organizations are used to leading operational conversations, the rules for strategic conversations have to be made explicit (von Krogh & Roos, 1995). Harkins provides conversational rules for leading difficult conversations (Harkins, 1999), Isaacs outlines different rules depending on his typology of conversations (Isaacs, 1999). Barge and Oliver, for example, are interested in change, and argue for the necessity for conversers to develop an affirmative competence, i.e. to think in terms of positive possibilities and solutions rather than in problems (Barge & Oliver, 2003). Argyris, on the other hand, takes the perspective of learning and states that “in the name of positive thinking managers often censor what everyone needs to say and hear” (Argyris, 1994, p.79). Thus, rules always depend on the specific purpose attributed to the conversation (von Krogh et al., 1995) and can be quite antithetic. What is fruitful conversational behavior in one context (assessing different options), can be inhibiting in another (creating new ideas). Barge and Oliver make an even stronger claim and argue that it is not enough to simply adapt rules to a specific context. “Skilled activity is more than simply reading situations and applying the appropriate rules; rather, skilled activity requires one to use resources in a reflexive fashion (..)” (Barge & Oliver, 2003, p. 138). These authors argue that the technique (the rules that structure conversations) will not work alone, but has to be bound to a certain spirit; a spirit of

appreciation, of collaboration, etc. It seems that rules not only have to be adapted to the conversational context, but have to be used in a reflexive manner and to be embedded in a more general spirit shared by the conversers.

Before reviewing conversational rules, another remark on their general characteristics is necessary: the distinction between rules and principles, or between what we call *that-rules* and *how-rules*. The prescriptive indications for conversations that we have reviewed lack a clear distinction between conversational principles and rules. Authors do not share exactly the same understanding of rules and principles and often do not make a clear distinction between the two. A principle is a generally valid statement that suggests a way of reasoning or acting, a rule instead is a more concrete guideline that leads to action. A rule is a statement of how things ought to be done and describes in this context appropriate communicative behavior in groups (Hirokawa & Salazar, 1999). The reason why it is worth including both principles and rules is that the first are mainly *that-prescriptions*, while rules are more *how-prescriptions*. The *that-principles* such as: ‘balance inquiry and advocacy’ (Beer & Eisenstat, 2004; Ellinor & Gerard, 1998; Harkins, 1999; Ross, 1994), explain what aspects are important for leading high-quality conversations. The *how-rules* state how to implement a *that-principle*. An example of such a *how-rule* is: engage in advocacy by providing data and by explaining your reasoning. Engage in inquiry by slowing down the speed, reframing, opening up solutions, asking for the person's observable data and reasoning, and by asking yourself what led you to a specific view (Dixon, 1997; Ellinor & Gerard, 1998; Harkins, 1999; Ross, 1994). Often, it is only through the *how-rules* that the relevance of the *that-rule* becomes clear. The prescription of balancing talking and listening, for example, seems to be rather common sense, and only by understanding how to engage in active and deep listening (e.g. through imagining the other person's viewpoint, being interested, observing non-verbal

behavior, not interrupting, and listening for the implicit meanings (Ross, 1994)), can one understand that the that-rule is not just common sense at all.

Scholars have discussed a huge number of conversational principles and rules. In order to provide further clarity and structure, we present the reviewed rules in the six dimensions of knowledge-intensive conversations which we discussed earlier in this article.

Table 3 gives an overview of the conversational principles and rules that can be attributed to the *message dimension*. Some rules regard the *form* of how the content should be communicated, e.g. using humor (Eisenhardt et al., 2000) or visual support (Harkins, 1999), making hypothetical expositions and, in general, fostering innovative language (von Krogh et al., 2000). The two latter rules are important for developing new visions, looking at familiar issues from new angles and creating new knowledge. Other rules concern the *content* of the message like the one that urges participants to distinguish between facts and opinions (Margerison, 1989). Other rules are more general and regard the content and the form of the

<b>Expansive Message Form (verbal &amp; non-verbal)</b>	
• foster innovative language and experiment with new words	(von Krogh et al., 2000)
• make hypothetical expositions	(von Krogh & Roos, 1995)
• use humor	(Eisenhardt et al., 2000)
• use visual support to gain focus	(Harkins, 1999)
• make clear statements by avoiding euphemisms and talking in circles	(Weeks, 2001)
• use a neutral and moderate tone (intonation, facial expressions, body language, type of language) in difficult and stressful conversations	(Weeks, 2001)
<b>Fact-based, Prioritized, and Positioned Message Content</b>	
• select topics that are broad, relevant and personally meaningful to participants	(Gratton & Ghoshal, 2002)
• focus on the issues that matter most	(Beer & Eisenstat, 2004)
• distinguish between facts and opinions	(Margerison, 1989)
• include data in a democratic way and remain close to it	(Argyris, 1996; Dixon, 1997; Quinn, 1996)
• distinguish between identifying problems and giving recommendations	(Beer & Eisenstat, 2004)
• allow a certain level of ambiguity in strategic conversations	(von Krogh & Roos, 1995)

**Table 3: Conversational principles and rules regarding the message**

message, e.g. allowing a certain level of ambiguity in strategic conversations (von Krogh & Roos, 1995). We believe that the discourse in the message dimension could be greatly enriched by insights from other domains, such as, for example, information quality literature or general communication theory. Such insights can be seen in Grice's famous principle of cooperation: "make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged" (Grice, 1975). For conversations this means that a message has to be adapted, both in its content and form, to the issue, to the shared conversational intent and to the expectations and needs of the single participants.

There are numerous rules and principles for the *process dimension* of conversations (Table 4). Some concern how the conversation should be structured as a whole, and some regard the micro-interaction processes. The first aspect regards the question of how conversations should be structured and planned, and what the phases of which they should consist are. Various authors define clear phases for conversations including a phase that aims to ensure a common understanding of the issue, an analysis phase, a more creative phase where solutions are developed, an assessment phase, and a more operational phase where action plans are decided (Harkins, 1999). Most of these authors explicitly or implicitly argue that conversations should include first a divergent phase, and then a convergent one (Beer & Eisenstat, 2004; Harkins, 1999). Since conversations in organizations often take place with great pressure of time, the divergent phase (where people develop new ideas, inquire into the subject more in depth) is often missed out. Hence, social knowledge processes and the organization's capacity to be innovative are lowered (Harkins, 1999).

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**Explicit Macro Conversation Structure**

- structure conversations in the following phases: analyze actual status - define fictitious, realizable objectives - elaborate main driving forces, root causes - draw out possible solutions - define action plan (Barge & Oliver, 2003; Beer & Eisenstat, 2004; Harkins, 1999; Manning, 2002)
- structure the conversation in time by including converging and diverging phases (Beer & Eisenstat, 2004; Harkins, 1999)
- plan the agenda (Ross, 1994)
- convert generalities to specifics and migrate from specific issues to general principles (Margerison, 1989)
- start the conversation as broadly as possible (Topp, 2000)
- edit conversations appropriately, make incisions to crystallize main concepts (von Krogh et al., 2000)
- make very specific proposals for changing communicative behavior (Ford & Ford, 1995)

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**Balanced and Well-paced Micro Interaction Processes**

- alternate the contributions of the various participants in balanced ways to actively encourage participation and collaboration (Barge & Oliver, 2003; Beer & Eisenstat, 2004; Dixon, 1997; Eisenhardt et al., 2000; Ellinor & Gerard, 1998; von Krogh et al., 2000)
- let it be continuous and speak when the spirit moves you (Ellinor & Gerard, 1998; von Krogh & Roos, 1995)
- always link new statements to the previous contribution (Topp, 2000)
- do not rush but allow silence between phrases (Ellinor & Gerard, 1998; Isaacs, 1999; Topp, 2000)
- engage in effective and deep listening (listen to whole phrases, rephrase, etc.) without resistance to ensure common understanding (Ellinor & Gerard, 1998; Harkins, 1999; Isaacs, 1999; McCambridge, 2003; Ross, 1994; Topp, 2000)
- alternate talking with writing down individually in order to lay out differences and make possible constraints explicit (Beer & Eisenstat, 2004)

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**Table 4: *Conversational principles and rules regarding the conversational process***

With regard to micro interaction processes, authors mention that the various messages should be interlinked explicitly (Topp, 2000) and that there should be pauses and silence between the single contributions (Isaacs, 1999; Topp, 2000). Moments of silence are important to calm down frenetic or aggressive discussions and to allow participants to reflect upon assumptions, arguments or emotions (Ellinor & Gerard, 1998). Another rule states that the contributions of the various interlocutors should be balanced so that various perspectives can be considered (Ellinor et al., 1998) and knowledge effectively shared. This rule of the

process dimension directly refers to an underlying dimension; that of group dynamics (actively sharing responsibility and leadership to encourage participation and collaboration (Ellinor et al., 1998)).

The rules and principles that regard the *group dynamics* of conversations (Table 5) all pursue the same general aim. How do the participants of a conversation deal with the intervening group dynamics so that these do not stop the group from doing its task successfully, taking high-quality decisions, or sharing or creating knowledge? Various authors suggest that it is necessary to be able to pick group dynamics as a subject and lead emotional talks with it to create an atmosphere of trust (Argyris, 1996; Bohm, 1996; Gratton & Ghoshal, 2002). Organizational conversations are characterized by the fact that the participants have different functional and hierarchical roles within the organization. These roles can prevent

<b>Authentic Content Conflict</b>	
• maintain a healthy level of content conflict over issues and be hesitant to interpret a critique on a issue as an interpersonal attack	(Argyris & Schon, 1978; Eisenhardt et al., 2000)
• speak with one’s own voice and listen to oneself	(Isaacs, 1999)
<b>Moderate Relationship Conflict</b>	
• manage interpersonal conflict by focusing on facts and multiplying alternatives to enrich the level of debate	(Eisenhardt et al., 2000)
• Disarm attacks by restating and clarifying intentions	(Weeks, 2001)
• Lead personal talks to establish trust and empathy and to clarify relational aspects	(Gratton & Ghoshal, 2002)
• legitimize emotions	(Gratton & Ghoshal, 2002)
<b>Balanced Formal and Informal Power Structures</b>	
• balance power structures by leaving power fluid and defining roles dynamically	(Ellinor & Gerard, 1998) (von Krogh & Roos, 1995)
• suspend roles and status or pick them as a theme if they exert too much influence on the conversation	(Argyris, 1996; Bohm, 1996; Ellinor & Gerard, 1998; Senge, 1990)
• actively share responsibility and leadership (by speaking to the group and creating common goals) to encourage participation and collaboration	(Ellinor & Gerard, 1998)
• become aware of games and tactics and name them in order to neutralize them	(Topp, 2000; Weeks, 2001)
• Honor your partner by acknowledging responsibility	(Weeks, 2001)

**Table 5: Conversational principles and rules regarding group dynamics**

knowledge from being shared and further developed since fear, a narrow understanding of one's responsibility or a sense of inferiority impede equal participation. "It is difficult for those in positions of lesser authority to openly challenge the ideas of those in higher positions or even to offer alternative perspectives" (Dixon, 1997, p.30). Different rules regard the aspect of how to deal with power structures. For example, various authors suggest suspending roles or status and balancing power structures (Argyris, 1996; Bohm, 1996; Eisenhardt et al., 2000; Ellinor & Gerard, 1998; Senge et al., 1994).

The rules and principles on the *mental model* dimension (Table 6) generally aim to help us become aware, question and maybe change the way we interpret messages, make them meaningful, and approach an issue. Interpretation and inference processes mostly remain hidden so that participants tend to fall back into the same old paradigms and often misunderstand each other. For this reason, one central rule of the mental model dimension is to uncover underlying assumptions and to unfold the invisible patterned reality (analytic exploring) (Argyris, 1996). In a second step, the conversers learn to suspend and question their assumptions, certainties and judgments (Bohm, 1996; Isaacs, 1993, 1999; Senge, 1992). These authors do not argue that certain mental models are wrong and have to be changed, but that some are more suited to achieving a certain goal than others. Problematic patterns for social knowledge processes are dichotomic reasoning, polarizing viewpoints, defensive routines (Argyris, 1996), problem-oriented thinking (Barge & Oliver, 2003) or the focus on advocating (Ellinor & Gerard, 1998; Harkins, 1999; Ross, 1994).

To overcome these problematic patterns, participants should, on the one hand, engage in systemic thinking and relate diverging statements and viewpoints. Systemic thinking (Bohm, 1996) is important to see the interconnectedness between various aspects or points of

view and to discover the complexity of certain issues. It therefore leads to conversations that are less aggressive because they are not oriented on either-or thinking and therefore on winners and losers. Secondly, conversers should balance inquiry and advocacy, i.e. balance discovering and focusing. This implies that one has to inquire further into new alternatives, explore the standpoint of others, and inquire into one's own viewpoints (its reasons, implications, etc.). The aim is to see the connections between viewpoints. In this way,

<b>Balance between (Playful &amp; Analytic ) Discovering and Focusing</b>	
• uncover underlying assumptions and unfold the invisible patterned reality	(Bohm, 1996; Isaacs, 1993, 1999; Quinn, 1996)
• balance inquiry and advocacy (Engage in advocacy by providing data, and explaining your reasoning. Engage in inquiry by slowing down the speed, reframing, open up for new solutions, asking for the person's observable data and reasoning, and by asking yourself what led you to a specific view)	(Argyris, 1996; Beer & Eisenstat, 2004; Dixon, 1997; Ellinor & Gerard, 1998; Harkins, 1999; Ross, 1994)
• release the need for specific outcomes and leave room for exploration, imagination, and learning	(Bohm, 1996; Ellinor & Gerard, 1998; Quinn, 1996)
• institutionalize doubt, vigorous, disciplined questioning and big, broad questions	(Gratton & Ghoshal, 2002)
<b>Suspended Immediate Judgments and Emotional Reactions</b>	
• suspend assumptions, certainties and your judgment, acknowledge that they don't have to be out of necessity and actively engage in reframing problems and issues	(Bohm, 1996; Dixon, 1997; Isaacs, 1993, 1999; Senge, 1990)
• suspend and observe your immediate reactions (e.g. anger)	(Bohm, 1996; Topp, 2000)
<b>Interrelated Statements &amp; Viewpoints</b>	
• do not polarize viewpoints, but explore and respect differences and look for their interconnections and the shared meaning (systemic thinking) also by putting yourself in the other person's shoes	(Bohm, 1996; Dixon, 1997; Ellinor & Gerard, 1998; Isaacs, 1993, 1999; Putnam, 1994; Ross, 1994; Senge et al., 1994; Topp, 2000)
• develop a shared meaning and seek (but not force) consensus with qualification	(Dixon, 1997; Eisenhardt et al., 2000; McCambridge, 2003)
• think of the dynamic nature of things	(Isaacs, 1999)
<b>Affirming Options</b>	
• develop an affirmative and generative competence and think in positive possibilities and solutions rather than problems	(Barge & Oliver, 2003; Topp, 2000)

**Table 6: Conversational principles and rules regarding mental models**

diverging opinions are put forward so that new ideas can emerge (Dixon, 1997) and the picture of the issue can become more complete. In order to inquire into diverging standpoints,

conversers should engage in an activity of imagination and of suspending judgments. Conversers have to balance this activity of suspending (which we are less used to) with that of advocating one's own position, otherwise groups risk falling into groupthink and thus not having an adequate level of content conflict within a conversation.

The rules regarding the *conversational intent* of a conversation (Table 7) mainly stem from authors from the field of organizational learning. They regard, on the one hand, the general intent and vision of conversations (meta-reflection on what the function and characteristics of conversations are), and, on the other, the individual and common intent of the specific conversation. As a general vision of conversations, Bohm argues that the final goal of dialogue is to enhance learning, innovation and understanding (Bohm, 1996). Therefore the conversational intent has to leave room for unforeseen outcomes, which is quite difficult in the organizational context since conversations usually take place under great time pressure. But if conversations are too narrowly defined, the conversers will not develop new knowledge or radically new solutions: they will not be encouraged to think of the bigger picture, reflect upon underlying causes or possible interconnections between viewpoints. In a quite similar vein, Harkins states that a conversation should always include three general objectives: advancing the agenda, creating shared learning, and creating stronger relationships (Harkins, 1999). With this, Harkins not only points out the learning aspect, but also the emotional and relational functions of conversations.

<b>Explicit Individual Goals of the Particular Conversation</b>	
<ul style="list-style-type: none"> <li>• pay attention to your intentions and make sure that the intentions of the various participants are shared by the conversing group</li> </ul>	(Bohm, 1996; Ross, 1994)
<b>Shared Aim of Conversations for the Co-Creation of Meaning</b>	
<ul style="list-style-type: none"> <li>• define common objectives and a shared vision to be pursued jointly</li> <li>• do not define the conversational intent too narrowly, but leave space for unforeseen outcomes. Thus, let the intention of a conversation be threefold: advancing the agenda, creating shared learning, and creating stronger relationships</li> </ul>	(Eisenhardt et al., 2000) (Ellinor & Gerard, 1998; Harkins, 1999)

**Table 7: Conversational principles and rules regarding the conversational intent**

With regard to the conversational intent of the specific conversation, authors point out that the conversers have to share their individual objectives, or at least clarify the common objectives that are pursued by the conversation (Bohm, 1996; Ross, 1994). To reveal one's own intentions seems to be a rather difficult requirement. Conversers often have clear motives why they will or will not communicate a piece of information (Wittenbaum, Hollingshead, & Botero, 2004). It seems more productive to define clear *common* objectives than just individual ones. In this context, Eisenhardt, Katwajy, and Bourgeois refer to the fact that working out shared objectives is important for the group in order to create a collective vision and not see the conversation as a simple exchange of individual interests where some win and the others lose (Eisenhardt et al., 2000).

Finally, various authors point out rules and principles that regard the *outer context* of conversation i.e. the situation in which the conversation takes place (Table 8).

<b>Assorted People &amp; Roles</b>	
• ensure that relevant information and individuals are present at the conversation, e.g. involve generalists	(Gratton & Ghoshal, 2002; von Krogh & Roos, 1995)
• assign a 'facilitator' who 'holds the context' of dialogue	(Senge, 1990)
<b>Allocated Time and Conversation Formats</b>	
• create time and space for (emotive) conversations	(Gratton & Ghoshal, 2002)
<b>Supporting Space</b>	
• choose and arrange the physical space of a conversation so as to facilitate a certain type of conversation (sitting in circles, blocking out interruptions, holding meetings outside the walls of the organization, etc.)	(Bohm, 1996; Harkins, 1999)
<b>Shared Conversational Culture</b>	
• establish a conversational etiquette and communicate it at the beginning of a meeting	(Beer & Eisenstat, 2004; Gratton & Ghoshal, 2002; von Krogh et al., 2000)
• make the type of conversation (e.g. strategic conversations) explicit	(von Krogh & Roos, 1995)
• create a safe haven for participants by making openness and trust the rule rather than the exception and by encouraging and rewarding the injection of new perspectives	(Ross, 1994)

**Table 8: Conversational principles and rules regarding the outer context of conversations**

Some rules concern the mix of conversation participants: all the participants together must bring the necessary knowledge into the conversation in order for it to achieve its goal. In addition, certain authors see a great advantage in including a facilitator who leads the conversation, but who, at the same time, always backs out of this leading position. The physical space in which the conversation takes place influences the quality of conversations considerably. Suggestions include arranging participants in a circle or organizing the meeting in a location outside the organization's walls. Harkins suggests that in doing the latter, in closing the doors on the everyday context, the conversers will open up and have a more distant, external view of the issue (Harkins, 1999). Another important set of rules regards the general conversational etiquette and the conversational culture in which the conversation takes place. Von Krogh argues for the importance of explicitly communicating the conversational rules (von Krogh & Roos, 1995). Ross points out the importance of creating a safe haven and an open and trusting atmosphere (Beer & Eisenstat, 2004; Ross, 1994). Other aspects of the context, such as, for example, organizational hierarchies or norms, are rarely considered by authors when thinking of conversations. Schwartzman is an important exception to this trend. She affirms, referring to Goffman and Giddens, that conversations and meetings form the larger organizational reality and need to be considered (Schwartzmann, 1989).

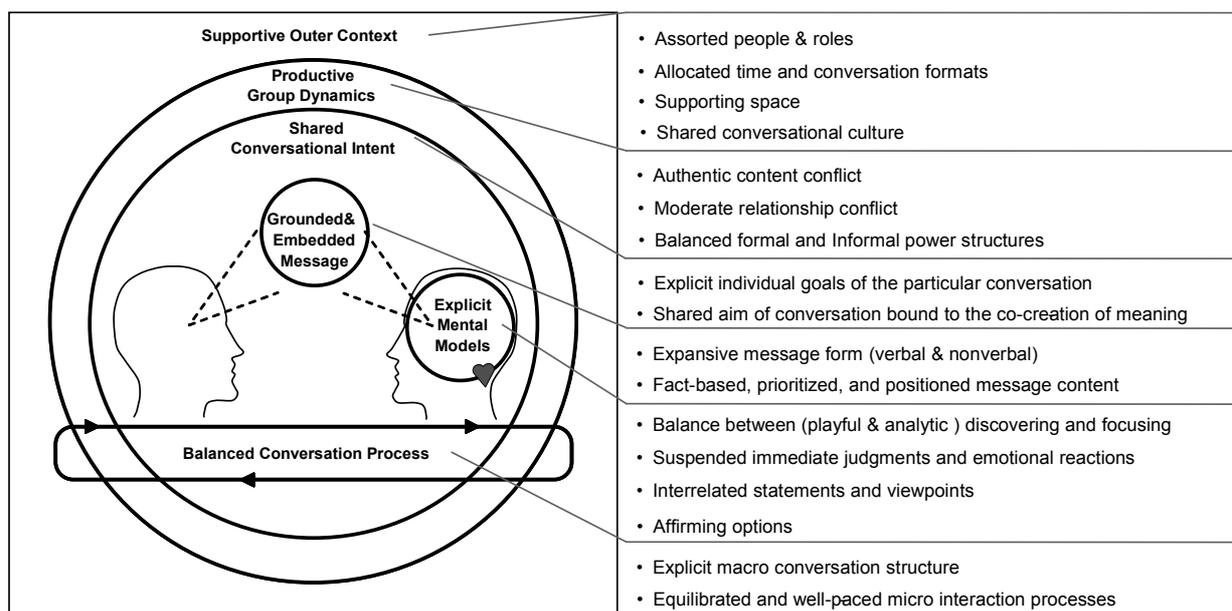
## **6 Conclusion: A Framework for Conversation Management**

Whether and to what extent are initiatives to manage knowledge-intensive conversations fruitful? If they are, how should we manage such knowledge-intensive conversations? This article gives tentative answers to these two questions by reviewing the literature on conversations and group communication within the organizational context. Regarding the first question, we have outlined the theory that conversations are central to sense-making and

social knowledge processes. Nonetheless they are often characterized by conversational routines that inhibit the creation, sharing or integration of knowledge. Given the role of conversations in the creation of meaning and integration of knowledge, but being aware of the problems involved in certain conversational patterns, we argue for the management of conversations.

In order to make this assertion, we have looked at four research streams that study conversations in relation to knowledge processes in a more or less explicit way. We have reviewed research on conversations from the standpoint of knowledge management, organizational learning, decision making, and change management. We have found that most of this research is prescriptive in nature and lacks empirical bases. Moreover, the present contributions very much focus on outlining the role of conversations, but fail to analyze micro-interaction patterns. Since the contributions from the field of group decision making are exceptions to these two trends, more knowledge transfer between the four outlined research streams is necessary. Also, future scientific contributions need to conduct more empirical research to study micro-conversational dynamics from a knowledge perspective. To integrate the various approaches and to address the second question of this article - how to manage knowledge intensive conversations? – we have proposed a set of six dimensions according to which the management of conversations has to be structured. These are the message, the conversation process, the conversational intent, group dynamics, mental models, and the outer context. We have then reviewed two specific means of managing conversations: formal procedures and conversational rules and principles. Formal procedures are either reflective tools or playful, action-oriented ways of structuring conversations. Compared with conversational rules, they provide less flexibility. Through the lens of the framework, we have particularly focused on the conversational rules and principles that are discussed in the

literature. For each of the dimensions that need to be addressed in the management of conversations, we have presented the conversational principles and rules that we found in the literature and organized and subsumed them further into categories. Figure 2 is an integrative result of this work and presents a prescriptive framework for the management of conversations. It ties the six dimensions of the management of conversations to the conversational rules and principles that prescriptively define the characteristics of effective knowledge-intensive conversations.



**Figure 2:** *A framework for the management of knowledge-intensive conversations in organizations*

Having outlined the advantages and drawbacks of conversational rules, we argue that future research should further investigate alternative means of improving the quality of conversations. Such alternative means are important for conversers to acquire and interiorize conversational behavior as prescriptively defined by the various conversational principles and rules. Examples are McCambridge’s study on the use of film extracts to teach conversational behavior (McCambridge, 2003) or Thomas et al. who developed a software application for knowledge socialization (Thomas et al., 2001). While Thomas and his colleagues focus on computer-mediated communication, future studies should analyze software-enabled group

support systems from a knowledge perspective, and integrate the insights from studies on organizational conversations. We believe that such applications should be based more strongly on interactive, content-specific visuals (Weinberger & Mandl, 2003) or on visual metaphors (Haber, Ioannidis, & Livny, 1994; Lakoff & Johnson, 1980). Interactive visualizations are effective means for transferring, creating, or integrating knowledge. In this way, we believe that software-supported conversational tools represent an interesting alternative way to augment conversational behavior. They not only foster reflection on one's own conversational routines, but make conversers try out, in a playful and action-oriented manner, alternative conversational patterns.

Most important for future research is that scholars engage in more integrated approaches to conversation management and apply a knowledge perspective to do so. An integrated approach is necessary to better understand the central role of conversations for knowledge processes in organizations. A first step towards the development of such an integrated approach consists of a stronger link between the prescriptive definition of knowledge-intensive conversations (through conversational principles) and the proposed means (e.g. formal interventions, software supported visual tools, work with film excerpts) to acquire and internalize the desired conversational behavior. A truly integrated approach for the management of conversations has to emphasize three major aspects: firstly, it has to outline the various *functions* of conversations and the various intents that can be pursued by conversations from a knowledge perspective. Secondly, it has to show which conversational *behavior* is favorable in which *context* (through conversational rules and principles) and to outline *methods*, through which problematic conversational patterns can be uncovered. Finally, it has to define a whole set of *means* that will allow conversers to change their conversational routines and internalize the conversational behavior that is prescribed by

conversational rules and principles. These means have to differ in their modes (playful versus analytic, reflective versus active) and in the degree to which they structure and interfere with the conversation (providing a loose structure vs. a rigid structure). Such an integrative approach can drive micro-interaction patterns that foster sense-making and the co-construction of knowledge. The term ‘conversation management’ seems adequate for this kind of systematic, balanced approach to conversations. The label may also contribute to an increasing awareness of the fundamental importance of high-quality conversations for social knowledge processes. This may also prove to be a healthy counter-movement to the many IT-system-driven knowledge-management initiatives.

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