The Communicative Creation of Meetings: An Interaction Analysis of Meeting Thought Units and Meeting Activities in Three Natural Meeting Contexts

By

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Abstract

Research on meeting interaction often reads like a how-to book, as both academic and popular literature focus primarily on normative, prescriptive strategies designed to produce effective meeting outcomes. Unfortunately, this approach has often led to ill-fated attempts at improving the effectiveness and efficiency of meetings, potentially hindering the progress of many theories in areas of decision making, leadership, social interaction, and information sharing. Specifically, scholars have either limited their approaches to a certain type of meeting activity (i.e., decision making) that by definition excludes some meeting interaction from analysis, or they have chosen an inclusive scheme (i.e., Interaction Process Analysis) without considering how task and relational interactions are used by group members in accomplishing meeting-specific tasks. Communication scholars are well situated to contribute to the development of interaction research in meetings, specifically focusing on the dynamic nature of communication (Burleson, 1992). In this study, three meeting contexts are analyzed using two interaction coding schemes, Bales' (1950a) Interaction Process Analysis (IPA) coding scheme and an adapted version of Scheerhorn, Geist and Teboul's (1994) communication in meetings coding scheme. This project investigates breast cancer support group meetings, nonprofit Internet service provider meetings, and local government commissioner meetings in order to clarify how messages function to accomplish meeting activities, how this differs within and between meeting contexts, and how task and relational messages influence

meeting activities. In essence, it moves research past the *what* and explores the *how* of meetings through interaction.

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Chapter 1

The Purpose of This Dissertation

Meetings are studied in many disciplines, including business (organizational behavior, strategic leadership), communication (group and organizational), organizational psychology, public administration, sociology, and others. These analyses tend to focus on the intent and outcomes of meeting behavior, and often lead authors to prescriptive outcome claims. Although this research is important, it has yet to provide a clear understanding of how meeting interaction works, and how interaction accomplishes different meeting activities. Schwartzman (1989) explains that in doing research, scholars assume that a meeting has occurred because they or participants have labeled it so. In addition, there have been surprisingly few empirical communication studies on meeting interaction, and often these involve zero-history groups of students accomplishing a one-time task as opposed to a natural meeting context. Thus, limited information is available about the processes and uses of meetings, especially across contexts.

The purpose of this dissertation project is to lay groundwork for meeting research through interaction. Three different meeting contexts are analyzed using two interaction analysis coding schemes in order to examine how meeting activities (e.g., coordination, decision making) are accomplished through the interaction of group members. The research focuses on how meeting interaction functions in meeting

activities within and between meeting contexts, and what this says about how we use task and relational messages to accomplish meeting activities.

The study of social interaction in groups has long been studied from a normative, functional perspective. Two examples of this are functional theory and the cooperative information sharing paradigm.

Functional Theory

Gouran and Hirokawa's (1983; 1986; 1996) work on a functional theory of group decision making consists of five activities that guide groups toward optimal decisions. These five steps include: Developing a thorough and accurate knowledge of the problem, understanding the criteria for a satisfactory choice, developing possible alternatives, assessing the positive implications of each alternative, and assessing the negative implications of each alternative. Subsequent research has shown Gouran and Hirokawa's theory to be helpful in establishing guidelines for certain types of meetings. Hirokawa and Poole (1996) created a list of at least nine functions that group communication performs, such as information processing, analytical processing, procedural functions, goal-oriented functions, synergistic functions (motivation and coordination), rhetorical functions (persuasion, social influence, and leadership), conflict management, control (power), and the maintenance of culture and climate.

However, since it does not consider the history of the group or other contextual concerns (Stohl & Holmes, 1993), and because it does not consider outcomes such as socioemotional satisfaction or consider group processes from the

perspective of the group members (Hollingshead, Wittenbaum Paulus, Hirokawa, Ancona, Peterson et al., 2005), the functional approach largely ignores natural group interaction. Hollingshead et al.'s (2005) examination of normative epistemological assumptions that underlie this functionally idealistic approach clarifies how common functionalist data-capturing methods are not reflective of natural contexts. For example, there are several studies in which the researcher informed group participants that accomplishing a specific group goal involved finding the *one* correct answer (e.g., Kelly & Karau, 1999; Larson, Christensen, Abbott, & Franz, 1996; Stasser & Titus, 1987). Although the functional assumption to choose the best option may be pervasive in group literature, it does not consider groups searching for any appropriate option from the universe of potential solutions, groups satisficing when an appropriate solution is found, or groups succumbing to pressure to choose less than optimal options. Other methods assume that sharing unique information is desired, and that this occurs not only when group members are well acquainted with one another (Gruenfeld, Mannix, Williams, & Neale, 1996), but also that group member roles are known (Stasser, Stewart & Wittenbaum, 1995). This assumption ignores possible individual and group benefits of sharing common information, such as credibility and social desirability. It also ignores individuals who strategically manage impressions for self-centered purposes. Last, functional theory studies focus on group decision making and not in the corpus of natural interaction.

Cooperative Information Sharing Paradigm

Similar problems can be seen in other lines of research, such as the cooperative information sharing paradigm (CISP). Much of the early research investigating the CISP was conducted by Stasser and Titus (1985) and concerned the hidden profile paradigm. In a typical hidden profile scenario, a zero-history group is formed and given a task to complete. Each individual is given shared information (items that all group members know about) and unshared information (items that are unique to a specific group member). In order to successfully complete the task, individuals must pool their shared and unshared information. Research has consistently found that groups are unable to successfully perform the task (Wittenbaum, Hollingshead, & Botero, 2004). Variations of the hidden profile task have shown similar results. For example, Stewart, Billings, and Stasser (1998) increased the accountability of each group member to make a proper decision, but found that group members consistently ignored unique information and focused on the details of shared information. Dennis (1996) provided group members with two media through which to communicate (written and oral), and found that less than half of the total information was discussed in interaction. He also found that individuals preferred to exchange preference-consistent information with their fellow group members (Dennis, 1996). Stasser, Stewart and Wittenbaum (1995) instructed group members as to who had certain types of information, and found a tendency to share more information. But even when information was shared, many groups were not able to productively use the information to formulate the correct decision (Stasser et al.,

1995). Stasser and Titus (1987) found that certain conditions could improve the amount of information shared, including when there was just a little information available or when there was very little shared information.

Studies investigating CISP and the hidden profile paradigm have based their efforts on the assumption that information sharing is complete, unbiased, and truthful (Stasser & Titus, 1985; Wittenbaum et al., 2004). Thus the hidden profile paradigm assumptions have been brought into question, since they are not indicative of interaction in social settings (Hollingshead, Jacobsohn, & Beck, 2007; Wittenbaum et al., 2004). In response to these claims, Wittenbaum, Hollingshead, and Botero (2004) introduced a strategic information sharing model (SISM), which avoids the normative assumptions that all group members are fixated upon the group goal and share information completely.

SISM is founded upon assumptions established by Kellerman (1992), who argued that all communication is strategic. This proposition stems from two overarching assumptions. First, communication is goal-oriented. Every time someone says something, there is an intent and purpose behind the message. This purpose could be as simple as trying to get a spouse to pass the salt or addressing a colleague with a salutation before asking him for an assignment. Message purposes can be instrumental, relational, or both, as demonstrated in the previous two examples, and can be individual- or group-oriented. Second, communication is adapted to accomplish this goal while at the same time navigating contextual constraints (Kellerman, 1992). If the individual addressing her colleague was doing so in a

library, she may whisper or wave due to the context. Thus communication strategy is the adapting of messages in order to accomplish a goal (building a positive relationship by saying "hello" before asking where the report is), while recognizing contextual constraints (whispering in the library).

Wittenbaum, Hollingshead, and Botero's (2004) SISM argues that group members strategically adapt messages in order to attain both personal and group goals. Depending upon the salience of goals and an individual's ability to accomplish multiple goals, messages are adapted accordingly. The SISM examines the complexity of one group member's strategically designed messages in group interaction; when considering all group members from this strategic perspective, the complexity of group communication becomes overwhelming. The strategically complex nature of communication is profitable in understanding why groups tend to underperform in accomplishing group goals.

In addition, information sharing is not based on complete information, specifically because individuals have cognitive limitations that prevent them from doing so. Individuals have a difficult time presenting raw, objective information, since each is from a speaker with unique vision of reality. Information may be shared as if it were truthful, but often this is in fact an individual's interpretation of the truth, and vulnerable to an individual's misunderstandings and mistakes. Lastly, studies using CISP (and SISM for the most part) are often not based on group members' interaction, and instead look solely at outcomes and decisions and ignore interaction variables such as sequentiality.

In sum, functional theory and CISP are two examples of how researchers have framed their understanding of group communication. They have assumed that group members are aware of their goal; are well acquainted with one another; and are sharing complete, truthful, and unbiased information that will successfully accomplish a group goal. Studies from both of these perspectives have tended to ignore natural meeting interaction. This is an overly idealistic yet largely unhelpful view of interaction in meetings.

Additional Group Perspectives

Alternative group perspectives include many similar rationalistic biases and assumptions as functional theory and CISP. For example, conflict and power approaches of meetings often view power structures as static and clearly understood (Lovaglia, Mannix, Samuelson, Sell, & Wilson, 2005). Network theorists have difficulty explaining how interaction links change longitudinally, and assume that links must be directional (Katz, Laxer, Arrow, & Contractor, 2005). Social identity approaches assume that members assess groups and desire to be affiliated with groups, and this holds greater sway in obtaining group coherence than conflict, goals, status, and other variables (Abrams, Hogg, Hinkle, & Otten, 2005). Feminist approaches often sacrifice the intended message for the unintended meaning, and assume gender is a salient factor in every group (Meyers, Berdahl, Brashers, Considine, Kelly, Moore, et al., 2005).

A Group Interaction Perspective

Clearly, any theory will have weaknesses associated with the assumptions of its foundational perspective. The creation of paradigms is fixated upon the ontological and subsequent epistemological assumptions that are the foundations of its unique insights. In other words, choosing a certain perspective necessitates not seeing groups from another perspective. This much is clear. But if communication scholars desire to understand interaction in a natural context with real life variables and dynamics, then methodologies that capture this bona fide understanding are needed (Stohl & Putnam, 1994). Spitzberg and Cupach (1998) make this point in introducing the importance of understanding the dark side of communication by quoting Hirschman (1981):

> Modern political science owes a great deal to Machiavelli's . . . insights . . . that the traditional concentration on the "ought," on the manner in which princes and statesmen ought to behave, interferes with the fuller understanding of the "is" that can be achieved when attention is closely and coldly riveted on the ways in which statescraft is in fact carried on. (pp. 294-295)

This is where communication scholars can contribute the most; this is our unique contribution to the field (Burleson, 1992). Analyzing meetings through interaction allows us to examine a medium which reflects what it is (the nature of communication and context of the situation) as opposed to what it ought to be. Apart from research conducted by Karen Tracy (e.g., Tracy & Ashcraft, 2001, Tracy &

Muller, 2001) and qualitative studies in Larry Frey's edited volumes on bona fide groups (1994, 2003), few group researchers have done so.

Interaction analysis may also alleviate many of the biases scholars have when analyzing communication. An understanding of meetings that is not influenced by normative and rationalistic biases is needed to make meeting research applicable to the complexity of natural meeting contexts (Sillince, 2000). Approaches that focus on creating a descriptive foundation of meetings, as well as providing a platform for explanatory and prescriptive analysis, are needed. A renewed focus on process may require a renewed emphasis on how we approach communication, such as through the stories or narratives of interaction (Poole & Hirokawa, 1996). Most importantly for communication scholars, researchers need to examine how interaction creates meetings and meeting activities by actually looking at interaction behavior (Hirokawa & Rost, 1992; Tracy & Dimock, 2004).

There have been several approaches to investigating group and meeting communication. Scheerhorn, Geist, and Teboul's (1994) work on distinguishing and labeling the different meeting activities has shown decision making episodes to be the most frequently studied communication activity, even though it is not the meeting activity of highest frequency in natural contexts. Information sharing is the most prominent episode, and coordination occurred at the same frequency as decision making (Scheerhorn, Geist, & Teboul, 1994). Wittenbaum, Hollingshead, and Botero's (2004) SISM explores how group members use biased, untruthful, and incomplete information to accomplish goals, and subsequent research has attempted

to demonstrate the complexity of this model in group communication (Hollingshead, Jacobsohn, & Beck, 2007). There has also been a focus on looking at meetings as complete entities, and not as a set of communicative activities existing in a neutral context. This emphasis on a meeting as an entity keeps the focus on interaction and context intact (Tracy & Dimock, 2004). Other endeavors have attempted to likewise examine groups through more naturalistic means in hopes of tapping into the bona fide nature of group communication (Putnam & Stohl, 1996).

While many researchers have focused on a particular type of meeting or group interaction (i.e., information sharing, decision making), Bales' (1950a) Interaction Process Analysis (IPA) focuses on the *function* of the communication at a more foundational level. Accordingly, all actions by group members can be coded as task activity or relational (socioemotional) activity. As a result, the continuity of the interaction process--or how group members use interaction sequences (i.e., question-answer, suggestion-rejection)--moves the conversation among members or to other topics (Bales, 2001). Because it was designed as a general purpose descriptive and diagnostic tool (Bales, 1968), IPA's greatest benefit is that it accounts for all utterances and can be used in nearly any group or meeting context, making all meetings comparable analytically through interaction (Bales, 1950b). Thus, its systematic approach can be used to identify patterns of interactions across meeting context (for a more detailed view of IPA, see chapter 3).

The analysis of interaction in groups is limited in its effectiveness without methodologies that provide a blueprint of the micro processes of interaction. Either

scholars have limited their approaches to a type of interaction (i.e., decision making) that by definition excludes some meeting interaction from analysis, or they have chosen an inclusive scheme (i.e., IPA) without considering how task and relational messages accomplish meeting-specific tasks. Thus, the integration of approaches would be ideal. This project will attempt to do exactly this by using a method that consists of two coding schemes (IPA and Scheerhorn et al.'s meeting activities scheme) designed to make meetings comparable in terms of analysis. By using these two coding schemes, this project will examine how interaction creates different meeting activities and how these interactions differ within and between function and context. Thus, the first research questions are:

> RQ#1a: What does interaction look like in terms of IPA in the five meeting activities (decision making, coordination, information dissemination, motivation, and affiliation) specified by Scheerhorn, Geist, and Teboul (1994)?
>
> RQ#1b: How does interaction in these meeting activities differ in terms of IPA within and between meeting contexts?

The Task and Relational Dimensions of Communication

Chapter 2

Task/Relational Communication

In the ideal world, all communication research would at its core contribute to our understanding of the nature of communication (Burleson, 1992). Arguments addressing what communication is and what makes it dynamic have focused on several philosophical or methodological areas, including self-centered vs. other-centered communication (Deutsch, 1949; Pruitt & Rubin, 1986; Schelling, 1960), individual vs. group goal orientation (Hollingshead, Jacobsohn, & Beck, 2007; Wittenbaum, Hollingshead, & Botero, 2004), positivist vs. post-positivist vs. interpretivist paradigms (Corman, 2005; Lindlof & Taylor, 2002), and cognition vs. behavioral based methodologies (Folger & Poole, 1982; Rogers & Millar, 1982). Another important and common debate involves the task and relational dimensions of communication. Specifically, communication's relational dynamic is not well understood, nor is there consensus as to how relationships are created between individuals via interaction.

Any discussion of relational issues surpasses divisional boundaries within the communication discipline. That being said, different areas of communication research have different assumptions of the relational nature of communication. In interpersonal literature, relational development is largely assumed to be an output of interaction, with emphasis on engendering, increasing, and maintaining relational characteristics (Dindia & Timmerman, 2003). Interpersonal literature often is implicit in its

discussion of the relational dimension of messages, and tends to view communication from a normatively idealistic perspective (Spitzberg & Cupach, 1998). Group and organizational communication scholars have focused largely on task behavior, and do so from a more negative, critical perspective (i.e., groups tend to underperform). When relational issues are considered, they are often viewed in terms of how they affect the task itself, without mention of the influence on member relationships (Keyton, 1999). Needless to say, interpersonal, group, and organizational communication research does not converge in its understanding of how communication creates relationships.

Early Task and Relational Arguments

Early scholars analyzing research across these divisions include Robert Freed Bales and Paul Watzlawick. Bales (1950a) argued that messages are either task or relational in nature. Further he posited that communication functions in response to six problems: orientation, evaluation, control, decision (agreement), tension-management, and integration. The first three are considered task oriented in nature, and the last three relationally (or socioemotionally) oriented. However, there is evidence that Bales did recognize that task and relational dimensions co-exist in messages. In his Interaction Process Analysis (IPA) coding scheme, he specified that he was concerned with surface meaning from the view of the generalized other, and not the vicissitudes of a message (Bales, 1950b). He also instructed coders to favor the relational over task codes when a message appears to have both aspects. Fisher and Ellis (1990) claimed that instead of arguing that only one dimension existed in a

message, Bales was actually arguing that one of the dimensions was always predominant. This suggests that Bales was aware messages could be interpreted and influence in a variety of ways.

Watzlawick and colleagues have argued that all messages have both task (content) and relational components (Watzlawick, Beavin, & Jackson, 1967). Other researchers, such as Clark and Delia (1979) and Dillard (1990), also included dimensions such as identity, interactional, personal, and arousal management in messages. Watzlawick's perspective dismisses the notion that messages must be considered as either task or relational. Although it provides a significant critique to Bales' work, Watzlawick's argument has proven to be difficult to capture methodologically. Specifically, it has failed to explain how task and relational dimensions can co-exist, and what may lead one dimension to dominate another.

Multi-dimensional Nature of Messages

One reason for this difficulty is that the relational dynamic of communication is a multi-dimensional concept. Embedded in all conversational contexts is a relational foundation upon which messages are adapted. Individuals assess the nature of their relationship and with whom and why they are speaking, whether consciously or unconsciously, and use this assessment as a premise for adapting a message as to be formal or informal, direct or indirect, brief or descriptive, cautious or extreme, or otherwise affected by relational history or their presumption of a relational future. For example, participating in a convention panel with several acquaintances whom you have only met once may prescribe a cautious, more formal interaction approach due

to unfamiliarity with the individuals (this may not be true for all people). Several topics (i.e., sex, personal vendettas) would probably be forbidden from conversation. If the same panel involved several very good friends, then these considerations would drastically change, and more informal, intimate questions would be considered appropriate. The relational foundation is also considered when receiving messages. Indeed, research has shown that closeness in a relationship is associated with individuals withholding harsh judgments from their partners (Sedikides, Campbell, Reeder, & Elliot, 1998). When messages from a sender are consistent with the receiver's relational assessment, the validity of the receiver's assessment is confirmed. If messages conflict with the receiver's assessment, then the receiver may revise his or her relational assumptions, thus affecting subsequent communication.

These foundational implications are true even when individuals have no prior history. "Individuals enter conversations with expectations, schemas, or frames that help them comprehend social cues" (Knobloch & Solomon, 2005, p. 352). When individuals or groups meet initially, norms and expectations from past relationships determine the relational foundation for communication. These norms are often general in nature, and depend upon an assessment of the individual and the context. For example, an individual's first meeting with a new colleague will reflect her relationships with current colleagues (i.e., if she is casual with current colleagues, she will probably be casual with the new employee). There may be modifications to this based on the fact that it is an initial meeting. Thus the relational foundation of

interaction considers relational norms and expectations as well as historical considerations, weaving a complex context for communication.

Having established the premise that all communication has a relational foundation, I will now turn to the relational value of messages themselves. Interaction provides individuals with information upon which to draw relational inferences (Knobloch & Solomon, 2005). Baym (2000) showed that relational characteristics such as friendliness are likewise inferred through interaction in online communities. These inferences stem from direct and indirect relational influences of messages. Direct influence refers to the relational value explicitly stated through symbols and messages. Such phrases clearly target the relationship (e.g., "I love you," "I'm cheering for you") and are the premise for relational coding schemes such as IPA, since these messages are recognizable to outsiders as concerning the relationship. Even though they explicitly target the relationship, the meaning of the message is still dependent upon the interpretation of the receiver.

Besides explicit relational effects, messages also indirectly affect the relationship. Part of what makes communication dynamic is its ability to generate multiple meanings from the same message. Individuals interpret the same message differently, and make inferences as to the relational value of the message in relation to contextual, historical, or perceptual factors. Once the speaker states a message, he or she loses control over the interpretation of the message. Sometimes interpretative differences are not explicated in subsequent communication, and individuals may perceive similar interpretations when in fact there may be great divergence in

viewpoints. For example, a student very briefly requests an appointment with his teacher to discuss a grade. The student is doing so in order to dispute some of the teacher's deductions because the student views the teacher's exams and policies as unfair. As a result, the student has a great dislike for the teacher. The teacher may interpret the student's request as an opportunity to more fully teach the material. The teacher could also infer that the student likes the teacher since the student feels comfortable setting up an appointment. The perceptual differences in liking are indirect relational effects of the communication, since it was not explicitly stated in a message. The two individuals will communicate with each based on the assumption that they have shared meaning of what is transpiring, even though this is not true. These indirect relational effects may lead to both individuals approaching the scheduled appointment differently and realizing a need to correct or adapt their styles.

Both direct task and relational messages have indirect relational effects. In this example, the teacher and the student were accomplishing a task (setting up an appointment), and they had differing interpretations of the interaction, including relational implications. All messages have indirect relational effects, although sometimes these may not be as drastic as in this example. An exchange may simply confirm relationship assumptions between individuals. But even a simple message can affect both sides of a relationship. For example, Mead (1934) has suggested that these interactions tell us much about how we view ourselves as well as others. Indeed, Wright (1978) has argued that our choice of and interaction with friends tells us a

great deal about how we view ourselves. Thus these indirect effects are important in understanding both sides of a relationship.

The distinction between direct relational messages and indirect relational influences from messages is murky at best. Their influence cannot be separated and is dependent upon the perceptual interpretations of the participants. Although direct messages may be more identifiable, this does not necessarily mean they have greater influence. For example, two girls trying to dissect the significance of the following statement by two good-looking male group members, "Do you have big plans for the weekend?" are clearly trying to understand the indirect relational effects of the message (i.e., Are they trying to see if we're free for a date?, Are they just being polite?). Both indirect and direct relational influences must be appropriately considered when examining the relational influence of messages.

A New Approach to the Task/Relational Distinction

In order to better understand the task and relational dimensions of messages, and their subsequent influence on the relational foundation, it would be helpful to examine how task and relational messages are used in interaction. There have been few studies that have specifically analyzed how relational messages function (Keyton, 1999). Since Bales' IPA labels messages as either task or relational depending upon their surface meaning, and its task and relational distinction is widely respected (Keyton, 1997), it may be helpful to see how these dimensions work together in meeting conversation. Even though IPA does not consider how task and relational dimensions co-exist in messages, understanding surface level task and relational

messages is an appropriate starting point in our attempt to understand how these two dimensions function. Finding patterns (a key part of interaction analysis, Bateman & Gottman, 1997) of messages by their task and relationally coded functions can potentially tell us much about the nature of communication across individuals, meeting activities and context.

RQ#2 - What do the IPA task and relational message distinctions applied to natural contexts suggest about how task and relational message dimensions are used in interaction?

Meeting Contexts

Chapter 3

Context

An understanding of how context influences communication is vital, since several researchers argue meaning is largely contextual (Duck, 1994; Eisenberg, 1984). Context has always been difficult to grasp due to its complex and ever-changing nature. Indeed, some philosophers argue that context can never be mimicked due to its situated nature in time and place, and thus we never experience the same context twice (Giddens, 1979). Therefore a clear definition of context is important before considering the three meeting contexts for this project.

Context can be defined as internal and external influences that enable and constrain behavior. These influences are often overlapping and contradicting, creating a complex foundation upon which messages are based. Although there is danger in labeling context in such a broad way, it is also important to note that not all contextual factors influence messages. Context is only significant if salient to the individuals and interaction. Thus, any theoretical examination of context needs to consider the contextual perceptive of the participants (Dillard & Solomon, 2000).

There is a wide variety of internal contextual factors (e.g., bad mood, cognitive constraints), and most are a function of relational issues, since the way an individual views another affects how she views herself (Mead, 1934; Wright, 1978). All verbal and nonverbal messages give off subtleties about the relational status of individuals (Keyton, 1999). These relational implications can influence the context,

changing the dynamic relational foundation upon which messages are predicated. Evidence of this has been seen in studies investigating Deutsch's (1949) and Rubin and Pruitt's (1986) respective dual-concern theories (self vs. other-concern). For example, De Dreu and Carnevale (2003) found that negotiators who were viewed by their partners as showing a lack of concern for others (egocentric) were not able to achieve positive interaction and outcomes with other individuals. A meta-analysis of 28 studies found a robust trend that individuals interact more favorably with prosocial negotiators than egocentric negotiators (De Dreu, Weingart, & Kwon, 2000). The way individuals perceived others greatly influences how they interact with them, even when this involves a double standard as compared with their own behavior. Gross and colleagues found that individuals who perceived the use of other members' conflict strategies as controlling viewed them as inappropriate, but also found that individuals believed their use of the same controlling strategies to be competent and effective (Gross, Guerrero, & Alberts, 2004). Oftentimes the norms of a situation will influence how individuals view the nature of their relationship with others. De Cremer and Bakker (2003) found that participants acted more cooperatively with others when the participants perceived the others to be concerned for everyone's well being (also see Shankar & Pavitt, 2002). It is clear that an individual's assessment of the relational context influences how individuals adapt their messages to a situation.

External factors, those outside the relationship of the individuals, are also a part of context. Time constraints, cultural constraints, geographic location, and the pretense of the situation can all influence context (Keyton, 2006). For example, Tracy

and Dimock (2004) argue that meetings should not be considered as just another location were communication takes place, but a significant symbol by itself. Meetings are a place where multiple goals are brought to the forefront of interaction (Tracy & Dimock, 2004). Meetings also afford group members an opportunity to adjust their sensemaking of the group and organization as a whole through conversation that is otherwise considered mundane and common (Schwartzman, 1996). Strategically woven in task talk are often subtle relational strategies between group members (Schwartzman, 1996). The notion of a meeting's permeable and fluid boundaries (Putnam & Stohl, 1996; Stohl & Putnam, 1994) means that the number of individuals at a meeting fluctuates, potentially requiring the change of strategies to accomplish individual and group goals (Hollingshead et al., 2007; Wittenbaum et al., 2004). Thus the concept of a meeting is one example of how external factors constrain and enable group members' communication.

Clearly these studies show an overlap between the internal and external influences of context (Putnam & Stohl, 1996, Schwartzman, 1996), greatly adding to its complexity. Of course, understanding of contextual factors is based on individual interpretation. For communication scholars, our understanding of context is based upon the interaction of individuals. Kellerman's (1992) argument that all communication is strategic points toward an attempt to understand how messages are adapted in order to accomplish a goal in consideration of context. Thus a communication scholar's best understanding of an individual's perception of context is to examine how messages have been adapted in interaction. Theoretically,

interaction and conversation analysis methodologies are simply refinements of mechanisms used by individuals regularly to infer meaning from conversation.

For example, if an individual uses very formal language, such as "Yes sir" or "Yes maam," we can infer that the individual speaking interprets the context as formal, whether because of the situation or culture. The evidence of context is in the message. The practical side of a strategic approach to context is an emphasis on being aware of one's own inferences and other contextual cues that are revealed in language. It is also dependent upon how individuals believe others view them, similar to Mead's (1934) notion of the generalized other.

The Meeting

The interaction context under study is the meeting. Meetings are commonplace in all organizations, from for-profit businesses to church groups, from academic departments to basketball teams. As society has become more sophisticated in terms of technology and organizational size, the need for meetings has increased. Meeting load, or the frequency and length of meetings, has increased in organizations (Mosvick & Nelson, 1987). Mintzberg (1973) found that over two-thirds of a business manager's typical workday was filled up with meetings. Even though meetings are often created to improve productivity, not all effects stemming from the increase in meetings have been positive (e.g., employee fatigue, Luong & Rogelberg, 2005).

Most early and current research uses the meeting as a mechanism to collect data on other topics (e.g., Kahai, Sosik, & Avolio, 1997, leadership styles; George, Easton, Nunamaker Jr., & Northcraft, 1990, technology; Koch, 2005, gender;

Selinger, 2006, prescriptive strategies). In these studies, meetings are a convenient location for data collection. In the last few decades, however, there has been an increasing effort to focus on meetings themselves. Mirivel and Tracy (2005) point to several studies that introduced this focus, including Boden's (1994, 1995) conversational analytic work and those of several linguists (Bargiela-Chiappini & Harris, 1996, 1997; Bilbow, 2002; Poncini, 2002; Yamada, 1990, 1997).

Perhaps the most foundational of these works was Schwartzman's seminal book *The Meeting: Gatherings in Organizations and Communities* (1989). Schwartzman, an anthropologist, argued that meetings should be studied in their own right. Researchers can "learn about how social systems are constructed and how individuals make sense of them, when we put meetings in the foreground" (p. 309). In order to understand how meetings are constructed, Schwartzman turned to meeting interaction itself "that focuses on the various components of meetings as communicative events and allows one to examine how individuals actually produce meetings in organizational and community contexts" (p. 310).

Schwartzman found several similarities across all meetings, regardless of their function or purpose. For example, meetings serve the function of sensemaking for both the task of the group and its organization, as well as for the relationships among members. Indeed, not only do individuals frame interaction differently in meetings, but they also use them to place themselves in the social system. Meeting interaction is often mundane but essential; essential not only for the group's designated purpose but also for the social fabric of the group. Meetings are "an invisible but very powerful

social form" because relational goals and strategies are performed "in the guise of discharging business or work" (p. 78). In addition, meetings are also the "essential mechanism through which organizations create and maintain the practical activity of organizing" (Boden, 1994, p. 81). Boden, a contemporary of Anthony Giddens (theory of structuration), correctly points out that Giddens' social *action* that produces and reproduces structure is *talk*.

In the communication discipline, a focus on meetings brings several aspects to the forefront (Tracy & Dimock, 2004). First, it focuses attention to a work group's multiple purposes. Studies that focus on just one aspect or function of a group neglect the complex nature of multiple goals present within a group. Second, it allows for a relatively easy yoking of descriptive and normative impulses. Often normative ideals blind researchers from the reality of a situation, and empirical studies further perpetuate this problem. Including a descriptive foundation, however, overcomes this one-sided view (Tracy, 2007; Tracy & Dimock, 2004). Last and most importantly, focusing on meetings reinforces the importance of analyzing interaction. It is the discursive mechanism that allows meetings to exist.

There have been several meeting approaches similar in purpose to this dissertation project. For example, Bilbow (2002) has attempted to analyze different communicative acts in regard to the type of meeting activity being accomplished. Specifically Bilbow looked at commissive speech acts, which are "open expressions of commitment [used to] demonstrate a willingness on the part of a speaker to undertake an activity, and an acknowledgement of responsibility" (p. 302). Bilbow

found cross-departmental coordination meetings had more commissive speech acts than weekly departmental management meetings. He argued there appeared to be a greater need to express commitment in a meeting with individuals from several departments then in meetings with members from only one department.

Poncini's (2002) conversational analytic work of Italian international distributor meetings portrays how culturally related contextual variables are sometimes salient and other times not in meeting talk. For example, when negative evaluation or conflict arose, cultural differences were largely absent. "In such a multicultural setting there would clearly be limits in viewing each meeting participant, for example, as a representative of a 'homogenous' cultural group without recognizing individual differences" (p. 367). Thus, any analysis of a conflict among individuals from a variety of cultures would be deficient if it only used culture as an analytical variable in studying interaction.

In both Bilbow and Poncini's studies, the authors used different aspects of the interaction to answer their questions of how meetings activities and context were created and used. The goal of this project is to understand interaction in terms of function and task and relational value, and to further our knowledge in terms of their sequential nature. In order to accomplish this goal, this project will analyze meetings in three different contexts.

Three Contexts

Data was collected from three contexts: a breast cancer support group, a nonprofit Internet service provider organization, and a city commission. These

contexts were selected due to differences in their level of formality, degree of decision making activity, type of leadership, goals, time together, and size, which will allow the researcher to distinguish whether interaction functions differently across contexts (see Table 1). Previous research in each context will be briefly discussed, as well as a detailed description of the samples for the present study.

Breast Cancer Support Group Meetings

A majority of women diagnosed with breast cancer express a high need for information and support following primary treatment, with information needs continuing across time (Raupach & Hiller, 2002). A breast cancer support group's goal is to provide support for the various physical, mental and emotional difficulties that cancer survivors face. In general, researchers have claimed support groups are successful in accomplishing this goal (Krupnick, Rowland, Goldberg & Daniel, 1993; McCarthy, Thompson, Rivers, & Jahanzeb, 1999; Samarel et al., 1998; Spiegel, Kraemer, Bloom, & Gottheil, 1989).

Yoak and Chesler (1985) argued that support groups provide a parallel form of support. Members are not only able to receive support from others, but they can also provide support, which is beneficial to the provider as well. Alexander, Peterson, and Hollingshead (2003) investigated the types of support provided in an online support group and found informational support (72%) was the predominant type of social support, as compared to emotional support (16%), esteem support (9%), and tangible support (3%). There are differences in the types of support received when support groups are led by a member versus a professional. Member-led support

groups were shown to provide significantly more information and education (91%) than professionally-led (45%) support groups and significantly less formal emotional support than the other two types (member-led, 57%; shared leadership, 64%; professionally-led, 100%; Yoak & Chesler, 1985).

The interactive process that occurs in support groups has not been rigorously investigated (Cline, 1999), and this project is an appropriate step in that direction. The interaction for this context stems from meetings of a breast cancer support group (BCSG). Bosom Buddies is a BCSG that has been meeting for about seven years at the time of data collection. Most of the women are 60 or older, retired, and Caucasian. The meetings were led by a volunteer who is a breast cancer survivor and long-term member of the group. The meetings involved 7 to 15 members ($M = 11.38$) seated in a circle. The purpose of the volunteer group was to exchange information and provide support in a self-governed setting. To accomplish this goal, the facilitator would go around the circle of women, asking each if they had anything to contribute.

Nonprofit Meetings

According to Eadie (1997), over one and a half million nonprofit organizations operate in the United States, with several hundred new nonprofits starting yearly. Many individuals turn to nonprofit organizations as a way to contribute to society. Nonprofit groups can help residents identify with neighbors and their community (Buchalter, 2003) and improve community safety (Keyton & Stallworth, 2003).

Nonprofits also face many challenges to their existence (Eadie, 1997). There are several specific areas of difficulty. One of these challenges involves outside stakeholder influence on goal accomplishment (DiMaggio, 1988; Lewis, Hamel, & Richardson, 2001). They also face more ambiguous and diverse goals than for-profit companies (DiMaggio, 1988). Instead of focusing on sales, nonprofits often measure goal achievement in terms of the services they offer (Kanter & Summers, 1987).

Analyzing groups in nonprofit organizations allows researchers to investigate how group members negotiate individual, group and social goals simultaneously (Kramer, 2005). Despite this potential, there has been sparse analysis of nonprofit meeting interaction (Kramer, 2005), which makes it an appropriate context for this project. Four nonprofit Internet service provider meetings were recorded. This nonprofit provides Internet service to individuals of a Midwestern community. Customers purchase service at a competitive rate, knowing that all profit will go toward subsidizing computers and Internet service to low income families in the community. These meetings consisted of 5-8 workers gathering weekly for 20 minutes to an hour to update each other on the status of their current projects and resolve any issues within the organization. These meetings were led by a general manager, hired to coordinate organizational activities.

City Commissioner Meetings

There is not much in terms of communication research of meetings in a governmental context. One exception is Barge and Keyton's (1994) analysis of power and influence in a city council meeting. The authors attempted to uncover the

interrelationships between group discourse and context in order to understand how individuals used context strategically to acquire or use power. The authors likewise suggested little research has attempted to show a link between discourse and context. The presence of government meetings at all levels makes city commission meeting an appropriate context for this study.

Four meetings of the Lawrence, Kansas city commission were recorded from July 17, 2007 through August 14, 2007. These meetings varied in length from 1 to 5 hours (*M* = 3 hours, 22 minutes). The meetings covered a variety of issues, including final approval of the budget (which involved debate over reducing the bus schedule, raising pool fees, increasing government wages, and maintaining streets), debate over the creation of a second Wal-Mart® and subsequent rezoning, and debate over special permits to reduce downtown violence. The meetings typically began with approval of administrative items, focused on public and commissioner comments on issues, and concluded with commissioner votes concerning the different issues. There were five commissioners present for the meetings (except for the first meeting, where one was absent). The commissioner with the highest vote totals in the last election serves a one year term as mayor, followed by the second highest vote getter serving as mayor the next year until new elections are held. For these meetings, the mayor was Sue Hack, a retired junior high school teacher, long time commissioner, and the only female on the commission. Other commissioners include: Michael H. Dever, vice-mayor and president of an environmental consulting group; Mike Amyx, a local

barber and long time commissioner; Boog Highberger, a lawyer for the state; and Robert Chestnut, CFO of a local printing company.

Methods of Analysis

Chapter 4

Methodological Justification

Due to the difficulty in capturing group data, group researchers are constantly trying to adapt, recreate, or invent methods that will provide a more complete understanding of group constructs. Poole, Keyton, and Frey (1999) point to five difficulties unique to group communication methodologies. First, a group is often more or less than the sum of its parts. The group concept of synergy represents the idea that groups can accomplish superordinate goals if they work together and become more than the sum of its parts (Keyton, 2006). In essence, effective groups that work together can create more than the sum of its individual members (1+1+1 = more than 3). In ineffective groups, task and relational problems can lead groups to produce less than the sum of its individual members (1+1+1 = less than 3). Capturing these additional qualities or characteristics is difficult to do. Second, group constructs are difficult to capture, since they are often multidimensional and account for the involvement of multiple group members, and the subsequent number of relationships present in groups. Third, a group's permeable and fluid boundaries often lead a group to change member composition during interaction and across meetings. Accounting for this bona fide group dimension is difficult across longitudinal studies (Putnam & Stohl, 1996). Fourth, group behavior (communication) is difficult to capture. Group members often interact strategically, trying to accomplish individual as well as group goals (Hollingshead et al., 2007; Wittenbaum et al., 2004). Group members can work

in coalitions and attempt to accomplish hidden agendas (Keyton, 2006). Devising a data capturing scheme that accounts for all communication dimensions is complex. Last, group constructs are often systemic of other constructs embedded in the organization (Poole et al., 1999). The embedded nature of groups within institutions makes it difficult to account for group behavior.

In response to debates in the communication discipline between the use of qualitative and quantitative methodology, and as a methodological approach to all research studies, O'Keefe (2004) laid forth an argumentation approach to data collection. In essence, he argued that conducting research was a matter of making claims, and subsequently supporting them with evidence. Different types of claims require different types of evidence. Upon this premise, he argued that debates as to whether quantitative or qualitative methodologies are better are defective if separate from the claim they are attempting to support. This debate cannot take place in the abstract (O'Keefe, 2004). Data collection instruments are simply tools for generating evidence, and similar to evidence in a courtroom, it is only significant in relation to the claim it is trying to support. Communication researchers, including group researchers, use a variety of different methodologies because a variety of different questions (and thus claims) are being asked and answered. O'Keefe (2004) concluded by extending his argument to the use of multiple methods, stating that simply having more than one method to evaluate a claim does not necessarily improve the quality of the overall methodology used. In using the analogy of building a house, he claims that using a backhoe as well as jackhammer does necessarily mean the house is of higher

quality. It depends on what the tool (or method) can do in relation to building the house (or claim).

Interaction Analysis

The tool used for this project is interaction analysis (Keyton, 1997). There are several benefits to applying an interaction analytic approach. First, it considers the sequential nature of conversation (Bateman & Gottman, 1997, Keyton, 1997). Whereas many studies assume data or participants to be independent, dependence is exactly what interaction analysis is trying to examine (Bateman & Gottman, 1997). Sequential analysis accounts for what precedes and follows a message, thus accounting for changes in a message and how a message affects conversation. Since all data must be coded in interaction analysis, all messages and their influence on conversation are considered. Interaction analysis also considers how messages are mediators of other messages (Baron & Kenny, 1986). A mediator does more than simply influence the strength and direction of a relationship (moderator); it actually accounts for the influence on subsequent messages (Baron & Kenny, 1986). Interaction analysis also considers the interaction or message behavior itself. Although there are debates over whether interpretation and perception are axiologically better than behavior (Folger & Poole, 1982), Rogers and Millar (1982) have effectively argued that the analysis of "mere behavior" or communication is not inferior. Last, interaction analysis considers natural interaction (Bateman & Gottman, 1997), thus enabling researchers to understand how messages are used in consideration of context, which is in line with views such as the bona fide group

perspective (Putnam & Stohl, 1996). The ability of researchers to apply academic argument to practical scenarios is dependent upon the analysis of natural data (Scheerhorn et al., 1994). Interaction analysis' emphasis on the sequential nature of interaction, the message as a mediator, a focus on behavior, and efforts to consider natural interaction all provide a foundation for the effective analysis of meeting interaction.

Interaction Process Analysis

Two coding schemes will serve as the point of comparison within and between meetings. The first is Bales' (1950) Interaction Process Analysis (IPA), which suggests that each thought unit in an interaction can be coded by its function. A thought unit is a "sequence of a few words conveying a single thought" (Weldon, Jehn, & Pradhan, 1991, p. 559), and is defined in this project as the smallest unit of interaction that stands by itself. Bales' scheme privileges process over content and uses 12 codes to label the function of message within two larger umbrella dimensions, task and relational (socioemotional). Task functions are goal oriented and include thought units that ask for and provide information, ask for and offer suggestions, and ask for and state opinions. Relational functions have a positive or negative valence and include thought units that agree, disagree, release tension, create tension, show antagonism, and show solidarity. Table 2 provides the codes with their operational definitions. IPA assumes that each thought unit fits into one of these categories. In situations of overlap, Bales argues that relational functions hold greater influence and should be coded accordingly.

All methodologies have their limitations (e.g., for IPA, a narrow view of multidimensional communication, Hirokawa, 1988); however, IPA is an established and foundational methodology (McGrath, 1984) that is "well accepted as a sound method for identifying the communicative functions of group problem-solving and decision-making interaction" (Keyton, 2003, p. 260). IPA is chosen for this project because Bales (1950a) argued it was appropriate for "policy forming committees, boards and panels . . . problem solving groups . . . social and recreational clubs" (p. i). Additionally, Poole & Folger (1981) suggested IPA has better representational validity than other coding schemes, because its philosophical approach stems from an *experiencing* perspective, meaning the researcher is attempting to get at how the participants negotiate meaning interaction (Poole & Folger, 1978). Epistemologically speaking, the researcher is attempting to delve into the interactants "intersubjectively valid social world" (Hawes, 1978, p. 218). Thus, the categories are "constructed only as they have a socially defined and culturally shared meaning for the participants" (Trujillo, 1986, p. 375). This coding scheme has considerable longevity in communication research and is still being used in a variety of contexts (e.g., health care, Atwal & Caldwell, 2005; child abuse, Bell, 2001; education, Chou, 2002; CMC, Fahy, 2006, Pena & Hancock, 2006). Once all interaction is unitized into thought units, and each thought unit is given an IPA code, the researcher then has a blueprint of how communication functions in that interaction.

Although IPA is often used to simply identify frequencies and ratios of thought units, this proposal argues that this does not do justice to the true scope of

interaction analysis. An example of limited scope is Marks, Mathieu, and Zaccaro's (2001) meeting taxonomy, where they state IPA is limited in its understanding of process "because category membership is determined by the meaning of a single member statements, there is no synthesis of the verbal interaction among team members to understand the processes that occur" (p. 364). Another example is Pena and Hancock's (2006) investigation of online video game communication using the IPA coding scheme. Instead of considering the sequence of codes or how codes may affect one another, they simply aggregated the codes in for each speaker. They found more relational codes than task codes, and justified this as stemming from the relational premise of the interaction. These two examples reflect limited application of interaction analysis. It is important in interaction analysis to look at messages sequentially, in order to obtain a more complete understanding of how context and other variables influence the interaction. Interaction analysis of IPA data can be used to identify individual interaction sequences for further qualitative analysis or be used in more sophisticated quantitative methods such as logistic regression or log linear analysis that analyzes sequences within and between meetings. This project will investigate interacts and 3- interacts and how they are used similarly or differently based on meeting activity and context. An interact is two continuous communicative acts (Courtright, Fairhurst, & Rogers, 1989). Since there is no precedent for sequences of three continuous

communicative acts, this project labels them 3-interacts.[1]

The second coding scheme is Scheerhorn, Geist and Teboul's (1994) communicative episodes in business meetings coding scheme, which labels communication under five different meeting activities: Decision making, information dissemination, coordination, motivation, and affiliation. These activities were operationalized in the following manner by Scheerhorn, Geist, and Teboul.

Information dissemination. Sharing or providing information to the group, primarily in the form of one person giving a report.

Decision making/problem solving. Discussion of an issue or problem by two or more members, usually offering alternative suggestions. This activity may involve other members interjecting suggestions to a person dissemination information.

Coordination/organization. Usually two or more members discussing actions or steps to coordinate task performance. This activity sometimes involves one person delegating who is to do what, when. This activity may involve disseminating information designed to facilitate coordination.

Motivation. Primarily one person encouraging and supporting one or more group members.

[1] The term "double interact" was considered, but was thought to be potentially confusing to the reader. A double interact may be thought of as twice as many interacts, or four thought units. Thus, the term 3-interact was selected for ease in comprehension.

Affiliation. Friendly contact, marked by humorous, sarcastic, or joking comments, often accompanied by laughter. (1994, p. 252)

This method has been used in previous research to provide a schematic blueprint of the activities of business meetings, specifically focusing on the predominant interaction episodes in those meetings. Scheerhorn et al. (1994) ran into two difficulties when attempting to apply this coding scheme to transcripts. First, they discovered that often there was some overlap between episodes of meeting activity, which they subsequently labeled as primary and secondary episodes. "That is, although many of the units could be described as containing one episode, such as decision making, that unit might also have a secondary episode embedded within it, such as information dissemination" (Scheerhorn et al., 1994, p. 253). This project hopes to avoid this conflict with its use of both IPA and Scheerhorn et al.'s meeting activity coding scheme. Scheerhorn's coding scheme was designed to label the meeting activity that was being accomplished, not the messages accomplishing the activity. Although there may be evidence of more than one meeting activity code, Scheerhorn's coding scheme was designed to identify the predominant meeting activity taking place. Thus, its level of analysis is more macro compared to IPA's micro analysis of thought units. Applying IPA to the thought units allows us to understand what is being accomplished by defining the communicative mechanisms functionally in the meeting activity. The embedded mechanisms (or secondary codes) Scheerhorn et al. found to create the meeting activity is defined in this project as Bales' IPA message functions.

The second challenge of Scheerhorn et al.'s categories was finding a label for all meeting activities. Scheerhorn et al.'s coders continually had to develop their operational definitions throughout the process in order to accurately define episodes. In an attempt to overcome such difficulties, this project considered Marks et al.'s (2001) taxonomy of team processes (e.g., goal specification, strategy formulation, affect management) in hopes to portray meeting activities with more accuracy and depth. Their scheme considers all meeting processes in terms of transition phases, action phases, and interpersonal processes. Transition phases "are periods of time when teams focus primarily on evaluation and/or planning activities to guide their accomplishment of a team goal or objective" (p. 364). Action phases are "when teams conduct activities leading directly to goal accomplishment (p. 366). Interpersonal processes focus on managing relationships and can occur throughout transition and action phases. In this project, Marks et al's (2001) three phases were helpful in clarifying the distinctions between Scheerhorn et al's (1994) five meeting activities for coders. For example, Scheerhorn et al.'s coordination and information dissemination codes appear to align with Marks et al's transition phases, while Scheerhorn et al.'s decision making code aligns with Marks et al's action phases. With the help of Marks et al.'s distinctions, the information dissemination code was divided into two; one code labeled for when information dissemination was being accomplished by one person, while another codes accounted for information dissemination between multiple individuals. Also, the problem solving code was

divided between decision making and problem solving. The affiliation code was divided in terms of its positive or negative valence.

Although each thought unit will eventually need to be accounted for in terms of Scheerhorn et al.'s coding scheme, specific meeting activities occurred in larger units. In order to determine meeting activity episodes, coders first identified natural topic changes in conversation. Scheerhorn et al.'s coding scheme was applied to these natural topic changes. Since boundaries between these episodes can be difficult to establish (Scheerhorn et al., 1994), they remained fuzzy until after the codes were applied. This enabled the coders to look for places where additional episodes occurred within speaking turns. If boundaries were determined ahead of time, then these boundaries could suggest what the boundary creator considered to be the meeting activity type, skewing the data. In order to avoid coder bias, the boundaries were left fuzzy until coders labeled the episode, and after reliability was achieved boundaries were decided. When using this approach, reliability dramatically increased for the meeting activity type coding scheme. Table 3 shows a sample application of both Scheerhorn et al.'s and Bales' coding schemes.

Five coders participated in this project, but not concurrently. They were each trained to unitize the transcripts into thought units, followed by Bales' IPA coding scheme. For consistency, the initial transcripts coded by the first coders were used for subsequent coder training. Once all transcripts were coded for IPA, two coders identified topic changes in all transcripts before applying Scheerhorn et al.'s meeting process coding scheme.

Seven support groups meetings were observed and audio recorded, producing 256 pages of transcript. The transcripts were unitized according to thought units, with unitizing reliability of three research assistants ranging from .90 to .97. Across all 7 meetings, 4812 thought units were produced, with a range of 550-803 per meeting (*M* = 687). Coders reached consensus on coding differences (For other research conducted from this data collection, see Dennis, Kunkel, & Keyton, in press; Keyton, Beck, Dennis, & Kunkel, 2006). Scott's *pi* for the IPA codes ranged from .86 to .94 for the 12 IPA categories.

Four nonprofit meetings were observed and video recorded, producing 68 pages of transcript. Two coders each unitized 20% of the meeting interaction; unitizing reliability was achieved (.92). Across all 4 meetings, 1543 thought units were produced, with a range of 181-790 per meeting (*M* = 385). Two different coders each applied Bales' IPA codes to 20% of the meeting interaction; Cohen's κ was .90 (Krippendorff, 2004; Neuendorf, 2002).

Four city commission meetings were video recorded, producing 348 pages of transcript. Two coders achieved unitizing reliability (.90). Across all 4 meetings, 8310 thought units were produced, with a range of 613-3555 per meeting (*M* = 2078). Two different coders each applied Bales' IPA codes to 20% of the meeting interaction; Cohen's κ was .85.

After all meetings in each context were coded for IPA, the meeting activity type coding scheme was applied. Percent agreement for meeting activity codes was

.86. As in earlier coding, coders were unaware of the overall purpose of this investigation until coding was completed

The combination of Bales' IPA coding scheme and the Scheerhorn et al. meeting process coding scheme enabled the simultaneous analysis of macro and micro levels of communication. IPA codes sequences were examined in each context to determine how they created meeting activities. Each meeting activity type was then compared across the three contexts to determine if each activity was created in the same way communicatively. Next, individual IPA codes were examined for specific communicative differences across contexts and meeting activity type. Last, logistic regression was used to investigate the predictive power of meeting activity and context on IPA codes. In addition, the task and relational dimensions of the IPA coding scheme were analyzed for contextual differences for each meeting activity type. To better illustrate this, a hypothetical example is offered.

In a meeting there may be several instances where information is disseminated, with each episode categorized by Scheerhorn's information dissemination code. Furthermore, each thought unit within an episode can be analyzed. Using Bales' IPA, one can code the thought units within a specific meeting activity based upon message function. Intuitively, one would assume that information dissemination may consist of more task-oriented than relationally-oriented messages. One could also assume those task-oriented messages would be coded with the gives orientation/information code (IPA 6). But these assumptions have been untested. By analyzing the IPA codes of the message activities, one can understand

communicatively how that activity was created. One can also look at the sequence of messages in relation to other IPA codes. For example, does the gives orientation/information code follow asks for orientation/information codes? Does the information dissemination meeting activity consist solely of gives orientation/information codes, or are gives opinions or gives suggestions codes also used? The questions can also be asked across the three contexts for a same meeting activity type. Does the information dissemination meeting activity appear the same communicatively in a relationally-based, breast cancer support group meeting led by a volunteer as it does in a task-oriented, formal city commissioner meeting run by the mayor?

Quantitative analysis will be helpful in answering these questions. Three types of quantitative analysis were run, all based upon chi-square (χ^2) analysis. First, a chi-square test examined independence of IPA code frequencies across meeting activities, meetings, and context. A similar analysis tested for independence of each meeting activity across the three contexts. In addition, these tests were conducted for interacts and 3-interacts.

Second, individual IPA codes were tested for each meeting activity across the three contexts. The chi-square tests were computed for interacts and 3-interacts as well. This enabled the author to account for specific communicative differences in each meeting activity type across the three contexts.

Last, logistic regression was used to determine if context and meeting activity type can predict the occurrence of IPA codes. Logistic regression was chosen over log

linear analysis because directional influence was being investigated (context and meeting activity type's influence on communication). There are restrictions on which IPA sequences can be tested, since logistic regression assumes cell frequencies meet certain standards. No cells can have zero frequencies, and no more than 20% of cells can have frequencies fewer than five (Tabachnick & Fidell, 1996).

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Results

Chapter 5

In order to answer the three research questions, frequencies, chi-squares and logistic regressions are reported in turn. First, a general description of the data in terms of IPA and the Meeting Activity coding scheme provides a foundation for subsequent analysis.

Frequencies of IPA and Meeting Activity Codes

IPA codes. The majority of IPA thought unit codes across all meetings in all contexts were gives orientation/information (IPA 6), 59.6%. The second highest frequency was gives opinions[2] (IPA 5), 13.0%. The remainder of the IPA thought units each accounted for less than 10%: asks for orientation/information (IPA 7), 9.1%; agrees (IPA 3), 6.4%; shows solidarity/seems friendly (IPA 1), 4.3%; gives suggestions (IPA 4), 2.9%; disagrees (IPA 10), 1.2%; shows tension release/dramatizes (IPA 2), 1.2%; shows tension (IPA 11) 1.0%; asks for opinions (IPA 8), 1.0%; asks for suggestions (IPA 9), 0.3%, and shows antagonism/seems unfriendly (IPA 12), < 0.01%. See Table 4 for IPA code frequencies across all data and Table 5 for IPA code frequencies by context.

In terms of frequency, gives orientation/information codes (IPA 6) predominated the conversations. Additionally, there was a significantly greater number of IPA task codes (83.0%) than IPA relational codes. In comparison to Bales'

[2] The IPA labels reflect the original titles used in Bales' coding scheme. In order to remain consistent throughout this dissertation and with Bales' earlier works, the labels were not conjugated or adapted for grammatical purposes.

(1950) expected meeting IPA frequencies, only shows solidarity/seems friendly and gives suggestions statements were within Bales' normative ranges. Both gives orientation/information and asks for orientation/information codes were higher than published norms, while the other eight categories had IPA frequencies lower than expected.

The highest frequency IPA interact (i.e., two contiguous thought units) across all meetings and contexts was the gives orientation/information-gives orientation/information sequence (6-6), which made up 40.5% of all IPA interacts. Other high frequency interacts included: gives orientation/information-gives opinions (6-5) with 6.3%, gives opinions-gives orientation/information (5-6) with 6.1%, gives orientation/information-asks for orientation/information (6-7) with 4.6%, asks for orientation/information-gives orientation/information (7-6) with 4.3%, and gives opinions-gives opinions (5-5) with 3.9%. See Table 6 for the most frequent IPA interacts.

The higher frequency IPA interacts were task-oriented and included gives orientation/information (IPA 6) statements. Gives opinions (IPA 5) and asks for orientation/information (IPA 7) codes were most often combined with gives orientation/information codes. The most often occurring interact with a relational code was agrees-gives orientation/information (IPA 3-6) sequences (3.4%).

The highest frequency 3-interact IPA sequence across all contexts and meetings was three contiguous sequences of gives orientation/information (IPA 6-6-6), which represented 29.5% of all codes. Likewise, other high frequency 3-interact

IPA sequences were task-oriented and included: gives orientation/information-gives orientation/information-gives opinions (6-6-5) with 3.9%, gives opinions-gives orientation/information-gives orientation/information (5-6-6) with 3.8%, gives orientation/information-gives opinions-gives orientation/information (6-5-6) with 3.6%, gives orientation/information-gives orientation/information-asks for orientation/information (6-6-7) with 2.6%, asks for orientation/information-gives orientation/information-gives orientation/information (7-6-6) with 2.5%, gives orientation/information-gives opinions-gives orientation/information (6-7-6) with 2.4%, and gives orientation/information-agrees-gives orientation/information (6-3-6) with 1.7%. See Table 7 for most frequent 3-interact IPA sequences.

The highest frequency 3-interact codes all included gives orientation/information (IPA 6) statements. Gives opinions (IPA 5) and asks for orientation/information (IPA 7) codes were most often combined with gives orientation/information codes. The highest frequency 3-interact sequence with a relational code (6-3-6) occurred only 1.7% of the time.

Meeting activity codes. All thought units were also coded as being part of a specific meeting activity. Almost half of the Meeting Activity Type codes were classified as information dissemination among several individuals (45.4%). Information dissemination by one individual was coded 26.6% of the time, while problem solving was coded 13.1%. The rest of the frequencies are as follows: coordination, 7.2%; decision making, 3.8%; positive affiliation, 2.6%; motivation,

0.9%, negative affiliation, 0.2%, and other, 0.1%. See Table 8.1 for overall frequencies and Table 8.2 for meeting activity frequencies by context.

The two information dissemination meeting activities made up over 71% of all meeting activities across all meetings. Meeting activity codes related to making decisions (problem solving and decision making) represented almost 17% of all meeting activities. Thus meeting activities pertaining to information dissemination and decision making comprised nearly 88% of all activities.

Chi-square Tests for Overall Analysis

Data preparation. Chi-square tests of independence were used to investigate IPA code and sequence differences across contexts. The first chi-square test of independence examined the potential overall relationship between context and meeting activity type in regard to IPA codes. Despite the variety of meeting contexts and the number of meetings, there were low frequencies in some categories, violating assumptions of the chi-square test (Tabachnick & Fidell, 1996). To remedy the problem, IPA codes with frequencies equal to or less than 1% of the data (codes 8, 9, 11, and 12) were collapsed into an *other* category, reducing the number of IPA categories from 12 to 9. To remedy similar problems in the Meeting Activity Type coding scheme, codes for information dissemination by one individual and information dissemination by multiple individuals were collapsed into one category as originally conceptualized. Similarly, decision making and problem solving codes were collapsed back into their original problem solving code. The coordination category was not altered, and thus these three meeting activity codes were again

aligned with Scheerhorn et al.'s (1994) original effort. In addition, the rest of the codes were collapsed into one affiliation code. In coding, there were difficulties differentiating between motivation and affiliation, and thus this proved to be a natural collapse, with the negative affiliation codes representing extremely low frequencies. Thus the Meeting Activity Type coding scheme was reduced from 7 to 4 categories. Collapsing the two coding schemes in this theoretically appropriate way satisfied the necessary requirements for expected frequencies in each cell. Although not all researchers believe low cell expectancies hurt chi-square tests (Bradley, Bradley, McGrath, & Cutcomb, 1979), this type of collapse has been successfully used in other studies (e.g., Kuhn & Poole, 2000) and is a safer approach in avoiding Type I error. Table 8.3 shows the collapsed meeting activity coding frequencies by context. The collapsed IPA and Meeting Activity Coding Scheme are used for subsequent tests. All significance tests were conducted using $\alpha = .01$ criterion due to the large sample size. Cramer's *V* was used to test for strength of association; it is appropriate when two nominal variables are used that contain more than two categories per variable.

Chi-square tests across data. A two-way chi-square of 9 IPA codes x 3 meeting contexts was significant, χ^2 (16) = 886.65, $p < .001$, $V = .170$, suggesting context created differences in IPA frequencies. A two-way chi-square test of 9 IPA codes x 4 meeting activity type was significant, χ^2 (33) = 1205.73, $p < .001$, $V = .166$, suggesting meeting activity type created differences in IPA frequencies.

Next, a chi-square test of independence was computed comparing IPA codes across the three contexts within each of the four meeting activity type codes. The

two-way chi-square test of 9 IPA codes x 3 contexts was significant. For information dissemination activities, χ^2 (16) = 822.25, $p < .001$, $V = .197$. For problem solving activities, χ^2 (16) = 135.83, $p < .001$, $V = .166$. For the coordination activity, χ^2 (16) = 64.43, $p < .001$, $V = .174$. For the affiliation activity, χ^2 (16) = 128.78, $p < .001$, $V = .339$. These findings suggest that for each meeting activity type, IPA code frequencies were not the same across each context (e.g., support group IPA code frequencies for affiliation were significantly different than nonprofit IPA code frequencies for affiliation).

Last, a two-way chi-square test of 9 IPA codes x 3 context meeting was computed comparing IPA codes across meetings within a context (e.g., comparing support group meeting #1 and support group meeting #2), in terms of a specific meeting activity. All tests were significant: support group, χ^2 (56) = 553.48, $p < .001$, $V = .120$; non profit, χ^2 (24) = 59.22, $p < .001$, $V = .113$; and city commission, χ^2 (24) = 155.00, $p < .001$, $V = .079$. These findings reveal that IPA code frequencies were differently distributed across meetings within the same context.

The results from these tests suggest that there were differences among IPA composition for each context, for each meeting activity, for each context for a specific meeting activity, and even across same meeting activities in meetings of a same context. However, despite the significance of these chi-square tests, there are limitations in the extent to which they can be interpreted. For example, each test had a high number of degrees of freedom. This allowed any difference among the categories in a chi-square test to lead to a significant finding, regardless of the

similarities among the other categories. This became clearer in the final test that found differences across meetings of a same context. Upon reviewing frequencies across data, there were some similarities in frequencies across contexts; however, there were also clearly differences in frequencies across contexts, which caused the chi-square test to be significant. Thus certain IPA codes and sequences may in fact be very similar, while others within the same meeting activity may have been very different, resulting in a significant test.

In order to investigate the complexity of IPA code composition in meeting activities, it was necessary to examine specific IPA codes, interacts, and 3-interacts for each meeting activity type to investigate more fully the significant differences across contexts. A binary coding scheme was applied for each IPA code or sequence (i.e., 1 = present, 0 = not present).

Chi-square Tests for Specific IPA sequences

Testing IPA codes. The following two-way chi-square tests of 3 contexts (support group, nonprofit, city commission) x 2 IPA codes (present, not present) are organized by descending order of IPA code frequency. A summary of all chi-square tests for single IPA codes is presented in Table 9.1. Examining gives orientation/information codes (IPA 6) for each meeting activity produced mixed results. The chi-square test for meeting activity information dissemination was significant, $\chi^2(2) = 286.13$, $p < .001$, $V = .165$, with the support group showing lower frequencies and the city commission showing higher frequencies. The chi-square tests for problem solving was significant, $\chi^2(2) = 26.19$, $p < .001$, $V = .103$, with the

support group reporting lower frequencies than the other contexts. The chi-square tests for coordination, $\chi^2(2) = 5.43$, $p = .066$, and affiliation, $\chi^2(2) = 6.83$, $p = .033$, were not significant. For specific frequency differences, see Table 9.2. These tests suggest context created differences with gives orientation/information frequencies in information dissemination and problem solving meeting activities.

Examining gives opinions codes (IPA 5) for each meeting activity produced similar results. All the chi-square tests were significant: information dissemination, $\chi^2(2) = 56.95$, $p < .001$, $V = .071$; problem solving, $\chi^2(2) = 17.20$, $p < .001$, $V = .083$; coordination, $\chi^2(2) = 14.05$, $p = .001$, $V = .115$; and affiliation, $\chi^2(2) = 32.76$, $p < .001$, $V = .242$. For information dissemination, problem solving, and coordination, the nonprofit showed lower frequency levels. For affiliation, the support group showed higher frequency levels. For more on frequencies, see Table 9.3. These chi-square tests suggest context creates differences with gives opinions frequencies (IPA 5) in all meeting activities.

Examining asks for orientation/information codes (IPA 7) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 154.33$, $p < .001$, $V = .121$, with the city commission reporting a lower frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 17.79$, $p < .001$, $V = .085$, with the support group reporting a higher frequency. The chi-square tests for coordination, $\chi^2(2) = .602$, $p = .740$, and affiliation, $\chi^2(2) = 6.91$, $p = .032$, were not significant. For more on frequencies, see Table 9.4. These tests

suggest context creates differences with asks for orientation/information frequencies in the information dissemination and affiliation meeting activities.

Examining agrees codes (IPA 3) for each meeting activity produced mixed results. The chi-square tests for information dissemination, $\chi^2(2) = 270.27$, $p < .001$, $V = .160$, and problem solving, $\chi^2(2) = 16.49$, $p < .001$, $V = .082$, were significant, with the city commission reporting lower frequencies in both activities. The chi-square tests for coordination, $\chi^2(2) = 4.91$, $p = .086$, and affiliation, $\chi^2(2) = 3.70$, $p = .158$, were not significant. For more on frequencies, see Table 9.5. These tests suggests context creates differences with agrees frequencies in information dissemination and problem solving meeting activities.

Examining shows solidarity/seems friendly codes (IPA 1) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 56.96$, $p < .001$, $V = .073$, with the nonprofit reporting lower frequencies and the city commission reporting higher frequencies. The chi-square test for problem solving was not significant, $\chi^2(2) = 1.36$, $p = .506$. The chi-square test for coordination was significant, $\chi^2(2) = 10.31$, $p = .006$, $V = .099$, with the nonprofit reporting lower frequencies. The chi-square test for affiliation was significant, $\chi^2(2) = 56.15$, $p < .001$, $V = .317$, with the city commission reporting higher frequencies. For more on frequencies, see Table 9.6. These tests suggest context creates differences with shows solidarity/seems friendly frequencies in the information dissemination, coordination, and affiliation meeting activities.

Examining gives suggestions codes (IPA 4) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 17.47$, $p < .001$, $V = .041$, with the nonprofit reporting higher frequencies. The chi-square test for problem solving was significant, $\chi^2(2) = 35.90$, $p < .001$, $V = .120$, with all city commission reporting lower frequencies and the nonprofit reporting higher frequencies. The chi-square tests for coordination, $\chi^2(2) = 4.17$, $p = .124$, and affiliation, $\chi^2(2) = 5.37$, $p = .068$, were not significant. For more on frequencies, see Table 9.7. These tests suggest context creates differences with gives suggestions frequencies in information dissemination and problem solving meeting activities.

Examining shows tension release/dramatizes codes (IPA 2) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 35.07$, $p < .001$, $V = .058$, with the city commission reporting lower frequencies. The chi-square test for affiliation was significant, $\chi^2(2) = 24.65$, $p < .001$, $V = .210$, with the support group reporting lower frequencies. For more on frequencies, see Table 9.8. These tests suggest context creates differences with tension release frequencies in information dissemination and affiliation meeting activities. The chi-square tests for problem solving and coordination violated expected frequencies norms and were not interpretable.

Examining disagrees codes (IPA 10) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 84.28$, $p < .001$, $V = .089$, with the city commission reporting the lower frequencies.

The chi-square test for problem solving was significant, $\chi^2(2) = 34.11$, $p < .001$, $V = .117$, with the support group reporting higher frequencies. For more on frequencies, see Table 9.9. These tests suggest context has a relationship with disagrees frequencies in information dissemination and problem solving meeting activities. The chi-square tests for coordination and affiliation violated expected frequencies norms.

Overall, a pattern emerged for all four frequent task thought units: gives orientation/information (IPA 6), gives opinions (IPA 5), asks for orientation/information (IPA 7), and give direction (IPA 4) codes. In each, there was significant differences across contexts for information dissemination and problem solving meeting activities. Except for gives opinions codes, there was no significance in coordination and affiliation meeting activities. Statistically speaking, there were no differences in how the task-oriented IPA codes were used when coordinating or affiliating.

Although considered relational by Bales, the agrees (IPA 3) and disagrees (IPA 10) codes also followed the pattern of these task oriented IPA codes. The other two frequent IPA relational codes, shows solidarity/seems friendly (IPA 1) and tension release (2), were significant for affiliation. Thus frequencies of these two codes were different depending on the context. This may be explained by the fact that the shows solidarity and tension release are relational thought units; when performing an affiliative goal, context may have a greater influence on how that meeting activity is performed. In general, task oriented IPA codes were used differently across

contexts for task activities, and relationally oriented IPA codes were used differently across contexts for relational activities.

Testing IPA interacts. Although analyzing IPA codes singularly is helpful, it is also important to understand how these codes are used in interaction. One way to do this is to analyze longer code sequences. The following two-way chi-square tests of 3 contexts (support group, nonprofit, city commission) x 2 IPA interacts (present, not present) are organized in descending order of IPA interact frequency. For a summary of results, see Table 10.1.

Examining gives orientation/information-gives orientation/information interacts (6-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 672.61$, $p < .001$, $V = .252$, with the support group reporting lower frequencies and the city commission reporting higher frequencies. The chi-square for problem solving was significant, $\chi^2(2) = 55.44$, $p < .001$, $V = .145$, with the support group reporting lower frequencies. The chi-square for coordination was significant, $\chi^2(2) = 11.81$, $p = .003$, $V = .106$, with the city commission reporting higher frequencies. The chi-square tests for affiliation was not significant, $\chi^2(2) = 1.50$, $p = .474$. For more on frequencies, see Table 10.2. These tests suggest context creates differences with gives orientation/information-gives orientation/information frequencies in information dissemination, problem solving, and coordination meeting activities.

Examining gives orientation/information-gives opinions interacts (6-5) for each meeting activity produced mixed results. The chi-square test for information

dissemination was significant, $\chi^2(2) = 20.81$, $p < .001$, $V = .044$, with the nonprofit reporting lower frequencies. The chi-square tests for problem solving, $\chi^2(2) = 6.99$, $p = .030$, and coordination, $\chi^2(2) = 2.49$, $p = .288$, were not significant. The chi-square for affiliation was significant, $\chi^2(2) = 10.71$, $p = .005$, $V = .138$, with the support group reporting higher frequencies. For more on frequencies, see Table 10.3. These tests suggest context creates differences with gives orientation/information-gives opinions frequencies in information dissemination and affiliation meeting activities.

Examining gives opinions-gives orientation/information interacts (5-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 18.84$, $p < .001$, $V = .043$, with the nonprofit reporting a lower frequency. The chi-square tests for problem solving, $\chi^2(2) = 6.46$, $p = .040$, and coordination, $\chi^2(2) = 7.56$, $p = .023$, were not significant. The chi-square test for affiliation was significant, $\chi^2(2) = 10.73$, $p = .005$, $V = .142$, with the support group reporting a higher frequency. For more on frequencies, see Table 10.4. These tests suggest context creates differences with gives opinions-gives orientation/information frequencies in information dissemination and affiliation meeting activities.

Examining asks for orientation/information-gives orientation/information interacts (7-6) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 95.05$, $p < .001$, $V = .097$, with the city commission reporting a lower frequency. The chi-square tests for meeting activity type problem solving, $\chi^2(2) = 1.44$, $p = .486$, coordination, $\chi^2(2) = 2.29$, $p =$

.319, and affiliation, $\chi^2(2) = .40$, $p = .820$, were not significant. For more on frequencies, see Table 10.5. These tests suggest context creates differences with asks for orientation/information-gives orientation/information frequencies in information dissemination meeting activities.

Examining gives orientation/information-asks for orientation/information interacts (6-7) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 116.29$, $p < .001$, $V = .106$, with the city commission reporting a lower frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 14.10$, $p = .001$, $V = .077$, with the city commission reporting lower frequencies and support groups reporting higher frequencies. The chi-square tests for coordination, $\chi^2(2) = 5.36$, $p = .069$, and affiliation, $\chi^2(2) = 2.05$, $p = .359$, were not significant. For more on frequencies, see Table 10.6. These tests suggest context creates differences with gives orientation/information-asks for orientation/information frequencies in information dissemination and problem solving meeting activities.

Examining gives opinions-gives opinions interacts (5-5) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 49.94$, $p < .001$, $V = .070$, with the nonprofit reporting lower frequencies and city commission reporting higher frequencies. The chi-square test for problem solving was significant, $\chi^2(2) = 17.75$, $p < .001$, $V = .087$, with the nonprofit reporting lower frequencies and city commission reporting higher frequencies. The chi-square tests for coordination, $\chi^2(2) = 6.43$, $p = .040$, and affiliation, $\chi^2(2) = 8.68$, p

= .013, were not significant. For more on frequencies, see Table 10.7. These tests suggest context creates differences with gives opinion-gives opinion frequencies in information dissemination and problem solving meeting activities.

Examining gives orientation/information-agrees interacts (6-3) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 180.42$, $p < .001$, $V = .131$, with the nonprofit reporting a higher frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 28.67$, $p < .001$, $V = .108$, with the nonprofit reporting a higher frequency. The chi-square tests for coordination, $\chi^2(2) = 5.81$, $p = .055$, and affiliation, $\chi^2(2) = 3.04$, $p = .219$, were not significant. For more on frequencies, see Table 10.8. These tests suggest context creates differences with gives orientation/information-agrees frequencies in information dissemination and problem solving meeting activities.

Examining shows solidarity/seems friendly-shows solidarity/seems friendly interacts (1-1) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 57.64$, $p < .001$, $V = .074$, with the city commission reporting a higher frequency. The chi-square test for affiliation was significant, $\chi^2(2) = 43.40$, $p < .001$, $V = .279$, with the city commission reporting a higher frequency. For more on frequencies, see Table 10.9. These tests suggest context creates differences with shows solidarity/seems friendly-shows solidarity/seems friendly frequencies in information dissemination and affiliation meeting activities. The chi-square tests for problem solving and coordination could

not be computed due to low cell frequencies. All remaining chi-square tests involving IPA interacts are reported in Table 10.1.

Although some IPA interacts and their inverses (6-5, 5-6) had similar results, this was not always the case. For example, the gives orientation/information-asks for orientation/information (6-7) and asks for orientation/information-gives orientation/information (7-6) sequences were different in regard to problem solving. This may have to do with the natural flow of asks for orientation/information-gives orientation/information (7-6) sequence, whereas the order of 5-6 and 6-5 interacts may not be as important to the stream of conversation. In regard to the gives orientation/information sequence (6-6), the only one that was not significantly influenced by context was affiliation, which is the only relational meeting activity.

The 5-5, 6-7, 6-3, and 3-6 interacts followed the pattern observed with task oriented single IPA codes, namely that the sequences were significantly related to context in information dissemination and problem solving meeting activities, while not so in coordination and affiliation. The majority of all IPA interact codes were not significant for coordination and affiliation meeting activities. Information dissemination was significant for each IPA interact, suggesting context consistently created differences in this meeting activity. Coordination was not significant for any interact except for 6-6; this suggests that each context was communicatively similar in terms of IPA interacts for coordination. Affiliation meeting activities were significant in terms of 5-6 and 6-5 codes, suggesting that offering an opinion in

conjunction with gives orientation/information varied by context when performing affiliation.

Testing IPA 3-interacts. Continuing in the intent of understanding how messages are functioning in interaction (and thus looking at interaction sequences), IPA 3-interacts are considered. The following two-way chi-square tests of 3 contexts (support group, nonprofit, city commission) x 2 IPA 3-interact codes (present, not present) are organized in descending order of 3-interact IPA sequence frequency. For a summary of results, see Table 11.1.

Examining three contiguous sequences of gives orientation/information (IPA 6-6-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 861.96$, $p < .001$, $V = .286$, with the city commission reporting a higher frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 59.68$, $p < .001$, $V = .155$, with the support group reporting a lower frequency. The chi-square test for coordination was significant, $\chi^2(2) = 12.33$, $p = .002$, $V = .108$, with the city commission reporting a higher frequency. The chi-square tests for affiliation was not significant, $\chi^2(2) = .937$, $p = .626$. For more on frequencies, see Table 11.2. These tests suggest context creates differences with 6-6-6 frequencies in information dissemination, problem solving, and coordination meeting activities.

Examining gives orientation/information-gives orientation/information-gives opinions sequences (IPA 6-6-5) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 23.40$, $p <$

.001, $V = .047$, with the nonprofit reporting a lower frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 11.90$, $p < .001$, $V = .069$, with the city commission reporting a higher frequency. The chi-square tests for coordination, $\chi^2(2) = .266$, $p = .876$, and affiliation, $\chi^2(2) = 4.28$, $p = .118$, were not significant. For more on frequencies, see Table 11.3. These tests suggest context creates differences with 6-6-5 frequencies in information dissemination and problem solving meeting activities.

Examining gives opinions-gives orientation/information-gives orientation/information sequences (IPA 5-6-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 14.52$, $p = .001$, $V = .037$, with the nonprofit reporting a lower frequency. The chi-square for problem solving was significant, $\chi^2(2) = 9.69$, $p = .008$, $V = .063$, with the city commission reporting a higher frequency. The chi-square tests for coordination, $\chi^2(2) = 1.43$, $p = .488$, and affiliation, $\chi^2(2) = 4.80$, $p = .091$, were not significant. For more on frequencies, see Table 11.4. These tests suggest context creates differences with 5-6-6 frequencies in information dissemination and problem solving meeting activities.

Examining gives orientation/information-gives opinions-gives orientation/information sequences (IPA 6-5-6) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 9.47$, $p = .009$, $V = .030$, with nonprofit reporting a lower frequency. The chi-square tests for problem solving, $\chi^2(2) = 8.11$, $p = .017$, coordination, $\chi^2(2) = 7.27$, $p = .026$, and affiliation, $\chi^2(2) = 5.50$, $p = .064$, were not significant. For more on

frequencies, see Table 11.5. These tests suggest context creates differences with 6-5-6 frequencies in information dissemination meeting activities.

Examining gives orientation/information-gives orientation/information-asks for orientation/information sequences (IPA 6-6-7) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 34.39$, $p = .009$, $V = .057$, with the city commission reporting lower frequencies and the nonprofit reporting higher frequencies. The chi-square tests for problem solving, $\chi^2(2) = 3.39$, $p = .184$, and coordination, $\chi^2(2) = 2.46$, $p = .293$, were not significant. The test for affiliation could not be completed. For more on frequencies, see Table 11.6. These tests suggest context creates differences with 6-6-7 frequencies in information dissemination meeting activities.

Examining gives orientation/information-asks for orientation/information sequences-gives orientation/information (IPA 6-7-6) for each meeting activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 69.48$, $p = .009$, $V = .081$, with the city commission reporting a lower frequency. The chi-square test for problem solving, $\chi^2(2) = 3.41$, $p = .182$, and coordination, $\chi^2(2) = 6.48$, $p = .039$, were not significant. The test for affiliation could not be completed. For more on frequencies, see Table 11.7. These tests suggest context creates differences with 6-7-6 frequencies in information dissemination meeting activities.

Examining asks for orientation/information sequences-gives orientation/information-gives orientation/information (IPA 7-6-6) for each meeting

activity produced mixed results. The chi-square tests for information dissemination was significant, $\chi^2(2) = 27.42$, $p = .009$, $V = .051$, with the city commission reporting a lower frequency. The chi-square tests for problem solving, $\chi^2(2) = 1.08$, $p = .582$, and coordination, $\chi^2(2) = .455$, $p = .797$, were not significant. The test for affiliation could not be completed. For more on frequencies, see Table 11.8. These tests suggest context creates differences with 7-6-6 frequencies in information dissemination meeting activities.

Examining gives orientation/information-agrees-gives orientation/information (IPA 6-3-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 103.65$, $p = .009$, $V = .099$, with the city commission reporting lower frequencies and the nonprofit reporting higher frequencies. The chi-square test for problem solving was significant, $\chi^2(2) = 30.76$, $p = .009$, $V = .111$, with the non profit reporting a higher frequency. The chi-square test for coordination, $\chi^2(2) = 8.64$, $p = .013$, was not significant. The test for affiliation could not be completed. For more on frequencies, see Table 11.9. These tests suggest context creates differences with 6-3-6 frequencies in information dissemination and problem solving meeting activities.

Examining agrees-gives orientation/information-gives orientation/information (IPA 3-6-6) for each meeting activity produced mixed results. The chi-square test for information dissemination was significant, $\chi^2(2) = 61.16$, $p < .001$, $V = .076$, with the city commission reporting a lower frequency. The chi-square test for problem solving was significant, $\chi^2(2) = 11.56$, $p = .003$, $V = .068$, with the nonprofit reporting a

higher frequency. The chi-square test for coordination, $\chi^2(2) = .455$, $p = .797$, was not significant. The test for affiliation could not be completed. For more on frequencies, see Table 11.10. This test suggests context creates differences with 3-6-6 frequencies in information dissemination and problem solving meeting activities. The remaining chi-squares tests that satisfied chi square assumptions are presented in Table 11.1.

Overall, all 3-interacts were significant for information dissemination, except 1-1-1 sequences. Problem solving was significant for 6-6-6, 6-6-5, 5-6-6, and 6-3-6 sequences. Coordination was only significant for the 6-6-6 sequence. Affiliation was only significant for 1-1-1 sequences. Many of the tests could not be completed due to low frequencies of 3-interacts.

There were similarities and differences for the 3-interact IPA sequence as compared to the IPA codes and interacts. Information dissemination was significant for each 3-interact IPA sequence, suggesting that context consistently had a relationship with the IPA sequences across this meeting activity. Similar to IPA interacts, 3-interact IPA sequences in coordination were not significantly related to context except for the 6-6-6 sequence. These tests suggest that coordination was similar in terms of IPA codes, interacts and 3-interacts throughout the data.

There were interesting results for relational sequences. For example, the only significant chi-square test involving a relational code was 1-1-1. Thus, for all 3-interact sequences involving only task oriented IPA codes, none was used significantly differently for affiliation across the three contexts; task oriented messages were performed similarly for relational meeting activities. But relational

messages were different for affiliation across contexts. Thus, task oriented IPA codes and frequencies were generally different across contexts for task oriented meeting activities. Similarly, relationally oriented IPA codes and frequencies were generally different across contexts for relationally oriented meeting activities. The one difference to this pattern was coordination, which showed no IPA frequencies differences across contexts.

Logistic Regression Predicting IPA Sequences

Regression across all data. To investigate whether context, meeting activity type, or their interaction could effectively predict IPA code and sequence occurrence, logistic regression was computed. Logistic regression was selected since the focus was on specific binary dependent variables and because the assumptions of the research questions placed context and meeting activity type in a predictive relationship with the communication functions. Initially a multinomial logistic regression using the interaction and main effects of context and meeting activity type as predictor variables was computed to investigate whether there was a general model for prediction across all IPA codes and sequences. The tests suggested the model testing single IPA codes: $\chi^2(40) = 1737.97$, $p < .001$, $r^2 = .119$, goodness of fit $\chi^2(48) = 240.52$, $p < .001$; IPA interacts, $\chi^2(48) = 942.96$, $p < .001$, $r^2 = .162$, goodness of fit $\chi^2(96) = 234.91$, $p < .001$; and 3-interact IPA sequences, $\chi^2(66) = 903.68$, $p < .001$, $r^2 = .174$; goodness of fit $\chi^2(132) = 260.27$, $p < .001$, were all significant, but the models lacked goodness of fit.

Individual regression rationale. In order to identify the predictor variables best contributing to the logistic model, additional binary logistic regressions were computed using single IPA codes and sequences as criterion variables (0 = not present, 1 = present). We tested across seven models for best prediction, operationalized as accounting for the highest degree of variance. The first two models analyzed for each main effect

$$z = \beta o + \beta_1 \chi_1$$

$$z = \beta o + \beta_2 \chi_2$$

where z equals the logit or measure of the total contribution of all model's risk factors, βo is the constant, $\beta_1 \chi_1$ is the coefficient for context and $\beta_2 \chi_2$ is the coefficient for meeting activity type. The third test was for both main effects.

$$Z = \beta o + \beta_1 \chi_1 + \beta_2 \chi_2$$

The fourth and fifth test accounted for one main effect and the interaction of the two main effects.

$$Z = \beta o + \beta_1 \chi_1 + \beta_{12} \chi_1 \chi_2$$

$$z = \beta o + \beta_2 \chi_2 + \beta_{12} \chi_1 \chi_2$$

The sixth test accounted solely for the interaction.

$$Z = \beta o + \beta_{12} \chi_1 \chi_2$$

Thus the seventh model was the full model.

$$Z = \beta o + \beta_1 \chi_1 + \beta_2 \chi_2 + \beta_{12} \chi_1 \chi_2.$$

Initially, all predictor variables were entered simultaneously into the equation. The full model was run a second time with backward stepwise elimination (elimination =

.01) and in each case this test confirmed that the full model accounted for the most variance. Since there was more than one nominal dependent variable, simple contrasts were created in order to test for differences between the categories. Referent codes were selected for each predictor variable based on the greatest frequency difference between categories: the city commissioner meeting context and affiliation meeting activity type was designated referents, respectively. Nagelkerke r^2 is an estimation of explained variance for the model; it is a pseudo r^2 measurement and allowed for comparison across models. It is also generally lower than r^2 used in linear regression. Only models that met cell expectancies in accordance with logistic regression assumptions were computed (Tabachnick & Fidell, 1996). The models with the highest amount of variance explained are presented below. A summary of models containing the highest estimation of explained variances are listed in Table 12.

Regression for IPA codes. All full models accounted for the greatest degree of variance when the dependent variable was a single IPA code: gives orientation/information (IPA 6), (Omnibus test of model coefficients) $\chi^2(11) = 550.18$, $p < .001$, $r^2 = .050$; gives opinions (IPA 5), $\chi^2(11) = 248.53$, $p < .001$, $r^2 = .031$; asks for orientation/information (IPA 7), $\chi^2(11) = 220.98$, $p < .001$, $r^2 = .033$; agrees (IPA 3), $\chi^2(11) = 365.23$, $p < .001$, $r^2 = .065$; shows solidarity/seems friendly (IPA 1), $\chi^2(11) = 289.61$, $p < .001$, $r^2 = .065$.

Overall, several patterns emerged. When a single IPA code was the dependent variable, the main effect for meeting activity type was present in each model. For the task oriented dependent variables (i.e., IPA 6, give orientation/information; IPA 5,

gives opinions; IPA 7, asks for orientation/information), two additional models held similar r^2s to the full model: the model consisting of the main effects, and the model consisting of the meeting activity type main effect and the interaction. For relationally oriented dependent variables (i.e., IPA 3, agrees; IPA 1 shows support/seems friendly), these same two models did not have similar r^2s; the models that best predicted task oriented IPA codes did not predict relationally oriented IPA codes. In addition, the amount of variance accounted for was higher for the relational codes, although relatively low for all codes. In addition, the meeting activity type main effect was present in each model of adequate fit.

Regression for IPA interacts. Not surprisingly, all full models accounted for the highest amounts of variance when the dependent variable was an IPA interact. They are presented in order frequency: gives orientation/information-gives orientation/information (IPA 6-6), $\chi^2(11) = 1058.10$, $p < .001$, $r^2 = .094$; gives orientation/information-gives opinions (IPA 6-5), $\chi^2(11) = 66.37$, $p < .001$, $r^2 = .012$; gives opinions-gives orientation/information (IPA 5-6), $\chi^2(11) = 84.56$, $p < .001$, $r^2 = .016$; asks for orientation/information-gives orientation/information (IPA 7-6), $\chi^2(11) = 110.02$, $p < .001$, $r^2 = .025$; gives orientation/information-asks for orientation/information (IPA 6-7), $\chi^2(11) = 150.92$, $p < .001$, $r^2 = .033$; agrees-gives orientation/information (IPA 3-6), $\chi^2(11) = 223.78$, $p < .001$, $r^2 = .059$; gives orientation/information-agrees (IPA 6-3), $\chi^2(11) = 199.95$, $p < .001$, $r^2 = .060$.

With IPA interacts as the dependent variable, several patterns emerged. Sequences with relational codes accounted for more variance than task-only

sequences, with the exception the 6-6 sequence, which accounted for the most variance. Sequences with gives opinions (IPA 5) codes had the lowest r^2, and sequences with asks for orientation/information (IPA 7) codes were next lowest. The amount of variance accounted for was lower than the single codes, except for the 6-6, 6-3, and 3-6 sequences.

Regression for 3-interact IPA sequences. All full models accounted for the highest amounts of variance when the dependent variable was a 3-interact IPA sequence and are presented in order of highest frequency: 3 contiguous gives orientation/information (IPA 6-6-6), $\chi^2(11) = 1355.34$, $p < .001$, $r^2 = .126$; gives orientation/information-gives orientation/information-gives opinions (IPA 6-6-5), $\chi^2(11) = 57.72$, $p < .001$, $r^2 = .014$; gives opinions-gives orientation/information-gives orientation/information (IPA 5-6-6), $\chi^2(11) = 54.10$, $p < .001$, $r^2 = .013$; gives orientation/information-gives opinions-gives orientation/information (IPA 6-5-6, $\chi^2(11) = 44.26$, $p < .001$, $r^2 = .011$; gives orientation/information-gives orientation/information-asks for orientation/information (IPA 6-6-7), $\chi^2(11) = 50.24$, $p < .001$, $r^2 = .016$; gives orientation/information- asks for orientation/information-gives orientation/information (IPA 6-7-6), $\chi^2(11) = 84.54$, $p < .001$, $r^2 = .028$; asks for orientation/information-gives orientation/information-gives orientation/information (IPA 7-6-6), $\chi^2(11) = 37.27$, $p < .001$, $r^2 = .012$; gives orientation/information-agrees-gives orientation/information (IPA 6-3-6), $\chi^2(11) = 131.10$, $p < .001$, $r^2 = .056$; agrees-gives orientation/information-gives orientation/information (IPA 3-6-6), $\chi^2(11) = 83.17$, $p < .001$, $r^2 = .036$.

With IPA triplets as the dependent variable, several patterns emerged. For many of the sequences, several models were an appropriate fit. The model involving the main effect for meeting activity type and the interaction often explained almost the same amount of variance as the full model. The amount of variance accounted for was even lower than the single and double codes, except for the 6-6-6, 3-6-6, and 6-3-6 sequences.

Discussion

Chapter 6

Interaction analysis of meetings of a breast cancer support group, a nonprofit Internet service provider, and a city commission was guided by two research questions. Each question will be answered in turn, followed by a reflective step to examine the ramifications of this dissertation project.

IPA Across Meetings and Contexts

The first research question focused on what interaction looked like in terms of IPA in Scheerhorn et al.'s (1994) five meeting activities, and how the interaction differed in terms of IPA within and between meeting contexts. Several points came to the forefront: the complexity of meeting interaction, the quantity of thought units coded as gives orientation/information, the similarities and differences across meeting activity types, and the similarities and differences across contexts.

Complexity of Meeting Interaction

One of the clear findings from this data is the affirmation that meeting interaction is very complex. The results from the initial chi-square tests of independence examined IPA distributions across all data. These tests found significance for context (support group, nonprofit, and city commission meetings), meeting activity (information dissemination, problem solving, coordination and affiliation), and interactions between context and meeting activity. The range of variance accounted for in these tests ranged from 16.6% to 33.9%. An additional test indicated significant differences across meetings in the same context. This suggested

two things. First, further analysis was necessary to investigate whether the high number of categories in the nominal variables factored into this result (as discussed in the results section). By performing a more micro level of analysis (testing for differences among specific IPA codes and sequences), some IPA patterns did emerge. Second, these results spoke to the complex nature of social interaction. Examining the simple frequency occurrences of IPA codes across meetings and context made it appear that meetings within a context were fairly similar. However, these tests indicated that even within the same context interaction was significantly different at the macro level. The levels of association suggested that other factors influenced the frequency of IPA codes and sequences as well.

The logistic regression analysis confirms this same interaction complexity. When computing three multinomial logistic regressions separately predicting all IPA single, interact, and 3-interact sequences, the models reported significant results for each, with r^2 accounting for up to 17.4% of the variance. But even with significant predictive power, none of the models demonstrated a goodness of fit to the data. Interestingly, several reduced models nearly accounted for the same amount of variance as the full model. This suggests that although some of the variance is accounted for, it is difficult to determine which predictor variables are better at influencing the occurrence of the criterion variable. Micro level binary regression models showed that gives orientation/information and relational thought units accounted for most of the variance.

Thus, the chi-square tests and logistic regression models explained 11% to 34% of the variance in IPA frequencies across data. Clearly there are other variables involved as well; despite this, context and meeting activity type accounted for a significant amount of the variance. This is interesting since variables such as discussion content, group member personality or social psychological factors were unaccounted for, and yet significance was still found. Thus, one of the important findings from this project is that both context and meeting activity type influenced meeting interaction.

Gives Orientation/Information Statements

One of the more interesting results of this project was the high levels of gives orientation/information (IPA 6) statements prevalent across all meeting activities and contexts. Percentage-wise, gives orientation/information and ask for orientation/information (IPA 7) statements were the only codes with higher than expected frequencies in reference to Bales' norms. Bales' norms suggest that gives orientation/information thought units (IPA 6) should be higher than the other codes, but the proportional distributions in the study are higher than Bales predicts. All other codes were lower than Bales' norms except for two within the norms. Not surprisingly, this led analysis of interact and 3-interact sequences to be heavily influenced by the presence of gives orientation/information thought units.

This prevalence was not restricted to the information dissemination meeting activity, where one might assume a higher proportion of gives orientation/information may take place. For problem solving (n = 1284, 51.80%), coordination (n = 560,

52.78%), and affiliation meeting activities, (n = 222, 39.71%), gives orientation/information frequencies were all higher than Bales' norms would suggest. Consistently across both the chi-square and logistic regression tests, give orientation/information thought units and sequences had the greatest influence.

The predominance of gives orientation/information (IPA 6) thought units can be both positive and problematic. One of the benefits of having higher frequencies of gives orientation/information codes is that it suggests group members are sharing large amounts of information pertinent to the meetings. Indeed, one of the assumptions of previous meeting and decision making research is that individuals can pool their knowledge, leading to more effective outcomes (Stasser & Titus, 1985). In this light, the higher frequencies of gives orientation/information codes perhaps improved meeting productivity.

One potential explanation for the high amounts of gives orientation/information thought units is the procedural or facilitative mechanisms embedded within the contexts. The city commission meetings set time aside on the agenda to receive information from specific businesses or agencies (i.e., Wal-Mart, bar owners), the public (i.e., walk-in opinions concerning Wal-Mart, bus hours, swimming pool fees, the budget), and city commissioners themselves. Indeed, sometimes these time lengths were extended in order for everyone to participate. Meeting agendas also required that information dissemination must take place in its entirety before city commissioner debated the issues. This provided a prime

opportunity for members of the community to speak, knowing that the city commissioners would listen without interruption.

In support groups, time was allotted for each member to have an opportunity to speak. This was an informal group norm, as everyone waited on the facilitator to go around the room and ask each member how she is doing. Often members would share information about their cancer status, which could lead to more information sharing by fellow group members or to different meeting activities (i.e., problem solving, affiliation). There were some members who did not take advantage of the time allotted to them, but everyone was given the opportunity to share information about her cancer status, and often this involved gives orientation/information statements.

Similarly, the nonprofit meetings involved the general manager going around the room, asking each member for status reports. This was somewhat different from the support group meetings in that the majority of conversations focused topically on the different companies they were working with, and the group members who worked with the respective companies. At the end, if someone had not had the opportunity to share what he or she had done that week, or if he or she had nothing to say, a very brief, sometimes teasing conversation would take place that would give that person an opportunity to speak. For example (IPA codes in parentheses following the thought unit):

GM: . . . Yeah, I hear you. (6) Miss Sally? (7) Sal, huh? (7) How's your job going? (8)

Sally: It's good. (5)

GM: Are you ready to take some time off from us? (7)

Sally: Yep. (3)

Then the GM transitioned to the founder of the nonprofit, who would talk for an extended period of time to wrap up the meeting. Thus, in each context, whether formally or informally created, the meeting structure enabled members to share information and this was often done using gives orientation/information codes.

Whereas there are many positives to sharing large amounts of information, there are potential problematic elements to the high prevalence of gives orientation/information statements (IPA 6). For example, these statements were not only prevalent in meeting activities where the main purpose of the activity was information dissemination, but also in the problem solving, coordination, and affiliation meeting activities. Although the asks for orientation/information (IPA 7) thought units were within Bales' norms, gives opinions (IPA 5) or gives suggestions (IPA 4) statements had lower frequencies. In addition, there were very low levels of disagreement (IPA 10), asks for opinions (IPA 8) and asks for suggestions (IPA 9) statements. This is in accordance with Bales' (1950a) observation that meetings involve few requests for elaborations or opinions. Thus, one concern for the high frequencies of gives orientation/information thought units and the lower frequency of other thought units is that the information was not being openly evaluated or critiqued; it was simply being presented. There were very few thought units asking for an evaluation of information, suggesting possible conflict avoidance (Gorse &

Emmitt, 2007). Problem-solving and coordination meeting activities struggle without proper critique explicitly stated for the benefit of all. Bales (1953) argued that group leaders should ask for such evaluation if it is not present. In addition, the IPA coding scheme does not account for repeated information. Higher frequencies of gives orientation/information thought units do not necessarily indicate whether new or additional information was presented. Indeed, Stasser and Titus' information sampling model (1985, 1987) is based upon the tendency of group members to share or repeat information already possessed by group members. Although they found that repeated information was more easily recalled, they suggested this biased the discussion and negatively influenced outcomes (Stasser & Titus, 1987).

There are several potential reasons for the low frequencies of question and opinion oriented IPA codes. One possibility is that IPA's focus on the thought unit is too small in attempting to analyze opinions and critiques. In others words, opinions and critiques may be conveyed through longer strings of interaction, and these may be in the form of gives orientation/information statements. For example, city commissioners would take extended speaking turns in order to present their sides of the case. Often they did not explicitly state a preference for one idea or another through a specific thought unit, but the entire speaking turn as a whole revealed the commissioners' preferences. Another possibility is that the city commissioners would offer an opinion with one or two statements that gave opinions or gave suggestions, but for the remainder of the speaking turn would share information in support of or leading up to the opinion. The following example of a city commission meeting

during a problem solving meeting activity illustrates the point. The commissioners are debating whether or not to allow an area of land to be rezoned for the building of a second Wal-Mart in the city. This excerpt is from a city commissioner during the debate:

> Commissioner Boog: I'll start. (6) Um, I had, this rezoning came out of the abeyance agreement that entered into, I don't know how long ago, a year ago. (6) And I supported that at that time. (6) Since then, because of what it does, my understanding – the collective effect of the rezoning of this is to reduce the total amount of square footage from 150-something, to 128,000, but change the maximum building size from an 80,000 square foot to the just shy of 100,000 square foot. (6) Given the way that that – the way that we've violated our master plan by allocating far more commercial space to that corner, that intersection, than was contemplated in the plan, I thought that might be an improvement, (6) but since then I've come into information suggesting that the suggested use, the projected use, i.e., a Wal-Mart store, could potentially generate three to five times more traffic per square foot than comparable big box department stores, (6) and so, given that, I think we, by the rezoning, would be creating a situation that would be generating more traffic than the existing zoning (5), so I no longer support the proposed rezoning (5).

The commissioner is clearly arguing against the rezoning. To do this, he recounts some past city commission actions in order to explain his position. The first six thought units are coded as gives information/orientation (IPA 6) statements, and the

last two thought units are gives opinions (IPA 5) statements. Even though there is only the presence of two opinion statements, the entire speaking turn works as an argument against the rezoning.

Another possible explanation for the low frequencies of opinion, disagreement, suggestion, asking for opinion, and asking for suggestion codes is that many of these critiques could have taken place in back channel communication outside of the meeting. Since such disagreements could involve high emotions, personal attacks, and negative reactions, perhaps much of the real debate took place prior to the meeting and the meeting is actually a tool to *play out* the debate for others. Bartunek, Kolb and Lewicki (1992) argue that informal, behind-the-scenes, pre-meeting discussion of conflict enables more data collection, provides a safer environment to test interpretations, and creates a foundation for collective consensus in approaching the conflict formally. This safer environment may lead to potentially more negative attacks among conflicting parties. "Meetings are marked by civil discourse; personal attacks are whispered behind closed doors" (Bartunek, Kolb, & Lewicki, 1992, p. 213). Also, many of these critiques, which may also be relational, could be woven into the complexity of the discussion. Meetings are "an invisible but very powerful social form" because relational goals and strategies are performed "in the guise of discharging business or work" (Schwartzman, 1989, p. 78).

It is important to note that IPA codes with low frequencies are not necessarily of lesser import in conversation; potentially, low frequency messages could have more influence. Indeed, the rarity of many codes compared to the high number of

gives orientation/information thought units may accentuate their influence. High levels of information sharing may cause important information to be lost in the shuffle. Having higher frequencies of gives orientation/information codes and fewer of the other IPA codes may lead meetings to have a different flow of conversation depending on context. For example, responses to questions in city commission meetings contained more gives orientation/information interacts and 3-interacts. This could account for longer speaking turns, requiring individuals to listen for extended periods of time.

Differences in meeting activities may likewise account for differences in gives orientation/information across contexts. Information dissemination for the support group and nonprofit usually involved multiple individuals, but city commissioners had many instances where information dissemination meant listening to one person speak for an extended period of time. Although this coding division was collapsed in our data (and in the original Scheerhorn et al. coding scheme), it may be helpful in explaining some of the differences between contexts in the information dissemination meeting activity. The nature of city commissioner interaction may have prevented other IPA codes from being used; uninterrupted individuals would probably not use as many questions or other statements that require an immediate response. Gives orientation/information thought units had the greatest contextual differences across the data; indeed, the chi-square tests involving give orientation/information thought units accounted for the highest amounts of variance.

Communicatively Defining Meeting Activities

In addition to the predominance of gives orientation/information thought units, several other distinguishing factors were identified across meeting activity types. After completing the chi-square tests for single IPA codes and sequences, the results were analyzed in an effort to understand common patterns across contexts and to communicatively define meeting activity types. When making references to frequencies across contexts, it is important to remember that percentages are being used so that data are comparable. Thus, just because some meetings were longer than others and used more thoughts units, this did not influence how frequencies were compared across contexts. Several distinguishing characteristics are listed below.

Information Dissemination. Even though there were high levels of information sharing across all contexts and meeting activity types, the city commission meetings had significantly more gives orientation/information (IPA 6) thought units. This was true at the IPA single code, interact, and 3-interact level. The contextual differences in information dissemination during city commission meetings may account for this. In addition, city commission meetings were also longer than the other meetings; length of speaking turns and time on a particular topic were also longer. The high amount of gives orientation/information sharing thought units during information dissemination activities may account for these extended talking episodes; group members spoke longer because they were using considerably more gives orientation/information thought units (IPA 6) than the other contexts.

Additionally, the city commission meetings always had a lower frequency of asks for orientation/information (IPA 7) thought units in the information

dissemination meeting activity type. Again, this may be explained by the fact that each time information was shared it was done at great lengths in this context, and thus a single question could lead to extended answers, decreasing the percentage ratio of question-to-other statements. Bales (1954) stated that an even ratio (50/50) of questions to answers was evidence of successful communication. In addition, city commission meetings also had low levels of agrees (IPA 3) thought units as compared to the other contexts.

Naturally, it makes sense that when the frequency of a certain message type increases, the percentage of other message types decreases. But this is very important in terms of its influence on meetings. While collecting data, the author observed it was very difficult to sit and stay focused during city commission meetings (i.e., they were boring). The meeting activities that involved one person speaking for a long amount of time became very mind numbing, much more so than when listening to the other two meeting contexts. Indeed there are several critiques of public meetings outlining how their structure discourages public participation (e.g., see Innes & Booher, 2004). Increases in the amount of information shared, by using gives orientation/information thought units, might have counterproductive effects on the efficacy of meeting communication.

The nonprofit meetings had the fewest gives opinions (IPA 5) thought units during the information dissemination meeting activity type. This remained true for IPA interacts and 3-interacts (6-5, 5-6, 6-5-6, 6-6-5, 5-6-6) as well. Thus, the support group and city commission used more opinions when disseminating information. In

addition, this pattern was similar for the problem solving and coordination activities, although not always at a significant level when considering longer sequences. Even so, the nonprofits had the lowest gives opinions frequency every time.

Why would nonprofits have fewer opinion-oriented thought units? There are several possibilities. First, it could be that the decisions for many of these issues were not up for debate, but were simply being introduced to the group. Preferences could have been aired previously, or there might be powerful group members who can make decisions without the opinions of others. The founder of the nonprofit group displayed legitimate power by either informing the group members of the dilemma and his decision in one speaking turn, or by ending discussions about issues with his final solution.

GM: What have you found out or decided on switching out of this ACH (automated check clearinghouse) thing into a one account to handle it all? (7)

Secretary: That's not up to me anymore. (6)

Treasurer: We really have – the decision has been made to not make a decision right now. (6)

GM: Well, really, ACH is almost non-existent (6)– what do we have, two customers? (7)

Secretary: We have – like – (6)

Treasurer: We have eight (6)

Secretary: Eight. (6)

GM: Do we really have that many? (7)

Treasurer: We really have eight. (6) One of them is Security Federal (6). . . .We can make the decision to cancel it at any point in the future. (6)

Founder: Well, let's stop adding people to the list. (4)

Treasurer: Okay, (3) that's sort of what I was going to recommend. (6)

Founder: Your paperwork is going to need to change – (4)

The city commission had structures in place to ensure no one could speak over one another. The support groups had time when individuals would talk at the same time, but there were no power dynamics valuing one individual over another. Even though the nonprofit had ways to facilitate conversation, the power dynamics of the group did allow for certain individuals to make decisions without the input of others.

Problem Solving. The support group meetings had the fewest gives orientation/information (IPA 6) thought units during problem solving meeting activities. This suggests that when support group members were debating problems or making decisions, they shared significantly less information about the issue. Nonprofit and city commission meetings involved more information sharing as part of their problem solving process.

Although the support group had the lowest frequency of gives orientation/information thought units in problem solving activities, the support group members had the highest frequency of asks for orientation/information (IPA 7) thought units when trying to solve problems. It is interesting that higher amounts of

questioning for information did not lead to higher amounts of information being shared overall in problem solving activities.

This can be explained by analyzing longer sequences that included asks orientation/information thought units. Although this pattern was generally seen in IPA interacts (7-6, 6-7), it was not significant, and the pattern disappears when analyzing 3-interact IPA sequences. Since these longer sequences involve IPA 7s surrounded by IPA 6s, this suggests that the ask for orientation/information thought units were not surrounded by as many gives orientation/information thought units as in the other meeting activities. The responses to the questions were shorter, or could be answered in ways other than sharing information (i.e., agrees, disagrees, opinions). Observations during data collection and a close reading of the transcripts revealed that many of the problem solving meeting activities in the support group focused on a specific need by a group member, and the questions were asked politely and answered quickly. Other members were trying to listen and provide for other members' socioemotional needs. Questions were designed to gather small amounts of information from the member so that fellow group members could attempt to fill that need.

Facilitator: How are you feeling? (7)

Sally: I feel tired and kind of achy. (6) I guess I'm a weakie. (11) But I'm anemic, too, so . . . (6)

Facilitator: But your chemotherapy is over now, so that count will come back. (5) Do you get special shots for that, to help you with your anemia? (7)

Sally: No, (10) they're giving me iron tablets. (6) They wanted to do the shots, but they said they were $1500 apiece and I needed four, so I thought, well (6)

Facilitator: And your insurance doesn't pay? (7)

Sally: No. (10)

Facilitator: Do you have other insurance? (7)

Jenny: Take lots of vitamin B-12 and lots of zinc, and lots of vitamin C. (4)

Sally: Okay, I'll do that. (3)

Jenny: It's a lot cheaper than $1500 (6) and it can't hurt ya. And it really helps. (5)

Sally: I'll remember that. (3)

Facilitator: Your insurance took care of some other parts? (7)

Sally: Medicare did, yeah. (3) Yeah, they've been pretty good. (5)

Facilitator: Well, there's no right or wrong way to do your chemotherapy. (5) And if it wore you out, then you just, for now, you're dismissed (5) . . . rest on the couch. (4)

Sally: I do that sometimes. (6)

Facilitator: Well, you have to. (5)

In this circumstance, there are a series of questions trying to gather information, and Sally's responses were agrees (IPA 3), disagrees (IPA 10), gives opinions (IPA 5), and shows tension (IPA 11) thought units, in addition to gives orientation/information (IPA 6). None of her responses were more than three thought units before another member chimed in with a question, advice, or direction. These shorter answers stand in contrast to city commission meetings, where speaking turns were considerably longer.

City commission meetings had the lowest numbers of agrees (IPA 3) thought units during problem solving, replicating the finding for information dissemination activities. This pattern was true for the IPA interact and 3-interact sequences as well. This may suggest that for contextual reasons, individuals agree less in these meetings. The opinions of city commissioners are important to community members, and are often reported in the newspaper. Perhaps agreement is something city commissioners avoid, at least explicitly, or in public. Agreement can also be conveyed without the use of agreement messages. If a city commissioner restates another commissioner's ideas, then they are in essence agreeing without using a specific message to do so.

One important difference between problem solving in city commission meetings and the other contexts is the use of parliamentary procedure. The author and coders debated whether voting for a position was an agrees (IPA 3) or gives opinions (IPA 5) thought unit. It was determined that saying "aye" to a proposition was offering an opinion, and this coding decision may be why there are fewer agrees statement than in the other contexts.

Coordination. According to Scheerhorn et al. (1994), coordination is the "delegating of authority or providing announcements concerned with assignments–who is doing what, when" (p. 250). Interestingly, there were fewer significant differences in IPA codes, interacts, and 3-interacts across all three contexts in terms of coordination. No interact or 3-interact IPA sequences in the coordination meeting activity type was significant, except for the gives orientation/information only sequences. There were fewer statistical differences across contexts for coordination, suggesting it had the fewest contextual adaptations; thus, coordination was performed similarly regardless of context.

The way a group of individuals communicates in terms of coordinating is fundamental to coordination itself. The IPA single codes, interacts, and 3-interacts were similar across contexts, which suggests that context had little effect. Overall, coordination had more agrees (IPA 3), gives suggestions (IPA 4), and ask for orientation/information (IPA 7) and less gives opinions (IPA 5) and gives orientation/information (IPA 6) than the average IPA codes. Coordination was seen in two primary styles across all contexts. Often one individual would summarize several upcoming events. Other times, there would be a series of quick exchanges among group members. The following two examples are from the support group and nonprofit contexts.

Support group

Sally: I got my flu shot. (6)

Beth: Where did you get yours? (7)

Sally: At HyVee, Saturday. (6)

Beth: At HyVee? (7)

Lacy: 23rd Street is giving them I just found out today, at 23rd Street 8 on Monday and from 10 to 2 on Saturday (6)

Beth: What time? (7)

Lacy: Three to six? (7)

Beth: Are they doing it again? (7)

Lacy: Well, they *** (6)

June: I mean, I did it last week, but some *** (6)

Lacy: I'm hoping it's at 3 to 6 on Wednesdays, starting this Wednesday. (6)

(A *** symbol indicates the transcriber was unable to make out the word because people talked over one another).

Nonprofit

General Manager: – when are these flyers going to be done? (7)

Founder: Ten days (6)

General Manager: So next weekend, maybe. (6)

Founder: Doubt it, but . . . the week after that. (6)

General Manager: Does Noreen know the electrician's coming on the 12th? (7)

Founder: Right. (3) Next Wednesday, we got the electrician for (6)

General Manager: Does she know that? (7)

Founder: I'm sorry? (7)

General Manager: Does she know the electrician is coming on that day? (7)

Founder: Who, JD? (7)

General Manager: No, Noreen. (10) At ARO. (6)

Founder: No. (10)

Both are similar in their quick question/answer style among members. Both include clarifying questions and statements, as well as individuals talking over one another. This suggests there may be something communicatively foundational to how we coordinate in meetings. One reason for this similarity may be that these group contexts require similar coordination efforts based on their types of interdependence. Thompson's (1967) typology of the interdependence of organizational groups portrays three categories of interdependent group relationships and the subsequent coordination efforts needed in each. For example, in reciprocal interdependence outputs by individuals become inputs for other individuals. Thus Thompson suggests that mutual adjustment, which allows for new information to be injected into the conversation, is most appropriate. Although Thompson's work is at a more macro organizational level, it may be that a similar level of interdependence across all three contexts existed, explaining the necessity for a similar coordination activities. The task and relational implications of coordination will be discussed in more detail for RQ#2.

Affiliation. Overall, affiliation meeting activities involved more shows solidarity/seem friendly (IPA 1), releases tensions/dramatizes (IPA 2), agrees (IPA 3), gives suggestions (IPA 4), gives opinions (IPA 5), and ask for orientation/information (IPA 7) and less gives orientation/information (IPA 6) codes than compared with other meeting activities. Support group members used significantly more gives opinions (IPA 5) thought units than the other contexts. Opinion sharing appears to have been an important component of affiliation among support group members. Interestingly, city commission meetings had higher frequencies of shows solidarity (IPA 1) thoughts units as compared to the other contexts. Whereas support group members shared more opinions, city commissioners actually shared more statements to uplift others. This suggests that each context had a different way of accomplishing its respective need for affiliation. This will be discussed in further detail for RQ#2.

Comparing Contexts and Meeting Activity Types

After focusing on the meeting activity types separately in terms of their contextual differences, analysis comparing meeting activity types and context displayed some interesting patterns of messages. For example, some IPA frequencies suggested mixed results as to how context and meeting activity types influenced conversation. The city commission meetings had high quantities of gives orientation/information thought units, and this was true across IPA single codes, interacts, and 3-interact IPA sequences. However, the gives orientation/information codes were high overall, suggesting that these meeting contexts shared similar amounts of information.

There were differences in how relational IPA codes were distributed across the lone relational meeting activity (i.e., affiliation). This suggests that not all contexts performed this activity the same way; context influenced relational meeting function. These results tell us about the meeting activity type and the context; they provide a blueprint of how affiliation is performed, but they also reveal characteristics about each context, as is discussed in the task/relational section.

Certain patterns emerged across the data for specific IPA codes. In chi-squares test for each of the meeting activity types, a pattern emerged for gives information/orientation (IPA 6), asks for orientation/information (IPA 7), agrees (IPA 3), and gives suggestions (IPA 4). For each of these codes there were significant differences across contexts in the information dissemination and problem solving meeting activities, but not for coordination and affiliation (for the tests that satisfied cell frequency assumptions, the pattern continued for disagrees [10]). Thus frequency differences using these IPA codes are different in some meeting activity types and not others. This suggests that information dissemination and problem solving activities in each context used thought units to share and ask for information, agreement, and giving directions in different ways. This cannot be said for coordination and affiliation, where despite different contexts and purposes, the frequencies were not significantly different. Arguments for coordination being the same across contexts have already been made. But even though these IPA codes (IPA 3, 4, 6, 7, 10) were not different for affiliation, others IPA codes were. Shows solidarity/seems friendly (1) and shows tension release/dramatizes (2) thought units were significant for

affiliation, suggesting that contexts had different frequencies for each codes. This may be explained by the fact that the shows solidarity and tension release are relational thought units, and affiliation is a relational meeting activity type. Perhaps the relational meeting activity of affiliation is communicated differently for each context, and these differences are best understood in context by how relational messages (i.e., IPA 1 & 2) are used. Interestingly, gives opinions was related to context in each meeting activity type, suggesting that context played a role in how people voiced opinions no matter the task at hand.

Task- and Relationally-Oriented Messages

Closely related to the previous discussion, the second research question focuses specifically on what the IPA distributions suggest about how task and relational message dimensions are used in interaction. There was a low frequency of relational thought units throughout the meetings. In terms of Bales' norms (1950a), all relational thought units were lower than expectations except for shows solidarity/seems friendly codes (IPA 1), which were within the prescribed norms. Overall, 14.4% of all IPA thought units were relational. One reason for this was the lack of negatively-valenced relational codes, as all meetings were mostly positive in nature. Perhaps one reason Bales (1954) found more socioemotional thought units than in this project's three meeting contexts was that he was empirically testing zero-history groups. If these groups were only meeting once, then negatively-valenced thought units could not damage future communications. In natural context, group members may avoid negative socioemotional comments unless the situation explicitly

suggests they are appropriate. Negative thought units were a few dirty jokes in the nonprofit meetings and several statements by the mayor condemning protestors for interrupting the city commission meeting.

The relational thoughts units were rare enough that only a few longer sequences of interaction involving them were prevalent enough to meet statistical test assumptions. The two more prevalent relational thought units seen in IPA interacts were agrees (IPA 3) and shows solidarity/seems friendly (IPA 1) thought units. The most common IPA interact with these codes made up 13.8% of all IPA pairs. These two codes also had the highest frequency in 3-interact IPA sequences, with the most common representing 6.4% of all 3-interact sequences.

The reason these numbers decrease based on the length of the interaction sequence is that even though these codes have relational codes, the majority are still primarily task oriented. For example, a 6-3-6 sequence portrays an agreement code surrounded by two task codes. With the predominance of task codes, it is clear that relational codes are not influencing the conversation separately from task codes; conversely, task-oriented thoughts units are connected to relational thought units.

In addition, Bales (1950) and McGrath's (1984) discussion of IPA suggest that the purpose of interaction dictates the amount of task and relationally-oriented codes. Specifically, they observe that relationally-oriented purposes will show more relationally-oriented codes than task-oriented codes. Pena and Hancock (2006) confirmed this result is dependent on the task type and not on the medium of communication. However, this study contradicts earlier findings. Although 65.8% of

IPA codes in the city commission's affiliation meeting activities were relationally-oriented, task codes outnumbered relational codes during the affiliation meeting activities of the other two contexts. Admittedly, this project is different in that both task *and* relational purposes were examined within one group, as opposed to other studies in which either a task *or* relational purpose was examined. This may also suggest that groups with both task and relational purposes communicate differently than groups with a single purpose.

Interestingly, the affiliation meeting activity, which is the only relational meeting activity type, had several interesting findings involving task and relational codes. Like all the other contexts, affiliation showed a significant difference across contexts in terms of frequency of gives opinions (IPA 5) thought units. However, affiliation did not follow the pattern of the information dissemination and problem solving meeting activity types in that it was not significantly different across contexts in terms of gives orientation/information (IPA 6), asks for orientation/information (IPA 7), and agrees (IPA 3) thought units. It did show differences in the use of two relational thoughts units, shows solidarity/seems friendly (IPA 1) and releases tension/dramatizes (IPA 2). This was similar for the information dissemination meeting activity as well, although it should be noted that everything was significant for the information dissemination meeting activity type. The 1-1 sequence was significant at the interact level for affiliation, as was the 1-1-1 sequence at the 3-interact level. In addition, these differences accounted for more variance than all the

other tests. High levels of variance accounted for was likewise seen for the sequences including gives opinions (IPA 5), albeit at lower levels.

These findings may require researchers to reconsider how to best conceptualize task and relational dimensions of communication. For example, agrees (IPA 3) and disagrees (IPA 10) thought units are considered relational, but the patterns in this analysis suggest they are more similar to task-oriented thought units in their frequencies across contexts. Although agreement and disagreement could certainly have relational influence, they are prevalently used in task scenarios as well. A question about a project could be answered with an agreement thought unit followed by information (3-6), and be primarily used as responding to the task. There may be different types of agreement that have either task or relational implications[3]. Similarly, the gives opinions (IPA 5) thought units are used differently across contexts in affiliation meeting activity, even though opinions are task. This may be due to the relationship of the role of giving opinions with compliments, which are prevalent in support group affiliation meeting activities. In order to praise someone, an evaluation is often made and conveyed in the form of a compliment. This compliment is often an opinion. These opinions may be conveyed in such as way as to have very subtle praise, causing thought units to be labeled task-oriented as opposed to relational.

[3] In a recent conference of the Interdisciplinary Network for Group Research, a question and answer discussion following a presentation by the author (Keyton & Beck, 2007) focused precisely on this issue. Dr. Renee Meyers contributed significantly to this discussion.

These findings suggests that the task-relational dichotomy may be helpful in certain respects, such as the predominant nature of a message (Fisher & Ellis, 1990), but a better understanding of how these dimensions work within a message is a necessity for group communication research. The data suggest that task and relational messages are used for task goals, and that both task and relational messages are used for relational goals. Instead of dichotomizing them, perhaps what is really needed is a way to measure the task and relational dimensions within a message. How are they interactive with one another? Are they dialectical, suggesting that individuals negotiate between them when speaking? A pilot study conducted by the author attempted to label all messages with a support group transcript as both task and relational (Beck, 2007). The author successfully labeled all messages in terms of task, but was unable to do so in terms of relational. The relational dimension was oftentimes less explicit, making it difficult to determine their nature. This pilot study confirmed there is still much that is unknown about how these dimensions coexist within messages. A new theoretical perspective explaining how task and relational dimensions are negotiated in messages may allow communication scholars to better contribute to interaction research.

So how does context affect the use of relational messages? It appears that when a relational purpose is being achieved, context can influence how relational messages are used. These findings were not the same for task oriented or agreement/disagreement codes. In terms of shows solidarity/seems friendly (IPA 1) thought units, city commission meetings showed much higher frequencies than the

other contexts in affiliation meeting activities. This is interesting since there were far fewer affiliation meeting activities in formal city commission meetings than were in informal support group and nonprofit meetings. Thus, even though there was fewer affiliation episodes, those episodes had a higher percentage of shows solidarity/seems friendly statements. Perhaps the rareness of these meeting activities necessitated a higher level of relational statements to make sure others knew they were relating. Likewise, the results for the IPA interact 1-1 suggested that city commission meetings are using these messages in tandem, perhaps being efficient for the rare meeting activity type.

Additionally, nonprofits showed much lower frequencies of shows solidarity/seems friendly thoughts units in affiliation. Thus building up other group members was not a common occurrence in nonprofit meetings. However, nonprofit meetings did contain more release tension/dramatizes (IPA 2) statements than the other contexts. These were often used in the forms of jokes, sometimes crude or sexually suggestive. Contextually, nonprofit members worked with each other regularly throughout the week, whereas support group and city commission members met only at meetings. This more frequent interaction may allow for less shows solidarity/seem friendly statements and more release tension/dramatizes statements at meetings.

Thus, one reason there were differences in relational thought unit frequencies in the affiliation meeting activity is that the city commissioners were making statements to support or bolster other individuals' self image, nonprofit members

were joking and teasing, and support groups members were giving compliments. Although these were all affiliation meeting activities, the IPA codes suggest differences in how they were attempting to accomplish relational needs. Thus, the IPA distributions helped define the contextual differences.

Last, the coordination and affiliation meeting activity types showed similar patterns of IPA thought units across contexts. For all single IPA codes, coordination and affiliation meeting activities had the same pattern of significant results. Interestingly, this pattern is not as prevalent when analyzing longer sequences of codes, potentially suggesting that although the single IPA frequencies are similar, the thought units are being used in different ways.

Scheerhorn et al.'s Meeting Activity Coding Scheme

When collapsing the two information dissemination meeting activities (individual and multiple individuals), information dissemination represents over 71% of all meeting activities across all meetings. Meeting activity codes related to making decisions (problem solving and decision making) represented almost 17% of all meeting activities. Coordination makes up 7.23% and affiliation (collapse of affiliation and motivation) represents 3.51%. These findings support Scheerhorn et al.'s assertion that the majority of meeting activities are not decision making oriented, even though the majority of research on meetings focuses on decision making. Since information dissemination predominated the meetings, it is clear that this meeting activity should be a priority in group communication research.

Theoretical Contributions

Interaction analysis. One of the important contributions of this project is the attempt to make interaction comparisons across several meetings in multiple contexts. Researchers have analyzed interaction in one meeting or episode, often in zero-history groups with no future expectations. Other researchers have studied groups ethnographically, immersing themselves into the context to better understand the cultural nuances of a group. Instead, the approach in this dissertation project focuses on the interaction itself. A purely behavioral approach provides a blueprint for what is actually happening in interaction and can respond effectively to social interaction variables that other approaches cannot (Rogers & Millar, 1982). Thus, this project will not only benefit interaction researchers, but also greatly benefit non-behavioral research because it provides behavioral evidence and support for their claims. It is a micro level approach to understanding culture and community within a social setting, such as a meeting (Tracy & Dimock, 2004).

This study has taken an original approach to group interaction; it has analyzed several meetings across contexts. These natural contexts differed in terms of formality, decision making, leadership, purpose, time together, and size. This approach required collecting large amounts of data, but in doing so, allowed the author to make legitimate comparisons across the contexts. Cross-contextual methodologies enable communication scholars to discover the fundamental characteristics of communication itself. Communicative similarities across contexts suggest something fundamental about the nature of communication itself, which is what Burleson (1992) argued should be a communication scholar's main emphasis.

Communicative differences allowed us to better understand context in terms of interaction. Thus, this project's methodological approach allowed us to study communication itself.

Context. These data demonstrated that evidence of context is found in interaction. Analyzing interaction is where communication scholars make their unique contribution. Instead of relying on cognitive assessments, self-reports, or research observations to understand context, this type of methodology places a focus on the interaction itself; instead of relying on axioms, this approach has turned to the empirical analysis of communication in natural contexts (Weick, 1987). The previous section included analysis of how the different meetings accomplished affiliation. Based on the different messages, it was shown that city commission meetings focused on showing solidarity/seems friendly statements, support group meetings focused on gives opinions statements, and nonprofit meetings focused on release tension/dramatizes statements. The city commissioner statements helped us to understand a concerted, formal effort to boost others in their efforts, while nonprofit statements suggested a more joking, informal environment. The support group meeting used compliments as an affiliative tool. These contextual differences were evident in the interaction.

This project portrayed how business, public administration, and health advocacy environments are contextually created. In the selection of these three contexts, there were differences between meeting structure (formal vs. informal), goal (task orientation vs. social orientation), and leader (elected vs. appointed vs.

entrepreneur). They also differed on Schwartzman's (1989) dimensions of time (set time, no set time) and representation (formally responsible to another group, not responsible to others). An understanding of how context influenced interaction using an interaction analytic lens allowed scholars to adapt communication strategies to context. Many communication research paradigms lean towards a more interpretivist approach. This approach is helpful in understanding context, but can be limited in its ability to explain contextual differences through interaction. This project points disciplines toward efforts to understand the contextual implications of interaction analysis, which is needed due to the large variety of meeting contexts available.

Method. This project provides an important research method designed to capture meeting activities in terms of task and relational message functions. There are many more interaction analysis opportunities for which this methodology may be adapted. For example, this project has potential implications for communication strategy research, providing an interaction foundation for the study of strategic communication in functional terms. This area of research is understudied due to the difficultly in developing research methods that explain strategy based on interaction. As shown in the author's previous effort (Keyton, Beck, Dennis, & Kunkel, 2006), Bales' (1950a) IPA coding scheme has been used to understand leadership and facilitator approaches to a support group. The use of task and relational dynamics of communication was appropriate for this project because IPA showed how facilitation differs in accordance to purpose and function. An understanding of the subtle ways individuals use task and relational dynamics of language is essential to understanding

communication strategy and other areas of social interaction research (e.g., communication privacy, marital and parent-child interaction, workplace interaction and culture, classroom interaction). The two coding schemes used in this interaction analysis allowed for an in depth look at task and relational messages that may support earlier research efforts focused primarily on self report and observation. This analysis explained meeting function in terms of interaction; it moved past the *what* and explored the *how* of meetings through interaction.

Along with the extension of current theory, this dissertation project also added several original ideas to social interaction analysis. The application of the IPA coding scheme, in conjunction with the meeting process scheme, is not only original but takes the macro and micro strengths of both schemes and combines them to directly examine how communication functions for similar purposes across different contexts. The adaptation of the Scheerhorn et al. coding scheme is an integration of both their and Marks et al.'s earlier work on meeting processes, and hoped to clarify the specific interaction makeup of communication activity categories. The study design also allowed for a comparable mechanism from which to analyze meetings across contexts. Last, this project helped identify meeting types not by what they confess to be doing, but by what they are actually doing. Meeting identification is rooted in interaction and not based solely on intent.

Practical Implications

This project has wide ranging effects for teachers and trainers, and well as other application oriented groups. Schwartzman (1989) argues that little is known

about meetings because they are a common and basic part of American culture, and often evaluated negatively. Any aspect of cultural life that is pervasive and negative deserves additional attention. This project provides a framework of communication that can be used in the classroom as well as training sessions in businesses because instead of talking about or around meetings, it can actually identify and portray meeting activities in accordance with their function. It provides a clearer understanding of how communication happens, and hopefully is a starting point for many more interaction analytic studies in the classroom. For example, instead of simply talking about proper behavior when making a decision, teachers and trainers could actually identify the different sequences of interaction, including their task and relational dimensions, and identify the longitudinal effects of such behavioral functions. Using these coding schemes as analytical tools will enable practitioners to better analyze the structure of interaction and make suggestions for improvement accordingly. This would clearly benefit practitioners in a variety of areas, including higher risk settings such as diplomacy, mediation, and decision making.

It also allows for reconsideration of many prescriptive meeting strategies that are taught in the classroom as well as popular literature. For example, a five step process to conducting a successful business meeting may not be successful if is not adapted to the context. Similarly, prescriptive strategies are often task oriented and neglect relational or relational implications. Consideration of these variables suggests a new way of analyzing meeting case studies, and subsequently a new way of viewing

and teaching meetings. These data also suggest that there is no amorphous *meeting*—that meetings exist in a context that defines and regulates members' interactions.

Finally, this project strengthens the link between communication theory and application. Meetings and other gatherings are prevalent across society, and there are many efforts in the business world directed at making them more effective and efficient. This project provides an understanding of how different meeting activities take place, and how interaction may be adapted in consideration of context. It also provides a tool for consultants to use that moves beyond looking at outcomes and focuses on the processes that led to the outcome.

Limitations

As is the case with all research, there are limitations to this study. When selecting a research method, the author is of necessity focusing on certain aspects of the data while ignoring others. One limitation of this project is that sequences are not isolated between speakers. The interaction sequences are sometimes said by one individual, and in other circumstances are used in exchanges between individuals. This project only makes claims to the appearance of certain communication sequences in interaction. It would be beneficial for future interaction analysis to use coding schemes (unlike IPA) that focus on speaking turns in order to understand not only how messages work with one another (this project), but how individuals use messages in interaction to influence one another. This can be difficult since speaking turns can vary in length, and comparing a 2-second and 10-minute speaking turn, or treating them as equivalent, is problematic and further complicates analysis.

In addition there are several other coding schemes that may be beneficial when looking across meetings. For example, the relational coding scheme could be adapted to look at interaction in meetings in terms of power and control (Rogers & Millar, 1982). Meyers and Brashers' (1998) work on persuasive arguments theory could also be helpful, as well as Wheelan's (1994) efforts to account for the longitudinal development of group process. There are also many opportunities to create better coding schemes. A project that Dr. Joann Keyton and I started is based on Cooren's work (2006) on collective mind. This project will analyze how messages are used in terms of their tense: Do we speak out the past, present, or future when making decisions?

Coding schemes are not the only methodological tool that may be beneficial in future research. Mixed method approaches, especially in conjunction with coding schemes, may provide an even greater understanding of interaction. For example, it would be beneficial to connect the group members' interpretation of interaction to the actual interaction itself (e.g., Beck & Keyton, 2007). Then questions regarding the influence of specific messages (e.g., Are opinions more important than suggestions?) could also be addressed. These approaches would also be beneficial because they consider the group members who may not be participating by speaking, but are actively listening. In group situations, individuals generally have to listen more than they speak, and this would be another avenue for future research.

Of course there are limitations based on the specific contexts used. The support group, nonprofit, and city commission selected for this study are not

completely representative of all such organizations. However, the author believes these organizations do have certain characteristics that make them very representative of other meeting situations. For example, the facilitative structure of each is unique to the specific context. The level of formality is also unique; government meetings tend to be more formal, grass root nonprofits tend to be more informal, and support groups tend to encourage openness and a casual nature, especially when they are participant run. The support group's socioemotional goal is unique from the task oriented goals of the nonprofit and city commission. So even though they cannot be generalized to all organizations, there are certain characteristics that are representative of the general contexts. Future research may want to consider how contextual differences are connected to the five fundamental components of a group (i.e., size, interdependence, identity, goal, structure), in order to create a comparative mechanism for contextual analysis (Keyton, 2006, Keyton & Beck, in press).

Conclusion

Group communication research on meeting interaction is often filled with prescriptive strategies designed to produce effective meeting outcomes. This dissertation project has attempted to put natural *interaction* at the forefront of group communication research. As a result of this interaction analytic approach, we learned more about how context, meeting activities, and task and relational messages influence interaction. We learned that the meeting context in general may lead to high amounts of information sharing, but not necessarily critique. We learned that when critique is present, it is often embedded within longer sequences of interaction, and

often include gives orientation/information statements. We learned that contexts do not have equal influence on all meeting activities, such as coordination. We learned how business, public administration, and health advocacy environments contexts are interactionally created. Most importantly, we learned something about the nature of communication itself, which should always be at the forefront of our efforts.

References

Abrams, D., Hogg, M. A., Hinkle, S., & Otten, S. (2005). The social identity perspective on small groups. In M. S. Poole & A. B. Hollingshead (Eds.), *Theories of small groups: Interdisciplinary perspectives,* (pp. 99-138). Thousand Oaks, CA: Sage.

Alexander, S. C., Peterson, J. L., & Hollingshead, A. B. (2003). Help is at your keyboard: Support groups on the internet. In L. R. Frey (Ed.), *Group communication in context: Studies of bona fide groups* (2nd ed., pp. 309-334). Mahwah, NJ: Erlbaum.

Atwal, A., & Caldwell, K. (2005). Do all health and social care professionals interact equally: A study of interactions in multidisciplinary teams in the United Kingdom. *Scandinavian Journal of Caring Sciences, 19*, 268-273.

Bales, R. F. (1950a). *Interaction process analysis.* Cambridge, MA: Addison-Wesley.

Bales, R. F. (1950b). A set of categories for the analysis of small group interaction. *American Sociological Review, 15*, 257-263.

Bales, R. F. (1954). In conference. *Harvard Business Review, 32*, 44-50.

Bales, R. F. (1968). Interaction process analysis. In D. L. Sills (Ed.), *International encyclopedia of the social sciences* (vol.7, pp. 465-471). New York: Macmillan.

Bales, R. F. (2001). *Social interaction systems: Theory and measurement.* New Brunswick, NJ: Transaction.

Bargiela-Chiappini, F. H., & Harris, S. J. (1996). Interruptive strategies in British and Italian management settings. *Text, 16,* 269–297.

Bargiela-Chiappini, F. H., & Harris, S. J. (Eds.). (1997). *The languages of business: An international perspective.* Edinburgh, Scotland: Edinburgh University Press.

Bartunek, J. M., Kolb, D. M., & Lewicki, R. J. (1992). Bringing conflict out from behind the scenes: Private, information and nonrational dimensions of conflict in organizations. In D. M. Kolb & J. M. Bartunek (Eds.), *Hidden conflict in organizations: Uncovering behind-the-scenes disputes* (pp. 209-228). Newbury Park, CA: Sage.

Bateman, R. & Gottman, J. M. (1997). *Observing interaction: An introduction to sequential analysis* (2nd ed). New York: Cambridge University Press.

Baym, N. K. (2000). *Tune in, log on: Soaps, fandom, and online community*. Thousand Oaks, CA: Sage.

Beck, S. J. (2007). Examining the task and relational dimensions of messages: A dual application of Bales' (1950) interaction process analysis coding scheme. Unpublished manuscript.

Beck, S. J, & Keyton, J. (2007). The use and perception of communication strategy in meetings. Paper presented at the annual meeting of the National Communication Association, Chicago.

Bell, L. (2001). Patterns of interaction in multidisciplinary child protection teams in New Jersey. Child Abuse & Neglect, *25*, 65-80.

Bilbow, G. T. (2002). Commissive speech act use in intercultural meetings. *International Review of Applied Linguistics in Language Teaching, 40,* 287–308.

Boden, D. (1994). *The business of talk: Organization in action*. Cambridge, England: Polity Press.

Boden, D. (1995). Agendas and arrangements: Everyday negotiations in meetings. In A. Firth (Ed.), *The discourse of negotiation: Studies of language in the workplace* (pp. 83–99). Oxford, UK: Pergamon.

Bradley, D. R., Bradley, T. D., McGrath, S. G, & Cutcomb, S. D. (1979). Type I error rate of the chi-square test of independence in R x C tables that have small expected frequencies. *Psychological Bulletin, 86*, 1290-1297.

Buchalter, R. (2003). Negotiating (im)permeable neighborhood borders. In L. R. Frey (Ed.), *Group communication in context: Studies of bona fide groups* (2nd ed., pp. 57–82). Mahwah, NJ: Erlbaum

Burleson, B. R. (1992). Taking communication seriously. *Communication Monographs, 59*, 79-86.

Chou, C.C. (2002). A comparative content analysis of student interaction in synchronous and asynchronous learning networks. System Sciences, 2002. HICSS. Proceedings of the 35th Annual Hawaii International Conference.

Clark, R. A., & Delia, J. G. (1979). Topoi and rhetorical competence. *Quarterly Journal of Speech, 65*, 187-206.

Cline, R. J. W. (1999). Communication in social support groups. In L. R. Frey, D. S. Gouran, & M. S. Poole (Eds.), *The handbook of group communication theory and research* (pp. 516-538). Thousand Oaks, CA: Sage.

Corman, S. R. (2005). Postpositivism. In S. May & D. K. Mumby's (Eds.) *Engaging organizational communication theory & research* (pp. 15-34). Thousand Oaks, CA: Sage.

Courtright, J. A., Fairhurst, G. T., & Rogers, L. E. (1989). Interaction patterns in organic and mechanistic systems. *The Academy of Management Journal, 32*, 773-802.

De Cremer, D., & Bakker, M. (2003). Accountability and cooperation in social dilemmas: The influence of other's reputational concerns. *Current Psychology, 22***,** 155-163.

De Dreu, C. K.W. & Carnevale, P. J. (2003). Information processing and strategy in conflict and negotiation. *Advances in Experimental Social Psychology, 35*, 235-291.

De Dreu, C. K.W., Weingart, L. R., & Kwon, S. (2000). Influence of social motives, on intergrative negotiations: A meta-analytic review and test of two theories. *Journal of Personality and Social Psychology, 78*, 889-905.

Denham, B. E. (2002). Advanced categorical statistics. Issue and application in communication research. *Journal of Communication, 52*, 162-176.

Dennis, A. R. (1996). Information exchange and use in small group decision making. *Small Group Research, 27*, 532-550.

Dennis, M., Kunkel, A., & Keyton, J. (in press). Understanding the efficacy of a breast cancer support group from a problematic integration perspective. *Journal of Applied Communication Research*.

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations*, *2*, 129-152.

Dillard, J. P. (1990). A goal-driven model of interpersonal influence. In J. P. Dillard (Ed.), *Seeking compliance: The production of interpersonal influence messages* (pp. 21-40). Scottsdale, AZ: Gorsuch-Scarisbrick.

Dillard, J. P., & Solomon, D. H. (2000). Conceptualizing context in message-production research. *Communication Theory, 10*, 167-175.

DiMaggio, P. J. (1988). Nonprofit managers in different fields of service: Managerial tasks and management training. In M. O'Neill & D. R. Young (Eds.), *Educating managers of nonprofit organizations* (pp. 51-69). New York: Praeger.

Dindia, K., & Timmerman, L. (2003). Accomplishing romantic relationships. In J. O. Greene & B. R. Burleson (Eds.), *Handbook of communication and social interaction skills* (pp. 685-721). Mahwah, NJ: Erlbaum.

Duck, S. (1994). *Meaningful relationships: Talking, sense and relating.* Newbury Park, CA: Sage.

Eadie, D. C. (1997). *Changing by design: A practical approach to leading innovation in nonprofit organizations*. San Francisco: Jossey-Bass.

Eisenberg, E. M. (1984). Ambiguity as strategy in organizational communication. *Communication Monographs, 51*, 227-242.

Fahy, P. J. (2006, March 1). Online and face-to-face group interaction processes compared using Bales' interaction process analysis (IPA). *European Journal of Open, Distance, and E-learning, I*, Retrieved March 28, 2008, from http://www.eurodl.org/materials/ontrib./2006/Patrick_J_Fahy.htm

Fisher, B. A., & Ellis, D. G. (1990). *Small group decision making: Communication and the group process.* New York: McGraw-Hill.

Folger, J. P., & Poole, M. S. (1982). Relational coding schemes: The question of validity. In M. E. Burgoon (Ed.) *Communication yearbook 5* (pp. 235-247). New Brunswick, NJ: Transaction.

Frey, L. R. (Ed.). (1994). *Group communication in context: Studies of natural groups.* Hillsdale, NJ: Erlbaum.

Frey, L. R. (Ed.). (2003). *Group communication in context: Studies of bona fide groups.* Mahwah, NJ: Erlbaum.

George, J. F., Easton, G. K., Nunamaker Jr., J. F., & Northcraft, G. B. (1990). A study of collaborative group work with and without computer-based support. *Information Systems Research, 1*, 394-415.

Gorse, C. A., & Emmitt, S. (2007). Communication behaviour during management and design team meetings: A comparison of group interaction. *Construction Management & Economics, 25*, 1195-1211.

Gouran, D. S., & Hirokawa, R. Y. (1983). The role of communication in decision making groups: A functional perspective. In M. S. Mander (Ed.), *Communications in transition* (pp. 168-185). New York: Praeger.

Gouran, D. S., & Hirokawa, R. Y. (1986). The counteractive functions of communication in effective group decision-making. In R. Y. Hirokawa & M. S. Poole (Eds.), *Communication and group decision-making* (pp. 81-90). Beverly Hills, CA: Sage.

Gouran, D. S., & Hirokawa, R. Y. (1996). Functional theory and communication in decision-making and problem solving groups: An expanded view. In R. Y. Hirokawa & M. S. Poole (Eds.), *Communication and group decision-making* (pp. 55-80). Thousand Oaks, CA: Sage.

Gross, M., Guerrero, L., & Alberts, J. (2004). Perceptions of conflict strategies and communication competence in task-oriented dyads. *Journal of Applied Communication Research, 32*, 249-270.

Gruenfeld, D. H, Mannix, E., Williams, K. Y., & Neale, M. A. (1996). Group composition and decision making: How member familiarity and information distribution affect process and performance. *Organizational Behavior and Human Decision Processes, 67*, 1-15.

Hawes, L. C. (1975). A response to Grossberg and O'Keefe: Building a science of communication. *Quarterly Journal of Speech, 61*, 209-219

Hirokawa, R. Y. (1988). Group communication research: Considerations for the use of interaction analysis. In C. H. Tardy (Ed.), *A handbook for the study of*

human communication: Methods and instruments for observing, measuring, and assessing communication processes (pp. 229-245). Norwood, NJ: Ablex.

Hirokawa, R. Y., & Poole, M. S. (Eds.). (1996). *Communication and group decision-making* (2nd ed.). Thousand Oaks, CA: Sage.

Hirokawa, R. Y., & Rost, K. M. (1992). Effective group decision making in organizations: Field test of the vigilant interaction theory. *Management Communication Quarterly, 5*, 267-288.

Hirschman, D. O. (1981). *Essays in trespassing: Economics to politics and beyond.* Cambridge, UK: Cambridge University Press.

Hollingshead, A. B., Jacobsohn, G. C., & Beck, S. J. (2007). Motives and goals in context: A strategic analysis of information-sharing groups. In K. Fiedler (Ed.), *Social communication,* (pp. 257-280). New York: Psychology Press.

Hollingshead, A. B., Wittenbaum, G. M., Paulus, P., Hirokawa, R., Ancona, D., Peterson, R., et al. (2005) A look at groups from the functional perspective. In M. S. Poole & A. B. Hollingshead (Eds.), *Theories of small groups: Interdisciplinary perspectives* (pp. 21-64). Thousand Oaks, CA: Sage.

Innes, J., & Booher, D. (2004). Reframing public participation: Strategies for the 21st century. *Planning Theory & Practice, 5*, 419-436.

Kahai, S. S., Sosik, J. J., & Avolio, B. J. (1990). Effects of leadership style and problem structure on work group process and outcomes in an electronic meeting system environment. *Personnel Psychology, 50*, 121-146.

Kanter, R. M., & Summers, D.V. (1987). Doing well while doing good: Dilemmas of performance measurement in nonprofit organizations and the need for a multiple-constituency approach. In W. W. Powell (Ed.), *The nonprofit sector: A research handbook* (pp. 154-166). New Haven, CT: Yale University Press.

Katz, N., Lazer, D., Arrow, H., & Contractor, N. (2005). The network perspective on small groups: Theory and research. In M. S. Poole & A. B. Hollingshead (Eds.), *Theories of small groups: Interdisciplinary perspectives,* (pp. 277-312). Thousand Oaks, CA: Sage.

Kellerman, K. (1992). Communication: Inherently strategic and primarily automatic. *Communication Monographs*, *59*, 288-300.

Kelly, J. R., & Karau, S. J. (1999). Group decision making: The effects of initial preferences and time pressure. *Personality and Social Psychology Bulletin, 25*, 1344-1356.

Keyton, J. (1999). Relational communication in groups. In L. R. Frey, D. S. Gouran, & M. S. Poole (Eds.), *The handbook of group communication theory & research* (192-222). Thousand Oaks, CA: Sage.

Keyton, J. (2003). Observing group interaction. In R. Y. Hirokawa, R. S. Cathcart, L. A. Samovar, & L. D. Henman, *Small group communication: Theory and practice* (8th ed., pp. 256–266). Los Angeles: Roxbury.

Keyton, J. (2006). *Communicating in groups: Building relationships for group effectiveness*. New York: Orford.

Keyton, J., & Beck, S. J. (2007). The influential role of socioemotional messages in group interaction. Paper presented at the annual meeting for the Interdisciplinary Network for Group Research, East Lansing, MI.

Keyton, J., & Beck, S. J. (in press). A foundational framework for evaluating teamwork: Addressing micro and macro context. *Business Communication Quarterly*.

Keyton, J., Beck, S., Dennis, M. S., & Kunkel. (2006). Double duty in a breast cancer support group: Enacting social support and managing group process. Paper presented at the annual meeting for the Interdisciplinary Network for Group Research, Pittsburgh.

Keyton, J., & Stallworth, V. (2003). On the verge of collaboration: Interaction processes versus group outcomes. In L. R. Frey (Ed.), *Group communication in context: Studies of bona fide groups* (2nd ed., pp. 235–260). Mahwah, NJ: Erlbaum.

Knobloch, L. K., & Solomon, D. H. (2005). Relational uncertainty and relational information processing: Questions without answers? *Communication Research, 32*, 349-388.

Koch, S. C. (2005). Evaluative affect display toward male and female leaders of task-oriented groups. *Small Group Research, 36*, 678-703.

Kramer, M. W. (2005). Communication and social exchange processes in community theater groups. *Journal of Applied Communication Research, 33*, 159-182.

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.

Krupnick, J. L., Rowland, J. H., Goldberg, R. L., & Daniel, U. V. (1993). Professionally-led support groups for cancer patients: An intervention in search of a model. *International Journal of Psychiatry in Medicine, 23*, 275-294.

Kuhn, T., & Poole, M. S. (2000). Do conflict management styles affect group decision making? Evidence from a longitudinal field study. *Human Communication Research, 26*, 558-590.

Larson, J. R., Jr., Christensen, C., Abbott, A. S., & Franz, T. M. (1996). Diagnosing groups: Charting the flow of information in medical decision making teams. *Journal of Personality and Social Psychology, 71*, 315-330.

Lewis, L. K., Hamel, S. A., & Richardson, B. K. (2001). Communicating change to nonprofit stakeholders: Models and predictors of implementers' approaches. *Management Communication Quarterly, 15*, 5-41.

Lindlof, T. R., & Taylor, B. C. (2002). *Qualitative communication research methods* (2nd ed.). Thousand Oaks, CA: Sage.

Lovaglia, M., Mannix, E. A., Samuelson, C. D., Sell, J., & Wilson R. K. (2005). Conflict, power, and status in groups. In M. S. Poole & A. B. Hollingshead (Eds.), *Theories of small groups: Interdisciplinary perspectives,* (pp. 139-184). Thousand Oaks, CA: Sage.

Luong, A. & Rogelberg, S.G. (2005). Meetings and more meetings: The relationship between meeting load and the daily well-being of employees. *Group Dynamics: Theory, Research and Practice, 1*, 58-67.

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review, 26,* 356-376.

McCarthy, M. M., Thompson, A., Rivers, S., & Jahanzeb, M. (1999). The benefits of support group participation to lung cancer survivors: An evaluation. *Clinical Lung Cancer, 1,* 110-117.

McGrath, J. E. (1984). *Groups: Interaction and performance.* Englewood Cliffs, NJ: Prentice-Hall.

Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.

Meyers, R. A., Berdahl, J. L., Brashers, D., Considine, J. R., Kelly, J. R., Moore, C., et al. (2005). Understanding groups from a feminist perspective. In M. S. Poole & A. B. Hollingshead (Eds.), *Theories of small groups: Interdisciplinary perspectives* (pp. 241-276). Thousand Oaks, CA: Sage.

Meyers, R., A., & Brashers, D. (1998). Argument in group decision making: Explicating a process model and investigating the argument-outcome link. *Communication Monographs, 65*, 261-281.

Mirivel, J., C., & Tracy, K. (2005). Premeeting talk: An organizationally crucial form of talk. *Research on Language and Social Interaction, 38*, 1-34.

Neuendorf, K. (2002). *The content analysis guidebook*. Thousand Oaks, CA: Sage.

O'Keefe, D. J. (2004). The unity of argument across methodological divides. Paper presented at the annual meeting of the Interaction Communication Association, New Orleans, LA.

Pena, J., & Hancock, J. T. (2006). An analysis of socioemotional and task communication in online multiplayer video games. *Communication Research, 33*, 92-109.

Poncini, G. (2002). Investigating discourse at business meetings with multicultural participation. *International Review of Applied Linguistics in Language Teaching, 40,* 345–373.

Poole, M. S., & Folger, J. P. (1978). Overature to interaction research: A theory of validation for interaction coding schemes. Paper presented at the annual meeting of the Speech Communication Association, Minneapolis, MN.

Poole, M. S., & Hirokawa, R. Y. (1996). Introduction: Communication and group decision making. In R. Y. Hirokawa & M. S. Poole (Eds.), *Communication and group decision making* (2nd ed., pp. 3-18). Thousand Oaks, CA: Sage.

Poole, M. S., Keyton, J., & Frey, L. R. (1999). Group communication methodology: Issues and considerations. In L. R. Frey, D. S. Gouran, & M. S. Poole (Eds.), *The handbook of group communication theory and research* (pp. 92-112). Thousand Oaks, CA: Sage.

Pruitt, D. G., & Rubin, J. Z. (1986). *Social conflict: Escalation, stalemate, and settlement*. New York: McGraw-Hill.

Putnam, L. L., & Stohl, C. (1996). Bona fide groups: An alternative perspective for communication and small group decision making. In R. Y. Hirokawa & M. S. Poole (Eds.), *Communication and group decision making* (2nd ed., pp. 179-214). Thousand Oaks, CA: Sage.

Raupach, J. C., & Hiller, J. E. (2002). Information and support for women following the primary treatment of breast cancer. *Health Expectations, 5,* 289-301.

Rogers, L. E., & Millar, F. E. (1982). The question of validity: A pragmatic response. In M. Burgoon (Ed.), *Communication yearbook 5* (pp. 249-257). Beverly Hills, CA: Sage.

Samarel, N., Fawcett, J., Krippendorf, K., Piacentino, J. C., Eliasof, B., Hughes, P., et al. (1998). Women's perceptions of group support and adaptation to breast cancer. *Journal of Advanced Nursing, 28,* 1259-1268.

Scheerhorn, D., Geist, P., & Teboul, J. C. B. (1994). Beyond decision making in decision-making groups: Implications of the study of group communication. In L. R. Frey (Ed.), *Group communication in context: Studies of natural groups* (pp. 247-262). Hillsdale, NJ: Erlbaum.

Schelling, T. C. (1960). *The strategy of conflict.* Cambridge, MA: Harvard University Press.

Schwartzman, H. B. (1989). *The meeting: Gatherings in organizations and communities.* New York: Plenum Press.

Sedikides, C., Campbell, W. K., Reeder, G. D., & Elliot, A. (1998). The self-serving bias in relational context. *Journal of Personality and Social Psychology, 74*, 378–386.

Selinger, C. (2006). Making committees work. *IEEE Spectrum, 43*, 53-55.

Sillince, J. A. A. (2000). Rhetorical power, accountability and conflict in committees: An argumentation approach? *Journal of Management Studies, 37*, 1125-1156.

Spiegel, D., Kraemer, H. C., Bloom, J. R., & Gottheil, E. (1989). Effect of psychosocial treatment on survival of patients with metastatic breast cancer. *The Lancet, 2,* 888-891.

Spitzberg, B. H., & Cupach, W. R. (1998). Introduction: Dusk, detritus, and delusion – A prolegomenon to the dark side of close relationships. In B. H. Spitzberg & W. R. Cupach (Eds.), *The dark side of close relationships* (pp. xi-xxii). Mahwah, NJ: Erlbaum.

Stasser, G., Stewart, D. D., & Wittenbaum, G. (1995). Expert roles and information exchange during discussion: The importance of knowing who knows what. *Journal of Experimental Social Psychology, 31*, 244-265.

Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology, 48,* 1467-1478.

Stasser, G., & Titus, W. (1987). Effects of information load and percentage of shared information on the dissemination of unshared information during group discussion. *Journal of Personality and Social Psychology, 53*, 81-92.

Stewart, D. D., Billings, R. S., & Stasser, G. (1998). Accountability and the discussion of unshared, critical information in decision-making groups. *Group Dynamics: Theory, Research, and Practice, 2*, 18-23.

Stohl, C., & Holmes, M. (1993). A functional perspective for bona fide groups. In S. Deetz (Ed.) *Communication Yearbook 16* (pp. 601-614). Newbury Park, CA: Sage.

Stohl, C., & Putnam, L. L. (1994). Group communication in context: Implications for the study of bona fide groups. In L. R. Frey (Ed.), *Group communication in context: Studies of natural groups* (pp. 285-292). Hillsdale, NJ: Erlbaum.

Tabachnick, B.G., & Fidell, L. S. (1996). *Using multivariate statistics*. (3rd ed.) Harper Collins: New York.

Thompson, J. D. (1967). *Organizations in action*. New York: McGraw Hill.

Tracy, K. (2007). The discourse of crisis in public meetings: Case study of a school district's multimillion dollar error. *Journal of Applied Communication Research, 35*, 418-441.

Tracy, K., & Ashcraft, C. (2001). Crafting policies about controversial values: How wording disputes manage a group dilemma. *Journal of Applied Communication Research, 29,* 297-316.

Tracy, K., & Dimock, A. (2004). Meetings: Discursive sites for building and fragmenting community. In P. J. Kalbfleisch (Ed.), *Communication yearbook 28* (pp. 127-165). Mahwah, NJ: Erlbaum.

Tracy, K., & Muller, H. (2001). Diagnosing a school board's interactional trouble: Theorizing problem formulation. *Communication Theory, 11,* 84-104.

Trujillo, N. (1986). Toward a taxonomy of small group interaction-coding schemes. *Small Group Research, 17*, 371-394.

Watzlawick, P., Beavin, J., & Jackson, D. (1967). *Pragmatics of human communication: A study of interactional patterns, pathologies, and paradoxes.* New York: Norton.

Weick, K. E. (1987). Theorizing about organizational communication. In F. M. Jablin, L. L. Putnam, K. H. Roberts, & L. W. Porter (Eds.), *Handbook of organizational communication* (pp. 97-122). Newbury Park, CA: Sage.

Weldon, E., Jehn, K. A., & Pradhan, P. (1991). Processes that mediate the relationship between a group goal and improved group performance. *Journal of Personality and Social Psychology*, *61*, 555-569.

Wheelan, S. A. (1994). *Group processes: A developmental perspective.* Boston: Allyn & Bacon.

Wittenbaum, G. M., Hollingshead, A. B., & Botero, I. C. (2004). From cooperative to motivated information sharing in groups: Moving beyond the hidden profile paradigm. *Communication Monographs, 71*, 286-310.

Wright, P. H. (1978). Toward a theory of friendship based on a conception of self. *Human Communication Research, 4,* 196-207.

Yamada, H. (1990). Topic management and turn distribution in business meetings: American versus Japanese strategies. *Text, 10,* 271–295.

Yamada, H. (1997). Organisation in American and Japanese meetings: Task versus relationship. In F. Bargiela-Chiappini & S. Harris (Eds.), *The languages of business: An international perspective* (pp. 117–135). Edinburgh, Scotland: Edinburgh University Press.

Yoak, M., & Chesler, M. (1985). Alternative professional roles in health care delivery: Leadership patterns in self-help groups. *Journal of Applied Behavioral Science, 21,* 427-444.

Table 1.

Matrix of the three contexts and their contextual differences.

	Support Group	Nonprofit	City Commission
Formality	Informal	Informal	Formal
Decision Making	Collective	Authoritarian	Parliamentary
Leadership	Volunteer, no training	General Manager, hired	Mayor, elected
Overall Goal	Socioemotional	Task	Task
Time Together	Several years, same core membership	12 months, 4 core members, 2-3 new hires	4 year terms, rotating basis
Size	7-15	5-8	5

Table 2.

Interaction Process Analysis Functional Codes

Social Emotional area: Position reactions	1. *Shows solidarity/seems friendly*: Any act that shows positive feelings toward another person 2. *Shows tension release/dramatizes*: Any act that reduces the anxiety that a person or group may be experiencing 3. *Agrees*: Any act that shows acceptance of what another person has said
Task area: Attempted answers	4. *Gives suggestions*: Any act that offers direction/action for how to engage the task 5. *Gives opinions*: Any act that advances a belief or value that is relevant to the task 6. *Gives orientation/information*: Any act that reports factual observations or experiences
Task area: Questions	7. *Asks for orientation/information*: Any act that requests factual observations or experiences 8. *Asks for opinions*: Any act that requires a belief or value that is relevant to the task 9. *Asks for suggestions*: Any act that requests direction/action for how to engage the task
Social Emotional area: Negative reactions	10. *Disagrees*: Any act that shows rejection of what another person has said 11. *Shows tension*: Any act that indicates that a person is experiencing anxiety 12. *Shows antagonism/seems unfriendly*: Any act that shows negative feelings toward another person

Note: Adapted from Bales' Interaction Process Analysis (1950).

Table 3.

Example of transcript coded with meeting activity coding scheme and interaction process analysis.

	Make Decision
Sally:	Take lots of vitamin B-12 and lots of zinc, and lots of vitamin C. (4)
June:	Okay, I'll do that. (3)
Sally:	It's a lot cheaper than $1500 (6) and it can't hurt ya. And it really helps. (5)
June:	I'll remember that. (3)
	Information Dissemination – multiple individuals
Facilitator:	Your insurance took care of some other parts? (7)
June:	Medicare did, yeah. (3) Yeah, they've been pretty good. (5)
Facilitator:	Well, there's no right or wrong way to do your chemotherapy. (5) And if it wore you out, then you just, for now, you're dismissed (5). . . rest on the couch. (4)
June:	I do that sometimes. (6)
Facilitator:	Well, you have to. (5)
June:	I'm just so tired, that I just can't go. (6) Like I can't go two places in the same day, like to the grocery store and someplace else. (6) It has to be one or the other. (6)
Beth:	Well, that goes on for a long time. (5)

Table 3. *(continued)*

June:	It will? (7)
Beth:	I try to do just one thing. (6)
	Positive affiliation
Jane:	And then you get old like us and it comes back for no reason. (2)
(laughter, multiple conversation)	
Mary:	And then you just forget where you're going. (2) (laughter)
Cathy:	You start figuring out which of those places have benches. (6)

Note: IPA codes shown in parentheses.

Table 4.

Interaction Process Analysis code frequencies across all data.

IPA code types	Frequency	Percent	Bales' Norms	Compared to Bales' Norms
1 – Shows solidarity/seems friendly	631	4.3	2.6-4.8	Within
2 – Shows tension release/dramatizes	181	1.2	5.7-7.4	Lower
3 – Agrees	936	6.4	8.0-13.6	Lower
4 – Gives suggestions	425	2.9	2.0-7.0	Within
5 – Gives opinions	1903	13.0	15.0-22.7	Lower
6 – Gives orientation/information	8733	59.6	20.7-31.2	Higher
7 – Asks for orientation/information	1329	9.1	4.0-7.2	Higher
8 – Asks for opinions	142	1.0	2.0-3.9	Lower
9 – Asks for suggestions	48	0.3	0.6-1.4	Lower
10 – Disagrees	180	1.2	3.1-5.3	Lower
11 – Shows tension	149	1.0	3.4-6.0	Lower
12 – Shows antagonism/seems unfriendly	6	0.0	2.4-4.4	Lower
Total thought units	14663	100.0		

Table 5.

Interaction Process Analysis code frequencies by context.

	Contexts			
IPA Codes	Support Group	Nonprofit	City Commissioner	Total
1 – Shows solidarity/seems friendly	3.9% (191)	1.3% (20)	5.1% (420)	4.3% (631)
2 – Shows tension release/dramatizes	1.7% (81)	3.8% (59)	0.5% (41)	1.2% (181)
3 – Agrees	8.8% (422)	12.5% (192)	3.9% (322)	6.4% (936)
4 – Gives suggestions	2.6% (127)	5.1% (78)	2.6% (220)	2.9% (425)
5 – Gives opinions	14.1% (680)	4.6% (71)	13.9% (1152)	13.0% (1903)
6 – Gives orientation/information	51.1% (2457)	57.2% (882)	64.9% (5394)	59.6% (8733)
7 – Asks for orientation/information	12.2% (589)	12.8% (197)	6.5% (543)	9.1% (1329)
8 – Asks for opinions	0.9% (44)	0.5 % (7)	1.1% (91)	1.0% (142)
9 – Asks for suggestions	0.2% (11)	0% (0)	0.4% (37)	0.3% (48)

Table 5. (*continued*)

IPA Codes	Contexts: Support Group	Nonprofit	City Commissioner	Total
10 – Disagrees	2.4% (115)	1.7% (26)	0.5% (39)	1.2% (180)
11 – Shows tension	1.9% (90)	0.6% (9)	0.6% (50)	1.0% (149)
12 – Shows antagonism/seems unfriendly	0.1% (4)	0.1% (1)	0.0% (1)	0.0% (6)
IPA Code Total	4811	1542	8310	14663
% within context	100.0%	100.0%	100.0%	100.0%

Table 6.

Interaction Process Analysis interact frequencies by context.

IPA Pairs	Contexts			
	Support Group	Nonprofit	City Commissioner	Total
6-6 Gives orientation/information – Gives orientation/information	27.4% (1320)	34.4 % (531)	49.1% (4082)	40.5% (55933)
6-5 Gives orientation/information – Gives opinions	6.8% (328)	2.7% (42)	6.7% (559)	6.3% (929)
5-6 Gives opinions – Gives orientation/information	6.6% (319)	2.7% (41)	6.5% (539)	6.1% (899)
6-7 Gives orientation/information – Asks for orientation/information	6.7% (320)	6.8% (105)	3.0% (247)	4.6% (672)
7-6 Asks for orientation/information – Gives orientation/information	6.0% (287)	6.4% (99)	3.0% (249)	4.3% (635)
5-5 Gives opinions – Gives opinions	2.6% (126)	0.7% (11)	5.3% (438)	3.9% (575)
3-6 Agrees – Gives orientation/information	4.8 % (229)	7.4% (114)	1.9% (160)	3.4% (503)

Table 6. *(continued)*

IPA Pairs	Contexts: Support Group	Nonprofit	City Commissioner	Total
6-3 Gives orientation/information – Agrees	3.4% (165)	7.6% (118)	1.5% (127)	2.8% (410)
1-6 Shows solidarity/seems friendly – Gives orientation/information	1.7% (84)	0.8% (12)	2.3% (191)	2.0% (287)
6-1 Gives orientation/information – Shows solidarity/seems friendly	2.1% (100)	0.6% (9)	2.1% (173)	1.9% (282)
7-7 Asks for orientation/information – Asks for orientation/information	1.4% (65)	2.9% (44)	1.5% (128)	1.6% (237)
1-1 Shows solidarity/seems friendly – Shows solidarity/seems friendly	0.6% (29)	0.3% (5)	1.7% (139)	1.2% (173)
5-7 Gives opinions – Asks for orientation/information	1.6% (78)	0.6% (9)	0.6% (53)	1.0% (140)
3-5 Agrees – Gives opinions	1.8% (86)	0.5% (8)	0.3% (22)	0.8% (116)
3-3 Agrees – Agrees	0.4% (19)	1.4% (22)	0.8% (65)	0.7% (106)

Table 6. *(continued)*

IPA Pairs	Contexts: Support Group	Nonprofit	City Commissioner	Total
5-3 Gives opinions – Agrees	1.4% (66)	0.5% (8)	0.3% (24)	0.7% (98)
Infrequent Pairs	24.8% (1191)	23.7% (365)	13.4% (1114)	18.2% (2670)
Interact Total	4812	1543	8310	14665
% within Context	100.0%	100.0%	100.0%	100.0%

Table 7.

Interaction Process Analysis 3-interact frequencies by context.

IPA 3-interacts	Context			
	Support Group	Nonprofit	City Commissioner	Total
6-6-6 Gives orientation/information – Gives orientation/information – Gives orientation/information	16.1% (773)	21.6% (333)	38.8% (3227)	29.5% (4333)
6-6-5 Gives orientation/information – Gives orientation/information – Gives opinions	3.4% (165)	1.7% (26)	4.6% (386)	3.9% (577)
5-6-6 Gives opinions – Gives orientation/information – Gives orientation/information	3.3% (157)	1.7% (27)	4.4% (368)	3.8% (552)
6-5-6 Gives orientation/information – Gives opinions – Gives orientation/information	3.7% (179)	1.7% (26)	3.8% (318)	3.6% (523)
6-6-7 Gives orientation/information – Gives orientation/information – asks for orientation/information	3.2% (156)	4.0% (62)	2.0% (167)	2.6% (385)

Table 7. *(continued)*

IPA 3-interacts	Context: Support Group	Context: Nonprofit	Context: City Commissioner	Total
7-6-6 Asks for orientation/information – Gives orientation/information – Gives orientation/information	3.1% (148)	3.6% (55)	1.9% (158)	2.5% (361)
6-7-6 Gives orientation/information – Asks for orientation/information – Gives orientation/information	3.6% (173)	3.9% (60)	1.4% (120)	2.4% (353)
3-6-6 Agrees – Gives orientation/information – Gives orientation/information	2.2% (107)	3.8% (58)	1.0% (85)	1.7% (250)
6-3-6 Gives orientation/information – Agrees – Gives orientation/information	2.1% (99)	4.9% (76)	0.9% (73)	1.7% (248)
6-5-5 Gives orientation/information - Gives opinions – Gives opinions	1.1% (55)	0.3% (4)	2.3% (189)	1.7% (248)

Table 7. *(continued)*

IPA 3-interacts	Context: Support Group	Context: Nonprofit	Context: City Commissioner	Total
5-5-5 Gives opinions – Gives opinions – Gives opinions	0.6% (30)	0.1% (2)	2.6% (213)	1.7% (245)
5-5-6 Gives opinions – Gives opinions – Gives orientation/information	1.0% (49)	0.5% (7)	2.0% (165)	1.5% (221)
1-6-6 Shows solidarity/seems friendly – Gives orientation/information – Gives orientation/information	0.9% (43)	0.6% (9)	1.6% (131)	1.2% (183)
5-6-5 Gives opinions – Gives orientation/information – Gives opinions	1.1% (55)	0.1% (2)	1.5% (123)	1.2% (180)
6-7-7 Gives orientation/information – Asks for orientation/information – Asks for orientation/information	0.7% (36)	1.1% (17)	0.8% (65)	0.8% (118)

Table 7. *(continued)*

IPA 3-interacts	Context: Support Group	Nonprofit	City Commissioner	Total
7-6-7 Asks for orientation/information – Gives orientation/information – Asks for orientation/information	1.0% (49)	1.2% (18)	0.4% (33)	0.8% (115)
7-7-6 Asks for orientation/information – Asks for orientation/information – Gives orientation/information	0.7% (32)	1.5% (23)	0.7% (60)	0.8% (115)
7-3-6 Asks for orientation/information – Agrees – Gives orientation/information	1.3% (62)	0.9% (14)	0.3% (24)	0.7% (100)
1-1-6 Shows solidarity/seems friendly – Shows solidarity/seems friendly – Gives orientation/information	0.3% (13)	0.2% (3)	0.8% (64)	0.5% (80)
7-7-7 Asks for orientation/information – Asks for orientation/information – Asks for orientation/information	0.2% (12)	1.0% (15)	0.3% (29)	0.4% (56)

Table 7. *(continued)*

IPA 3-interacts	Context: Support Group	Context: Nonprofit	Context: City Commissioner	Total
1-1-1 Shows solidarity/seems friendly – Shows solidarity/seems friendly – Shows solidarity/seems friendly	0.2% (8)	0.1% (1)	0.6% (47)	0.4% (56)
Infrequent pairs	49.4% (2376)	45.2% (697)	27.1% (2250)	36.3% (5323)
3-Interact Total	4812	1543	8310	14665
%	100.0%	100.0%	100.0%	100.0%

Table 8.1.

Frequencies of thought units for each Meeting Activity Type.

Meeting Activity Type	Meeting Activity Type – Frequency	Meeting Activity Type – Thought Unit Frequency	%
Information dissemination (Individual)	109	3907	26.64
Information dissemination (Multiple individuals)	217	6659	45.41
Decision making	37	552	3.76
Problem Solving	30	1927	13.14
Coordination	56	1061	7.23
Motivation	12	134	0.91
Positive affiliation	35	387	2.60
Negative affiliation	1	28	0.19
Other	1	10	0.01
Total	498	14665	100.0

Table 8.2.

Frequencies of Meeting Activities by context.

Meeting Activity Types	Context			
	Support Groups	Nonprofit	City Commissioners	Total
Information dissemination (Individual)	14	2	93	109
Information dissemination (Multiple individuals)	122	50	45	217
Decision making	4	4	29	37
Problem Solving	10	4	16	30
Coordination	20	11	25	56
Motivation	8	1	3	12
Positive affiliation	18	15	2	35
Negative affiliation	0	1	0	1
Other	0	0	1	1
Total Meeting Activities for each context	196	88	214	498

Table 8.3.

Frequencies of Meeting Activities by context, collapsing variables.

	Context			
	Support Group	Nonprofit	City Commissioner	Total
Information dissemination	69.4% (136)	59.1% (52)	64.5% (138)	65.5% (326)
Problem solving	7.1% (14)	9.1% (8)	21.0% (45)	13.5% (67)
Coordination	10.2% (20)	12.5% (11)	11.7% (25)	11.2% (56)
Affiliation	13.3% (26)	19.3% (17)	2.8% (6)	9.8% (49)
Total	196	88	214	498
% within Context	100.0%	100.0%	100.0%	100.0%

Table 9.1.

Chi-square analysis analyzing single IPA codes across contexts, in terms of specific meeting activity types.

	Information Dissemination	Problem Solving	Coordination	Affiliation
6 – Gives orientation/information	*286.13 *V* = .165	*26.19 *V* = .103	5.43	6.83
5 – Gives opinions	*56.95 *V* = .071	*17.20 *V* = .083	*14.05 *V* = .115	*32.76 *V* = .242
7 – Asks for orientation/information	*154.33 *V* = .121	*17.79 *V* = .085	.602	6.91
3 – Agrees	*270.27 *V* = .160	*16.49 *V* = .082	4.91	3.70
1 – Shows solidarity/seems friendly	*56.96 *V* = .073	1.36	*10.31 *V* = .099	*56.15 *V* = .317
4 – Gives suggestions	*17.47 *V* = .041	35.90 *V* = .120	4.17	5.37
2 – Shows tension release/dramatizes	*35.07 *V* = .058			*24.65 *V* =.210
10 – Disagrees	*84.28 *V* = .089	*34.11 *V* = .117		

Note: Blank cells indicate a violation of chi-square assumptions, nullifying the results of the test.
* indicates significance at $\alpha = .01$

Table 9.2.

Two-way chi-square test of meeting activity type by context for gives orientation/information (IPA 6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	53.2% (2040)a	60.7% (611)b	70.2% (4016)c
Problem Solving	40.1% (160)a	55.6% (80)b	53.9% (1044)b
Coordination	46.6% (124)	55.2% (122)	54.7% (314)
Affiliation	42.6% (133)	40.4% (69)	26.3% (20)

Notes: Percentages refer to the proportion of IPA 6 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.3.

Two-way chi-square test of meeting activity type by context for gives opinions (IPA 5).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	13.5% (518)a	5.2% (52)b	12.3% (703)a
Problem Solving	18.8% (75)a	6.3% (9)b	20.4% (394)a
Coordination	12.0% (32)a	2.7% (6)b	9.2% (53)a
Affiliation	17.6% (55)a	2.3% (4)b	2.6% (2)b

Notes: Percentages refer to the proportion of IPA 5 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.4.

Two-way chi-square test of meeting activity type by context for asks for orientation/information (IPA 7).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	12.4% (474)a	13.3% (134)a	5.7% (326)b
Problem Solving	13.3% (53)a	6.9% (10)b	7.0% (136)b
Coordination	15.4% (41)	15.8% (35)	13.9% (80)
Affiliation	6.7% (21)	10.5 (18)	1.3% (1)

Notes: Percentages refer to the proportion of IPA 7 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.5.

Two-way chi-square test of meeting activity type by context for agrees (IPA 3).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	8.3% (317)a	11.9% (120)a	2.1% (122)b
Problem Solving	12.0% (48)a	16.0% (23)a	7.8% (151)b
Coordination	10.2% (27)	13.1% (29)	8.0% (46)
Affiliation	9.6% (30)	11.7% (20)	3.9% (3)

Notes: Percentages refer to the proportion of IPA 3 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.6.

Two-way chi-square test of meeting activity type by context for shows solidarity/seems friendly (IPA 1).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.5% (135)a	1.1% (11)b	5.8% (330)c
Problem Solving	0.8% (3)	1.4% (2)	1.5% (29)
Coordination	3.8% (10)a	0.5% (1)b	5.4% (31)a
Affiliation	13.8% (43)a	3.5% (6)a	39.5% (30)b

Notes: Percentages refer to the proportion of IPA 1 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.7.

Two-way chi-square test of meeting activity type by context for gives suggestions (IPA 4).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	2.3% (90)a	4.7% (47)b	2.5% (145)a
Problem Solving	4.3% (17)a	9.7% (14)b	1.9% (36)c
Coordination	4.9% (13)	2.7% (6)	6.3% (36)
Affiliation	2.2% (7)	6.4% (11)	3.9% (3)

Notes: Percentages refer to the proportion of IPA 4 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.8.

Two-way chi-square test of meeting activity type by context for shows tension release/dramatizes (IPA 2).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	1.5% (56)a	1.3% (13)a	0.4% (21)b
Affiliation	6.1% (19)a	21.1% (36)b	15.8% (12)b

Notes: Percentages refer to the proportion of IPA 2 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 9.9.

Two-way chi-square test of meeting activity type by context for disagrees (IPA 10).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	2.2% (84)a	1.3% (13)b	0.2% (14)c
Problem Solving	5.5% (22)a	2.1% (3)b	1.1% (22)b

Notes: Percentages refer to the proportion of IPA 10 to all codes within the context's meeting activity type. Letters denote differences between contexts. Letters are only used for significant results.

Table 10.1.

Chi-square analysis analyzing IPA interacts across contexts, in terms of specific meeting activity types.

	Information Dissemination	Problem Solving	Coordination	Affiliation
Gives orientation/information – Gives orientation/information (6-6)	*672.61 *V* = .252	*55.44 *V* = .145	*11.81 *V* = .106	1.50
Gives orientation/information – Gives opinions (6-5)	*20.81 *V* = .044	6.99	2.49	*10.71 *V* = .138
Gives opinions – Gives orientation/information (5-6)	*18.84 *V* = .043	6.46	7.56	*10.73 *V* = .142
Asks for orientation/information – Gives orientation/information (7-6)	*95.05 *V* = .097	1.44	2.29	.40
Gives orientation/information – Asks for orientation/information (6-7)	*116.29 *V* = .106	*14.10 *V* = .077	5.36	2.05
Gives opinions – Gives opinions (5-5)	*49.94 *V* = .070	*17.75 *V* = .087	6.43	8.68

Table 10.1. *(continued)*

	Information Dissemination	Problem Solving	Coordination	Affiliation
Gives orientation/information – Agrees (6-3)	*180.42 *V* = .131	*28.67 *V* = .108	5.81	3.04
Agrees – Gives orientation/information (3-6)	*176.26 *V* = .129	*15.25 *V* = .078	7.21	
Gives orientation/information – Shows solidarity/seems friendly (6-1)	*15.06 *V* = .038			6.91
Shows solidarity/seems friendly – Gives orientation/information (1-6)	*23.33 *V* = .047		4.90	2.60
Asks for orientation/information – Asks for orientation/information (7-7)	*17.13 *V* = .040		1.37	
Shows solidarity/seems friendly – Shows solidarity/seems friendly (1-1)	*57.64 *V* = .074			*43.40 *V* = .279

Table 10.1. *(continued)*

Gives opinions – Agrees (5-3)	*36.92 *V* = .059

Note: Blank cells indicate a violation of chi-square assumptions, nullifying the results of the test.
* indicates significance at α = .01

Table 10.2.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives orientation/information interact (IPA 6-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	29.3% (1123)[a]	38.5% (388)[b]	55.9% (3197)[c]
Problem Solving	16.0% (64)[a]	32.6% (47)[b]	34.5% (668)[b]
Coordination	24.4% (65)[a]	28.5% (63)[a]	35.7% (205)[b]
Affiliation	21.8% (68)	19.3% (33)	15.8% (12)

Notes: Percentages refer to the proportion of IPA 6-6 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.3.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives opinions (IPA 6-5).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	6.8% (259)[a]	3.0% (30)[b]	6.6% (375)[a]
Problem Solving	7.5% (30)	2.1% (3)	8.2% (158)
Coordination	5.6% (15)	2.7% (6)	4.4% (25)
Affiliation	7.7% (24)[a]	1.8% (3)[b]	1.3% (1)[b]

Notes: Percentages refer to the proportion of IPA 6-5 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.4.

Two-way chi-square test of meeting activity type by context for gives opinions-gives orientation/information (IPA 5-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	7.0% (254)[a]	3.2% (31)[b]	6.3% (354)[a]
Problem Solving	7.8% (29)	2.8% (4)	8.9% (165)
Coordination	6.2% (16)	1.4% (3)	3.6% (20)
Affiliation	6.9% (20)[a]	1.8% (3)[b]	0% (0)[b]

Notes: Percentages refer to the proportion of IPA 5-6 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.5.

Two-way chi-square test of meeting activity type by context for asks for orientation/information-gives orientation/information (IPA 7-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	6.6% (239)[a]	7.2% (70)[a]	2.7% (152)[b]
Problem Solving	4.9% (18)	3.5% (5)	3.6% (66)
Coordination	7.0% (18)	7.9% (17)	5.2% (29)
Affiliation	4.1% (12)	4.2% (7)	2.6% (2)

Notes: Percentages refer to the proportion of IPA 7-6 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.6.

Two-way chi-square test of meeting activity type by context for gives orientation/information-asks for orientation/information (IPA 6-7).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	7.1% (258)[a]	7.1% (69)[a]	2.6% (147)[b]
Problem Solving	8.1% (30)[a]	5.7% (8)[b]	3.7% (69)[c]
Coordination	8.9% (23)	9.3% (20)	5.4% (30)
Affiliation	3.1% (9)	4.8% (8)	1.3% (1)

Notes: Percentages refer to the proportion of IPA 6-7 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.7.

Two-way chi-square test of meeting activity type by context for gives opinions-gives opinions (IPA 5-5).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	2.5% (91)[a]	0.9% (9)[b]	4.6% (260)[c]
Problem Solving	4.6% (17)[a]	0.7% (1)[b]	8.7% (162)[c]
Coordination	1.9% (5)	0% (0)	2.9% (16)
Affiliation	4.5% (13)	0.6% (1)	0% (0)

Notes: Percentages refer to the proportion of IPA 5-5 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.8.

Two-way chi-square test of meeting activity type by context for gives orientation/information-agrees (IPA 6-3).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.3% (125)[a]	7.8% (79)[b]	1.0% (58)[a]
Problem Solving	4.3% (17)[a]	10.4% (15)[b]	2.5% (48)[a]
Coordination	4.5% (12)	7.7% (17)	3.7% (21)
Affiliation	3.5% (11)	4.1% (7)	0% (0)

Notes: Percentages refer to the proportion of IPA 6-3 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 10.9.

Two-way chi-square test of meeting activity type by context for shows solidarity/seems friendly-shows solidarity/seems friendly (IPA 1-1).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	0.3% (13)[a]	0.2% (2)[a]	1.9% (109)[b]
Affiliation	4.8% (15)[a]	1.2% (2)[a]	22.4% (17)[b]

Notes: Percentages refer to the proportion of IPA 1-1 interacts to all interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.1.

Chi-square analysis analyzing IPA 3-interacts across contexts, in terms of specific meeting activity types.

	Information Dissemination	Problem Solving	Coordination	Affiliation
Gives orientation/information – Gives orientation/information – Gives orientation/information (6-6-6)	*861.96 *V* = .286	*59.68 *V* = .155	*12.33 *V* = .108	.937
Gives orientation/information – Gives orientation/information – Gives opinions (6-6-5)	*23.40 *V* = .047	*11.90 *V* = .069	.266	4.28
Gives opinions – Gives orientation/information – Gives orientation/information (5-6-6)	*14.52 *V* = .037	*9.69 *V* = .063	1.43	4.80
Gives orientation/information - Gives opinions – Gives orientation/information (6-5-6)	*9.47 *V* = .030	8.11	7.27	5.50
Gives orientation/information – Gives orientation/information – Asks for orientation/information (6-6-7)	*34.39 *V* = .057	3.39	2.46	

Table 11.1. *(continued)*

	Information Dissemination	Problem Solving	Coordination	Affiliation
Gives orientation/information – Asks for orientation/information – Gives orientation/information (6-7-6)	*69.48 *V* = .081	3.41	6.48	
Asks for orientation/information – Gives orientation/information – Gives orientation/information (7-6-6)	*27.42 *V* = .051	1.08	.455	
Gives orientation/information – Agrees – Gives orientation/information (6-3-6)	*103.65 *V*=.099	*30.76 *V* = .111	8.64	
Gives orientation/information – Gives opinions – Gives opinions (6-5-5)	*31.29 *V* = .054			
Gives opinions – Gives opinions – Gives opinions (5-5-5)	*50.88 *V* = .069			

Table 11.1. *(continued)*

	Information Dissemination	Problem Solving	Coordination	Affiliation
Agrees – Gives orientation/information – Gives orientation/information (3-6-6)	*61.16 *V* = .076	*11.56 *V* = .068	3.057	
Gives opinions – Gives opinions – Gives orientation/information (5-5-6)	*20.46 *V* = .044	2.43		
Gives opinions – Gives orientation/information – Gives opinions (5-6-5)	*10.64 *V* = .032			
Gives orientation/information – Asks for orientation/information – Asks for orientation/information (6-7-7)	2.54			
Asks for orientation/information – Asks for orientation/information – Asks for orientation/information (7-7-7)	*10.11 *V* = .031			

Table 11.1. *(continued)*

	Information Dissemination	Problem Solving	Coordination	Affiliation
Shows solidarity/seems friendly – Shows solidarity/seems friendly – Shows solidarity/seems friendly (1-1-1)				*38.90 *V* = .264
Gives orientation/information – Gives opinions – Asks for orientation/information (6-5-7)	*26.23 *V* = .050			
Shows solidarity/seems friendly – Shows solidarity/seems friendly – Gives orientation/information (1-1-6)	*28.11 *V* = .052			
Asks for orientation/information – Agrees – Gives orientation/information (7-3-6)	*50.59 *V* = .069			

Table 11.1. *(continued)*

	Information Dissemination	Problem Solving	Coordination	Affiliation
Asks for orientation/information – Gives orientation/information – Asks for orientation/information (7-6-7)	*22.93 *V* = .047			
Asks for orientation/information – Asks for orientation/information – Gives orientation/information (7-7-6)	*19.48 *V* = .043			
Shows solidarity/seems friendly – Gives orientation/information – Gives orientation/information (1-6-6)	*17.92 *V* = .041			

Note: Blank cells indicate a violation of chi-square assumptions, nullifying the results of the test.
* indicates significance at α = .01

Table 11.2.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives orientation/information-gives orientation/information (IPA 6-6-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	17.5% (672)[a]	25.6% (258)[a]	45.9% (2629)[b]
Problem Solving	6.5% (26)[a]	20.8% (30)[b]	23.8% (460)[b]
Coordination	15.4% (41)[a]	13.6% (30)[a]	23.0% (132)[b]
Affiliation	10.9% (34)	8.8% (15)	7.9% (6)

Notes: Percentages refer to the proportion of IPA 6-6-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.3.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives orientation/information-gives opinions (IPA 6-6-5).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.5% (136)[a]	1.7% (17)[b]	4.7% (269)[a]
Problem Solving	2.3% (9)[a]	0.7% (1)[a]	5.2% (101)[b]
Coordination	3.0 (8)	2.3% (5)	2.8% (16)
Affiliation	3.8% (12)	1.8% (3)	0% (0)

Notes: Percentages refer to the proportion of IPA 6-6-5 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.4.

Two-way chi-square test of meeting activity type by context for gives opinions-gives orientation/information-gives orientation/information (IPA 5-6-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.4% (129)[a]	2.0% (20)[b]	4.3% (244)[a]
Problem Solving	2.8% (11)[a]	1.4% (2)[a]	5.6% (108)[b]
Coordination	2.3% (6)	1.4% (3)	2.8% (16)
Affiliation	3.5% (11)	1.2% (2)	0% (0)

Notes: Percentages refer to the proportion of IPA 5-6-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.5.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives opinions-gives orientation/information (IPA 6-5-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.8% (146)[a]	1.9% (19)[b]	3.8% (216)[a]
Problem Solving	2.3% (9)	1.4% (2)	4.8% (92)
Coordination	4.5% (12)	1.4% (3)	1.7% (10)
Affiliation	3.8% (12)	1.2% (2)	0% (0)

Notes: Percentages refer to the proportion of IPA 6-5-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.6.

Two-way chi-square test of meeting activity type by context for gives orientation/information-gives orientation/information-asks for orientation/information (IPA 6-6-7).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.3% (128)[a]	4.4% (44)[b]	1.8% (104)[c]
Problem Solving	3.8% (15)	3.5% (5)	2.3% (44)
Coordination	3.4% (9)	5.4% (12)	3.1% (18)

Notes: Percentages refer to the proportion of IPA 6-6-7 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.7.

Two-way chi-square test of meeting activity type by context for gives orientation/information-asks for orientation/information-gives orientation/information (IPA 6-7-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.8% (147)[a]	4.0% (40)[a]	1.3% (76)[b]
Problem Solving	3.0% (12)	2.8% (4)	1.7% (33)
Coordination	3.4% (9)	5.0% (11)	1.7% (10)

Notes: Percentages refer to the proportion of IPA 6-7-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.8.

Two-way chi-square test of meeting activity type by context for asks for orientation/information-gives orientation/information-gives orientation/information (IPA 7-6-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	3.3% (125)[a]	4.1% (41)[a]	1.9% (107)[b]
Problem Solving	2.3% (9)	2.8% (4)	1.8% (34)
Coordination	3.4% (9)	3.6% (8)	2.8% (16)

Notes: Percentages refer to the proportion of IPA 7-6-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.9.

Two-way chi-square test of meeting activity type by context for gives orientation/information-agrees-gives orientation/information (IPA 6-3-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	2.1% (80)[a]	4.7% (47)[b]	0.6% (36)[c]
Problem Solving	2.5% (10)[a]	7.6% (11)[b]	1.3% (25)[a]
Coordination	2.3% (6)	5.9% (13)	2.1% (12)

Notes: Percentages refer to the proportion of IPA 6-3-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 11.10.

Two-way chi-square test of meeting activity type by context for agrees-gives orientation/information-gives orientation/information (IPA 3-6-6).

	Support Group	Nonprofit	City Commissioner
Information Dissemination	2.2% (86)[a]	3.6% (36)[a]	0.8% (44)[b]
Problem Solving	2.3% (9)[a]	4.9% (7)[b]	1.3% (25)[a]
Coordination	1.9% (5)	4.5% (10)	2.8% (16)

Notes: Percentages refer to the proportion of IPA 3-6-6 3-interacts to all 3-interacts within the context's meeting activity type. Letters denote significant differences (.01) between contexts.

Table 12.

Logistic regression with context and meeting activity type as predictor variables and IPA sequences as the dependent variable.

IPA Type	IPA Code	Omnibus test of model coefficients	r^2	Model of Best Fit
All IPA codes		1737.97	.119	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
All IPA pairs		942.96	.162	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
All IPA triplets		260.27	.174	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
Gives orientation/information	6	550.18 535.91 506.73	.050 .048 .046	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
Gives opinions	5	248.53 228.21 160.85	.031 .029 .020	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
Asks for orientation/information	7	220.98 198.36 195.94	.033 .029 .029	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
Agrees	3	365.23 313.87	.065 .056	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
Shows Solidarity/Seems Friendly	1	289.61 275.11	.065 .062	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$

Table 12. (continued)

IPA Type	IPA Code	Omnibus test of model coefficients	r^2	Model of Best Fit
Gives orientation/information - Gives orientation/information	6-6	1058.10 1028.19	.094 .091	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
Gives orientation/information - Gives opinions	6-5	66.37 58.18 45.05	.012 .011 .008	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$ $z = \beta o + \beta_1\chi_1$
Gives opinions – Gives orientation/information	5-6	84.56 71.22 52.18 42.24	.016 .013 .010 .008	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1$
Asks for orientation/information – Gives orientation/information	7-6	110.02 102.66 98.38 93.93 97.04	.025 .024 .023 .022 .021	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$ $z = \beta o + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1$
Gives orientation/information – Asks for orientation/information	6-7	150.92 144.71 133.59 139.82 124.00	.033 .032 .030 .029 .027	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$ $z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$ $z = \beta o + \beta_1\chi_1$ $z = \beta o + \beta_{12}\chi_1\chi_2$

Table 12. (continued)

IPA Type	IPA Code	Omnibus test of model coefficients	r^2	Model of Best Fit
Agrees – Gives orientation/information	3-6	223.78	.059	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		195.40	.051	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		189.29	.050	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		174.66	.046	$z = \beta o + \beta_{12}\chi_1\chi_2$
Gives orientation/information – Agrees	6-3	199.95	.060	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		181.40	.055	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		159.40	.048	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		164.89	.046	$z = \beta o + \beta_1\chi_1$
		149.77	.045	$z = \beta o + \beta_{12}\chi_1\chi_2$
Gives orientation/information - Gives orientation/information - Gives orientation/information	6-6-6	1355.34	.126	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		1330.31	.123	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		1309.53	.122	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		1280.19	.119	$z = \beta o + \beta_1\chi_1 + \beta_{12}\chi_1\chi_2$
Gives orientation/information - Gives orientation/information – Gives opinions	6-6-5	57.72	.014	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		50.80	.012	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		45.95	.011	$z = \beta o + \beta_{12}\chi_1\chi_2$
		43.95	.011	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		42.26	.010	$z = \beta o + \beta_1\chi_1$

Table 12. (continued)

IPA Type	IPA Code	Omnibus test of model coefficients	r^2	Model of Best Fit
Gives opinions - Gives orientation/information - Gives orientation/information	5-6-6	54.10	.013	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		47.95	.012	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		44.69	.011	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		38.43	.010	$z = \beta o + \beta_{12}\chi_1\chi_2$
		37.48	.009	$z = \beta o + \beta_1\chi_1$
Gives orientation/information - Gives opinions - Gives orientation/information	6-5-6	44.26	.011	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		32.15	.008	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		29.49	.008	$z = \beta o + \beta_{12}\chi_1\chi_2$
		27.58	.007	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
Gives orientation/information - Gives orientation/information – Asks for orientation/information	6-6-7	50.24	.016	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		49.12	.016	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		46.27	.015	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		39.05	.012	$z = \beta o + \beta_{12}\chi_1\chi_2$
		35.16	.010	$z = \beta o + \beta_1\chi_1$
Gives orientation/information – Asks for orientation/information - Gives orientation/information	6-7-6	84.54	.028	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		80.25	.027	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		82.80	.026	$z = \beta o + \beta_1\chi_1$
		74.87	.025	$z = \beta o + \beta_{12}\chi_1\chi_2$
		71.45	.024	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$

Table 12. (continued)

IPA Type	IPA Code	Omnibus test of model coefficients	r^2	Model of Best Fit
Asks for orientation/information - Gives orientation/information - Gives orientation/information	7-6-6	37.27	.012	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		35.84	.012	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		34.66	.011	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		29.38	.010	$z = \beta o + \beta_{12}\chi_1\chi_2$
		29.05	.009	$z = \beta o + \beta_1\chi_1$
Gives orientation/information - Agrees - Gives orientation/information	6-3-6	131.10	.056	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		123.69	.053	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		118.62	.046	$z = \beta o + \beta_1\chi_1$
		97.79	.042	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
Agrees - Gives orientation/information - Gives orientation/information	3-6-6	83.17	.036	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		71.48	.031	$z = \beta o + \beta_1\chi_1 + \beta_2\chi_2$
		71.37	.028	$z = \beta o + \beta_1\chi_1$
		64.29	.028	$z = \beta o + \beta_2\chi_2 + \beta_{12}\chi_1\chi_2$
		61.53	.026	$z = \beta o + \beta_{12}\chi_1\chi_2$

Notes: Blank cells indicate a violation of chi-square assumptions, nullifying the results of the test. All model tests presented here are the best fit and significant unless otherwise indicated.
z = logit
βo = constant, $\beta_1\chi_1$ = coefficient for context main effect, $\beta_2\chi_2$ = coefficient for meeting activity type main effect,
$\beta_{12}\chi_1\chi_2$ = coefficient for interaction of context and meeting activity type
$\alpha = .01$