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Running head: CONVERSATIONAL FORM AND SOCIAL STRUCTURE

Beyond Content of Conversation: The Role of Conversational Form in the Emergence
and Regulation of Social Structure

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Abstract

Social interaction is pivotal to the formation of social relationships and groups. Much is known about the importance of interaction content (e.g., the transfer of information). The present review concentrates on the influence of the *act* of conversing on the emergence of a sense of solidarity, more or less independently of the content. Micro-characteristics of the conversation (e.g., brief silences, smooth turn-taking) can profoundly influence the emergence and the regulation of relationships and of solidarity. We suggest that this might be because the form of a conversation is experienced as an expression of the social structures within the group. Because of its dynamic nature, moreover, the form of conversation provides group members with a continuous gauge of the group's structural features (e.g., its hierarchy, social norms, and shared reality). Therefore, minor changes in the form and flow of group conversation can have considerable consequences for the regulation of social structure.

Keywords: conversational form, social structure, hierarchy, social norms

Beyond Content of Conversation: The Role of Conversational Form in the Emergence
and Regulation of Social Structure

A good conversation comprises more than the exchange of information. Imagine having a video call with a job applicant from overseas. The applicant has an excellent resume and during the interview, she answers all questions satisfactorily and seems friendly and respectful. But despite the high quality answers and her objective suitability for the job, you are unsure whether to hire her. During the interview, you do not have the feeling that you clicked: She seems a bit distant or aloof and does not seem very enthusiastic as it takes her some time to respond – or laugh about your jokes. There are some awkward silences. Altogether, the conversation leaves you with a vague sense that the applicant may not fit into the team very well. This could be because she is indeed difficult to work with, but it could also be simply because a lack of flow in the conversation has unconsciously created a barrier between you and the applicant. Rather than solely focusing on the content of the conversation, your judgment of whether the applicant fits your team may be influenced by the form of conversation: There may have been slight delays “on the line” obstructing the development of a close social connection. This role of conversational form in shaping solidarity is central to the current paper.

Social interactions like these are central to the formation of social relations (Gaertner & Schopler, 1998; Lewin, 1948). Indeed, traditional research established that the *frequency* and *content* of social interactions play a crucial role in establishing good social relations as well as shared understandings of reality (Gaertner & Schopler, 1998; Hardin & Conley, 2001; Kashima, Klein, & Clark, 2007; Lewin, 1948; McPherson, Smith-Lovin, & Cook, 2001; Mead, 1934). Research on shared reality has for instance shown that people validate their viewpoints by exchanging information with others (Berger & Luckmann, 1971; Kashima et al., 2007). On the one hand, this process of *grounding* enables people to view the world as

stable and predictable. But grounding serves a second function: It includes the implicit notion that viewpoints are shared among a collective, and therefore signals the existence of a “we” (Kashima et al., 2007). Accordingly, social interaction plays a role in maintaining and developing a sense of *we-ness*: People can induce a sense of social unity and shared identity through the bottom-up process of exchanging particular individual viewpoints (Jans, Postmes, & Van der Zee, 2011; Postmes, Haslam, & Swaab, 2005). The present paper argues that in this process of developing a sense of *we-ness*, the concepts of social unity (or entitativity), belongingness, and shared reality, although distinct in some sense, become closely intertwined. We shall use the generic term *solidarity* in this paper to refer to this sense of emergent *we-ness*, because we want to avoid specific terms such as “entitativity” or “shared social identity” which come with particular theoretical baggage derived from interdependence and self-categorization theory. As we shall argue below, within natural conversations many of the processes described in these distinct theories operate in tandem and cannot be disentangled.

The present paper also argues that solidarity emerges not just because of the *content* of social interaction (what is being said both verbally and nonverbally) but also because of a strong influence by the *form* of interaction. Going back to our example of the job interview, the content of the conversation should have caused you to hire the applicant, as her answers were of high quality and she behaved normally. But the form of the conversation produced the opposite outcome: The disruptions in conversational flow elicited the feeling that the relationship between you and the applicant was somehow flawed, making her less likely to fit the team. Indeed, the literature we review below suggests that the form of communication *in itself* shapes social outcomes to a considerable extent. For instance, speaking at a similar pace or in a similar accent not only facilitates smooth interaction, but also communicates that actors belong to the same group (Giles & Coupland, 1991; Giles, Mulac, Bradac, & Johnson,

1987). Similarly, mimicking the poses or emotions of one's interaction partner increases liking, affiliation, and empathic responses (Ashton-James, Van Baaren, Chartrand, Decety, & Karremans, 2007; Lakin & Chartrand, 2003; Stel, Van Baaren, & Vonk, 2008). Moreover, when speakers' conversational contributions match what is expected of them on the basis of their status, this can bolster relationships (Koudenburg, Postmes, & Gordijn, 2014a; Ridgeway, Berger, & Smith, 1985). Although these findings come from different areas of social psychology, communication, and sociology, they all point to the pivotal role of the *form* of communication in social processes.

Overview of the Paper

In this literature review, our central research question is whether and how the form of conversations influences (a) the emergence and (b) the maintenance of solidarity. Our goal is to develop a coherent framework explaining how micro-characteristics of the form of dialogue (e.g. silences, interruptions, the experience of flow) influence processes at a more macro-level, such as the emergence and regulation of social structures. We will focus mainly on the social psychological literature, but we integrate this with findings and theoretical perspectives from the sociological, anthropological, and communication literature, which also devoted attention to the form of communication in relation to solidarity.

We start with some definitions and demarcations: what is conversational form, what is flow, and what is solidarity? Then we discuss existing theories on the emergence of solidarity. Next, we introduce a new theoretical framework posing that conversational form both represents and regulates social structure. We then review empirical evidence for the two main propositions of this framework. First, we present studies that show the influence of conversational form in processes of *emerging* social structure. Second, we focus on the *regulation* of social structure and introduce three different structural factors that may be

regulated through conversational form: Social norms, hierarchy, and shared reality. Finally, we discuss the relevance and practical implications of our theoretical framework.

The Form of Conversation

This literature review is about the influence exerted by the form of conversations. We define conversational form quite broadly as the behaviors within a conversation that are not categorized as content. Different aspects of conversational form are described in literatures on nonverbal expressions (e.g., Argyle, 1967; 1969; Ridgeway, et al., 1985), posture (e.g., Goffman, 1964; Mehrabian, 1969), mimicry (e.g., LaFrance & Broadbent, 1976; Lakin & Chartrand, 2003), and sociolinguistics (e.g., Giles & Coupland, 1991). The present review is distinct from these literatures because it explores the straightforward notion that inferences about the structure of the social system as a whole are inferred from the form that conversations take.

We are particularly interested in the influence of conversational form on the development of solidarity in small groups and dyads. In small groups and dyads communication between people is characterized not only by what is said, but also by the *flow* of conversations. Conversational flow is defined as the extent to which a conversation is *experienced* as smooth, efficient, and mutually engaging (see Koudenburg et al., 2014a). The subjective experience of flow can be produced by various aspects of conversational form such as high-quality turn-taking, short response latencies, and few interruptions. Thus, conversational *form* refers to the objective characteristics of the conversation, whereas flow refers to the subjective experience of it.

The experience of conversational flow is the result of the cooperative interplay of multiple actors taking finely tuned turns and is therefore by definition the outcome of a collaboration among multiple actors. We believe that conversational flow can be used, subjectively, as an indicator of the quality of the relationship. The reason for this is that turn-

taking in conversation is more than just an informational exchange—the conversation is, for humans, one of the most important instruments by which we can “do” sociality (e.g., Dunbar, 2004). Accordingly, the analysis of the underlying social organization of a conversation is *the key* instrument for understanding all social processes (see also Sacks, Schegloff, & Jefferson, 1974). In sum, conversational flow is a moment-to-moment experience which may act as a constant gauge on the quality of relationships.

Often it is difficult to disentangle effects of form and content of interaction, as they are closely intertwined and mutually dependent. But sometimes, the meaning of aspects of conversational form can be interpreted more or less independently from the content of what is being said. This is possible, for example, if one can find a way of systematically manipulating some aspect of the form of conversation while keeping constant its content. It is this literature we review here.

The Emergence of Solidarity

Before examining how solidarity is developed in small groups and dyads, it is important to first define it. The Oxford English Dictionary refers to solidarity as “The fact or quality, on the part of communities etc., of being perfectly united or at one in some respect, especially in interests, sympathies, or aspirations.” In early theorizing, Emile Durkheim (1893/1984) uses the term social solidarity to describe the nature of the bonds that tie individuals to society. Later descriptions by Leach et al., (2008, p. 147) suggested that solidarity should be associated with “a sense of belonging, psychological attachment to a group, and coordination with other group members”. The different notions of solidarity thus reveal several aspects of solidarity: The sense that there is an experience of *unity* within the group and the sense that one *belongs to* or *identifies with* the group. Accordingly, we define solidarity here as the perceived and experienced we-ness within the group as a whole, in conjunction with a sense of individual belonging to the group. At the collective level of the

group, solidarity is related to perceptions of entitativity (Lickel et al., 2000). This perception of the group as an entity is typically associated with several *structural characteristics* of the group such as social norms, a certain level of hierarchy, and a socially shared reality. On the individual level, we-ness requires one to feel like *being part of* this unity, therefore includes both feelings of belonging – in the sense that one is accepted by, and feels part of the group, and feelings of identification – in the sense that one has a “positive emotional valuation of the relation between self and group” (Postmes, Haslam, & Jans, 2013, p. 599).

Bottom-Up Processes: Solidarity Emerging From Interdependence and Communication

How does solidarity emerge within small groups? Different theories have been developed to answer this question, which can be broadly categorized into two classes (see Postmes, Haslam et al., 2005). First, there are theories that focus on bottom-up processes by which interdependence and interpersonal interactions may foster the development of solidarity (e.g., Gaertner & Schopler, 1998; Lewin, 1948). For example, classic theories of group formation (e.g., Lewin, 1948) suggested that the essence of a group lies in the interdependence between its members. People become connected because they complement each other and fulfil each other’s needs. Interpersonal contact increases interdependence as well as attraction between group members, and therefore fosters group formation (Gaertner & Schopler, 1998; Lott & Lott, 1965).

But beyond interdependence, group members also need a shared understanding and shared language. Through communication, group members develop a socially shared understanding of the world around them, a process called *grounding* (Clark, 1996; Kashima et al., 2007). For instance, in the first hours after Malaysia Airlines Flight 17 crashed down in the Ukraine in July 2014, many people communicated intensively with others to make sense of the situation and develop a common understanding, which varied from “there must have been an accident” to “this was a terrorist attack”. The establishment of such common ground

provides people with a feeling of social validation (Festinger, 1950; Echterhoff, Higgins, & Levine, 2009; Hardin & Higgins, 1996). Moreover, this process of grounding implies that knowledge is shared among a group of people, and hence encompasses the suggestion that a collective “we” exists (Clark, 1996; Kashima et al., 2007). In two ways then, through the establishment of interdependence and the emergence of shared meaning, can interaction foster the development of solidarity.

Top-Down Processes: Solidarity Emerging from Self-Categorization

Second, there are theories that focus on top-down processes. An example of this is self-categorization theory (SCT: Turner, 1982; 1985; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which proposes that people are most likely to self-categorize as group members when differences within the group are smaller than differences between groups. According to SCT, individuals tend to perceive themselves in terms of a shared stereotype that defines the ingroup in contrast to relevant outgroups (e.g., Hogg & Turner, 1987). Group members can thus develop a sense of solidarity on the basis of their shared attributes (cf. McPherson et al., 2001). Think, for instance, about meeting someone from your home country when travelling abroad. It is quite likely that you will feel a sense of solidarity: Even though you have not met this person before, you know that he or she is “one of us”. In groups that are formed through such top-down (deductive) processes, similarities between members become a defining feature of group membership and form the basis of solidarity. Importantly, rich or intensive social interaction is not required for such forms of solidarity to emerge: As long as norms and attributes of the groups to which people may belong are known, mere knowledge of category membership should be sufficient to make social identities salient (Jans, Leach, Garcia, & Postmes, 2015; Lea, Spears, & Watt, 2007; Spears, Postmes, Lea, & Wolbert, 2002).

Beyond Explicit Processes

Both theories about inductive and deductive pathways to group formation have hitherto been applied mainly to studying and understanding *explicit* processes of social influence (e.g., through the content of interaction or through category activation) that underpin a group's formation. Thus, influence may be exerted when people engage in explicit comparison of their own opinion with those of others (e.g., Sherif, 1935), or influence may stem from categorization of people into ingroup and outgroup (e.g., Turner et al., 1987). In dialogue, however, people can also make inferences from the *form* of interaction. During social interactions, people can acquire a sense of solidarity merely because the subjective experience of conversing with others is, in itself, a collaborative act. Thus, conversational form can shape perceptions of good collaboration (experienced as a feeling of conversational flow) and this in turn can feed perceptions of group solidarity and social structure. Indeed, this review argues that pretty subtle processes within the form of social interactions play a pivotal role in this emergent process. On the basis of various studies in social psychology, sociology, anthropology, and communication, we aim to construct a more coherent and integrated perspective to account for this subtle process by which social structures emerge.

Conversational Form both Reflects and Constitutes Social Structure

How do social interactions shape and structure culture and other social structures? The study of these processes has been a central topic in early sociological research (e.g., Giddens, 1984; Goffman, 1959; 1967; Mead, 1934). For example, Giddens (1984) suggests that in order to obtain knowledge about macro-social systems, one must study the micro-sociality of human interaction. It is in day-to-day actions that people both *draw upon* and *reproduce* structural features of wider social systems.

The core idea of these approaches is that structures (including meaning, identity, and institutional order) shape social interaction, but that structures at the same time *are shaped by* interaction (Garfinkel, 1967; Giddens, 1984; Goffman, 1959). Garfinkel (1967) suggests that

members' actions and social structures are closely linked in a 'mutually elaborative' relationship, such that they cannot be separately identified but are more like parts-and-whole of a mosaic. This viewpoint implies that social interaction can *represent* or reflect established social structures, but it can also *constitute* and renew structures by challenging and transforming existing ones. Interaction thus provides means to regulate social structure—either by affirming or challenging it. According to Giddens (1984), furthermore, this process of affirming or challenging structures takes place not just in the explicit content of what is discussed, because it is often concealed in the tacit and informal rules that guide social interaction (see also Goffman, 1959).

Can this Idea be Applied to Conversational Form?

In line with the sociological literature, we propose that the form of communication is taken as a representation of the social structure. When people engage in a conversation, the coordinated speech acts together constitute the relations among those in the social interaction (cf. Fiske, 2004), in the dual sense that speech acts are both shaped by and shape these relationships. On the one hand, this means that the dynamics of the conversation provide meta-information about the state of solidarity within a group or dyad. For instance, a smoothly flowing conversation is likely to represent a relation in which levels of solidarity are high, and people are likely to be on the same wavelength. In contrast, a conversation that is “hard work” because utterances are poorly coordinated (e.g., with disruptions or overlapping speech) may indicate low levels of solidarity between people. On the other hand, the form of conversation should not be viewed as a mere reflection of the social system: The quality of the interaction plays a role in forming, transforming, and maintaining the solidarity within the group. For example, interrupting a person of high status may not only *reflect* a potential threat to the hierarchy, the act itself also brings such a threat into existence and thereby, to some extent, changes the solidarity within the group.

Important to point out is that the classic literature (e.g., Giddens, 1984; Mead, 1934; Hardin & Higgins, 1996) tends to focus on both the content and the form of interaction, whilst our review zooms in on the qualities of interaction that are conveyed most clearly by conversational form. There are two reasons for this: a conceptual and a pragmatic one. Conceptually, we believe that the form of interactions, much like other forms of co-action such as dancing or singing together, or even cooking a meal, are subjectively experienced as collaborative actions taken by “us” (see also Tuomela, 1995; Searle, 1995). For example, when well-versed dancers are able to coordinate their moves in a smooth and harmonious manner, this enables them to feel perfectly at one with each other. Although dancers are not likely to be consciously aware of every step they take, missing a beat may seriously disrupt the flow and threaten or undermine the unity that dancers experience—they then focus the attention of both dancers on the actions of “you” and “me”. Similarly, in conversations, a disruption of the flow is likely to be interpreted as a signal that there may be some problem at the social level. A minor delay in the connection during video-mediated communication can therefore elicit a feeling of doubt or unease about the social relations. While the source of such disruption may remain unclear, the level of solidarity within the social system can no longer be taken for granted. The conversation no longer indicates that “we are on the same wavelength” and that “I belong to this group”. In this way, subtle disruptions of conversational flow, such as brief silences or interruptions can have a substantial influence on the development and experience of solidarity within the group.

The pragmatic reason for focusing on the form of interactions is that it can be studied and manipulated quite easily, especially with the help of modern communication technology. This makes it a relatively powerful instrument for research, as our review of this body of research will show.

Studies on the Form of Communication

The basic idea that the form of communication serves an important communicative function in its own right has been the subject of quite some empirical investigation. A large body of research on the form of communication focuses on *nonverbal* behaviors such as facial expression or posture in communication. For example, there is a broad range of evidence for the importance of these behaviors to the communication of hierarchy and affiliation. Research has shown that expansive and open postures communicate that a person is high in power, whereas contractive, closed postures are mostly displayed by those low in power (Carney, Hall, & Smith LeBeau, 2005). Similarly, during a job interview, nodding, smiling and leaning forward increases a person's chance of being selected (Gifford, Ng, & Wilkinson, 1985). Moreover, mimicking facial expressions, behaviors, or posture has been associated with increased liking, rapport, and pro-social behavior (Chartrand & Bargh, 1999; LaFrance & Broadbent, 1976; Van Baaren, Holland, Kawakami, & Van Knippenberg, 2004).

Communication accommodation theory. The previous examples all refer to nonverbal communication, but can similar effects be found in the literature on *verbal* communication? Indeed, research in the communication accommodation tradition (Giles & Coupland, 1991; Giles et al., 1987) has shown that people adjust their speech rate (Street, 1984; Webb, 1970), pause and utterance duration (Jaffe & Feldstein, 1970) and language (Giles, Taylor, & Bourhis, 1973) to their communication partner. By accommodating (for instance by choosing to speak in a similar dialect), communicator A can reveal to communicator B that he or she belongs to the same group. As such, accommodation can be used to signal solidarity. In contrast, choosing to speak in a different dialect than one's conversation partner may be a strategy to dissociate oneself from the other (Giles & Coupland, 1991).

Research on both verbal and nonverbal communication thus suggests that various aspects of communication form can be influential in determining communication outcomes.

But typically these studies tend to be focused on strategies of communicators and on consequences for receivers: They are focused on interpersonal consequences, not on group level (or multilevel) consequences of communication. To clarify, these studies clearly speak to effects of what “I” say to “you”, but less on the effects of having a conversation among “us”. There are however good reasons to conduct such a group-level (or multilevel) analysis. In line with this idea, Bernieri and Rosenthal (1991) theorized that people engage in different efforts to coordinate their interaction, and that these efforts not only serve conversational flow, but also signal that the group is an entitative unit. In line with *speech act theory* (Searle, 1969), speech acts can thus be evaluated on the basis of their ostensible or intended meaning, but also on their actual effects (termed *perlocutionary effects*, Searle, 1969). These effects could occur quite directly, as when someone is persuaded or inspired, or have more distant psychological consequences, such as mutual bonding.

Behavioral coordination. Bernieri and Rosenthal (1991) described some aspects of coordination that relate to similarity of behavior, such as behavioral matching and simultaneous movement. Here, behavioral matching refers to adopting similar behavioral patterns during interaction, such as two people adopting a similar posture or a soccer team that during the warming up session adopts each other’s movements. Taking this further, simultaneous movement refers to individuals’ behaviors occurring at precisely at the same instant. Although there are some differences between the two, they have in common that they both refer to *similarity* of behavior, either in time or in form. We will refer to these acts as synchrony.¹ Synchronous action is observed in many social situations, and often occurs unintentionally (Richardson, Marsh, & Schmidt, 2005). For instance, dyads walking down a lane tend to synchronize their steps, and football fans often chant simultaneously. Such

¹ In the work of Bernieri and Rosenthal (1991), the term interactional synchrony is used differently, to describe simultaneous movement, behavioral meshing, and rhythm altogether. However, in later work, the use of the term synchrony is mainly used to describe concurrent or simultaneous activity in a more narrow sense. In the present paper, the term synchrony refers to this more narrow definition of similar or simultaneous movement or speech.

synchronous action is based on a principle of similarity, and has been suggested to lead to the blurring of psychological boundaries between self and others (Miles, Nind, Henderson, & Macrae, 2010; Paladino, Mazzurega, Pavani, Schubert, 2010).

In addition to coordination based on similarity of action, a second aspect of coordination relies on the capability to smoothly integrate the different activities of actors so that the total product of a group's actions can become more than the sum of its parts. In Bernieri and Rosenthal's theorizing, this is called behavioral meshing, but we will use the term *complementary action* here (see also Goffman, 1967; 1974). This form of coordination may be best exemplified by an ordinary conversation, in which two or more speakers take turns. Other examples include the communal lifting of a large table (see also Tuomela, 1995), or playing in a baseball team in which each player fulfils a particular function. In complementary action, coordination is not necessarily based on similarity, but on the ability to successfully integrate distinct individual inputs to create a common product. Incidentally, both synchrony and complementary action rely to some extent on the third ingredient of acting to a common rhythm, which plays a role in enabling both simultaneous movement and the integration of distinct inputs.

In much of the research that has followed up on the consequences of behavioral coordination, the emphasis has been on synchrony and in particular on the *physical* coordination of actions. Consequently, the entrainment of physical movement into exact simultaneous action became the typical way to operationalize coordination. In research by Marsh, Richardson, and Schmidt (2009) for instance, individuals were asked to entrain their movements while rocking chairs side by side, or while swinging pendulums. In other studies participants were asked to watch interactions between individuals who moved in, or slightly out of sync, and to indicate their perceived entitativity afterwards (Lakens, 2010). Research using these paradigms has shown that synchronous movement promotes perceptions of group

entitativity and interpersonal liking (Bernieri, Gillis, Davis, & Grahe, 1996; Lakens, 2010). In addition to increased *perceptions* of entitativity, Marsh et al.'s (2009) study showed that participants who were facilitated to rock in sync displayed a greater sense of team-ness in an upcoming task, suggesting that group level solidarity can arise when individuals perform the same actions together. These positive effects occurred regardless the nature of the collective behavior: Both folkloric marches and pro-immigrant demonstrations appeared to create a sense of unity (Paez, Rimé, Basabe, Wlodarczyck, & Zumeta, 2015). Indeed, the effects of synchronous behavior on cooperation were sustained even when such cooperation required personal sacrifice (Wiltermuth & Heath, 2009).

Extending this research into the field, Fischer and colleagues examined coordinated movement and vocalization in nine naturally occurring collective rituals such as yoga, Buddhist chanting, Kirtan [Hindu devotional singing], etc. (Fischer, Callander, Reddish, & Bulbulia, 2013). In line with Bernieri and Rosenthal's theorizing, they found that rituals were not always based on exact synchronization of movements and/or vocalizations in time. Rituals also included more complementary forms of co-action such as sequential synchrony or actions that were not exactly matched in time but were nevertheless complementary to a shared ritual goal (for instance Capoeira [Brazilian martial arts] or a Christian church service). They categorized the rituals according to their type of coordination (synchrony, complementarity and no synchrony) and levels of sacred attribution. This research revealed that ritual synchrony resulted in increased cooperation compared to a condition in which people acted asynchronously. Interestingly, rituals performed in a complementary fashion also enhanced perceptions of group entitativity.

The implication of these very different lines of research, when taken together, is that the coordination of behaviors within a group increases solidarity. This is the case both when

actions are taken synchronously, but also when actions are complementary. The next section applies these insights to an entirely different form of coordinated action: the conversation.

Can similar patterns of coordination be identified in regular conversation?

Similarly to coordination within rituals, a normal conversation involves more than acting in exact synchrony. The nature of synchronous forms of interaction (in the sense of concurrent activity) implies that all group members must be engaged in identical acts in order to perform well at it. It thus seems plausible that it would be the underlying similarity of action that forms the basis for the emergence of social unity. But when people converse, their actions may be attuned to a very different choreography than when speech is exactly synchronous: They must coordinate their speech by taking turns and thereby complementing each other's actions. Thus, although it is quite likely that the smooth coordination of turns in conversations can similarly serve as a sign of solidarity, the nature of that solidarity should be qualitatively different. Whereas both activities require a rhythmic coordination of behaviors, turn-taking does not require people to act in ways that are exactly similar or simultaneous. Rather, a sense of solidarity may develop through the successful integration of distinct individual inputs.

There is indeed some research pointing to the rhythmic underpinnings of smooth turn-taking. Research in pragmatics has proposed several mechanisms that enable a smooth coordination of speech acts (Goffman, 1967; Schegloff, 2007). One first observation is that turn-taking is a cooperative act: A speaker signals whether they want to keep the floor or are about to end their turn with cues such as changing pitch, stretching out the last word or syllable, or gazing at the listener (Duncan, 1972; Kendon, 1967). But over the course of a longer conversation, speakers also coordinate the smooth transition of speaking turns by finding a common rhythm (Bernieri & Rosenthal, 1991). It has been proposed that people have an oscillator mechanism, which allows them to organize their turn taking in a way that creates a smooth flow of speech (Wilson & Wilson, 2005). Others suggest that acting together

requires a shared representation of the own and other person's actions, allowing speakers to accurately predict each other's actions (Sebanz & Knoblich, 2009; Gambi & Pickering, 2011). As a result, speakers have the technical capacity to coordinate their speech with extreme temporal precision, which makes pauses between speaking turns often last no longer than two tenths of a second (Jefferson, 1973; 1986). In sum, although most conversations do not have a fixed rhythm in the way synchronous actions do, a smoothly flowing conversation has a fluid rhythmic oscillation that requires actions to be minutely timed to the actions of the other. In that sense, although the forms of interaction clearly differ, both require a close coordination of actions in time.

Conversational flow and its disruption. It should come as no surprise then that, like acting in synchrony, the successful coordination of speech may have a powerful communicative function that is independent of content. Beňuš, Gravano, and Hirschberg (2011) evaluated the role of single word grounding responses (such as *yeah*, *mhmm*, and *okay*) and conversational fillers (e.g., *um* and *uh*) in dialogue. They concluded that these words often serve temporal alignment of turn initiations. In their observation, short latencies between turns signaled a greater understanding between communicators and therefore contributed to the establishment of common ground. In line with this, it has been shown that turn-initiations that overlap the preceding turn or start long after the turn is finished decreases the trustworthiness of the speaker (Brennan & Williams, 1995).

Contrasting the positive effects of conversational flow, one can thus infer that a *lack* of flow may negatively affect social outcomes. For instance, a lack of flow may influence person perception, perceptions of the quality of the underlying relationship, mutual trust and perceived mutual understanding. In the job interview example at the beginning of the paper, it is possible that a delay in the Internet connection elicited feelings of disconnect not only in the literal, but also in the symbolic sense: The disruption of conversational flow raised

questions about the level of consensus and the quality of underlying relationships. Similar processes may occur in face-to-face conversations: A person may experience a higher sense of solidarity when having a smooth conversation at a party compared to when having an effortful conversation with a shy colleague. This suggests that people may not only experience solidarity in synchronous action, but also in the smooth alternation of speaking turns.

In three experimental studies, we tested the idea that the smooth coordination of speaking turns could induce a sense of solidarity, whereas a disruption of flow would not do so (Koudeburg, Postmes, & Gordijn, 2013a). In these studies, dyads were instructed to talk for five minutes about their favorite holiday destinations via a headset. In half of the 5-min conversations, a short delay of 1 second was introduced after two and a half minutes of conversing normally—participants thus experienced a loss of flow. Although such a short delay may not be noticed consciously, it considerably reduces the flow of the conversation because smooth turn-taking is hindered: interruptions and short silences become more frequent (see also Pearson et al., 2008). Even though the conversation lasted only five minutes, the delays substantially lowered levels of entitativity and belonging and somewhat reduced levels of shared cognition compared to a condition in which the conversation occurred in real time. But importantly, even a delayed conversation still elicits higher levels of experienced solidarity than a monologue does (Koudeburg et al., 2013a, Study 2). This suggests that smooth conversational flow induces a sense of solidarity, which is compromised when flow is disrupted at a later stage of the conversation.

These studies demonstrate that people are informed about the solidarity within a group not just by what is said, but also by how it is being said. When conversation occurs in a smooth and efficient way, this is accompanied by feelings of unity, belonging and consensus: feelings that suggest that “things are all-right”. More specifically, the smooth interplay of taking turns enables communicators to coordinate speech in a harmonious way. This may

serve as a proxy for more deep-seated feeling of harmony within the dyad: conversational flow may therefore signal common ground and convey a sense of shared reality. By contrast, the disruption of close coordination leads communicators to question the level of solidarity and consensus. Even brief delays of seemingly trivial duration are sufficiently disruptive to undermine the emergence of solidarity and a sense of shared reality.

For us, the interest in studies such as these lies not just in the consequences of disrupting conversational flow. The most powerful effects occur when flow is undisrupted. Even in relatively trivial 5-minute conversations with a total stranger, quite strong feelings of solidarity may emerge. Given the nature of such conversations, we can be reasonably sure that this solidarity emerges in part from the bottom up: The combination of distinct individual inputs within a conversation with good flow—a skill that comes relatively effortlessly to humans—creates the impression that there is a social entity of “us” in which all of us have a stake.

Of course, this ability to regulate the flow of interactions is but one of many aspects of the form that interaction may take. In particular, the conversation is a setting in which the individual contributor is able (and expected) to have a major contribution: Actors take turns. However, there are also situations in which individual inputs are much less discernible in the process of group formation. When acting in synchrony for instance (e.g., a group of soldiers marching, a group of protesters chanting, a group of believers praying), the social entity of “us” emerges through the similarity and simultaneity of group members’ coordinated actions and can therefore be threatened, rather than strengthened, by individual distinctiveness. This suggests that different forms of coordination may lead to qualitatively different forms of solidarity.

Comparing Different Pathways to Solidarity

The distinction between synchronous and alternating, or complementary interaction shows some conceptual parallels to the distinction that has been made in the *explicit* pathways to group formation (Postmes, Haslam et al., 2005; Postmes, Spears, Lee, & Novak, 2005). In the theorizing by Postmes and colleagues, a socially shared identity is either deduced from a superordinate social identity (e.g., inferred from inter-group comparisons), or induced from the combination of individual contributions to the group. A deductively formed social identity is traditionally anchored in group attributes that individual group members can immediately infer from (for example) shared stereotypes of a common outgroup: intergroup comparisons may foster the formation of a self-stereotype (e.g., Turner et al., 1987). But the need for intergroup comparisons is not self-evident: Perceptual unity of an ingroup can also be deduced from its gestalt-like distinctiveness from a “background” in which another group is not necessarily the referent (Gaertner, Iuzzini, Guerrero Witt, & Oriña, 2006; Turner et al., 1987). Extending this principle, properties of a shared social identity can also be inferred from the homogeneous simultaneous action of ingroup members, as can be seen in synchronous behavior of an army or choir (e.g., Koudenburg, Postmes, Gordijn, & Van Mourik Broekman, 2015). This resonates with Durkheim’s (1893/1984) *mechanical solidarity*, which he associated with indigenous tribes who used rhythmic co-action to increase and express group unity.

Durkheim distinguished this from solidarity based on *organic* principles: Here individual complementarity serves as the basis for group formation and therefore the individuality of group members becomes an important ingredient for in-group functioning. The concept of organic solidarity can be related to contemporary research showing that interpersonal interaction is also a major predictor of feelings of unity and solidarity (Gaertner et al., 2006; Gaertner & Schopler, 1998; Koudenburg, Postmes, & Gordijn, 2011a; 2013a; 2014a; Lickel et al., 2000; Prentice, Miller, & Lightdale, 1994). This can also be

conceptualized as a bottom-up process in which a common sense of identity is *induced* from group members' individual contributions to the group (Postmes, Haslam et al., 2005; Postmes, Spears et al., 2005; see also Swaab, Postmes, Van Beest, & Spears, 2007). In these organic processes, members also engage in co-action, but their actions are based on complementary or alternating actions (and thus remain distinguished), rather than actions performed simultaneously (which are more indistinguishable or non-differentiated). Organic solidarity can be evoked through conversational turn-taking or different forms of complementary action, (see Bernieri & Rosenthal, 1991; Koudenburg et al., 2015).

In Durkheim's conceptualization of mechanical and organic solidarity, societies organized by organic principles also have higher interdependence among individuals. Because each member's actions bring a piece of the puzzle, group members depend on each other for its completion. Groups organized mechanically do not depend on individual members, and thus have lower interdependence. But interdependence among group members should not be equated with the psychological experience of group unity, identification and belongingness. In this respect, the mechanical can create an allegiance just as strong as the organic (Postmes, Spears et al., 2005).

Experimental evidence. A recent set of studies confirmed this assumption, again simply by examining the form of interaction—more specifically the rhythmic coordination of verbal communication (Koudenburg et al., 2015). As in physical action, different forms of coordination may be witnessed in speech: Sometimes, people engage in synchronous speech – for instance when praying or when chanting at a protest meeting. At other times people will engage in complementary interaction, for instance when taking turns in a conversation. We compared the act of turn taking with speaking or singing in synchrony in 5 studies, employing actors, undergraduate students, and choir singers. The main focus of these studies was to examine the consequences of both types of coordination for establishing a sense of solidarity.

Specifically, we were interested in the effects of coordinating verbal interaction independently of the content of this interaction (which was kept constant across conditions).

For example, in one study, 93 actors were allocated to triads and asked to recite a poem either synchronously, by taking turns or, in the control condition, by reciting it independently of the other actors. Actors who coordinated their interaction experienced more solidarity than those who interacted without coordination. Importantly, the level of solidarity was equally high when actors spoke in synchrony or took turns. However, the *kind* of solidarity that was experienced was qualitatively different. When actors took turns, they felt an *increased* sense of personal value to the group. Statistically, this sense of personal value to the group mediated the emergence of solidarity, as did the sense that *others* were personally valuable to the group. But when speech was fully synchronized, the experience of personal value to the group was much lower, and played no role in the emergence of solidarity.

We can thus conclude that although different forms of social interaction foster solidarity, the nature of this solidarity very much depends on the form of co-action that is displayed: Solidarity based on similarity of action facilitates categorization by relegating individual group members' inputs to the background (cf. Turner, 1982; 1985; Postmes, Spears, & Lea, 1998, Tanis & Postmes, 2008). By contrast, in a conversation that consists of a dynamic interplay of speaking turns, the combined input of individuals determines what it means to be "us".

Integration of Findings: How Solidarity Emerges from the Form of Conversation

In sum, these findings suggest that a conversation consists of much more than the words that are spoken and meanings that are exchanged. Aspects of communication that at first sight may seem trivial, such as brief interruptions, the use of filler words, or silences, appear to play an important role in maintaining conversational flow. The flow of a conversation, in turn, conveys information about both the degree and the nature of solidarity

that is being achieved in the conversation. The coordination of relatively concrete *behavioral* actions affects various outcomes on a *psychological* level. First, in conversations with a good flow, people experience higher levels of belonging in the dual sense of feeling attached to, and being accepted by other group members. Second, a smoothly flowing conversation leads to an increased sense of understanding and social validation, suggesting that the flow of the conversation serves as a proxy for agreement between the members. Third, the effects of conversational flow reach beyond the level of interpersonal relations (i.e. the level of “me” and “you”), and affect the emergence of social unity at the group level (i.e. the level of “we”).

Putting all of these observations together, it is worth pausing to ask what can account for these effects. One possibility is that smooth interaction fosters the development of closer interpersonal relationships, and that these interdependencies between group members define the level of unity within the group (Lewin, 1948; Gaertner & Schopler, 1998). A second possibility is that the convergence of speech that facilitates conversational flow signals that speakers belong to the same category and thus share a common identity (Giles & Coupland, 1991; Giles et al., 1973; 1987). A third explanation could be derived from the literature on fluency and ‘feelings-as-information’ (Alter & Oppenheimer, 2009; Rebar, Schwarz, Winkelman, 2004; Schwarz, 2011; Schwarz & Core, 1983). The fluency literature suggests that a fluent exchange with another may be a positive experience simply because it is seemingly effortless. This is likely to affect a broad range of social outcomes including satisfaction with the group.

It should be pointed out that these different explanations are non-exclusive: they may be operating in tandem. Interdependence and fluency may combine to explain the positive valuation of social relationships in complementary interactions. In synchronous interactions, however, it is likely that category membership and common identity are a source of solidarity, too.

The theoretical framework presented in this paper seeks to move away from the debate whether the first step in group formation would be occurring at the inter-personal level or whether this first step is premised on some pre-existing shared category or common knowledge. We believe that it is also possible that group members (implicitly) observe the conversation and its dynamic development. The form of this conversation can then be seen as a manifestation of the group or dyad “in action”. The form of the conversation, in other words, provides instant feedback about the state of affairs among us. One might say that the cooperation during the conversation *represents* the group as a social system. The dynamic interplay between speakers thus creates a representation of both the interpersonal level (me and you) and the level of the group or dyad (us) at the same time.

In sum, it appears that there is a lot of evidence, across multiple disciplines, that suggests that conversational form plays an important role in the emergence of social structures. Having established this, it becomes feasible to ask what role conversational form plays in the regulation of structures that have already been established. As we shall argue below, the complex set of behavioral skills that enables people to coordinate their speech in a smoothly flowing manner also enable people to influence the system, and regulate its structural characteristics. It is to this issue we turn next.

The Maintenance and Regulation of Social Structure

Most communication occurs between individuals that have established some form of social relationship or common group membership (e.g., a group of friends, acquaintances, work teams, etc.). In such groups, structure is for instance provided by social norms that guide the behavior and attitudes of members (Sherif, 1966; Turner, 1982), and more broadly by universal norms that are necessary for a cooperative conversation to be possible in the first place (Grice, 1975). Moreover, groups are often structured by a status hierarchy, which provides a framework for communication within the group (e.g., Berger, Conner, & Fisek,

1974; Goffman, 1974; Ridgeway et al., 1985). A third structural factor is that groups presuppose a commonly shared reality, which provides group members with a common view of the world around them and more generally enables communication between group members (Echterhoff et al., 2009; Kashima et al., 2007). Social norms, status hierarchies, and shared realities, when taken together, become core characteristics that “define” the group, in the sense that they are affirmed through group members’ actions towards each other. Thus, each of these structural factors can be recognized within the communication between members.

Together, these structural factors provide a framework that gives a group stability over time, among others by structuring and influencing group members’ actions. This is because even though group members are constantly called upon to recreate social structures (customs, norms, etc.), they usually share a desire for social stability and for the preservation of existing structures that discourages members of a community to challenge and change them. In communication for instance, social norms inform us that interrupting others is rude or inappropriate. Awareness of the hierarchy within the group informs us about whom we should be listening to most (and interrupting the least). Thus, in most well-executed conversations, the group members’ actions towards each other reflect the social structures within the group.

Usually, the enactment of existing structures is expected, and is therefore experienced as smooth and pleasant. The importance of respecting social structures is illustrated by research on communication rules and their violation. For instance, different research traditions have focused on formulating rules of politeness (Brown & Levinson, 1987), maxims for communication (Grice, 1975), and indications for the appropriate ways to take turns (Sacks et al., 1974; Wilson & Wilson, 2005). Behavior that deviates from the structural framework poses a potential threat to the stability of the social system. Indeed, when a group member of low status interrupts a high status other, this may threaten assumptions of group hierarchy and

thus threaten or call in doubt the solidarity. Because disruptions of the normal flow of the conversation may signal that something within the social system is wrong, this should normally (i.e., when the continuation of those systems is valued) elicit behavior that is aimed at re-establishing unity. That is, solidarity may be maintained by sanctioning deviants (Garfinkel, 1967; Goffman, 1967; 1971; Marques & Paez, 1994), or alternatively by more subtle cues in communication that inform people about the status of the relationship between speakers.

We suggest that relatively subtle variations in the form of conversations can be enlisted to regulate three aspects of social structure. We further suggest that these subtle tactics may be quite effective and powerful. First, norm regulation occurs through subtle cues in the form of conversation which suggest that the solidarity within a group is under threat, and therefore instigate behavior aimed at re-establishing solidarity (e.g., conformity to group norms). Second, in order to maintain a certain hierarchy within the group, differences in status should be acknowledged within the form of conversation. Third, the form of conversation plays a role in maintaining previously established shared realities.

Structural Factor 1: The Regulation of Social Norms

Social norms are generally accepted prescriptions that guide beliefs and behaviors within a certain group (cf. Morris, 1956). For example, in one group it may be normative to greet each other with a hug or kiss, whereas in other groups a handshake or even a simple nod will suffice. On the one hand, such norms can be seen as merely practical guidelines for behavior, on the other hand they can express a group's identity and become prescriptive (Turner, 1982). Therefore, in order to ensure the continuity of groups, it is important that group norms are maintained and regulated.

Research on the regulation of group norms has traditionally focused on explicit forms of social control (e.g., Axelrod, 1986; Fehr & Gächter, 2000; Festinger, 1950; Horne, 2001;

Moscovici, 1991). Here, in order to maintain compliance with group norms, it is suggested that group members apply sanctions to those who deviate from group norms. These sanctions may include the denial of positive outcomes, derogation of the deviants, or their exclusion from the group (Eidelman, Silvia, & Biernat, 2006; Marques & Paez, 1994; Schachter, 1951). Most empirical findings are based on explicit operationalizations of sanctioning, such as the allocation or deduction of points in a game paradigm, up to quite extreme measures such as the amount of hot sauce that is given to a deviant (e.g., Axelrod, 1986; McGregor et al., 1998).

In sociological theory (e.g., Axelrod, 1986; Horne, 2001), sanctioning is understood as a costly process; those who sanction risk losing important relationships and risk retaliation by the deviant. This may be the reason that in many public settings, sanctioning appears to be quite rare. In an experiment by Milgram and colleagues (Milgram, Liberty, Toledo, & Wackenhut, 1986), confederates were instructed to cut into waiting lines throughout New York City. Milgram's aim was to examine responses to norm deviance. However, it appeared that in only 32 % of the cases, people explicitly objected to the intrusion. In the majority of the cases, intruders were just given a dirty look or received no visible or audible sanction at all. Of the 514 people who occupied the 2nd, 3rd or 4th position behind the intruder, only 54 people objected (10.5 %).

A similar process can be observed in group conversations. Here, normative deviance or extreme opinions may elicit correcting remarks by other group members (Feldman, 1984) or lead to a discussion in which group norms are re-negotiated (Festinger & Thibaut, 1951; Smith & Postmes, 2011). But quite often a deviant utterance in conversation elicits less explicit responses from the audience: People may remain silent while searching for an appropriate response, or try to avoid discussion by introducing a new topic. Despite the

apparent rarity of explicit norm regulation, people nevertheless do adhere to group norms.

This suggests that norm regulation may take place at a more subtle level.

The fact that normative regulation can well be achieved through subtle means is confirmed by research on the *establishment* of group norms. This reveals that members are often informed about group norms vicariously, through observing the behavior of others (e.g., Bandura, 1977; Cialdini, 2001). By interacting with others, exposing one's ideas to those of others and being exposed, people establish a common ground which provides them with a sense of validation (Clark, 1996; Echterhoff et al., 2009; Kashima et al., 2007; see also Asch, 1952, pp. 170-181; Festinger, 1954). This subjective experience of grounding does not require the explicit communication of group norms, but is informed by implicit processes of opinion comparison.

In our own research, we wanted to take this one step further, by showing that people can also obtain sense of validation merely from the flow of a conversation. As discussed above, when conversations are smooth and effortless this suggests that people are on the same wavelength (Koudenburg et al., 2013a). In follow-up research we also showed that people are able to infer implicit group norms from the form of interaction. We tested this idea in several ways, for example by examining participants' responses when their expressed opinions elicited a brief silence in a peer audience (Koudenburg et al., 2011a). We know that prolonged silences are socially threatening (Williams, 2001). Our studies showed that brief disruptions of conversational flow had similar effects, but also influenced the process of social validation—one of the foundations of norm formation. In several experiments, we studied effects of a brief four-second silence in a 6-minute conversation. This silence occurred after a somewhat controversial statement, and we ensured that the conversation continued after this silence as if nothing dramatic had happened. The consequence of such a single brief silence went beyond rejection alone: after the conversation, the perceived consensus within the group

had also significantly decreased and communicators felt less socially validated. Importantly, these findings provide direct evidence that conversational flow influences the processes that lead to group norm formation. The silence conveys to a communicator that they may have breached group norms—this makes salient the risk of social rejection.

How Can These Subtle Conversational Cues Serve to Regulate Norms? The strength of the outcomes, combined with the subtlety of the manipulation, suggests that people are very sensitive to cues that signal social exclusion. Pickett, Gardner, and Knowles (2004) suggest that this sensitive system helps people monitor their inclusionary status within the group. When people's inclusionary status is threatened, their vigilance is further increased and they pay even more attention to social cues. For instance, people who have been ostracized have a better memory for socially relevant information than those who did not have this experience (Gardner, Pickett, & Brewer, 2000). In addition, people are better able to distinguish between genuine and deceptive smiles after they have been rejected (Bernstein, Young, Brown, Sacco, & Claypool, 2008). Moreover, people with a dispositionally high motivation to belong are better able to identify facial expressions and vocal tones (Pickett et al., 2004). It is suggested that this increased social sensitivity serves to re-establish connection with others (Bernstein, Sacco, Brown, Young, & Claypool, 2010; Pickett et al., 2004). One way of re-establishing this connection, would be to conform to group norms.

In one set of studies we put these different elements together, in order to find direct evidence for the idea that violations of conversational flow lead to increased conformity to established group norms. In this research, we examined the consequences of subtle conversational cues such as silences for conformity (Koudenburg, Postmes, & Gordijn, 2013b). The results showed that very brief silences signal that a group norm has been breached; a situation which participants experience as threatening. In order to compensate for this threat, participants conformed more strongly to group norms by shifting their attitudes to

fall in line. Importantly, this effect occurs only for participants who are highly motivated to belong. We believe these results provide direct evidence that a silence in the midst of a smoothly flowing conversation can send an extremely powerful signal. It is also quite manipulative, because the recipient of this silence cannot argue or reason with the sanction or threat that they experience: The warning signal sent by a silence is completely tacit. In group contexts, moreover, a silence only occurs when *all* members of the group remain silent, and thus it feels like a collective disapproval.

In sum, this research points to the existence of a mechanism for regulating and maintaining solidarity, complementary to that of explicit sanctioning. By minimally changing the form of an interaction in some unexpected way, one may make deviants aware of their transgression by subtly signaling the ever-present threat of reduced popularity or even expulsion from the group. Group members are highly sensitive to these cues, and are therefore likely to respond with behavior that increases their likelihood of reconnection, for example by displaying attitude conformity (Koudenburg et al., 2013b). Thus, subtle cues in the form of conversation inform speakers of the status of social relations within the group. To the extent that group members perceive those relations to be in danger, they are likely to act in ways that restore those relations or otherwise maintain the unity within the group. But in addition to solidarity, a group has other characteristics such as an internal hierarchy that may also need to be preserved. Does conversational form also help achieve this?

Structural Factor 2: The Maintenance of Hierarchy

A second characteristic of social structures is that in addition to some overarching sense of solidarity or unity, there typically exists some division of labor coupled with an internal status hierarchy among group members (Bales, 1950; Homans, 1950). Although relationships among friends may be fairly equal, in families or work relations, status and power tend to be less equally distributed. The influence of status in communication has been a

subject of study for a long time, and research shows that this influence can hardly be underestimated. One's status within the group affects both verbal and nonverbal communication. For instance, when participants are led to believe that they are higher in task expertise (a status characteristic), they are likely to respond before their partners on problem-solving trials (Conner, 1977). Similarly, different patterns of eye gaze have been identified between low and high status speakers in the group (Dovidio & Ellyson, 1982; Ellyson, Dovidio, Corson, & Vidicur, 1980), and efforts to accommodate others are typically performed by low status group members (Giles & Powesland, 1975; Gregory & Webster, 1996). The form of conversation thus conveys information about the structure of relationships, suggesting that hierarchy provides a framework for communication within the group.

Indeed, research suggests that people have different norms regarding communication with higher or lower status others (Ridgeway et al., 1985). People from lower status groups (e.g., women, compared to men) have been found to use more deferential speech forms (Lakoff, 1975). For example, the use of hedges, disclaimers, and tag questions that characterize a deferential style are especially common when women speak with higher status individuals (i.e., men; Carli, 1990). Similarly, research shows that interruptions are relatively rare in a same-sex context, but that men are likely to interrupt women in mixed sex contexts (Zimmerman & West, 1975). This suggests that these speech characteristics are a function of status differentials, rather than a structural sex difference. Indeed, a meta-analysis of 26 studies showed that interruptions were positively related to status, which was either defined as dominance in personality or in role/rank (Hall, Coats, & Smith LeBeau, 2005).

Accordingly, research suggests that a deferential or dominant conversational style can be instigated by creating status differences within groups. In an elaborate study, Leffler, Gillespie, and Conaty (1982) examined the effect of status on vocal interruptions, laughter,

the proportion of mutual space occupied, and intrusive behavior such as touching and pointing at the other. They assigned participants to high status positions (teachers) or low status positions (student) and found that the teachers claimed more space with their bodies, talked more, and attempted more interruptions than students. Moreover, they found that males in their study displayed more nonverbal behaviors that were related to high status than females did: They took more space, pointed to possessions more often, touched more frequently, and laughed less.

Expectation States Theory. Status differences are not just ubiquitous in established groups where group members have known each other for a long time. Also in newly formed groups, status hierarchies emerge quite rapidly, in part because status is inferred from various personal characteristics and behavioral patterns. Expectation states theory (Berger et al., 1974) postulates that inequalities in task-oriented groups, even when newly formed, are due to the different performance expectations that members hold for themselves and others, based on external status differences (e.g., as derived from group memberships). They argue that people's position in a group not only determines their communication style, but that this style of communication also serves to *maintain* the inequality within the group.

Acquiring or maintaining hierarchy. To test this argument, Ng, Bell, and Brooke (1993) examined communication patterns among unacquainted subjects, in groups of four or five. Their aim was to investigate the emergence of power hierarchies through group conversation. In their study, participants watched a video about homosexuality followed by a group discussion on the discrimination of homosexuals with regard to marriage and adoption. They were encouraged to express their own views, but reach a final consensus on the issue. After the discussion, participants individually ranked all group members with regard to their influence in the final group decision. The group discussions were recorded and later coded for *number of turns* (successful attempts at speaking) and *number of turns gained by interruption*

(in which the interrupter prevented the first speaker from completing while the interrupter completed his or her utterance). Results showed that the aggregate number of turns of each group member positively predicted their influence ranks. In other words: The degree of participation within a conversation predicts one's status position at a later stage (see also Brooke & Ng, 1986; cf. Willard & Strodtbeck, 1972). Moreover, when differentiating between non-interruptive and interruptive turns, it appeared that especially interruptive turns predicted one's influence rankings. Ng and colleagues concluded that speaking turns are a conversational resource: those who take many turns succeed in achieving a high rank in the emergent power hierarchy of the group (p. 267).

Similar to interruptions, people have been found to use gaze patterns to acquire status in initially equal interactions (Dovidio & Ellyson, 1982). For instance, the first to break eye contact is likely to lose status, as breaking eye-contact is a nonverbal sign of deference or submission (Argyle, 1967). Berger and colleagues (1974) suggest that the development of different communication styles can be guided by people's expectations regarding the behavior of people of different status. Because performance expectations influence observable displays of power and status behaviors, they often work as self-fulfilling prophecies maintaining status differences within the group (Ridgeway et al., 1985; Ridgeway & Smith-Lovin, 1999). Thus, expectancies serve to maintain the status quo; but how do these expectancies influence the solidarity within the group?

Maintaining solidarity. It has now been established that expectancies regarding status-relevant behavior provide a framework for defining and shaping interpersonal interaction (Berger et al., 1974; Fiske, 2004; Goffman, 1974). From studies of language usage we learned that the violation of expectancies threatens the coherence within a group (Grice, 1975; Ohlschlegel & Piontkowski, 1997). Accordingly, we could infer that adherence to norms regarding status-relevant conversational patterns serves to maintain a stable hierarchical

structure within the group. To maintain solidarity, communication patterns should be in line with expectations concerning the existing status positions within the group.

In two studies we tested this idea: Would status-congruent communication patterns foster a sense of solidarity (Koudenburg et al., 2014a)? We suggested that whereas high status group members are likely to be approached with respect based on their position within the group (e.g., listen to what the teacher says, don't talk back), group members with a lower status may feel respected mainly because they are included in the conversation (e.g., Huo, Binning, & Molina, 2001). Such different norms may cause the same conversational patterns to be interpreted differently, depending on one's status within the group. A brief silence after a high status person has spoken, for instance, could be interpreted as an appropriate reflection of one's standing, whereas a brief silence that occurs after a low status person has spoken may arouse feelings of rejection. We compared how members with either high or low status in the group would interpret a silence after they had given their opinion (compared with a control condition in which this silence did not occur). The results showed that participants who were given a high status in the group – for instance by receiving false feedback about their own task expertise compared to that of others – did not interpret a silent response from the audience after they had spoken as more threatening to the unity within the group than when there was no silence. If anything, a trend suggested that a silence after a high status member had spoken *affirmed* the solidarity within the group, possibly because it was interpreted as a sign that their distinct position in the group was recognized. Low status group members, however, felt especially respected when their contribution did not disrupt the flow of the conversation, and perceived solidarity to be strongest when there were no silences. We interpreted these findings as showing that the recognition of status differentials within the form of communication forges a sense of solidarity.

Sociologists have obtained similar findings when studying interaction rituals in speed dating (McFarland, Jurafsky, & Rawlings, 2013). In a study including audiotapes of approximately 1100 four-minute speed dates, they examined the role of conversational characteristics in participants' feelings of connection (i.e., by asking them to report how well they clicked with their dating partner). McFarland and colleagues regarded the heterosexual speed dates as having asymmetrical power relationships, in which women had somewhat of an upper hand. This was based on the idea that women are significantly more selective than men in whom they would like to date and the sense of connection that they experience, which gives them the power to decide whether there will be a second date (see also Finkel & Eastwick, 2009). The results revealed that characteristics of speech explained 7.5% of the variance in having a sense of connection, after taking into account the partners' traits. When the empowered individual was the focus of the conversation, dating partners experienced the highest sense of connection. Thus, when men aligned with their female partners by accommodating her and mirroring her laughter or language use, both dating partners were likely to regard the date as a success.

Together, these studies suggest that feelings of solidarity emerge when conversational form reflects and respects the hierarchical structure within a group or dyad. They thus underline that whether a conversation is experienced as smooth, efficient, and engaging is not reflected by a seamless flow of utterances, but by a pattern of interaction that fits the structural characteristics of a group.

Structural Factor 3: The Maintenance of Shared Reality

In parallel to hierarchical relations and social norms, the establishment of a shared reality is an important aspect of relationships (Berger & Kellner, 1964; Clark, 1996; Echterhoff et al., 2009; Kashima et al., 2007). Through the process of grounding, people form (or affirm) commonly shared beliefs about the world around them. Previous studies showed

that the flow of a conversation often serves as a proxy for agreement, and thus suggests that the form of communication can serve grounding processes (Koudenburg et al., 2011a, 2013a). This raises the question whether conversational form also plays a role in maintaining already established socially shared realities.

Shared Reality Among Intimates

Similar to the findings regarding status relationships, expectations or a priori beliefs about the relationship play a crucial role here: The same conversational patterns can be interpreted differently when occurring in conversations between strangers, compared to when occurring in a conversation between intimates. A brief conversational silence, for instance, may be threatening when it occurs in a conversation between previously unacquainted individuals, but among intimates it may not be threatening at all. To the contrary, if intimates believe that no words are needed in order to understand each other, they may interpret a silence in terms of their perceived shared reality: As a sign of social validation.

Indeed, once a common ground is established, it colors the interpretation of other people's behavior or expressions, which is likely to lead to an overestimation of attitude similarity (Murray, Holmes, Bellavia, Griffin, & Dolderman, 2002; Sillars, 1985). In a recent set of studies, we examined how the form of conversation can function to maintain this shared reality. To this end, we tested the effects of disruptions of flow in conversations between intimates (Koudenburg, Gordijn, & Postmes, 2014b). We set up two experiments in which we manipulated the disruption of conversational flow by introducing a delay in auditory or audio-visual feedback, which continued throughout the second half of the conversation (for a similar manipulation, see Koudenburg et al., 2013a). Results revealed a paradoxical effect: When partners experienced moderate levels of relationship security, no effect of flow disruption was found.² However, when partners experienced their relationship to be highly stable and strong,

² On average, the participants in these studies perceived their relationships as very strong and stable. Participants who scored 1 SD below the mean still perceived their relationship to be well above the midpoint of the 7-point scale, and were

the disruption of flow led to an *increased* sense of social validation. Rather than posing a threat to the relationship, as found in research among strangers (Koudenburg et al., 2013a), the disruption was interpreted in terms of the shared reality that partners had developed within their relationship. In a sense, the lack of communication provided partners with extra scope to interpret their partner's opinion to their advantage. Thus, when disruptions of conversational flow impede the accessibility of actual information about the partner's viewpoints, people are likely to fall back upon the ideas about their relationship and the shared reality that exists in that relationship. As a result, they overestimate their partner's support and feel strengthened in their viewpoints (see Koudenburg, Postmes, & Gordijn, 2011b, for a similar effect in a different context).

Shared Reality Within Groups

These findings are in line with research findings in the literature on intergroup processes (Pearson et al., 2008). Pearson and colleagues asked participants to have a conversation about the war in Iraq or the 2004 presidential election with either ingroup or outgroup members (Whites vs. Blacks and Latino's). The conversation occurred through audio-visual communication. Throughout the 6-min conversation, auditory and visual feedback was either delayed for 1s, or occurred in real time. Results revealed that in intergroup conversation, a delay instigated higher levels of anxiety and decreased interest in the conversation. However, in intragroup conversations a delay did not influence participants' interest in the communication and participants even reported marginally decreased levels of anxiety compared to the condition in which interaction was smoothly flowing.

Together, these studies suggest that the availability of a commonly shared identity or reality can help to overcome the negative effects of flow disruptions. Whereas in conversations among strangers or outgroup members disruptions of flow raise questions and

therefore labeled as having 'moderate levels of perceived relationship security'. It is possible that this explains why flow disruptions were not perceived negatively among these participants.

instigate anxiety, among members who share group membership the same disruptions are less anxiety provoking. Moreover, if an established relationship between speakers is experienced as very strong and stable, the shared identity can even provide a resource through which lacking or disruptive communication fosters a sense of shared reality.

General Discussion

Our central question in this review was whether micro-characteristics of the form of dialogue (e.g. silences, interruptions, conversational flow) influence processes at a more macro-level (e.g., the emergence and regulation of social structures such as group unity, norms, hierarchy, and shared reality). More specifically, we sought to answer questions of how the form of conversations influences how people develop social ties and gain a sense of belonging. In addition, we were interested in how people acquire a sense of grounding, or validation: What makes people believe that their opinions are shared, valid or true? The second aim was to examine how conversational form influences regulation once such solidarity between people is established. What causes people to adjust their opinions to the group norm? How do people maintain a certain position in a group once a hierarchy has been developed? What processes play a role in maintaining a commonly shared reality within close relationships?

One would expect that developing or changing these social structures requires either the use of power, coercion, and sanctioning, or it requires persuasion and other forms of informational influence. Our results, however, suggest that an additional process may play a role. We show that solidarity or the lack of it may also result from subtle cues in the form of communication: A brief silence, a slight delay, a minimal overlap in speech. These micro-characteristics of communication form have profound consequences for the emergence of solidarity at a group level. In the studies reviewed here, attitude conformity is not a result of explicit social pressure or influence attempts, but rather a function of subtle social cues that

alert people to the possibility of having breached a group norm. A sense of shared reality does not just develop from a process of information exchange, active opinion comparison or debate, but it merely emerges from the subjective experience of having a smoothly flowing conversation. The power of conversational flow for shared reality lies in the visceral sensation that flow produces: *We* are on the same wavelength. Finally, conversational flow also regulates the maintenance of hierarchy. Again, hierarchy is not just achieved by explicit exertion of control or the expression of status, but is much more likely to be displayed in subtle conversational patterns, which allow high status group members somewhat more space and freedom than members with a low status in the group.

How is it possible that these micro-characteristics of speech have such a substantial influence on the degree to which social structures emerge and are regulated, even in relatively brief and banal conversations? Why would these seemingly unimportant aspects of dialogue affect social outcomes and processes that are profoundly important? We propose that this is simply because the form of communication, itself, is understood to express the social structure: The conversation represents the social relations within the group, in other words. Thus, the dynamics of the conversation reflect and constitute the state of solidarity within a group or dyad.

The second argument we make is that once established, solidarity can be regulated and maintained through the form of communication. We examined three aspects of social structure: Social norms, hierarchy, and shared reality, and discuss how the form of communication plays a role in the regulation of these aspects. We were particularly interested in people's responses to threats to the social system (cf. Garfinkel, 1967; Goffman, 1981). Disruptions in the form of conversation can signal a potential threat to the unity in the dyad or group, for instance by challenging the existing status relations.

Indeed, with regard to norm regulation, disruptions of conversational flow may alert people to threats to the solidarity within a social system, and therefore instigate behavior that is aimed at re-establishing social connection, that is, conforming to group norms. A breakdown of conversational flow can signal a problem in the relationships or consensus within a social system. Conversational form may therefore function as an instrument to withhold validation and prevent grounding, and as such be a subtle method for sanctioning deviants and regulating norms.

In a similar way, conversational form may function to regulate status relations, because expectations and interpretations of conversational patterns depend upon one's status within the social structure. Whereas a brief silence after a high status person has spoken may mean that this person is appropriately being listened to and may thus be an appropriate reflection of this person's respected position, a similar silence after a low status person has spoken may indicate that this person is being ignored or excluded. By adhering to the norms for hierarchical communication (i.e., don't talk back after a high status person has spoken), social structures can be reinforced through the form of conversation.

Finally, the experience of common ground can color the perception of conversational characteristics, and in this way strengthen a sense of shared reality. Thus, through the form of interaction, social structures can be regulated in terms of norms, status relations and shared reality.

It is important to note that conversational flow should not be equated with a seamless flow of utterances. Rather, flow refers to the *experience* of a conversation as smooth, efficient, and mutually engaging (see Koudenburg et al., 2014a). In other words, a conversation has flow when the conversational characteristics are in line with social-structural expectations. What constitutes an appropriate conversation in any given situation is informed by the characteristics of the group or dyad (e.g., status relations, level of intimacy), by the

nature of the setting or transaction (e.g., task-oriented work or social entertainment), as well as by external factors such as culture or context. For instance, in religious contexts in which it is common to pray in silence, any sound or utterance would be disrupting the sense of solidarity that the prayer may instigate. Moreover, in some cultures, such as the Japanese or the Finnish, silence may be more appropriate in some situations than the uninterrupted flow of talk would be (e.g., Hasegawa & Gudykunst, 1998; Sajavaara & Lehtonen, 1997).

In sum, we argue that the form of conversation influences solidarity at the level of the group or dyad. Through dynamic processes of interaction, a framework is developed, which informs people about the status and nature of their relationships and guides the interpretation of future interaction. When the solidarity is threatened by undesirable dynamics within the form of communication, this instigates processes that operate to protect the system. In this way, the form of conversation functions to maintain social norms, hierarchies, and shared realities within a social system.

Implications for Research

The conclusion that solidarity within dyads and groups can emerge from, and be regulated through, micro-characteristics of conversational form has a range of implications for research. To conclude this review, we shall focus on three domains that we expect will be especially fruitful for future study.

Implicit versus Explicit Processes

One of the characteristics of the form of communication compared to its content is that it appears to occur at a more implicit level. Subtle irregularities in conversational form are not often consciously noticed by people, even though several researchers have suggested that the psychological and social implications of these tacit and implicit processes are often bigger than the explicit content is (Garfinkel, 1967; Giddens, 1984). Indeed, in both the study by Pearson et al. (2008), and in our own studies on delays in audio-visual communication

(Koudenburg et al., 2013a), most participants did not notice that the connection was delayed. Despite their apparent unawareness of these cues, the deterioration of conversational flow did affect feelings of solidarity. But even when people do notice conversational cues, they are often unaware of the *influence* of these cues on their perceptions or behavior. Remarkably, even when we made participants in our experiment aware of the poor connection (Koudenburg et al., 2013a, Study 2, Study 3), they were still not able to correct for the feeling that solidarity with their interaction partner had decreased.

It is likely that people who *perform* these conversational acts are similarly unaware of their behavior and its influence (at least most of the time). For example, even though a silence is often perceived as a rejection (Pomerantz, 1984; Koudenburg et al., 2011a) it is often performed when senders are distracted, are busy reflecting on what was said previously, and/or are pondering what to say next (Johannesen, 1974; Jaworski, 1993; Tannen, 1993). Of course, such conversational signals could also be performed for instrumental reasons: as the review has shown, these behaviors can be highly manipulative. But we know of no research that directly examines to what extent conversational form can be influenced intentionally *and* strategically. It would be interesting (and relatively simple) to manipulate different communication goals in order to examine whether people spontaneously resort to these manipulative relational techniques. For example, it would be interesting to see if people spontaneously use these tactics when they are given the explicit task of establishing a good relationship with another person or maintaining normative compliance within a group. The outcomes of this research would enhance our understanding of how social relations are preserved in everyday settings.

When comparing explicit and implicit forms of maintaining solidarity, we observe several important differences between the two. First, implicit rejection (e.g., ignoring someone) motivates people to strengthen social relations (Williams & Sommer, 1997)

whereas explicit rejection causes targets to withdraw from them (Molden, Lucas, Gardner, Dean, & Knowles, 2009) or to respond aggressively (Twenge, Baumeister, Tice, & Stucke, 2001). This may be because implicit rejections allow both parties to save face and because implicit rejections are more subtle and deniable. In the case of brief interruptions or pauses, the ambiguity of the signal makes it unlikely that someone is called upon his actions. Implicit rejections are, in some sense, off-record: The behavior cannot be attributed to one clear communicative intention, and thus offers the actor the ability to deny any intent to exclude the other or to be presumptuous (Brown & Levinson, 1987). The receiver similarly preserves face; he/she is not explicitly rejected in the eyes of the rejecter and a possible audience. But implicit rejection *does* threaten belongingness motives, and thus motivates behavior aimed at reconnection (Koudenburg et al., 2013b; Warburton & Williams, 2005). Explicit rejection, by contrast, is an overt and undeniable gesture and therefore threaten other motives as well, such as motives for control and meaningful existence. It is for this reason, Warburton and Williams argue, that people who are explicitly rejected are more likely to behave aggressively.

Finally, one important and tantalizing implication of the review is that implicit influence tactics may be more important for understanding how groups and societies self-regulate. As our review suggested, in natural interactions subtle conversational cues (silences, avoidance) appear to be quite commonplace, whereas the explicit regulation of group norms (e.g., group discussion, sanctioning of deviants) are very rare, even in response to blatant norm violation. This observation points to an important shortcoming in the literature: there is an abundance of research that studies consequences of “sanctioning” (e.g., Axelrod 1986; Horne, 2001) which is based on the assumption that punishment is the way that people regulate social behavior. The current review suggests this assumption presents only half the story. Moreover, the subtle means to regulate norms that were reviewed above appear to be

highly *effective*: even when people are made aware of the form of conversation, they appear to be unable to correct for its influence on their actions, thoughts, and feelings (Koudenburg et al., 2013a). In sum, future research should devote much more attention to implicit channels of social regulation .

The Interaction Between Form and Content

In this review paper we propose that the form of interaction can influence levels of solidarity, *more or less independently* of its content. It is important to note that this does not mean that the content of an interaction has no influence on the form, nor does it deny that there are situations in which form and content interact when impacting feelings of solidarity. For instance, the content of a conversation often informs the appropriate form of conversation in terms of pace, intonation, and duration of silences. Indeed, the subject of a serious illness would require a different kind of flow than speaking about today's bargains at the market would. Relatedly, research on mimicry has shown that the exchange of stereotype-consistent information is more likely to be mimicked than the exchange of stereotype-inconsistent information is (Castelli, Pavan, Ferrari, & Kashima, 2009). This suggests that stereotypical information is reinforced nonverbally to encourage conversational flow and thereby, as the present review shows, underlines the validity of these stereotypes. It thus appears that the content and form of interaction are closely intertwined: On the one hand, content may influence the flow of interaction (Castelli et al., 2009); on the other hand, the risk of endangering solidarity may motivate people to avoid sharing information that could jeopardize conversational flow (Clark & Kashima, 2007).

But within the many "display rules" for the form of conversation that are determined by its content and cultural context, conversations offer considerable leeway for communicators to manage, develop and challenge social relations. Thus, the process of developing and maintaining solidarity through the form of interaction is necessarily achieved

within these elaborate sets of expectations, in which content and form thus interact. Thus, we underline the relevance of content in shaping the form of interactions, in part by providing a framework for what constitutes an appropriate flow given the context. Keeping this context (including the content and the structural characteristics) constant however, we are able to see that the form of interaction has a profound influence on the experience of solidarity (Koudenburg et al., 2011a; 2013a).

There are also situations imaginable in which form and content have seemingly opposing influences. Consider, for instance, an argument between two people in which turns are taken with great flow. One could imagine that such a situation tears people apart, rather than that it connects them. But then imagine an argument in which the angry statement of one person results in a silence by the other(s). It is likely that such a situation disturbs the relationship even more than an argument with high levels of flow would. To give another example; a compliment would be expected to foster positive relationship outcomes. However, this may not be the case when the speaker nonverbally expresses, for example, negative affect, or looks away while giving the compliment (Flora & Segrin, 2000).

These examples suggest that we need to know more about the relative influences of content and form. Questions of interest could be: In what way can the form of conversation solidify the content? When does the form of conversation qualify the content? But also, can form and content be at odds with each other, and how does this affect social structural factors, such as perceived norms or shared realities? In order to compare the relative influences of form and content, a systematic research program varying both form and content of conversation is needed.

Individual and Group Levels of Analysis

The current review reveals the influence of interpersonal action on dynamics at the collective level (the level of the group or dyad). Most research on the form of conversation

focuses on the effects of speech cues and coordination on social relationships in the interpersonal plane (me and you). For instance, research showed that convergence of speech rate and response latency leads to increased liking (Street, 1984), a brief conversational silence instigates feelings of rejection (Koudenburg et al., 2011a), and interruptions can increase the status of the interrupter with regard to the person who is interrupted (Ng et al., 1993). The present review shows that conversational form has consequences beyond the level of “you” and “me”, and engenders a sense of solidarity at the level of “we” or “us”. For example, a smooth interplay of speaking turns at the interpersonal level increases solidarity at the collective level (Koudenburg et al., 2013a). Moreover, interactional dynamics that respect the status relations within the group are likely to foster perceptions of the entitativity of the group as a whole (Koudenburg et al., 2014a). We suggest that this is because dynamics in the form of conversation influence solidarity at the collective level. Social systems at this level have their own structural characteristics such as social norms, hierarchy and a shared reality. Through the form of communication, each individual can influence the social system to a greater or lesser extent (e.g., by accommodating the other speaker), but the organization of a conversation depends upon the successful coordination of the speakers’ acts. In this intricate pattern, individual and group level can not be disentangled: both levels constitute each other.

This multilevel approach, in which individual and group interact, has potential benefits to many fields, including for instance, relationships research, research on social influence, and research on power and leadership. A lot of research in these fields is informed by testing either how person X influences person Y and person Z, or it focuses on the influence of a common social attribute (such as a shared identity) on all group members. But the present review clearly shows that these two go hand in hand. Perceiving the social structure as emerging from, and simultaneously influencing the behavior of the actors provides a different way of thinking about and examining human behavior.

Implications for Practice

The processes discussed in this review suggest an immediate practical relevance for a broad range of face-to-face settings in which the maintenance of a good relationship or achievement of a high level of solidarity would appear to be beneficial. We believe that it is important to focus on the *form* of conversations in various settings ranging from intimate relationships, through work settings and education to clinical settings. If the practical impact of disrupted flow is indeed substantial, as we suspect it is, it might be advisable in the future to include the topic of conversational form more explicitly in social skills training of professionals such as doctors, teachers, and clinical psychologists. When preparing for job interviews, candidates may want to consider training skills that enable them to have a smoothly flowing conversation: Skills that go beyond providing the correct answers to the questions. But even on a more elementary level of schooling, pupils may benefit not just from tuition in rhetoric and debate, but from widespread conversation classes in one's own language: Such classes may help people to establish and maintain healthy relationships later on in life.

In addition to emphasizing the potential importance of conversational form in everyday face-to-face conversations, the conclusions of this review also have implications for communication that is mediated by technology. In mediated communication, such as video-conferencing or even old-fashioned telephone calls, conversational dynamics are highly susceptible to disruptions of flow. Delays in the connection frequently occur, and often cause interactions to run less smoothly by increasing the number of interruptions and pauses. The present review reveals that these changing dynamics in conversational coordination influence the degree to which communicators experience a sense of solidarity.

Although these processes can occur in both face-to-face and mediated communication, the latter form of communication is more likely to be influenced by disturbances outside of

the communicators' control. Research by Rutter and Stephenson (1977) has shown that when conversational flow in face-to-face communication is disrupted by various types of speech disturbances (interruptions, simultaneous speech, and pauses), communicators are likely to maintain a high level of nonverbal coordination (e.g., through coordinating their body movements). Thus, the coordination of body movements may obviate the deterioration of verbal coordination. In mediated communication however, such obviation may not be effective or even impossible, because conversation either occurs via audio channels only, or, in the case of video-mediated communication, the visual feedback is likely to be disturbed as well. In a way, the introduction of new forms of "high-bandwidth" social interaction (e.g., desktop video conferencing) may ironically hamper the ability to establish particular kinds of social relations, because people expect coordination to be no different than in face-to-face conversation. Conversations can thus end up feeling "bad" for reasons that speakers do not understand. Here, technology may subtly undermine the development of solidarity.

These conclusions also have implications for communication between members of different cultural backgrounds. Different norms about communication can lead to difficulties in speech coordination. Whereas pausing may be normative behavior in some cultures, other cultures may perceive such pauses as withholding or hostile because they disrupt conversational flow (Sajavaara & Lehtonen, 1997; Tannen, 2000). Different expectations may trouble the coordination of speech, and consequently undermine the solidarity that is experienced in such interactions.

Conclusion

On the basis of this literature review, we conclude that solidarity can emerge from the act and art of conversing, relatively independently of the content of this interaction. A brief silence or interruption that may seem trivial when approaching a conversation as a mere transfer of information, appears to play a pivotal role in the emergence and the regulation of

solidarity. We suggest that the form of such conversations represent the level and quality of solidarity among group members. It informs people about status relations, and more generally about the nature of relationships within the group. In addition, because of its dynamic nature, the form of a conversation provides a continuous gauge of whether good relationships, and their associated social norms, hierarchies and social realities, are being established, threatened, changed, or confirmed.

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