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Chapter two

The Role of Conversational Form in the
Emergence and Regulation of Social Structure

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Abstract

Social interaction is central to the formation of social relationships and groups. Research examining this role has traditionally concentrated mainly on the content of interaction (e.g., the transfer of information). This literature review concludes that a sense of solidarity can also emerge from the act and art of conversing more or less independently of the content. Seemingly trivial aspects of the form of conversation (e.g., brief silences, smooth turn-taking) have a strong influence on the emergence and the regulation of solidarity. We suggest that this might be because the form of a conversation is an expression of the social structure of the group. Because of its dynamic nature, moreover, the form of conversation provides a continuous gauge of the evolvement of structural characteristics (e.g., hierarchy, social norms, & social reality) and plays an important role in their regulation.

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. Also, 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 and that she may be awkward to get along with. 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; 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 points to the existence of a “we” (Kashima et al., 2007). Accordingly, social interaction plays a role in developing a sense of *we-ness* at the group level: 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). In this process, the concepts of social unity (or entitativity), belongingness, and shared reality, although distinct in some sense, become closely intertwined. Theoretically, this sense of *we-ness* may be based on interdependence between actors or on self-categorisation and shared group membership. We shall use the term *solidarity* in this paper to refer to this sense of *we-ness*, thereby avoiding terms such as “entitativity” or “shared social identity” which come with particular theoretical baggage.

Perhaps it is due to the focus on the content of social interaction (what is being said both verbally and non-verbally) that certain aspects of the *form* of interaction tend to be overlooked. Other aspects of conversational form are, it seems, mere vehicles for the exchange of information. However, focusing on content or information exchange alone may lead to outcomes that are at times difficult to interpret. When going back to our example of the job interview, the content of the conversation and the non-verbal expressions during the interaction should have caused you to hire the applicant, as her answers were of high quality and she behaved normally. However, the form of the conversation may nevertheless lead to 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, a sizable literature suggests that the flow and form of communication *in itself* influences social processes. Beyond the content of what is being said and beyond non-verbal expressions that add to this content, people are often influenced by various other characteristics of a conversation, which inform speakers about the quality of social relationships. For instance, the literature on behavioural mimicry has shown that 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). Similarly, 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). Moreover, when a low status speaker interrupts a high status other, this is seen as rude and inappropriate, but when a high status speaker interrupts a group member of lower status, this can serve to maintain the mutually accepted status differences within the relationship (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.

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. We are particularly interested in the development of solidarity through dialogue, and focus on small groups and dyads. In addition, we mainly focus on aspects of dialogue that influence the flow of a conversation, such as turn-taking, response latencies, and interruptions. The meaning of these aspects of conversational form can be interpreted more or less independently from the content of what is being said and the non-verbal expressions accompanying it. Moreover, these aspects are relevant in most forms of communication, including communication that occurs via mediated channels (e.g., telephone-calling, video-mediated communication, computer-mediated communication).

We review empirical findings mainly from the social psychological literature, but we integrate these with findings and theoretical perspectives from the sociological and communication literature, which examine the influence of the form of communication on the development of solidarity. Our central aim is to study whether micro-characteristics of the form of dialogue (e.g. silences, interruptions) influence processes at a more macro-level, such as the emergence and regulation of social structures.

The Emergence of Solidarity

Before examining the development of solidarity within small groups and dyads, it is important to first define solidarity. 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 on the concept, Emile Durkheim (1893/1984) uses the term social solidarity to describe the nature of the bonds by which societies are tied together. 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.

In order to explain how solidarity emerges within small groups, different theories have been developed, which can be broadly categorized into two streams (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, when people find themselves in a train that is delayed, they will try to make sense of the situation. By communicating to other passengers, they will develop a common understanding of the situation

which may vary from “there must have been an accident” to “the railway company is unreliable”. 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.

Second, there are theories that focus on top-down processes (e.g., Turner, 1985). An example of this is self-categorisation theory (SCT: Turner, 1982; 1985; Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), which proposes that people are most likely to self-categorise 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. 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 these 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 (Lea, Spears, & Watt, 2007; Spears, Postmes, Lea, & Wolbert, 2002).

These theories about inductive and deductive pathways to group formation have hitherto been applied mainly to studying and understanding *explicit* social processes of influence (e.g., through the content of interaction or through category activation) that underpin a group’s formation. Thus, there are many instances in which people engage in explicit comparison of their own opinion with those of others

(e.g., Sherif, 1935), or categorize others into ingroup or outgroup by labelling them “one of us” or “one of them” (e.g., Tajfel, Billig, Bundy, & Flament, 1971). In dialogue, however, people are also informed about the level of solidarity through the *form* of interaction. At such occasions, people may acquire a sense of solidarity merely from the subjective experience of conversing with others, independently of the content of such interaction. This suggests that subtle processes within the form of social interactions are likely to play an important role in the development of social structures, i.e. through the emergence of solidarity. Unfortunately, research on the emergence of groups has often focused on explicit utility and meaning functions of social interaction, and largely ignored the role of conversational form. As a result, the literature on group formation is lacking a coherent conceptual framework to explain how feelings of solidarity can arise from the *form* of conversation alone. However, various studies in social psychology, sociology, and communication allow us to construct a more coherent and integrated perspective in order to account for this tacit emergence and maintenance of social structures.

The form of communication

The majority of studies on the form of communication focus on *non-verbal* signals such as facial expression or posture in communication. There is a broad range of evidence for the importance of these signals to the communication of hierarchy and affiliation. For instance, 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, behaviours or posture has been associated with increased liking, pro-social behaviour and a sense of togetherness (Chartrand & Bargh, 1999; LaFrance & Broadbent, 1976; Van Baaren, Holland, Kawakami, & Van Knippenberg, 2004).

These examples all refer to non-verbal communication, but similar effects can be found in the literature on *verbal* communication: Here, form can similarly inform speakers about underlying relationships. For instance, 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. Not only does such accommodation promote conversational flow and foster understanding between interaction partners, it can also be used to reveal that actors belong to the same group and therefore communicates a need for social integration (Giles & Coupland, 1991).

Research on both verbal and non-verbal communication thus suggests that the form of communication has a communicative function in and of itself. Indeed, theorizing by Bernieri and Rosenthal (1991) suggested 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. They suggested that some aspects of this coordination relate to similarity of behaviour, such as behavioural matching or simultaneous movement. We refer to these acts as synchrony.¹ Another aspect of coordination relies on the capability to smoothly integrate the different activities of speakers so that the total product of a group's actions can become more than the sum of its parts—this is called behavioural meshing. Both synchrony and meshing 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 successful integration of distinct inputs to a common product.

In much of the research that has followed up on the consequences of rhythmic co-action, the emphasis has been on synchrony and in particular on the *physical* coordination of actions. Consequently, the

¹ In the work of Bernieri and Rosenthal (1991), the term *interactional synchrony* is used differently, to describe simultaneous movement, behavioural 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 simultaneous movement or speech.

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). The research using these paradigms suggested 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.

A normal conversation however, as Bernieri and Rosenthal suggested, involves more than acting in 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 signal of solidarity, the nature of that solidarity should be qualitatively different. Whereas both activities require a rhythmic coordination of behaviours, turn-taking does not require people to act in ways that are exactly 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; Clark, 2002). 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 have no fixed rhythm in the same way that synchronous actions do, a smoothly flowing conversation has a more fluid rhythmic oscillation that requires acts that are 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.

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 signalled a greater understanding between communicators and therefore contributed to the establishment of common ground. In line with this, other work has 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).

In contrast to 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, a lack of flow within the conversation may have led one to question underlying relationships. It is possible that a delay in the Internet connection elicited feelings of disconnection 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. Similarly, 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 perceive 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 (Koudenburg et al., 2013a, *Chapter 4*). In these studies, previously unacquainted participants came into the lab individually, where they were placed into separate cubicles. They were given headsets and instructed to talk for five minutes about their favourite holiday destinations with a participant on the other side of the line. The topic was chosen because most people find it engaging and can keep up an animated conversation about it without much effort. In half of the conversations, a short delay of 1 second was introduced after two and a half minutes of conversing normally. This brief delay then continued for the remaining two and a half minutes of conversation. Such a short delay may not be noticed consciously by participants, but it still is quite disruptive and effectively reduces the flow of the conversation because it makes smooth turn-taking impossible: Participants start interrupting each other, and experience short silences in the conversation (see also Pearson et al., 2008). It is quite important to point out that in these studies, the participants started the conversation in the normal way. Only the second half of the conversation was complicated by the delay: Participants thus experienced a loss of flow. In a questionnaire after the conversation, participants in the delay condition reported substantially lower levels of entitativity, lower feelings of belonging and slightly lower levels of shared cognition compared with the participants for whom the

conversation occurred in normal time. Interestingly, these results were independent of the content of conversation.

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These studies show quite clearly 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 that suggest that “things are all-right”: people perceive a good connection and consensus within the dyad. More specifically, although we found no evidence that there were any between-condition differences in objective agreement prior to the conversation, the smooth interplay of taking turns elicited a *feeling* of consensus (Koudenburg et al., 2013a, *Chapter 4*). The ability to coordinate speech in a harmonious way may thus serve as a proxy for more deep-seated harmony within the dyad—pointing to the establishment of perceived common ground or a sense of shared reality. Not only did participants perceive to be on the same wavelength, they were also more likely to perceive the dyad as a coherent social unit, and experience a sense of belonging to this dyad: In all studies, these were strong and consistent effects. When the coordination was disrupted halfway through however, people started questioning the level of solidarity and consensus within the dyad. These studies indicate that brief delays of seemingly trivial duration can have a quite a strong influence on important social outcomes, such as the emergence of solidarity and a sense of shared reality.

For us, the interest of these studies lies not just in the “experimental” condition in which the flow is disrupted, but also in the “control” condition in which flow is undisrupted. The findings inform us about a powerful and effective pathway to establishing social solidarity. Quite strong feelings of solidarity may emerge as a consequence of relatively trivial conversations with a total stranger about holiday destinations. Given the restrictions that we created in the experimental settings we can be reasonably sure that a lot of this solidarity emerges from the bottom up: The combination of distinct individual inputs within a conversation with good flow—a relatively effortless investment—creates a meaningful 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 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 (inferred for example 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 can be immediately inferred by individual group members based on (for example) shared stereotypes of a common outgroup: inter-group comparisons may foster the formation of a self-stereotype (e.g., Turner et al., 1987). But the need for inter-group comparisons is not self-evident: Perceptual unity of an ingroup can also be inferred 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 the shared social identity can also be inferred from the homogeneous simultaneous action of ingroup members. 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 kind of solidarity from a solidarity that was based on more *organic* principles: Here individual complementarity serves as the basis for group formation and the individuality of group members becomes an important consideration 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, 2011; 2013a; 2013b, *Chapter 3, 4, 7*; 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 groups, 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).

In a recent set of studies, we examined rhythmic coordination of verbal communication. 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 in synchrony in 5 studies (Koudenburg, Postmes, & Gordijn, 2013b, *Chapter 5*). 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 were kept constant across conditions).

For example, in Study 4, 93 actors were allocated to triads and asked to recite a poem either synchronously or by taking turns. In the control condition, participants recited the poem without coordinating with the other participants. Results showed that people who had a coordinated interaction (either in synchrony or by taking turns) experienced more

solidarity than participants who interacted without coordination between speakers. Importantly however, the kind of solidarity that was experienced in both coordination conditions was qualitatively different, depending on how people interacted (i.e., reciting the poem in synchrony or by taking turns). In the turn-taking condition participants felt an *increased* sense of personal value to the group. Moreover, we found that the experience of solidarity during such complementary action was statistically mediated by the sense that individuals were personally valuable to the group (and in one study by the sense that other group members were personally valuable, too). Thus, individuality appears to be central to the organically emerging sense of solidarity. In the synchrony condition, by contrast, where speech was fully synchronized, there was strong solidarity but the experience of personal value to the group did not play any role in its emergence. 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 categorisation 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".

Across the set of five studies, we attempted to show that these effects were not beholden to actors reading a poem. Similar effects were found when undergraduate students performed these actions. We conducted one study in which rhythm was cued by means of a karaoke-type setup which dictated speech rate. And finally, we conducted one study with singers. Although so far we have not extended this line of research to consider physical movement or completely different task types, we believe it would be worthwhile to attempt extending this finding to other settings.

Integration of findings: How solidarity emerges from the form of conversations

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In sum, these findings suggest that a conversation constitutes 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. This affects various outcomes. 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). Another 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). But there is also another possibility which gets away from the idea that the first step in group formation would be occurring at the inter-personal level, and that also gets away from the idea that group formation is based on some pre-existing shared category or common knowledge.

We believe that it is also possible that group members observe the conversation and its dynamic evolvment. The form of this conversation can then be seen as a physical manifestation of the group or dyad “in action”. This is, in other words, real feedback about the state of affairs among us. In a way, one might say that the conversation thus *embodies*

the group as a social system. Through the dynamic interplay between speakers a social body emerges that goes beyond the interpersonal level to level of the group or dyad. This system is regulated through a complex set of behavioural skills that enables people to coordinate their speech in a smoothly flowing manner. One could compare this to a situation in which people are dancing together. By paying close attention to the partner's moves, well-versed dancers are able to coordinate their moves in a smooth and harmonious manner, leading 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 dancing flow and as such, threaten to undermine the particular form of social unity that dancing together expresses. 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 thus 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 effectively expressed. The conversation no longer embodies that "we are on the same wavelength" and that "I belong to this group".

Now that it is clear that conversational form may play an important role in the emergence of social structures, it becomes feasible to ask what role conversational form plays in the regulation of these structures once groups or social relationships have been established.

The Maintenance and Regulation of Solidarity

Most communication occurs between individuals that have established some form of social relationship or common group membership (e.g., in a group of friends, among acquaintances, at work, etc.). In such groups, structure is for instance provided by social norms that guide the behaviour 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, social structures often have a status hierarchy, which

similarly provides a framework for communication within the group (e.g., Berger, Connor, & Fisek, 1974; Goffman, 1974; Ridgeway et al., 1985). A third aspect of social structures is that they 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 aspects of social structure 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. In communication for instance, social norms inform us that interrupting others is rude or inappropriate, and awareness of the hierarchy within the group informs us about whom we should be listening to most (and interrupting the least). In a well-executed conversation, the group members’ actions towards each other reflect the social structures that exist within the group. This dynamic is experienced as smooth and pleasant: Contributions to the conversation mesh well and turn-taking is uninterrupted and seemingly effortless. Behaviour that deviates from this 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 behaviour that is aimed at re-establishing unity. That is, solidarity may be maintained by sanctioning deviants, 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 behaviour 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 behaviours 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. Similarly, whereas you may openly despise of meat eaters in a group of vegetarian friends, you are probably inhibited to express such strong opinions among the family members of your friend, whose mother has just spent hours cooking a meat dish. On the one hand, norms can be seen as merely practical guidelines for behaviour, on the other hand they can encompass important information on the group's identity (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, 2001a; 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 exclusion from the group (Eidelman, Silvia, & Biernat, 2006; Marques & Paez, 1994; Schachter, 1951). Most empirical findings are based on explicit operationalisations of sanctioning, such as the allocation or deduction of points in a game paradigm, or the quite extreme measure of how much hot sauce is given to a deviant (e.g., Axelrod, 1986; McGregor et al., 1998).

In sociological theory (e.g., Axelrod, 1986; Horne, 2001a), sanctioning is understood as a costly process; those who sanction risk losing important relationships and risk retaliation by the deviant. It may be for that 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, norm deviant 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.

Indeed, research on the *establishment* of group norms reveals that members are often informed about group norms vicariously, through observing the behaviour 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). But although this subjective experience of grounding can be informed by processes of opinion comparison, our earlier research suggested that people can obtain a similar sense of validation merely through the flow of the conversation: Having a smooth and effortless conversation implies that people are on the same wavelength (Koudenburg et al.,

2013a, *Chapter 4*). This suggests that people may be able to infer implicit group norms through the form of interaction.

We tested this hypothesis by examining participants' responses when their expressed opinions elicited a brief silence in a peer audience (Koudenburg et al., 2011a, *Chapter 3*). Previous research on ostracism revealed that a prolonged silence is experienced as a socially threatening form of exclusion (Williams, 2001). Our studies were set up to examine whether brief disruptions of conversational flow would have similar effects. Participants watched a video in which they were asked to imagine being one of the actors. In a conversation with two peer students, this actor stated her disapproval about intimate relationships between teachers and students. The video was edited in such a way that in the one condition, the conversation smoothly continued on the topic, without reference to the statement of the actor, whereas in the silence condition, the other students responded with a brief four-second silence after the statement, after which they continued in a similar way as in the no-silence condition.² The results showed that participants felt that consensus within the group decreased after the occurrence of a silence, and accordingly, felt less socially validated. Moreover, after the silence participants reported increased feelings of rejection. Importantly, these findings point to the possibility that the form of conversation plays a role in the communication of group norms. Indeed, the effects could logically result from participants' feeling that they had breached a group norm, and were rejected as a result.

This suggests that people are quite sensitive for cues in their environment that may signal social exclusion. Pickett, Gardner, and Knowles (2004) similarly proposed that people have a sensitive system, which helps them monitor their inclusionary status within the group. When people's inclusionary status is being threatened, they are more likely to pay attention to social cues in their environment. For instance, people who have been ostracized have a better memory for socially relevant information than those who have not been previously

² In a base rate condition, participants received a script of the video, without any information about the fluency of the conversation. The results in this condition resembled those in the flow condition, suggesting that without information about the fluency in the conversation, people assume that there is flow.

ostracized (Gardner, Pickett, & Brewer, 2000). In addition, people are better able to distinguish between genuine and deceptive smiles after they have been rejected (Bernstein et al., 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 sensitivity serves to re-establish connection with others (Bernstein et al., 2010; Pickett et al., 2004). One way of re-establishing this connection, would be to conform to group norms.

In follow up research, we therefore examined the consequences of subtle conversational cues – like silences – for norm regulation (Koudenburg et al., 2013c, *Chapter 6*). In a way, a silence can be seen as an extremely persuasive signal: One cannot argue or reason with a sanction or warning that remains tacit. Moreover, because of the collective nature of the silence – a silence only occurs when all members of the group remain silent – the actor may feel like being collectively disapproved. Conversational form may thus function as an instrument to withhold validation and prevent grounding and could therefore be seen as a subtle method of sanctioning.

In the same paradigm as described before, we asked participants after watching the conversation about their attitudes on intimate relationships between teachers and students. It appeared that participants who had watched the video in which a silence occurred, reported more normative attitudes regarding these relationships than those who had watched the uninterrupted conversation. Thus, the silence signalled that an implicit group norm (being liberal about relationships between teachers and students) had been breached, and as a result, participants shifted their attitudes to be more in line with this norm. This effect however only occurred for participants who were highly motivated to belong, suggesting that conformity to the inferred group norm occurred in an effort to re-establish ones inclusionary status within the group. In line with this reasoning, participants high in motivation to belong felt more threatened by the silence than those with a low motivation to belong.

In a second study testing the same hypothesis, student participants expressed their own attitudes in a conversation with confederates. The topic of the conversation was the discrimination of smokers on the

waiting list for donor organs. After participants had expressed their opinion on the topic, confederates either smoothly continued the conversation on policies regarding smokers in different countries (no-silence condition) or they remained silent for 4 seconds, after which they continued the conversation in a similar way (silence condition). Importantly, in neither of the conditions did the confederates directly reveal their attitude on the topic. Participants' attitudes regarding discriminatory policies were measured before and after the conversation. A pilot test had revealed that students perceived the group norm to be slightly in favour of discriminating policies against smokers in organ donation. The results of the study showed that for participants who were highly motivated to belong to the group, a silent response of the audience after they had expressed their attitudes instigated a shift of these attitudes to be more in line with the group norm. Interestingly, we found that also students who had a low motivation to belong to the group shifted their attitudes when these elicited a silent response from the audience. However, they changed their views in the opposite direction, that is, contrary to the group norm. Possibly, the silence marked their distinctiveness from the group, and motivated them to move even further away from the group norm (cf. Postmes, Spears, Sakhel, & De Groot, 2001). We again found that the implicit threat to one's inclusion within the group motivates people to conform to group norms.

Together, these studies point to the existence of a mechanism for regulating and maintaining solidarity, complementary to that of explicit sanctioning. By subtly changing the form of an interaction in some unexpected way, one may make deviants aware of their transgression by subtly signalling 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 to these signals with behaviour that increases their likelihood of reconnection, for example by displaying attitude conformity (Koudenburg et al., 2013c, *Chapter 6*). 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?

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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 labour 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 non-verbal 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 et al., 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 (i.e., 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.

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 behaviour 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 men in their study displayed more nonverbal behaviours 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 (Berger et al., 1974) postulates that inequalities in task-oriented groups 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. In support of this argument, research shows that speakers gain power by interrupting others (Ng, Bell, & Brooke, 1993), and that the degree of participation within a conversation predicts one's status position at a later stage (Willard & Strodbeck, 1972). In addition, people 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 non-verbal 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 behaviour of people of different status. Because performance expectations influence observable displays of power and status behaviours, they often work as self-fulfilling prophecies maintaining status differences within the group (Ridgeway et al., 1985; Ridgeway & Smith-Lovin, 1999).

Thus, expectancies regarding status-relevant behaviour provide a framework for defining and shaping interpersonal interaction (e.g., Fiske, 2004; Goffman, 1974). From studies on language 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, communicational patterns should be in line with the existing status positions within the group.

In two studies we tested whether status-congruent communication patterns could foster a sense of solidarity (Koudenburg, Postmes, & Gordijn, 2014a, *Chapter 7*). 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 et al., 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, is likely to 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. Indeed, our research 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 – interpreted a silent response from the audience after they had spoken as less threatening to the unity within the group, than did those who had a low status in the group. For high status group members, a silence may thus be a sign that their distinct position in the group is recognized, and therefore affirms the solidarity within the group. 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 turn-taking occurred unintermittedly. 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 modelling effects of the partners' traits. When the empowered individual was the focus of the conversation, dating partners experienced the highest sense of connection. Thus, when men reinforced this focus and 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.

Structural factor 3: The maintenance of shared reality

In parallel to the hierarchical structures 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 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; *Chapter 3, 4*). This raises the question whether conversational form also plays a role in maintaining already established socially shared realities.

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 is unlikely to be interpreted as similarly threatening (or even noticed) by those who feel they know each other completely. To the contrary, intimates may often feel that no words are needed in order to understand each other, and interpret a silence in terms of their perceived shared reality: As a sign of social validation.

Indeed, once a common ground is established, it colours the interpretation of other people's behaviour 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, *Chapter 8*). In Study 1, we examined people's agreement with statements in which flow disruptions were regarded negatively: "When my partner and I are quiet for a moment, we often have a different view on the subject," and with statements in which flow disruptions were regarded positively: "When my partner briefly remains silent after I said something, I feel reaffirmed". Correlational evidence showed that participants who perceived their relationship as stable were less likely to agree with the negative interpretations of flow disruptions. For the positive interpretation of flow disruptions no such direct link was found. However, an indirect effect indicated that relationship stability increased the experience of a socially shared identity, which in turn increased participants' perceptions of flow disruptions as validating.

To further examine how disruptions of flow are experienced in intimate relations, we set up two experiments using conversations between intimates (Koudenburg et al., 2014b, *Chapter 8*, Study 2 & 3). We manipulated whether or not flow was disrupted 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, *Chapter 4*). Results revealed a paradoxical effect: When partners experienced their relationship to be less stable or

less strong, no effect of flow disruption was found.³ However, when partners experienced their relationship to be stable or strong, 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., 2011a, 2013a, 2013c, *Chapter 3, 4, 6*), 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 actual information about the partner's viewpoints is difficult to access, 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, *Chapter 9*, for a similar effect in a different context).

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 control condition.

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 instigate

³ 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. It is possible that this explains why flow disruptions were not perceived negatively among these participants.

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.

Conversational Form as the Representation of Social Structure

Our central question in this review was whether micro-characteristics of the form of dialogue (e.g. silences, interruptions) influence processes at a more macro-level, such as the emergence and regulation of social structures. 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 the use of power, coercion, sanctioning, the transfer of information, or other forms of explicit social influence. Our results, however, suggest that an additional process may play a role. We show that solidarity 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 commands, 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 active opinion comparison and discussion, but also emerges

from the subjective experience of having a smoothly flowing conversation, which carries the implicit notion that people are on the same wavelength. Hierarchy is not just maintained 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 speaking time than members with 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 of group unity and shared reality emerge, over the course of a brief conversation? Why would these seemingly trivial aspects of dialogue affect these profoundly important social outcomes and processes? We propose that this is because the form of communication is, in itself, taken as a visible expression of the social structure: The conversation embodies the group, in other words. When people engage in a conversation, the coordinated speech acts together form a representation of the social relations among those in the social interaction (cf. Fiske, 2004). 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 highly disruptive and effortful conversation may indicate low levels of solidarity between people. Thus, the dynamics of the conversation are a physical representation of the state of solidarity within a group or dyad.

Not only do these communication dynamics inform people about the *level* of solidarity, they may also contain information about the *nature* of this solidarity. Indeed, coordination can take on different forms, which result in different forms of solidarity. For instance, when individuals speak in synchrony, they are likely to develop a mechanical form of solidarity: People feel connected through their shared characteristics that inform them about who they are in relation to another individual or as a group member. In contrast, complementary principles of coaction, such as taking turns in a conversation, are more likely to induce a form of solidarity that is organic in nature and relies on the personal value of each individual in a dyad or a group. It appears that solidarity emerges in the background of the focal activity that people perform. Thus, rather

than being a mere vehicle for the content of interaction, the form of dialogue appears to be a manifestation of the relationship between people.

The idea that different relationships can be manifested in people's behaviour shows resemblance with Fiske's *Relational Models Theory* (RMT; 2004). Fiske suggests that people use different relational models to structure their behaviour towards each other. One of these models is *communal sharing*, in which the focus is on what people have in common (e.g., through family-ties, acting in synchrony). Another way to structure interactions is by the *equality matching*-model, in which people use additive imbalances as a framework (e.g., by returning favours, taking turns in a conversation). According to RMT, the equality matching principle is based on interdependencies and results in fragile bonds: When complementary needs can be satisfied in another way (or by another person), there is no reason to remain connected. Our studies however suggest that turn-taking creates a solidarity that is at least as strong as the solidarity that results from acting in synchrony (Koudenburg et al., 2013b, *Chapter 5*). Moreover, our data suggests that through the dynamic interplay between speakers a solidarity emerges that goes beyond mutual obligations on the interpersonal level, but enhances a sense of we-ness at the group level (Koudenburg et al., 2013a, *Chapter 4*).

The second conclusion that we draw on the basis of this review 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 discussed 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. Disruptions in the form of conversation can signal a potential threat to the unity in the dyad or of the group, for instance by challenging the existing status relations.

Indeed, with regard to norm regulation, we showed that disruptions of conversational flow alert people to threats to the solidarity within a social system, and therefore instigate behaviour that is aimed at re-establishing social connection, that is, conforming to group norms. Conversational characteristics thus serve a signalling function: A

breakdown of conversational flow is perceived as a signal to problems 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. Here, signals may take on different forms for speakers of different status, 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 thus be an appropriate reflection of this person's respected position, a similar silence after a low status person has spoken may signal 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 colour the perception of conversational characteristics, and in this way strengthen a sense of shared reality. Although conversational dynamics that impede the flow of information threaten communication between outgroup members or strangers, for people who share a strong sense of identity, the lack of access to each other's viewpoints may in fact lead to an overestimation of the consensus between them, and foster a sense of validation. Thus, through the form of interaction, social structures can be regulated in terms of norms, status relations and shared reality.

In sum, 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

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The present review suggests that solidarity within dyads and groups can emerge from, and be regulated through micro-characteristics in the form of conversation. What are the implications of these findings for future research?

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. Indeed, in both the study by Pearson et al. (2008), and our own studies on delays in audio-visual communication (Koudenburg et al., 2013a, *Chapter 4*), most participants did not notice that the connection was delayed. Despite their apparent unawareness of these cues in both these sets of studies, 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 behaviour. Remarkably indeed, even when we made participants in our experiment aware of the poor connection (Koudenburg et al., 2013a, *Chapter 4*, 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* certain conversational acts are similarly unaware of their behaviour, or its influence in the development of solidarity (at least most of the time). A silence, for instance, has been shown to result from many different causes: One can actively reject someone (e.g., Williams, 2001), but also, one can have difficulty processing what has been said or be pondering what to say next (Johannesen, 1974; Jaworski, 1993; Tannen, 1993). Despite the diverging causes on the part of the sender, the silence is often quite unequivocally perceived as a rejection (Pomerantz, 1984; Koudenburg et al., 2011a, *Chapter 3*). Accordingly, the sociologist Pettit (1993) has suggested that norm regulation may occur as a side-effect of naturally

occurring behaviour of group members, rather than as a result of intentional sanctioning that is imposed upon deviants. Whereas a norm deviation may be received in silence just because the audience is unsure how to respond, the receiver is likely to feel threatened and respond with conformity as a result. In this way, subtle and implicit conversational signals could serve norm regulation (Koudenburg et al., 2013c, *Chapter 6*). In this review we focused on the effects of conversational form, rather than the production of it. Further research is needed to establish the extent to which conversational form is influenced intentionally.

When comparing explicit and implicit forms of maintaining solidarity, several differences between the two emerge. First, implicit forms of rejection (e.g., ignoring someone) motivate behaviour aimed at establishing reconnection, whereas explicit forms of rejection often cause the target to withdraw from social contact (Molden et al., 2009). A reason for this may be that implicit forms of rejecting or status-enhancing behaviours are more likely to preserve the relationship. In the case of brief interruptions or pauses, the ambiguity of the signal makes it unlikely that someone is called upon his actions. Communication thus occurs in a way, off-record: The behaviour cannot be attributed to one clear communicative intention, and thus offers the actor the ability to deny any intent to exclude someone or to be presumptuous (Brown & Levinson, 1987).

Moreover, influence of implicit nature makes people unable to fight against it: Even when making people aware of the form of conversation, they appear to be unable to correct for its influence as they are often unaware of the effects of these subtle characteristics on their feelings (Koudenburg et al., 2013a, *Chapter 4*). Important to take into account here is that in natural interactions subtle conversational cues may be quite commonplace, whereas the explicit regulation of group norms (e.g., group discussion, sanctioning of deviants) that has hitherto received more research attention (e.g., Axelrod 1986; Horne 2001) is not as common. Thus, there is a real potential for subtle signals to have the stronger social effects overall.

Individual versus group levels of analysis

two

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, *Chapter 4*). Moreover, interactional dynamics that respect the status relations within the group are likely to foster perceptions of group entitativity (Koudenburg et al., 2014a, *Chapter 7*). We suggest that this is because dynamics in the form of conversation influence the solidarity at the level of the group or the collective. Social systems at this level have their own structural characteristics such as social norms, hierarchy and a shared reality. These characteristics do not exist at the individual level, but become relevant when individuals interact with one another. 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 together.

Beyond the context of dialogue

The present review focused on form of interaction in the specific context of a dialogue. It would be interesting to examine the influence of form beyond the context of a spoken conversation. What meaning do people assign to the time it takes others to reply to an email? How do people experience solidarity when others conceal their opinions in a group, or, on a societal level; when others do not vote during the

elections? Would this be interpreted as validating and thus strengthen the solidarity, or would it be experienced as a threat to one's viewpoints? Although the research on this topic is very scarce at this moment, there are some studies which suggest that this may be a potentially fruitful avenue for future research. For instance, Kalman and Rafaeli (2011) examined managers' evaluations of job candidates who either replied to an email after 1 day, 2 weeks, or remained silent for more than a month. Results revealed that response latencies influenced the managers' evaluation of the applicants in terms of credibility, trust and affiliation. The research suggests that the form of online communication conveys important social information, which in the case of unexpected response latencies may have hampered the development of solidarity.

In another area, research suggests that the form of interaction can also enhance perceptions of solidarity. We examined voters' perceptions of non-voters, who can be seen as remaining silent during the elections (Koudenburg et al., 2011b, *Chapter 9*). Here, the form played an important role as well: It appeared that without any information given on the reasons why others did not come to the polls, voters included non-voters in their grassroots support. As such, the silence of non-voters provided voters with scope for interpretation, which caused them to overestimate the support for their party. In this way, the form of communication (e.g., silence) could serve grounding processes and thus lead to validation of one's viewpoints.

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 maintenance of a good relationship or achievement of a high level of solidarity would appear to be beneficial. More concretely, we believe that it is important to focus on the *form* of interactions 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 is disrupted by various types of speech disturbances (interruptions, simultaneous speech, and pauses), communicators are likely to maintain a high level of non-verbal 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.

The 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 a normative behaviour 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 sociality 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 within the group, 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.

