

RESEARCH ARTICLE

The experience and emergence of attitudinal consensus in conversations

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Abstract

Reaching consensus is important for human individual, social and societal functioning. The reverse process of polarization has been associated with individual uncertainty, social conflict and societal distrust, tension, or even schisms. In conversations, the experience of consensus is shaped by both content and aspects of the form of conversation, which indicate whether people are on the same wavelength. In two conversation studies ($N = 268$) we aimed (1) to examine where the conversational *experience* of consensus originates and (2) to test which conversational behaviours enhance attitude convergence between conversation partners. The results show that, although actual attitudinal differences were only predictive in Study 2, both conversational content (e.g., disagreement) and form (e.g., experience of flow) consistently predicted the experience of consensus. Convergence of attitudes was harder to predict: most conversational factors were unrelated to attitudinal convergence and conversational flow either increased or decreased attitudinal convergence depending on the particular context.

KEYWORDS

attitude convergence, consensus, conversational flow, conversations, group dynamics, polarization

1 | INTRODUCTION

An increasing number of studies in political science, sociology and psychology have been dedicated to examining the convergence and divergence of attitudes in social networks. And rightfully so—attitude consensualization is important in human individual, social and societal functioning and the reverse process of polarization has been associated with individual uncertainty (Hardin & Higgins et al., 1996; Moscovici & Personnaz et al., 1980), social conflict (Okhuysen & Richardson et al., 2007) and societal distrust, tension, or even schisms (Iyengar et al., 2019; Sani & Reicher et al., 1998, 1999; Schudson et al., 1997).

Research efforts in psychology and sociology have focused on predicting and modelling the convergence and divergence in attitudes in small groups and society (e.g., Lorenz et al., 2021; Paicheler et al., 1977; Postmes et al., 2002) but recent perspectives argue that experiences of polarization and conflict may not always be grounded in incongruence of attitudes (Baldessarri & Bearman et al., 2007). Indeed, recent research in small conversational settings suggests that statements revealing one's attitudinal position to be in line with, or opposing others (i.e., the content of conversation) may be just one of many things influencing the experience of consensus and polarization. Beyond this, these experiences are shaped by subtle indicators in the *form* of conversation, such as a smooth flow, a sudden silence, or a partner's

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responsiveness, which indicate whether or not people are on the same wavelength¹ (e.g., Koudenburg et al., 2017; Roos, Postmes, et al., 2020; Roos, Koudenburg, et al., 2020). In this paper, we therefore distinguish between *attitude consensualization*, defined as the convergence of attitudes within a group over time (in this case, over the course of a conversation),² and the *experience of consensus*, which is the feeling of agreeing or being on the same wavelength with regard to an issue.

We conducted two group conversation studies, with two aims: First, we examined where the *experience* of consensus originates, by modelling the effects of actual attitudinal similarities, conversational content and conversational form. Second, we aimed to test which conversational behaviours may enhance attitude consensualization in terms of decreasing actual attitudinal differences between conversation partners. Here again, we focused on the role of both conversational content and form in influencing the attitude consensualization process.

Beyond these theoretical aims, this research was also set up to inform methodological decisions in measuring the experience and emergence of attitudinal consensus within conversations. We compared the predictive value of different types of ratings (specific behaviours, such as number of interruptions vs global coding of, for instance, conversational flow) by several sources (interaction partners themselves vs observers). Previous research on consensualization has, somewhat surprisingly, involved very few studies that looked into actual interactions between participants. Often, research focused on interaction outcomes (e.g., Haslam et al., 2003; Jans et al., 2011) or perceptions of videotaped interactions of others (Koudenburg et al., 2011; 2013; Smith & Postmes et al., 2011b). The few studies that reported on actual conversations relied on either content, form, or prior attitudinal consensus to predict the experience of consensus (Koudenburg et al., 2013a; Roos et al., 2022). This project is therefore the first to examine the predictive validity of different indicators systematically and simultaneously.

1.1 | The functions and risks of consensual communication for individuals, groups and societies

Communication is often geared towards consensus because this serves both epistemic and relational human needs. Broadly speaking, consensus implies that people have a shared, and therefore valid and reliable understanding of the world around them. Within groups, consensualization can help members coordinate collective behaviour, for instance when they negotiate important group norms, shape their group identity and form shared images of other relevant groups (Haslam et al., 1999, 2003; Jans et al., 2011; Postmes et al., 2005). On a societal level,

political scientists have emphasized that healthy democracies thrive on everyday political communication as a means to increase understanding and overcome attitudinal differences (e.g., Cappella et al., 2002; Gamson et al., 1992; Mutz et al., 2006). Supporting this idea, research shows that deliberation between politically opposing groups can help them find common ground (Caluwaerts & Reuchamps et al., 2014; Kim et al., 2018).

Despite the benefits for individual, group and societal functioning, the proclivity towards consensus, and specifically, attitudinal consensus, also poses risks. Even in early social psychological research, it became evident that discussion tends not to produce convergence towards the average of viewpoints but is likely to extremize attitudes into one direction (Koudenburg et al., 2019; Stoner et al., 1961). Such extremizing patterns would occur even more strongly in an intergroup context, as groups would be motivated to consensualize on an attitude-based identity that would optimally distinguish their group from other relevant outgroups (Haslam et al., 2003; McGarty et al., 2009; Turner et al., 1987). Moreover, the positive effects of consensual communication in a group context, which encourages validation of attitudes (Asch et al., 1956; Klein et al., 2003; Moscovici et al., 1976), could easily turn sour when groups moralize their attitudes and come to view their own attitudes as morally superior to those of other groups; leading to derogation of those who do not share their attitudes (D'Amore et al., 2023; Tetlock et al., 2000).

Major positive and negative consequences are convincingly reported but it is not always clear whether consequences stem from an actual consensualization of attitudes, or from a mere experience of consensus. We examine how both emerge and influence one another over the course of an everyday group conversation.

1.2 | The experience of consensus in conversations

The experience of attitudinal consensus may not always be grounded in reality. People are particularly bad at estimating other people's attitudes. They tend to overestimate the extent to which others hold the same attitudes (Krueger & Clement et al., 1994; Ross et al., 1977). Even during conversations, which can be considered rich environments for information about other people's attitudes, prior beliefs about the existing level of attitudinal consensus (for instance based on a previous relationship or a shared group membership) can reduce people's motivation to search for new information on the actual attitude of their conversation partner and therefore lead to biased validation of their attitudes (Koudenburg et al., 2014). It therefore makes sense to examine more closely how people infer attitudinal consensus in conversation.

Abundant research suggests that we form opinions on a certain issue by paying attention to what people around us do or say on the matter (Bandura et al., 1977; Cialdini et al., 2001). Group discussions, as such, provide a platform for group members to negotiate group norms (Festinger & Thibaut, 1951; Smith & Postmes et al., 2011) and correct deviating or extreme attitudes (Feldman et al., 1984). However, it appears that, in many conversations, explicit positioning, or blatant val-

¹ Admittedly, 'being on the same wavelength' is a rather indiscriminant term, including aspects of both agreement and mutual understanding. This is exactly what we expected to be affected in these conversation studies: beyond objectively comparing attitudes, people derive their experience of consensus through the smooth flow of conversation. Experientially, agreement and mutual understanding appear hard to disentangle.

² This definition is the logical inverse of attitude polarization, which is the divergence of attitudes over time.

idation or rejections, are relatively uncommon. Quite often, responses to opinion statements may be much more subtle (Brown & Levinson et al., 1987; Milgram, 1986; Koudenburg et al., 2017). Indeed, the process of affirming or challenging existing attitudes takes place not just in the content that is explicitly discussed, because it is often concealed in the tacit and informal rules that guide social interaction (see also Goffman et al., 1959).

So how do we discover whether our conversation partners agree with us? Recent research demonstrates that beyond the affirmation of specific attitudinal information, the smooth flow of interaction can, in and of itself, also provide information about the extent to which interaction partners experience consensus. A conversation is considered to have flow when it is experienced as smooth, effortless and mutually engaging (Koudenburg et al., 2017). When a conversation has a good flow, interaction partners as well as outside observers infer that this is because people are on the same wavelength on the issue (Koudenburg et al., 2013a, 2017, 2020). When the flow is disrupted, however briefly, by a brief silence, or a delay in computer-mediated communication, this is taken as a signal that something about the conversation is off: it raises questions about the relationships and the level of consensus between conversation partners. Indeed, a single silence in a 5 minute conversation can raise doubts about the extent to which attitudes are shared within a conversation group and, as a result, shift group norms (Koudenburg et al., 2013b, 2021). These effects of conversational flow remain, even when controlling for actual attitudinal differences between interaction partners (Koudenburg et al., 2013a).

The conversational flow account offered intriguing explanations for the polarization often observed in text-based, online interactions. Roos, Postmes, et al. (2020) and Roos, Koudenburg, et al. (2020), asked student groups to discuss potentially controversial topics both via text-based chat and face-to-face. Afterwards, they coded both the *content* of conversation turns in each medium, in terms of whether statements revealed an attitudinal position in agreement or disagreement with the previous speaker and the *form* of conversations, in terms of responsiveness (to the previous turn) and ambiguity of the statement. It turned out that an equal number of expressions of agreement and disagreement were present in face-to-face and online discussions but, surprisingly, these did not contribute to the *experience* of consensus (Roos, Koudenburg, et al., 2020). However, the extent to which discussion partners formulated their statements ambiguously and were responsive to the others, was much higher face-to-face than online. This supported the smooth flow of a conversation and increased the experience of consensus (Roos, Postmes, et al., 2020; Roos, Koudenburg, et al., 2020). Based on this, we expect that, beyond actual attitudinal differences and conversation content, the flow of a conversation is highly predictive of the experience of consensus.

We accordingly hypothesized that the experience of consensus in conversations is predicted positively by actual similarity in attitudes (*Hypothesis 1*), conversation content that reveals attitudinal agreement, rather than disagreement among speakers (*Hypothesis 2*) and conversational form, specifically aspects relating to the smooth flow of conversation (*Hypothesis 3*).

1.3 | Conversation as an effective means to consensualize

A second aim of this research is to examine whether these content-based expressions of agreement and disagreement and more form-based aspects in the flow of a conversation promote actual attitude consensualization. Classic research in social psychology has pointed to the value of conversations for attitude consensualization (Festinger, 1950; Schachter et al., 1951). In communication science, conversations have been seen as the primary tools to reach common ground³ (H. H. Clark, 1996; Stalnaker, 2002) and political scientists have pointed to the risk of avoiding political issues, because of the value of everyday communication in overcoming opinion differences (Cappella et al., 2002; Gamson et al., 1992; Mutz et al., 2006). The question, then, is 'what conversational aspects predict attitude consensualization in conversation?'

Traditional research established that the *content* of social interactions plays a crucial role in establishing consensus (Hardin & Conley et al., 2001; Kashima et al., 2007; Lewin et al., 1948, 1997; Mead et al., 1934). For instance, group members may converge in their attitudes because their discussion revolves around specific content,⁴ or because they experience (implicit) pressure to comply (e.g. Eysenck & Crown et al., 1948; Feldman et al., 1984). Moreover, group members may engage actively in reconciliation of discordant attitudes, for instance by redefining their identity, reinterpreting the social world, or engaging in mutual social influence (Haslam et al., 2003; Turner et al., 1987). Implicit in these explanations is that consensualization occurs through a process of comparing and negotiating attitudes, or, as Klein et al. (2003) put it more explicitly: *'The process through which individuals who initially had distinct beliefs about a target group come to endorse a consensual view of this group through within-group communication [...] is predicated on group members' discovering and acknowledging their respective views.'*

The way in which consensualisation is typically studied reflects this focus on content, using paradigms to assess the sharing of novel information between interaction partners, (Stasser & Titus et al., 1985), or the collective endorsement of particular stereotypical information about their own and other group (e.g., the Katz-Braly paradigm). Essentially, groups are seen as information processors (Hinsz et al., 1997), and they prefer to process information in a way that does not jeopardize group consensus: members prefer to discuss information that is shared among group members, or that is consistent with stereotypes (Kashima et al., 2013). The challenge researchers took on was to reduce bias by getting groups to discuss unshared information, or information that was not in line with existing stereotypes (Postmes et al., 2001).

³ While Clark refers to a wide set of common knowledge, which is included in the term 'common ground' (including cultural, social and lexical information), he also includes common, or mutual beliefs: what we both accept to be true. Stalnaker provides a broader definition, which includes both beliefs and attitudes: 'presumptions, assumptions, acceptance for the purposes of an argument or an inquiry.'

⁴ This content may be biased due to limits to the information that group members have available (Hamilton & Trier, 1986; Stangor & Lange, 1993), decide to share (A. E. Clark & Kashima, 2007; Stasser & Titus, 1985), or remember (Coman et al., 2009).

The insights from these accounts prove very valuable for the understanding of why discussions in groups may lead to biases. However, the focus on discussion content has obscured the more subtle ways in which disagreements can be communicated. According to politeness theory (Brown & Levinson et al., 1987), people have an array of politeness tactics to introduce disagreement, while avoiding conflict in interaction. In fact, expressing disagreement may be quite dysfunctional for consensualizing attitudes. Recent research demonstrates that overt, explicit communication of disagreement communicates a lack of concern for the other person's opinion, reducing their willingness to engage with the opinion difference (Roos, Koudenburg, et al., 2020). In contrast, formulating one's attitudes in a nuanced way communicates concern for the other person's opinion, while producing ambiguity that leaves room to find commonalities in attitudes (Brown & Levinson et al., 1987; Roos, Postmes, et al., 2020). This suggests that diplomatic behaviours that support the flow of an interaction, rather than concealing actual opinion differences, may provide flexibility to interpret and subtly negotiate towards a common point of view.

In the present study, we focus on four different subtle behaviours that could contribute to, or hamper, the flow of a conversation and as such affect consensualization. Two behaviours that are known to disrupt conversational flow are conversational silences and unsupportive interruptions. Previous research has shown that both communicate disagreement and are experienced as a rejection by the previous speaker (Koudenburg et al., 2011, 2017). Reversely, supportive interruptions support the flow of a conversation, in the sense that they are often used to continue or build on a point made by the previous speaker, or confirm the previous speaker's position explicitly. A final behaviour that may serve the flow of interaction is the use of humour and collective laughter. Humour has various functions in interactions but two functions are important for the current hypotheses. First, humour is often used in a group to maintain a feeling of solidarity among ingroup members (Ladegaard et al., 2009). Humour can reflect shared background knowledge, experience, or understanding (Holmes et al., 2000) and as such, it is seen as a positive politeness strategy, used predominantly to save face and strengthen ingroup cohesion (Brown & Levinson et al., 1987). In potentially contentious situations, humour can also be seen as a device for coping with uncertainty, exploring ambiguous situations, releasing tension or distancing unpleasantness (Linstead et al., 1988). By using humour, a position can be contested, with a critic concealed in sugarcoating (Holmes et al., 2000; Ladegaard et al., 2009). Taken together, with humour one can subtly communicate a disagreement, while releasing tension and maintaining ingroup solidarity. We reason that these results are especially likely to occur when humour results in collective laughter (i.e., all interaction partners laughing at the same time).

1.4 | Hypotheses

Hypotheses 1–3 focus on the experience of consensus in conversation.

Hypothesis 1: The experience of consensus in conversations is positively predicted by actual similarity in attitudes.

Hypothesis 2: The experience of consensus in conversations is positively predicted by conversation content, in terms of agreement, lack of disagreement (H2a) and global impressions of consensus (H2b).

Hypothesis 3: The experience of consensus in conversations is positively predicted by conversational form; that is, specific behaviours supporting (vs disrupting) flow: laughter, silence and (non-)supportive interruptions (H3a) and global impressions of conversational flow (by the conversation partners-H3b, or by external observers-H3c).

Hypotheses 4 and 5 focus on the consensualization of attitudes over the course of the conversation.

Hypothesis 4: Attitude consensualization is positively predicted by conversation content, in terms of agreement, lack of disagreement (H4a) and global impressions of consensus (H4b).

Hypothesis 5: Attitude consensualization is positively predicted by global impressions of conversational flow (by the conversation partners-H5a, or by external observers-H5b), as well as specific behaviours supporting (vs disrupting) flow: laughter, silence and (non-)supportive interruptions (H5c).⁵

1.5 | The present research

The present research set out to test these five hypotheses in two studies in which students in secondary education (Study 1, Dutch sample) and university students (Study 2, German sample) discussed policies on integrating refugees into their respective school systems. Students in general have quite positive attitudes on refugee integration but the specifics of the proposed policies created more divergent attitudes on the proposal.

Consensualization was operationalized in terms of attitude convergence, which was represented by the decrease in attitude variation within groups from before to after the discussion. The participants' experience of consensus was measured through self-report. We measured whether consensualization and experienced consensus were predicted by the form of the conversation in terms of flow and the content of the conversation in terms of (dis)agreement. Notably, to capture the flow of a conversation, we used participants' own subjective experiences of a conversation as smooth, effortless and mutually engaging but complemented these with external observers' general perceptions of the conversation in these terms and with observers' ratings of specific behaviours. To capture the content, we used observers' general ratings of attitudinal consensus but also the specific number of times they observed statements as being in agreement and disagreement with the previous statement over the course of the conversation.

⁵ The hypotheses were not preregistered. Initially, we also aimed to differentiate between conversations that focused on the more specific affirmative action policy versus the more general issue of refugee integration. This differentiation appeared quite difficult to assess and we decided to focus our research on the more general question of how groups experience and reach consensus in conversations instead. The hypotheses were developed prior to analyses.

Such agreement could be preceded by an 'I agree' or 'yes...' expression, but implicit agreement, which involved attitudinal content building on the previous statement would also be considered agreement. Similarly, revealing an attitudinal position negating the statement of the previous speaker would be rated as disagreement.

Beyond testing the hypotheses, taking into account different perspectives on the conversation should aid the formulation of specific recommendations regarding the measurement of attitude consensualization, experiences of consensus and their predictors.

2 | STUDY 1

2.1 | Methods

2.1.1 | Participants and design

As part of an introduction to psychology workshop at the University of Groningen, 132 students who were in their fourth year of pre-university education⁶ participated in the study. Students participated in groups of three, four, or five, to which they were randomly allocated at the start of the study. Most participants had native-Dutch or Dutch-dual nationalities. Data from four groups that included a non-native Dutch student were excluded from the analyses. The remaining 116 participants (78 women, 38 men; $M_{\text{age}} = 15.46$, $SD = 0.60$) were spread over 28 groups (two \times three-person, twenty \times four-person and six \times five-person groups).

2.1.2 | Power analysis

For the analysis of experienced consensus (Hypotheses 1–3), we performed a sensitivity power analysis using MLPowSim software, with information from the Study 1 data structure and variance. The analysis indicated that we had 0.8 power to detect a standardized regression coefficient of 0.37 for a group-level predictor and 0.22 for an individual-level predictor. For the group-level analysis of consensualization (Hypotheses 4 and 5), an analysis with G*Power (linear multiple regression, $\alpha = .05$, two-tailed) indicated that we had 0.8 power to detect an effect of Cohen's $f^2 = 0.30$.

2.1.3 | Procedure

Students came in classes of 15–25 and were randomly separated into groups of three, four, or five students. A researcher accompanied the groups to separate rooms. Here, they first completed a pre-measure of attitudes towards refugees, including more general attitudes towards integration of refugees in Dutch schools and more specific attitudes about implementing an affirmative action policy that would allow

refugee students who scored among the top 25% of their class in their home country directly to pre-university education in the Netherlands (i.e., the highest level of the Dutch secondary education). In general, students were expected to be positive about integrating refugee children in the schools in the Netherlands (Postmes et al., 2017). However, allowing students who did not go through the Dutch educational system to enter the highest level, which is hard to enter, could be seen as threatening and opinions on that were expected to vary. Although people may generally endorse equality in principle, previous work on affirmative action found that high status groups generally did not support affirmative action policies (i.e., policies that favour low-status groups), especially if they perceive them as affecting high status groups' outcomes (Lowery et al., 2006; O'Brien et al., 2010). Thus, we expected that students' views on affirmative action would vary more and asked them to discuss the proposed policy with others. The researcher left the room for 5 minutes, after which they came back to stop the discussion and hand out the second questionnaire. Group discussions were recorded on video or audio.⁷ Finally, all participants and reported their demographics and intergroup contact frequency.

2.1.4 | Measures

An overview of the variables in both studies is provided in Table 1. All items were assessed on scales from 1 (strongly disagree), to 7 (strongly agree).

Consensualization. Participants reported their attitudes regarding the topic before and after the conversations. We asked for their attitudes on admitting refugees in schools (i.e., their general attitude) with a single statement: *To encourage integration, refugee students should be admitted to Dutch schools (rather than separate refugee schools)*, as well as their attitudes on the more controversial topic of affirmative action (which was the topic of the discussion): *Refugee students in the top 25% of their class in their home country, should directly be admitted to pre-university education*. The general and specific attitude had small-to-medium correlations, $r_{\text{pre-discussion}} = .19$, $p = .047$; $r_{\text{post-discussion}} = .29$, $p = .002$. We operationalized attitude consensualization as the reduction in the group's SD of an attitude item. We analysed the post-discussion SD while controlling for the pre-discussion SD in a regression analysis (e.g., Dugard & Todman et al., 1995).⁸

Experience of consensus. Experience of consensus was assessed with the three items from the shared cognition scale (Koudenburg et al., 2013a) and two additional reverse-coded items assessing the polarization aspect (based on Koudenburg & Kashima et al., 2022): *The*

⁷ Group members were allocated such that groups either consisted of students aged < 16, or students of 16 years and older. Due to ethical considerations, we only videotaped the second groups, the first groups were recorded on audio.

⁸ We also assessed participants' perceptions of the distribution of opinions among high school students, both before and after the discussion. Conversational harmony, feelings of belonging to the group and their intentions for future discussion, moral emotions and judgments regarding the topic were measured after the discussion. Finally, participants answered some open questions regarding the discussion. ('What did you agree/disagree on?' 'What were important moments during the discussion?') Analysing these measures was beyond the aims of the current paper.

⁶ Pre-university education takes 6 years in the Netherlands and is the highest level of secondary education.

TABLE 1 Overview of the study variables.

Rated by:	Participant(s)		Trained observer	
	Objective	Subjective	(Inter)subjective ratings	Observable verbal behaviours
Consensus	Within group attitude similarity/ convergence	Consensus		
Interaction content			Consensus	Agreement Disagreement (r)
Interaction form		Flow	Flow	Laughter Silence (r) Supportive interruptions Non-supportive interruptions (r)

group members were divided on the issue and during the conversation, subgroups formed (of one or more members). The Cronbach's alpha of the five items together was .864.

2.1.5 | Predictors

Self-ratings of flow. Two items assessed the subjective experience of the conversational flow: Participants indicated the extent to which the conversation about the topic was *smooth* and *effortful* (reverse-coded), Spearman–Brown $r = .774$.

Observer coding and ratings. A coding scheme was developed to assess conversational displays of consensus. First, audio and video files were transcribed by two research assistants (hereafter called observers). Afterwards, all conversations were coded by the same observer. The observers counted the number of times they saw each of the following specific behaviours that related to (a) the form of interaction: laughter, silences, supportive interruptions, non-supportive interruptions; (b) the content of interaction: expressions of agreement and expressions of disagreement. Finally, they indicated their (c) global perception of consensus on a semantic differential dissensus (–2) to consensus (2). See Table 2 for the coding scheme.⁹ Both count data and global perceptions were rated per minute of group conversation and then averaged per conversation.

Descriptive statistics of all variables are displayed in Table 3.

2.2 | Results

First, we analysed predictors of experienced consensus to test Hypotheses 1–3. We defined multilevel models where respondents were nested in conversation groups. We fitted a random intercept for groups and the models were estimated with full maximum likelihood in SPSS. We used three different models for predictors related to attitude similarity, conversation content and conversation form, respectively.

⁹ We also coded the content of what participants talked about and some indicators related to morality. Moreover, observers also rated the semantic differentials smooth-effortful, disengaged-engaged, smooth-effortful, low-high arousal, tentative-firm, harmonious-hostile, poor-excellent social relations. Because this is not the focus of the current paper, we did not analyse these data.

TABLE 2 Coding scheme in Study 1 and Study 2.

Construct	Specific behaviours	Global ratings
Consensus	<i>Disagreement:</i> count the times a speaker disagrees with the previous speaker. Weights: 2 = explicit disagreement (explicitly disagreeing with the previous speaker), 1 = subtle disagreement (often taking the shape of nuancing the previous statement)	<i>Consensus:</i> on a scale from –2 = dissensus to 2 = consensus
	<i>Agreement:</i> count the times a speaker agrees with the previous speaker. Weights: 2 = explicit agreement (explicitly states their agreement), 1 = subtle agreement (often taking shape of continuing on previous statement)	
Flow	<i>Silence:</i> count the number of silences (including other awkward moments).	<i>Flow:</i> reverse-coded on a scale from –2 = smooth, to 2 = effortful
	<i>Supportive interruption:</i> taking over and continuing the line of reasoning, or encouraging 'hmm' or 'yes', without any clear intention to take over.	
	<i>Unsupportive interruption:</i> interruption objecting to the previous speaker, or starting a different argument.	
	<i>Laughter:</i> count the times people laugh together.	

Most predictors were measured at the group level and we only had 28 groups in the data. A model containing all group-level predictors at the same time would risk having collinearity issues and having insufficient information to test the independent relations with all predictors.

Contrary to Hypothesis 1, attitude similarity (i.e., actual consensus, measured as the post-discussion group SD) was not related to expe-

TABLE 3 Descriptive statistics, Study 1.

	N	M	SD	Minimum	Maximum
<i>Group member ratings</i>					
General attitude (before)	116	5.27	1.19	2.00	7.00
Specific attitude (before)	116	4.51	1.48	1.00	7.00
General attitude (after)	116	5.53	1.25	2.00	7.00
Specific attitude (after)	116	3.77	1.54	1.00	7.00
Experienced consensus	116	6.05	1.02	2.20	7.00
Flow	116	5.17	1.43	1.00	7.00
<i>Observer rating</i>					
Agreement	116	4.03	1.43	2.20	8.00
Disagreement	116	1.65	1.05	0.00	4.20
Consensus	116	0.16	0.95	-1.60	2.00
Laughter	116	0.28	0.38	0.00	1.25
Silences	116	0.70	0.45	0.00	1.80
Supportive interruptions	116	2.35	1.67	0.00	6.00
Non-supportive interruptions	116	0.63	0.55	0.00	2.25
Flow	116	0.31	0.93	-1.20	1.80

rienced consensus (see Model 1 in Table 4). Regarding conversation content, disagreement was negatively related to experienced consensus and the observer rating of consensus was positively related to experienced consensus, both supporting Hypothesis 2 (see Table 4, Models 2a-c). Finally, regarding conversation form, only the group members' ratings of flow were related to more experienced consensus (see Table 5), indicating partial support for Hypothesis 3.

We next analysed the factors that were related to attitude consensualization. We did this by analysing the SD for each of the discussion groups of the attitude scores after the discussion, controlling for the SD before the discussion in a regression model at the group level ($N = 28$). As such, this model analyses changes in the group SD. Variables were tested in separate models, although agreement and disagreement were in the same model and also the four behaviours related to the form of conversation were in the same model. We report the standardized regression coefficients in Table 6 for specific and general attitude. Descriptive zero-order correlations with the SD in the group, after the discussion are reported in Supporting Information, Table S1.

Almost none of the predicted relations with consensualization were found, which is a clear lack of support for Hypotheses 4 and 5. The observer rating of flow is related to consensualization on the specific attitude, but the relation is opposite to Hypothesis 5b as flow is related to *less* consensualization. The only hypothesized relation that received support is that observer ratings of flow were linked to *more* consensualization on the general attitude. Clearly, Hypotheses 4 and 5 did not receive consistent support.

2.3 | Discussion

The results of Study 1 provide no support for Hypothesis 1, the experience of consensus is unrelated to the actual consensus in terms of

attitude variation after the conversation. This suggests that conversations may often not allow for a very good estimate of other people's true opinions. It's very possible that interaction partners' motivation to have a smooth and easy conversation overrides their need to share their own, true opinions on complicated issues or search for the true opinions of others.

That said, and supporting Hypotheses 2 and 3, interaction partners did use the content and form of a conversation to make inferences about consensus. Specifically, H2a was partially supported: expressions of agreement seemed not to contribute to the experience of consensus but interaction partners were very sensitive to expressions of disagreement. Supporting H2b, an even better predictive value was provided by the global estimate of consensus provided by the observer, accounting for 43% of the variation in participants' experience of consensus. The data also support Hypotheses 3: the form of a conversation explains another 23% of the variance in group members' experiences of consensus. Here, it appears that the observer' coding of the specific behaviours such as laughter and supportive interruptions (H3a) and their general impressions of flow (H3c) may tap into these flow experiences (explaining up to 17% of variation), but are not as predictive as participants' own subjective experience of the conversation as smoothly flowing. In line with H3b, therefore, to predict the experience of consensus, flow seems to be best captured by the subjective report of the people who actually engage in the conversation.

Notably, while the predictive validity of form and content for the experience of consensus in the conversation is high, their effect on actual convergence in attitudes is ambiguous, providing no consistent support for Hypothesis 4 and 5. When focusing on attitude convergence on the specific policy that was the focus of the discussion the only significant result points in opposite direction, suggesting that the experience of a smooth conversational flow may communicate that these differences are not a problem and as such, relate to an increase in opinion divergence (contrasting H5a). However, when examining more general attitudes about refugee integration, attitudes do seem to converge with stronger displays of conversational flow (supporting H5a). Potentially, group members may enthusiastically quarrel about the specifics of a certain policy, once they have ascertained that their general attitudes on the topic align.

Whereas Study 1 referred to a hypothetical policy, we increased the external validity in Study 2 by using a policy that was discussed at the university at the time. We also sought to replicate the results in a different sample, this time employing a sample of students at a German university.

3 | STUDY 2

3.1 | Methods

3.1.1 | Participants and design

Students studying at the University of Osnabrück took part in the study ($n = 136$; 92 women, 44 men; $M_{\text{age}} = 21.86$, $SD = 3.01$; 90.44%

TABLE 4 Experienced consensus in Study 1, as predicted by actual consensus (Model 1) and conversation content (Model 2a-c).

	Model 1	Model 2a	Model 2b	Model 2c
<i>Actual consensus (after discussion)</i>				
SD general attitude	−0.07 (0.17)			
SD specific attitude	−0.10 (0.17)			
<i>Conversation behaviour: content</i>				
Agreement		0.21 (0.14)		0.06 (0.16)
Disagreement		−0.38** (0.14)		−0.11 (0.21)
<i>Conversation rating by observer</i>				
Consensus			0.53*** (0.13)	0.41 (0.24)
Explained group level variance	1.8%	36.9%	43.4%	44.0%

Note: Coefficients based on standardized variables (standard errors between brackets).

TABLE 5 Experienced consensus in Study 1, as predicted by conversation form (Model 3a-c).

	Model 3a	Model 3b	Model 3c
<i>Conversation behaviour: form</i>			
Laughter	0.28 (0.18)	0.23 (0.19)	0.23 (0.18)
Silence	−0.05 (0.19)	0.08 (0.22)	0.18 (0.22)
Supportive interruptions	0.16 (0.18)	0.18 (0.18)	0.21 (0.17)
Non-supportive interruptions	−0.09 (0.21)	−0.07 (0.21)	−0.02 (0.20)
<i>Conversation rating by observer</i>			
Flow		0.21 (0.19)	0.18 (0.19)
<i>Conversation rating by group members</i>			
Flow			0.17* (0.08)
Explained group level variance	13.0%	17.0%	23.3%

Note: Coefficients based on standardized variables (standard errors between brackets).

identified as German). The sample's political orientation was on average centre to left leaning ($M = 3.12$, $SD = 0.86$; 1 = *Extreme left* to 7 = *Extreme right*) and the majority of students (88.2%) were enrolled in a study program with a restricted number of students.

3.1.2 | Power analysis

For the analysis of experienced consensus (Hypotheses 1–3), we performed a sensitivity power analysis using the MLPowSim software, using information from the Study 2 data structure and variance. This indicated that we have 0.8 power to detect a standardized regression coefficient of 0.27 for a group-level predictor and 0.22 for an individual-level predictor. For the group-level analysis of consensualization (Hypotheses 4 and 5), an analysis with G*Power (linear multiple regression, $\alpha = .05$, two-tailed) indicated that we had 0.8 power to detect an effect of Cohen's $f^2 = .20$.

3.1.3 | Procedure

Twelve research assistants approached the students in the university canteen to participate in a study on the inclusion of refugees in

higher education. At the beginning of the academic year, the University of Osnabrück announced that it would be allowing refugees who obtained asylum status to enrol in study programs. We were interested in the students' attitudes towards the new policy to accept refugees (i.e., general attitude), as well as whether they thought that the university should go one step further and ensure that refugees had places reserved in the study programs that restrict the number of students they admit (i.e., an affirmative action policy). More prestigious programs at German universities usually have a restricted number of places and this potential policy would ensure that the refugees had a chance of entering those programs. At the same time, reserving spots for refugees would mean less spots available for home students, which could be seen as threatening in this context (Lowery et al., 2006).

The students who signed up were asked to come to the lab in groups of three or four (resulting in a total of 41 groups). Two research assistants guided the discussions. The procedure was similar to Study 1: the participants first completed a pre-measure of attitudes and then took part in a group discussion, which was recorded on audio. During the group tasks, the research assistants left the room. After the discussion, the participants filled out the second questionnaire individually.

TABLE 6 Group-level correlates of consensualization on the specific and general attitude (Study 1, standardized coefficients, standard errors between brackets).

	Specific attitude	General attitude
<i>Model 1: Conversation behaviour: content</i>		
Agreement	0.20 (0.20)	−0.25 (0.18)
Disagreement	0.18 (0.18)	−0.14 (0.18)
<i>Model 2: Conversation rating by observers</i>		
Consensus	0.01 (0.19)	−0.03 (0.17)
<i>Model 3: Conversation rating by group members</i>		
Flow (group member perception)	0.25 (0.17)	−0.03 (0.19)
<i>Model 4: Conversation rating by observer</i>		
Flow (observer perception)	0.51** (0.15)	−0.45** (0.15)
<i>Model 5: Conversation behaviour: form</i>		
Laughter	0.38 (0.20)	−0.29 (0.19)
Silence	−0.25 (0.21)	0.05 (0.20)
Supportive interruptions	−0.28 (0.19)	0.14 (0.18)
Non-supportive interruptions	−0.16 (0.23)	−0.18 (0.22)

Note: Because consensualization is operationalized as a decrease in SD, negative parameters reflect stronger consensualization.

3.1.4 | Measures

As in Study 1, we assessed attitudes regarding the topic before and after the conversation with a single statement for the general attitude *Refugees who meet the admission requirements should be allowed to enrol in bachelor and master programs at the University of Osnabrück*, and for the specific attitude *Study programs with admission restrictions should reserve a certain number of spots (around 10%) for refugees*. Participants indicated their agreement with each of these statements on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

After the conversations, the participants responded to the questions about the conversational flow (Spearman–Brown $r = .475$) and four items measuring experienced consensus¹⁰ (Cronbach's $\alpha = .803$).

3.1.5 | Conversation coding by observers

We used the same coding scheme developed in Study 1. First, audio files were transcribed using an online tool (<https://sonix.ai>, May–August 2020) and the transcriptions were checked by three research assistants, who also coded the conversations. Second, all conversations were coded by two out of the three observers (the design was not fully crossed). Both count data and global perceptions were rated for every minute of the group conversation and then averaged per conversation. Interrater reliability was assessed using the intra-class correlation

(ICC). We specified one-way random models, because it is more appropriate for not fully crossed designs (Hallgren et al., 2012). ICCs for each code were calculated per pair of observers and then averaged (following guidelines by Light et al., 1971). This led to good (>0.75) to excellent (>0.90 , according to Koo & Li, 2016) reliability for all codes: laughter: ICC = 0.90, silences: ICC = 0.76, supportive interruptions: ICC = 0.92, non-supportive interruptions: ICC = 0.85, expressions of agreement: ICC = 0.80 and expressions of disagreement: ICC = 0.78, global perception of consensus: ICC = 0.87, global perceptions of flow: ICC = 0.68.

Descriptive statistics of all variables are displayed in Table 7.

3.2 | Results

In contrast to Study 1, and supporting Hypothesis 1, groups with more actual post-discussion consensus on the specific attitude (i.e., the topic of the conversation) also experienced more consensus in the group. This factor alone accounted for 34% of the group-level variance in experienced consensus. Furthermore, the amount of disagreement in the conversation and the global consensus ratings were both related to experienced consensus, supporting Hypothesis 2, and explaining even more variance than actual consensus (see Models 2a–2b in Table 8). However, when both were added in the same model (Model 2c), only the global consensus ratings had an independent relation with experienced consensus.

Regarding conversation form, supportive interruptions and the participants' perceptions of flow were related to higher experienced consensus, partially supporting Hypothesis 3 (see Table 9).

We performed the same analyses of consensualization as in Study 1 (see Table 10). Descriptive zero-order correlations with the SD in the group, after the discussion are reported in Supporting Information, Table S2. Contradicting Hypothesis 4, we found no significant predictive value of explicit agreement or disagreement, or observers' ratings of consensus on consensualization on the specific attitude. However, group members' experiences of flow did contribute to consensualization, supporting Hypothesis 5a. This finding was not echoed in the flow ratings by observers, contradicting Hypothesis 5b.

Consensualization on the general attitude was not predicted significantly by group members' experiences of flow. Only observers' ratings of explicit agreement, and supportive interruptions predicted stronger consensualization on the general attitude.

3.3 | Discussion

In contrast to Study 1, we found support for Hypothesis 1 in Study 2. The conversations in Study 2 provided group members with a more accurate insight of the level consensus in the group: 34% of the variance in experienced consensus was explained by actual variation in attitudes within the group.

Replicating the results from Study 1, and supporting Hypothesis 2, the content of conversation predicted another 36% of the variance

¹⁰ The fifth item in Study 1 'the group members were on the same wavelength' was not measured in Study 2.

TABLE 7 Descriptive statistics Study 2.

	N	M	SD	Minimum	Maximum
General attitude (before)	136	4.85	0.43	2.00	5.00
Specific attitude (before)	136	3.15	1.10	1.00	5.00
General attitude (after)	136	4.89	0.34	3.00	5.00
Specific attitude (after)	136	2.99	1.21	1.00	5.00
Experienced consensus	136	5.05	0.82	2.25	6.00
Agreement	136	29.44	18.89	3.50	79.50
Disagreement	136	4.16	3.77	0.00	13.50
Consensus	136	0.63	0.72	−1.25	1.80
Laughter	136	2.19	2.16	0.00	8.50
Silences	136	1.29	1.39	0.00	6.00
Supportive interruptions	136	17.00	12.49	0.50	46.00
Non-supportive interruptions	136	3.90	3.83	0.00	17.00
Flow (rater)	136	1.04	0.52	−0.37	1.67
Flow (participant)	136	5.05	0.78	3.00	6.00

TABLE 8 Experienced consensus in Study 2, as predicted by actual consensus (Model 1) and conversation content (Model 2a-c).

	Model 1	Model 2a	Model 2b	Model 2c
<i>Actual consensus (after discussion)</i>				
SD general attitude	−0.11 (0.11)			
SD specific attitude	−0.45*** (0.11)			
<i>Conversation behaviour: content</i>				
Agreement		0.32** (0.11)		−0.07 (0.14)
Disagreement		−0.40*** (0.11)		0.21 (0.18)
<i>Conversation rating by coders</i>				
Consensus			0.64*** (0.09)	0.84* (0.22)
Explained group level variance	34.1%	44.4%	61.5%	63.1%

Note: Coefficients based on standardized variables (standard errors between brackets).

TABLE 9 Experienced consensus in Study 2, as predicted by conversation form (Model 3a-c).

	Model 3a	Model 3b	Model 3c
<i>Conversation behaviour: form</i>			
Laughter	0.09 (0.14)	0.09 (0.14)	0.07 (0.13)
Silence	0.10 (0.14)	0.17 (0.18)	0.16 (0.17)
Supportive interruptions	0.30* (0.13)	0.27 (0.14)	0.24 (0.13)
Non-supportive interruptions	−0.23 (0.13)	−0.22 (0.13)	−0.20 (0.12)
<i>Conversation rating by coders</i>			
Flow		0.11 (0.18)	0.10 (0.17)
<i>Conversation rating by group members</i>			
Flow			0.14* (0.06)
Explained group level variance	23.8%	24.8%	34.0%

Note: Coefficients based on standardized variables (standard errors between brackets).

TABLE 10 Group-level correlates of consensualization on the specific and general attitude in Study 2.

	Specific attitude	General attitude
<i>Model 1: Conversation behaviour: content</i>		
Agreement	−0.11 (0.13)	−0.29* (0.11)
Disagreement	−0.02 (0.13)	0.02 (0.12)
<i>Model 2: Conversation rating by observers</i>		
Consensus	−0.21 (0.13)	−0.16 (0.12)
<i>Model 3: Conversation rating by group members</i>		
Flow (group member perception)	−0.35** (0.12)	−0.01 (0.12)
<i>Model 4: Conversation rating by observers</i>		
Flow (observers perception)	0.02 (0.13)	−0.07 (0.12)
<i>Model 5: Conversation behaviour: form</i>		
Laughter	−0.23 (0.15)	0.21 (0.12)
Silence	0.04 (0.14)	−0.05 (0.13)
Supportive interruptions	−0.03 (0.14)	−0.33** (0.12)
Non-supportive interruptions	0.04 (0.13)	0.04 (0.12)

Note: Because consensualization is operationalized as a decrease in SD, negative parameters reflect stronger consensualization. Standardized coefficients are displayed (standard errors between brackets).

in experienced consensus. As in Study 1, expressions of disagreement had more impact on experiences of consensus than expressions of agreement (in partial support of H2a), but general consensus ratings of observers were most predictive (supporting H2b). Beyond this, we found support for Hypothesis 3: the form of conversation predicted 34% of the variance in experienced consensus. Of the specific conversational behaviours, only supportive interruptions positively predicted consensus experiences (in Study 1 this effect was similar but not significant). Most predictive were again the subjective flow experiences by the group members, in line with Hypothesis 3b.

Study 2 demonstrated a correlation between group members' ratings of flow and consensualization in the direction predicted by Hypothesis 5a, suggesting that conversational flow allowed for common ground to develop. Notably, flow only predicted the consensualization of attitudes regarding the specifically discussed policy; the effect did not generalize to the general attitude about refugee integration. Moreover, observers' coding of flow did not echo this effect (providing no support for H5b): it was the group members' subjective experiences of flow that predicted attitude consensualization on specific attitudes during the conversation.

Finally, comparable to Study 1, the pattern predicting consensualization regarding general attitude diverged from the pattern on the specific attitude. Indeed, group members' experiences of flow were of little predictive value, but observers' ratings of explicit agreement and supportive interruptions predicted stronger consensualization regarding general attitude, thereby providing partial support for Hypothesis 4a and Hypothesis 5c.

4 | GENERAL DISCUSSION

Sociological, political and psychological research has been concerned with questions of attitude convergence and divergence and individual experiences of consensus and polarization but little effort has been spent on differentiating between actual and experienced consensualization. This paper aimed to fill this gap and specifically addressed how (a) the experience of consensus and (b) actual attitude consensualization emerge from conversation.

In two studies we asked small groups of high-school students (Study 1) and university students (Study 2) to discuss the integration of refugees into regular Dutch and German education.

4.1 | The experience of consensus (Hypotheses 1–3)

The first aim of the paper was to examine where the conversational *experience* of consensus (or, conversely, polarization) originated, modelling the effects of actual attitudinal differences (Hypothesis 1), conversational content (Hypothesis 2) and conversational form (Hypothesis 3). Across the studies, findings demonstrated that, rather than being a mere reflection of the actual attitudes of group members, the experience of consensus resulted from a multitude of indicators in the content and form of conversation that indicated that group members were on the same wavelength.

Specifically, results showed that whereas in Study 1, the actual diversity of attitudes seemed not to matter in the experience of consensus, in Study 2 the actual diversity of attitudes explained 34% of the variance in experienced of consensus, providing only partial support for Hypothesis 1. The divergence in findings between the studies may be attributable to the relevance of the issues in the different study contexts. Whereas participants in Study 1 were engaging in a conversation about a fictitious policy; for the participants in Study 2 the affirmative action policy that they discussed concerned an actual university policy that might affect them personally (i.e., in the sense that there might be less spots available to them in their preferred study program). When personal relevance is low, group members may have decided to just go with the majority opinion and felt little need to express their (only very recently developed) view on the issue (Martin & Hewstone, 2008). In contrast, in situations where both personal and group relevance of the discussed issue is very high, group members may be more likely to closely attend to their group's position on the issue, but at the same time, it is conceivable that they are more motivated to express their own views on the topic in an effort to negotiate and influence their group's position (Haslam et al., 2003; McGarty et al., 2009).

Hypothesis 2 received support consistently across studies. We found that the content of conversation explained around 35%–43% of the variance in experienced consensus. Interestingly, it did not matter whether all expressions of disagreement and agreement were counted, or whether observers gave a global impression of the consensus they perceived in the conversation: if anything, the global impressions were slightly more predictive, possibly because they take into account more

subtle ways of expressing (dis)agreement. Compared to expressions of agreement, expressions of disagreement are much more indicative of the experience of consensus. This underlines the importance of consensus in conversations; expressing agreement seems the default behaviour and any deviations that indicate disagreement jeopardize this consensus experience (Koudenburg et al., 2017).

The form of conversation, in terms of conversational flow, explained another 23%–34% of the variance, partially supporting Hypothesis 3. Interestingly, the form of conversation was especially predictive to the extent that it was perceived by conversation partners themselves as flowing smoothly and effortless; flow ratings of observers that were not part of the conversation did not predict the experience of consensus. The only coded behaviour that did contribute to the experience of consensus—and only did so statistically significantly in Study 2—was the supportive interruptions. This confirms previous research about responsiveness being key to experiencing a sense of consensus (Roos, Koudenburg, et al., 2020; Benus, Gravano, & Hirschberg, 2011).

4.2 | Methodological implications

In terms of methodological considerations our findings suggest that one can estimate the experience of consensus by using global estimates of consensus by observers in conversation and that counting expressions of agreement and disagreement may not add much, in this respect. This raises the questions about the value of big data analyses for which counting behaviours are at the core for inferring potential consensualization or polarization. Automatic coding is only reliable after careful checking of the codes by trained observers (e.g., Van Atteveldt et al., 2021), which is time-consuming and often neglected (e.g., Medvedev et al., 2019). The present paper suggests that more reliable estimates of consensus might be reached by asking observers to give global estimates of the consensus they perceive in a conversation—something that can be done in an equally efficient, if not more efficient, way.

To be able to formulate specific advice for the measurement of conversational form, we compared different types of ratings (specific behaviours vs global coding) by several sources (interaction partners themselves vs observers). In general, the results evidence the highly subjective nature of conversational flow experiences; while the inter-subjective feeling that a conversation is flowing smoothly is highly predictive for the experienced consensus in a specific conversation group (Koudenburg et al., 2017), this flow is hard to pin down to specific behaviours, such as silences, laughter or interruptions. Moreover, it is difficult to perceive for outside observers, whose estimates were not significantly linked to experienced consensus in the conversation. This means that whereas conversational flow may be quite easily disrupted experimentally by producing an inability between interactants to coordinate (Koudenburg et al., 2013a), what constitutes a good flow is negotiated situationally between interactants in a specific conversation.

4.3 | Attitude consensualization and polarization (Hypotheses 4 and 5)

The second aim of the studies was to test which conversational behaviours may enhance consensualization, in terms of decreasing actual opinion differences between conversation partners. We focused on the role of both conversational content (Hypothesis 4) and form in influencing consensualization processes (Hypothesis 5). The results demonstrated the difficulty in predicting consensualization (defined as the actual convergence of attitudes) from conversational content and form. None of the indicators that we used in the form or content of interaction consistently predicted attitude consensualization from pre- to post-measurement. This finding raises an interesting question regarding the suitability of conversations in overcoming attitudinal differences. Being positioned as a platform for finding common ground (e.g., H. H. Clark, 1996) and the cornerstone for healthy democratic functioning (Cappella et al., 2002; Gamson et al., 1992; Mutz et al., 2006); it appears that the consensus that emerges from conversation is mainly experiential, but not necessarily reflected in actual consensualization of attitudes. Does this mean that conversations play a trivial role? We would argue against that: the experience of consensus and, conversely, polarization have, quite independently of actual opinion differences, been related to a range of consequences that are very real: intergroup trust (Iyengar et al., 2019; Schudson et al., 1997) solidarity (Koudenburg et al., 2017; Roos et al., 2022) and attitude moralization (D'Amore et al., 2023). The actual potential for a conversation to bridge opinion differences requires further examination and is likely to require more than a single conversation but the current research does point to its potential to improve the *experience* of being on the same wavelength.

We would like to point out one interesting observation with regard to the relationship between conversational flow and attitude consensualization. In both studies, either the flow ratings by observers or group members themselves were predictive of attitude consensualization (or polarization) within the group. The direction of these effects, however, depended on the specific study context and the specificity of the attitude investigated. In Study 1, observers' ratings of flow were related more to polarization on the specific attitude but related to consensualization on the general attitude. In Study 2, we found that group member's ratings of flow were related to consensualization on the specific attitude, but had no relation to consensualization on the general attitude. Such contrasting findings will never be suitable for drawing definite conclusions but they do raise questions that could inspire further investigation.

First, the findings suggest that it is theoretically possible that processes of specific attitude divergence go hand-in-hand with general attitude divergence and vice versa. For instance, one may confirm agreement on a general attitude, before being able to enjoy a quarrel about the specifics of the regulation that is discussed (e.g., 'I agree we need to inspire every effort to accommodate refugees in the Dutch education system, but maybe admitting the top 25% without further consideration is a bit too lenient'). Alternatively, the general attitude

may change in the background of the specific attitude that is explicitly discussed. For instance, discussing the exact conditions by which refugees should or can be admitted to the Dutch/German education system may, in the background, communicate a loosening of the quite strict norms within the generally leftist student population on welcoming refugees.

Second, the inconsistencies suggest that methodological decisions on measuring consensualization or polarization need to carefully reflect on the specificity on which attitude consensualization or polarization is expected, considering that the effects on these levels may diverge quite tremendously. Going one step further, these results may evoke questions about the validity of attitude convergence measures in assessing the emergence of consensus and polarization, if the effects are so easily reversed. Perhaps, and depending on the study aims,¹¹ evaluating the subjective experience of consensus may provide better value for assessing conversation outcomes.

Concluding thoughts. The findings suggest that whereas the content and form of conversations have strong effects on the experience of consensus, they are less likely to affect attitude consensualization. This finding aligns with research demonstrating the stability of attitudes over time, where social norms (in the sense of which attitudes are appropriate to express) may vary heavily over time (Manfredi et al., 2020). This may lead one to question the value of everyday political conversations for reaching consensus. However, one could also interpret the findings as conversations being a means to reap the benefits of a shared reality experience, despite underlying attitudinal differences.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data and analyses that support the findings of the studies are shared in a publicly available repository on dataverse.nl at <https://doi.org/10.34894/6IOPCF>

ETHICS STATEMENT

All studies in this paper were approved by the ethics board of psychology of the University of Groningen and the University of Osnabruck. All participants gave their informed consent before participating in the studies.

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REFERENCES

- Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, 70(9), 1.
- Baldassarri, D., & Bearman, P. (2007). Dynamics of political polarization. *American Sociological Review*, 72(5), 784–811.
- Bandura, A. (1977). *Social learning theory*. Prentice Hall.
- Beňuš, Š., Gravano, A., & Hirschberg, J. (2011). Pragmatic aspects of temporal accommodation in turn-taking. *Journal of Pragmatics*, 43(12), 3001–3027.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage* (Vol. 4). Cambridge University Press.
- Caluwaerts, D., & Reuchamps, M. (2014). Does inter-group deliberation foster inter-group appreciation? Evidence from two experiments in Belgium. *Politics*, 34(2), 101–115. <https://doi.org/10.1111/1467-9256.12043>
- Cappella, J., Price, V., & Nir, L. (2002). Argument repertoire as a reliable and valid measure of opinion quality: Electronic dialogue during campaign 2000. *Political Communication*, 19(1), 73–93. <https://doi.org/10.1080/105846002317246498>
- Cialdini, R. B. (2001). *Influence: Science and practice*. Allyn & Bacon.
- Clark, H. H. (1996). *Using language*. Cambridge University Press.
- Clark, A. E., & Kashima, Y. (2007). Stereotypes help people connect with others in the community: A situated functional analysis of the stereotype consistency bias in communication. *Journal of Personality and Social Psychology*, 93, 1028–1039.
- Coman, A., Brown, A. D., Koppel, J., & Hirst, W. (2009). Collective memory from a psychological perspective. *International Journal of Politics, Culture, and Society IJPS*, 22(2), 125–141.
- D'Amore, C., Van Zomeren, M., & Koudenburg, N. (2023). Structural Polarization Amplifies Attitude Moralization in Response to Reminders of Harmful Outgroup Actions: A Four-Wave Longitudinal Study in the 2020 US Election Context. Manuscript submitted for publication.
- Dugard, P., & Todman, J. (1995). Analysis of pre-test-post-test control group designs in educational research. *Educational Psychology*, 15(2), 181–198. <https://doi.org/10.1080/0144341950150207>
- Eysenck, H. J., & Crown, S. (1948). National stereotypes: An experimental and methodological study. *International Journal of Opinion and Attitude Research*, 2, 26–39.
- Feldman, D. C. (1984). The development and enforcement of group norms. *Academy of Management Review*, 9, 47–53. <https://doi.org/10.2307/258231>
- Festinger, L. (1950). Informal social communication. *Psychological Review*, 57, 271–282. <https://doi.org/10.1037/h0056932>
- Festinger, L., & Thibaut, J. (1951). Interpersonal communication in small groups. *Journal of Abnormal and Social Psychology*, 46, 92–99. <https://doi.org/10.1037/h0054899>
- Gamson, W. A. (1992). *Talking politics*. Cambridge University Press.
- Goffman, E. (1959). *The presentation of self in everyday life*. Doubleday Anchor.
- Hallgren, K. A. (2012). Computing inter-rater reliability for observational data: An overview and tutorial. *Tutorials in Quantitative Methods for Psychology*, 8(1), 23–34. <https://doi.org/10.20982/tqmp.08.1.p023>
- Hamilton, D. L., & Trolie, T. K. (1986). Stereotypes and stereotyping: An overview of the cognitive approach. In J. F. Dovidio & S. L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 127–163). Academic Press.
- Hardin, C. D., & Conley, T. D. (2001). A relational approach to cognition: Shared experience and relationship affirmation in social cognition. In G. B. Moskowitz (Ed.), *Cognitive social psychology: The Princeton Symposium on the Legacy and Future of Social Cognition* (pp. 3–17). Lawrence Erlbaum.

¹¹ The subjective experience of consensus or dissensus may be more meaningful in terms of conflict than actual attitude convergence or divergence (cf. Iyengar et al., 2019) but measurement should ultimately be informed by the study aims. In a similar vein, the aim to uncover conversational mechanisms, rather than an assessment of consensus, can inform a preference of specific behavioural coding over global assessments of flow.

- Hardin, C. D., & Higgins, E. T. (1996). Shared reality: How social verification makes the subjective objective. In R. Sorrentino & E. T. Higgins (Eds.), *Handbook of motivation and cognition* (Vol. 3, pp. 28–84). Guilford Press.
- Haslam, S. A., Eggers, R. A., & Reynolds, K. J. (2003). The ASPIRe model: Actualizing social and personal identity resources to enhance organizational outcomes. *Journal of occupational and organizational psychology*, 76(1), 83–113.
- Haslam, S. A., Oakes, P. J., Reynolds, K. J., & Turner, J. C. (1999). Social identity salience and the emergence of stereotype consensus. *Personality and Social Psychology Bulletin*, 25(7), 809–818.
- Hinsz, V. B., Tindale, R. S., & Vollrath, D. A. (1997). The emerging conceptualization of groups as information processors. *Psychological Bulletin*, 121(1), 43.
- Holmes, J. (2000). Politeness, power and provocation: how humour functions in the workplace. *Discourse Studies*, 2(2), 159–185.
- Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., & Westwood, S. J. (2019). The origins and consequences of affective polarization in the United States. *Annual Review of Political Science*, 22(1), 129–146.
- Jans, L., Postmes, T., & Van der Zee, K. I. (2011). The induction of shared identity: The positive role of individual distinctiveness for groups. *Personality and Social Psychology Bulletin*, 37(8), 1130–1141.
- Kashima, Y., Klein, O., & Clark, A. E. (2007). Grounding: Sharing information in social interaction. In K. Fiedler (Ed.), *Social communication* (pp. 30–77). Psychology Press.
- Kashima, Y., Lyons, A., & Clark, A. (2013). The maintenance of cultural stereotypes in the conversational retelling of narratives. *Asian Journal of Social Psychology*, 16(1), 60–70.
- Kim, N., Fishkin, J. S., & Luskin, R. C. (2018). Intergroup contact in deliberative contexts: Evidence from deliberative polls. *Journal of Communication*, 68, 1029–1051.
- Klein, O., Jacobs, A., Gemoets, S., Licata, L., & Lambert, S. M. (2003). Hidden profiles and consensualization of social stereotypes: How information distribution affects stereotype content and sharedness. *European Journal of Social Psychology*, 33(6), 755–777.
- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of chiropractic medicine*, 15(2), 155–163.
- Koudenburger, N., Gordijn, E. H., & Postmes, T. (2014). "More than words": Social validation in close relationships. *Personality and Social Psychology Bulletin*, 40, 1517–1528. <https://doi.org/10.1177/0146167214549945>
- Koudenburger, N., Greijdanus, H. J. E., & Scheepers, D. T. (2019). The polarizing effects of group discussion in a negative normative context: Integrating societal, group and individual level factors. *Special section on Understanding rapid societal change: Emerging perspectives and methods*, *British Journal of Social Psychology*, 58(1), 150–174. <https://doi.org/10.1111/bjso.12282>
- Koudenburger, N., Kannegieter, A., Postmes, T., & Kashima, Y. (2021). The subtle spreading of sexist norms. *Group Processes & Intergroup Relations*, 24(8), 1467–1485. <https://doi.org/10.1177/1368430220961838>
- Koudenburger, N., & Kashima, Y. (2022). A polarized discourse: Effects of opinion differentiation and structural differentiation on communication. *Personality and Social Psychology Bulletin*, 48(7), 1068–1086. <https://doi.org/10.1177/01461672211030816>
- Koudenburger, N., Postmes, T., & Gordijn, E. H. (2011). Disrupting the flow: How brief silences in group conversations affect social needs. *Journal of Experimental Social Psychology*, 47(2), 512–515. <https://doi.org/10.1016/j.jesp.2010.12.006>
- Koudenburger, N., Postmes, T., & Gordijn, E. H. (2013a). Conversational flow promotes solidarity. *PLoS ONE*, 8(11), e78363. <https://doi.org/10.1371/journal.pone.0078363>
- Koudenburger, N., Postmes, T., & Gordijn, E. H. (2013b). Resounding silences: Subtle norm regulation in group interaction. *Social Psychology Quarterly*, 76(3), 224–241. <https://doi.org/10.1177/0190272513496794>
- Koudenburger, N., Postmes, T., & Gordijn, E. H. (2017). Beyond content of conversation: the role of conversational form in the emergence and regulation of social structure. *Personality and Social Psychology Review*, 21(1), 50–71. <https://doi.org/10.1177/1088868315626022>
- Krueger, J., & Clement, R. W. (1994). The truly false consensus effect: An ineradicable and egocentric bias in social perception. *Journal of Personality and Social Psychology*, 67, 596–610. <https://doi.org/10.1037/0022-3514.67.4.596>
- Ladegaard, H. J. (2009). Politeness, power and control: The use of humour in cross-cultural telecommunications. *Professional communication: Collaboration between academics and practitioners*, 191–209.
- Lewin, K. (1948). Resolving social conflicts: Selected papers on group dynamics.
- Lewin, K. (1997). *Resolving social conflicts: Selected papers on group dynamics*. American Psychological Association. (Original work published 1948).
- Light, R. J. (1971). Measures of response agreement for qualitative data: Some generalizations and alternatives. *Psychological Bulletin*, 76(5), 365–377.
- Linstead, S. (1988). 'Jokers wild': Humour in organisational culture. *Humour in Society* (pp. 123–148). Palgrave Macmillan.
- Lorenz, J., Neumann, M., & Schröder, T. (2021). Individual attitude change and societal dynamics: Computational experiments with psychological theories. *Psychological Review*, 128(4), 623.
- Lowery, B. S., Unzueta, M. M., Knowles, E. D., & Goff, P. A. (2006). Concern for the in-group and opposition to affirmative action. *Journal of Personality and Social Psychology*, 90(6), 961–974. <https://doi.org/10.1037/0022-3514.90.6.961>
- Manfredi, R., Guazzini, A., Roos, C. A., Postmes, T., & Koudenburger, N. (2020). Private-public opinion discrepancy. *PLoS one*, 15(11), e0242148.
- Martin, R., & Hewstone, M. (2008). Majority versus minority influence, message processing and attitude change: The source-context-elaboration model. *Advances in experimental social psychology*, 40, 237–326.
- Mead, G. H. (1934). *Mind, self, and society*. University Chicago Press.
- McGarty, C., Bliuc, A. M., Thomas, E. F., & Bongiorno, R. (2009). Collective action as the material expression of opinion-based group membership. *Journal of Social Issues*, 65(4), 839–857.
- Medvedev, A., Lambiotte, R., & Delvenne, J.-C. (2019). The anatomy of reddit: An overview of academic research. In F. Ghanbarnejad, R. S. Roy, F. Karimi, J.-C. Delvenne, & B. Mitra (Eds.), *Dynamics On and Of Complex Networks III: Machine Learning and Statistical Physics Approaches* (pp. 183–204). Springer Proceedings in Complexity. https://doi.org/10.1007/978-3-030-14683-2_9
- Milgram, S., Liberty, H. J., Toledo, R., & Wackenhut, J. (1986). Response to intrusion into waiting lines. *Journal of Personality and Social Psychology*, 51, 683–689. <https://doi.org/10.1037/0022-3514.51.4.683>
- Moscovici, S. (1976). *Social influence and social change* (Ser. *European monographs in social psychology* (10de editie)). Published in cooperation with European Association of Experimental Social Psychology by Academic Press.
- Moscovici, S., & Personnaz, B. (1980). Studies in social influence: V. Minority influence and conversion behavior in a perceptual task. *Journal of Experimental Social Psychology*, 16(3), 270–282. [https://doi.org/10.1016/0022-1031\(80\)90070-0](https://doi.org/10.1016/0022-1031(80)90070-0)
- Mutz, D. C. (2006). *Hearing the other side: Deliberative versus participatory democracy*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511617201>
- O'Brien, L. T., Garcia, D., Crandall, C. S., & Kordys, J. (2010). White Americans' opposition to affirmative action: Group interest and the harm to beneficiaries objection. *British Journal of Social Psychology*, 49(4), 895–903. <https://doi.org/10.1348/014466610x518062>
- Okhuysen, G. A., & Richardson, H. A. (2007). Group conflict as an emergent state: Temporal issues in the conceptualization and measurement of disagreement. In K. J. Behfar & L. L. Thompson (Eds.), *Conflict in organizational groups: New directions in theory and practice*: 145–180. Northwestern University Press.

- Paicheler, G. (1977). Norms and attitude change II: The phenomenon of bipolarization. *European Journal of Social Psychology*, 7(1), 1–14.
- Postmes, T., Gordijn, E., Kuppens, T., Gootjes, F., & Albada, K. (2017). Draagvlak migratiebeleid. Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC). <https://repository.wodc.nl/handle/20.500.12832/2332>
- Postmes, T., Haslam, S. A., & Swaab, R. I. (2005). Social influence in small groups: An interactive model of social identity formation. *European Review of Social Psychology*, 16, 1–42. <https://doi.org/10.1080/104632804400000062>
- Postmes, T., Spears, R., & Lea, M. (2002). Intergroup differentiation in computer-mediated communication: Effects of depersonalization. *Group Dynamics: Theory, Research, and Practice*, 6(1), 3.
- Postmes, T., Spears, R., & Cihangir, S. (2001). Quality of decision making and group norms. *Journal of Personality and Social Psychology*, 80(6), 918.
- Roos, C. A., Postmes, T., & Koudenburg, N. (2020). The micro-dynamics of social regulation: Comparing the navigation of disagreements in text-based online and face-to-face discussions. *Group Processes & Intergroup Relations*, 23(6), 902–917. <https://doi.org/10.1177/1368430220935989>
- Roos, C. A., Koudenburg, N., & Postmes, T. (2020). Online social regulation: When everyday diplomatic skills for harmonious disagreement break down. *Journal of Computer-Mediated Communication*, 25(6), 382–401. <https://doi.org/10.1093/jcmc/zmaa011>
- Roos, C. A., Koudenburg, N., & Postmes, T. (2022). Dealing with disagreement: The depolarizing effects of everyday diplomatic skills face-to-face and online. *New Media & Society*, 24(9), 2153–2176.
- Ross, L., Greene, D., & House, P. (1977). The false consensus effect: An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, 13, 279–301. [https://doi.org/10.1016/0022-1031\(77\)90049-X](https://doi.org/10.1016/0022-1031(77)90049-X)
- Sani, F., & Reicher, S. (1998). When consensus fails: An analysis of the schism within the Italian Communist Party. *European Journal of Social Psychology*, 28, 623–645.
- Sani, F., & Reicher, S. (1999). Identity, argument and schism: Two longitudinal studies of the split in the church of England over the ordination of women to the priesthood. *Group Processes & Intergroup Relations*, 2(3), 279–300. <https://doi.org/10.1177/1368430299023005>
- Schachter, S. (1951). Deviance, rejection, and communication. *Journal of Abnormal and Social Psychology*, 46, 190–207.
- Schudson, M. (1997). Why conversation is not the soul of democracy. *Critical Studies in Media Communication*, 14(4), 297–309. <https://doi.org/10.1080/15295039709367020>
- Smith, L. G. E., & Postmes, T. (2011). The power of talk: Developing discriminatory group norms through discussion. *British Journal of Social Psychology*, 50, 193–215. <https://doi.org/10.1348/014466610x504805>
- Stangor, C. G., & Lange, J. E. (1993). Cognitive representations of social groups: Advances in unconceptualizing stereotypes and stereotyping. S. 357–416. in: Mark P. Zanna (Hg.). *Advances in Experimental Social Psychology*, 26.
- Stasser, G., & Titus, W. (1985). Pooling of unshared information in group decision making: Biased information sampling during discussion. *Journal of Personality and Social Psychology*, 48(6), 1467–1478. <https://doi.org/10.1037/0022-3514.48.6.1467>
- Stalnaker, R. (2002). Common ground. *Linguistics and philosophy*, 25(5/6), 701–721.
- Stoner, J. A. F. (1961). *A comparison of individual and group decisions involving risk*, Doctoral dissertation, Massachusetts Institute of Technology.
- Tetlock, P. E., Kristel, O., Elson, S. B., Green, M., & Lerner, J. (2000). The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical counterfactuals. *Journal of Personality and Social Psychology*, 78, 853–870. <https://doi.org/10.1037/0022-3514.78.5.853>
- Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Blackwell.
- Van Atteveldt, W., van der Velden, M. A. C. G., & Boukes, M. (2021). The validity of sentiment analysis: Comparing manual annotation, crowd-coding, dictionary approaches, and machine learning algorithms. *Communication Methods and Measures*, 15(2), 121–140. <https://doi.org/10.1080/19312458.2020.1869198>

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