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Who influences lower-status individuals more: People of higher-status outgroups or people of their lower-status ingroup? Examining the difference between matters of opinion and matters of fact

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ABSTRACT

People are influenced by members of high-status groups and members of their ingroup. These principles of “status orientation” and “ingroup orientation” can imply opposing forces for people of lower status. Are lower-status individuals more influenced by members of higher-status outgroups or by members of their lower-status ingroup? Engaging status characteristics theory and self-categorization theory, we predict that status orientation is relatively stronger on questions about facts, which have an objectively correct answer, whereas ingroup orientation is stronger when it comes to ‘opinion questions’ that have no objectively correct answer. Results of an online survey experiment confirm that on factual questions, less-educated individuals are more strongly influenced by highly-educated outgroup individuals than by less-educated ingroup individuals. On opinion questions, we observe relatively weaker status orientation, with status orientation and ingroup orientation being about equally strong. These findings suggest that it is harder to reach societal consensus on opinion questions than on factual questions.

1. Introduction

Many pundits were taken by surprise by opinion dynamics and their outcomes related to events like Brexit, the election of Donald Trump, or fierce resistance against Covid-policies. Some argue that increasing inequality and distrust of less-educated individuals in a higher-educated “societal elite” may fuel societal polarization (Spruyt and Kuppens, 2015; Evans and Tilley 2017; Gidron and Hall 2020). The less educated might deem the highly educated a societal outgroup with conflicting interests and social norms, and they might thus be more inclined to follow views of other less-educated people instead. On the other hand, this notion is challenged by the idea that the less educated might also be particularly open to social influence from the highly educated because they consider them as better-informed and more competent regarding complex societal issues (Ridgeway et al. 1994).

Research provides evidence for both these effects of status ordering and group membership. First, individuals were found to be more susceptible to influence from people of high status than people of low status (Kalkhoff and Barnum, 2000; Carli 2001; Galak et al.,

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2016; Melamed and Savage 2016; but see also Toff and Suhay, 2019). Second, shared group membership fosters influence (Barnum and Markovsky 2007; Stallen et al., 2012; Genschow and Schindler, 2016; Hysenbelli et al., 2013; Spears 2021). However, the empirical literature does not identify conditions that favor one or the other process in interactions between members of different societal groups. In particular, it is not known which process dominates in situations where they generate opposite forces, like in the case where a member of a lower-status group may or may not reject influence from a person belonging to a higher-status outgroup.

The principles of “status orientation” and “ingroup orientation” are well understood through the lens of status characteristics theory and self-categorization theory, respectively. Status characteristics theory (Berger et al. 1972; Webster and Walker, 2022; chap. 1–3) supposes that individuals derive expectations about the competence of others from attributes (“status characteristics”) such as gender, race/ethnicity, or educational attainment. Whether a given attribute carries competence expectations depends on the context, but it is often the members of groups that we generally refer to as high-status or high-prestige groups that also have high status in the sense that they are expected to be competent (c.f. Kalkhoff et al., 2008; Ridgeway 2014; Gordon et al., 2018) and who therefore, according to status characteristics theory, exert stronger influence on others. On the other hand, self-categorization theory (Turner et al., 1987; Turner and Reynolds 2012) posits that the viewpoints of groups one identifies with contribute to one’s self-concept, that influence follows from uncertainty that is experienced when one disagrees with ingroup members, and that people tend to trust ingroup members to provide valid information. Self-categorization theory, a branch of the “social identity perspective” (Hornsey 2008:208,210), thus predicts that individuals are inclined to adopt the views of ingroup members (see Kalkhoff and Barnum, 2000; for a review of the two theories).

In this paper, we examine a scenario for which status orientation and ingroup orientation imply opposing forces: We study persons belonging to a lower-status group who receive conflicting signals from an ingroup member and a member of a higher-status outgroup. Following the logic of status characteristics theory, the person should adopt the view of the higher-status outgroup source. By contrast, following the logic of self-categorization theory, the person should be more strongly influenced by the ingroup source.

We argue that the relative strength of status orientation and ingroup orientation depends on whether the issue at stake is a belief about a fact or a subjective opinion. Factual beliefs, such a belief about how much government spending grew over the past decade, can be objectively correct or incorrect, whereas subjective opinions, like an opinion about whether the growth of government spending was problematic, cannot be judged objectively as correct or not.¹ Although distinguishing between factual beliefs and subjective opinions is key in societal discussions, the social influence literature has paid rather little attention to this distinction. Empirical studies predominantly focused on factual beliefs (cf. Hornsey et al., 2003), and even if recent research indicates comparable susceptibility to influence on opinion questions as on factual questions (Franzen and Mader, 2023), it seems likely that who is influenced by whom depends on whether the subject matter concerns a factual issue or a subjective opinion.

We predict that status orientation is relatively stronger on factual questions, whereas ingroup orientation is relatively stronger on opinion questions. To test our predictions, we conducted an online survey experiment. We asked 592 less-educated participants about their factual beliefs and subjective opinions while providing them with conflicting cues from highly-educated outgroup individuals and less-educated ingroup individuals. Our experiment sheds light on a contextual factor that may determine whether status orientation or ingroup orientation prevails in social influence between educational groups.

Previous experiments on patterns of influence across hierarchically ordered groups focused exclusively on factual questions or used weak manipulations of the fact/opinion dimension. In the domain of factual questions, status seems to weigh heavier than shared group membership: Study participants seem to be more influenced by higher-status sources than by ingroup sources when guessing the meaning of contrived words (Kalkhoff and Barnum, 2000) or the size of areas in geometrical figures (Savage Scott and Melamed, 2022). Whether ingroup orientation is stronger in the domain of opinions is not clear. Oldmeadow et al. (2003) did not observe differences in the patterns of influence across a ‘factual condition’ in which a word interpretation task was presented as a task with an objectively correct solution and an ‘opinion condition’ in which the word interpretations offered by the sources were described as the sources’ opinions. However, this may reflect that also participants in the opinion condition expected that the task has an objectively correct answer (Oldmeadow et al., 2003:148). In our study, we implemented a stronger manipulation of the fact/opinion dimension than previous work.

Our investigation focuses on issues that are topical. We agree with Hornsey et al.’s (2003:322) argument that social influence may look differently on highly stylized tasks than on more societally relevant topics. Therefore, we study social influence on beliefs about social and political facts, such as the magnitude of income inequality or government spending, and on opinions about such social and political facts. Similarly, we focus on an actual social cleavage by examining influence across educational groups, rather than, for example, the artificial groups studied in the minimal-group paradigm. Our study can therefore provide insights on influence processes in a context of high societal relevance.

We do not claim that our study provides a “decisive” test between two competing theories (status characteristics theory and self-categorization theory). We employ these theories to derive predictions for a context that arguably has some mismatch with their scope (see Section 2). Our results thus provide insights into influence processes across status groups in general and across educational groups in particular, and to some extent also into the generalizability of status characteristics theory and self-categorization theory.

¹ The fact/opinion distinction is not always entirely clear-cut and an issue may sometimes be placed on a continuum between the two extremes (see Sanders 1987).

2. Theoretical expectations

We argue that status characteristics theory and self-categorization theory are not equally suitable for the domains of factual beliefs and subjective opinions. This suggests differences in patterns of influence across these domains. Status characteristics theory was developed to explain influence patterns in task groups that try to jointly identify the correct solution to some problem. ‘Status characteristics’ refer to attributes of actors that are in a given context commonly associated with expectations of competence, i.e., expectations that an individual is able to identify the correct solution. This notion of competence poorly fits the context of opinion questions that do not have an objectively correct answer. In addition, two key scope conditions of status characteristics theory may not be met in the context of opinion questions (Dippong, 2012; Foschi, 1997). The condition of ‘task orientation’ (i.e., motivation to perform well) is likely violated because it is not clear what represents good performance. Likewise, the condition of ‘collective orientation’, which requires that individuals are willing to take into account another’s views and learn from each other, may not be met since individuals may feel entitled to their own personal opinion and discard others’ views, especially those of outgroup members. Hence, status characteristics theory may poorly describe influence processes in the domain of opinion questions.

Conversely, self-categorization theory seems more suited to capture influence in the domain of subjective opinions than in the domain of beliefs about facts. A scope condition of self-categorization theory is the salience of group identities. Arguably, questions about the subjective evaluation of facts render group identities salient because they hint on group-specific interests and potential disagreement between groups. By contrast, group identities may not be salient in the context of factual questions because facts can be seen as properties of a superordinate category (cf. Oldmeadow et al., 2003:142). These arguments lead us to predict:

H1. The likelihood that a lower-status individual adopts the position of a higher-status outgroup source rather than the position of a lower-status ingroup source is larger on factual questions than on opinion questions.

Note that we do not argue that influence processes on factual questions fit the scope of status characteristics theory perfectly while they do not at all fit the scope of self-categorization theory. Likewise, we do not claim that influence dynamics on opinion questions precisely match the scope of self-categorization theory and not at all the scope of status characteristics theory. For instance, people may not see a need to agree with others in their beliefs about the magnitude of government spending (violating status characteristics theory’s scope condition of ‘collective orientation’), and it may be that many less-educated people do not perceive educational groups as salient when providing a subjective evaluation of the magnitude of government spending (violating self-categorization theory’s scope condition of the salience of group memberships). Our argument is that status characteristics theory *better* fits the context of beliefs about facts than the context of subjective opinions whereas self-categorization theory *better* fits the context of opinions than the context of beliefs about objective facts. Accordingly, we expect relatively more status orientation when the subject matter concerns a factual issue and relatively more ingroup orientation when subjective opinions are formed.

We, furthermore, examine whether the effects of status and shared group membership depend on how strongly individuals identify with their group. It has been argued that self-categorization theory implies that people identifying little with ‘their group’ are less likely to adopt the views of ingroup members (Hornsey 2008:213). The prevalence of such ‘low identifiers’ may be high in lower-status groups (as Kuppens et al., 2015, show for the less educated) because members of lower-status groups may try to achieve a favorable social identity by psychologically distancing themselves from “their group.” We thus expect:

H2. If lower-status individuals identify less with “their group,” this increases the likelihood that they adopt the position of a higher-status outgroup source rather than that of a lower-status ingroup source.

3. Method

3.1. Design of the online survey experiment²

All participants of our online survey experiment were White U.S.A. residents with U.S.A citizenship, of age 30 to 50, and they were of a lower-status group in that they all had a high-school diploma or less as their highest educational certificate. We presented each participant nine questions on social and political topics. Each question had two answer options, and when answering a question, participants could see the answers and socio-demographic profiles of two respondents (henceforth “alters”) who had filled in the questionnaire earlier (see Fig. 1).

The experiment varied the answer choices of alters. On the five questions used to test the hypotheses (“critical questions”), participants received conflicting cues from an “ingroup alter” who likewise had at maximum a high-school diploma and a “higher-status (outgroup) alter” with at least a bachelor’s degree, as in Fig. 1. Both alters were White and of age 30 to 50, just as the participants themselves. The higher-educated alter can be described as “higher-status alter” because we had beforehand established that on the

² The study procedures and materials were approved by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Groningen.

How did the budget of the U.S. National Park Service develop between 2010 and 2020? Did it decrease or change little, or did it increase by more than 20%?

Age, ethnicity, education, and answer to the above question of two previous participants:

Respondent 1e0b6	Respondent 1b285
30 to 50	30 to 50
White	White
High school diploma or less	Bachelor's, master's, or doctorate degree
Decrease or little change	Increase more than 20%

What do you think?

Decrease or little change

Increase more than 20%

Fig. 1. Example question, including information on two previous respondents and their responses to the question.

topics of the critical questions our participants will expect the higher-educated alter to be more competent than the less-educated alter (see Section 2.3).³ On each critical question, participants were assigned randomly to the scenario in which the higher-status alter supported the first answer while the ingroup alter supported the second answer (as in Fig. 1) or the reverse scenario. Comparing the rate at which the two answers were chosen across these two scenarios allows for assessing the relative strength of status orientation and ingroup orientation.

For each factual question, we formulated a related opinion question. For instance, the opinion question related to the factual question in Fig. 1 was:

The budget of the U.S. National Park Service (NPS) increased from 2010 to 2020 from \$3.1 billion to \$3.9 billion. Some find it problematic that the NPS budget grew so much in only a decade, while money was short for some other purposes. Others find it crucial that a wealthy country like the U.S. protects its valuable landscapes and historical sites. They also stress that between 2010 and 2020 the NPS acquired several monuments of importance to the nation's history.

What is your opinion: Is this growth of the NPS budget problematic or not an issue?

To highlight the subjective character of opinion questions, the presented text included arguments for both possible answers. When choosing these arguments, we tried to make it possible for many participants to adopt either position and to interpret either position as prototypical for the group of the less educated (cf. Wood et al., 1996). The fact/opinion dimension was varied between subjects: A participant was either presented all nine factual questions or all nine opinion questions.

Participants first gave their informed consent and answered questions about their gender, age, race/ethnicity, educational attainment, political orientation, and education-based group identity. The questions on age, race/ethnicity, and educational attainment had the same answering categories as shown in the descriptions of alters.⁴ Of the subsequent nine questions about social and political topics, questions 2, 4, 6, 8, and 9 were designed to test the hypotheses. To allay suspicion, questions 1, 3, 5, and 7 featured agreement among the two alters or alters with a different age, education, or ethnicity. We also included two trivial attention check questions (one in the block of demographic questions, one after question 1) and excluded participants who failed one of them. We also added a memory question (after question 5) asking participants whether the two alters they have just been shown had the same education. Appendix A provides an overview of the five critical questions and the replication package contains the full questionnaires.

3.2. Collection of information about previous respondents (alters)

The alter profiles shown to participants were based on data from a pre-study in which a separate sample of 50 respondents answered the same questions (without being shown information about previous respondents). This pre-study oversampled White individuals of age 30 to 50 in order to populate the profiles displayed on the critical questions.⁵ Information about previous

³ We matched participant race/ethnicity and age to enable that differences and similarities in education activate group categorizations, similar as typically done in minimal group designs. The choice for White US citizens of age 30 to 50 was guided by the number of available participants and substantive reasons. Younger participants may still be in education or see the highest education of others of their age as non-final. We also expected that perceived education-related social stratification will be higher among those above 30 than among those below.

⁴ The categories were: *age*: Under 30, 30 to 50, Over 50, Prefer not to say; *race*: White, Asian, Hispanic, African-American, Other namely ..., Prefer not to say; *education*: High school diploma or less, Some post-high-school, no bachelor's degree, Bachelor's, master's, or doctorate degree.

⁵ Because information about previous respondents was truthful, respondent IDs displayed in the profiles (compare Fig. 1) could not be kept constant across the scenarios "higher-status alter chose answer 1; ingroup alter chose answer 2" and "higher-status alter chose answer 2; ingroup alter chose answer 1". We showed respondent IDs to signal that the profiles pertain to real previous participants (a fact that was stressed also in the instructions) and we assume that the specific IDs did not affect participant behavior.

respondents was thus truthful in the sense that alter profiles showed information pertaining to real participants. However, the presented profiles were hand-picked and not representative in terms of answers chosen by alters with specific characteristics.

3.3. Measurement of competence expectations

To assert that participants tended to expect people with a bachelor's degree to be more competent, we ran a pre-study with 60 respondents, recruited with the same screening criteria as used for the actual experiment. They were shown the factual questions together with the alter profiles but not the alters' answers, and we asked them to guess which alter had chosen the correct answer. We paid respondents a bonus of \$0.1 per correct guess to prevent ingroup-flattering answering. Appendix B details how this was used to decide which questions met the scope condition and which questions instead had to be used as "distraction questions".

3.4. Recruitment

Participants were recruited in early 2022 via advertisements on Prolific and redirected to our online questionnaires. First, we recruited 129 participants to collect responses of "alters", then another 60 participants for measuring competence expectations, and finally 714 participants for the actual survey experiment (participation fee: \$2.0). 122 participants of the latter sample were excluded for not meeting eligibility criteria, failing an attention check, or not finishing the study, leaving a sample of 592 participants. Details on recruitment and remuneration can be found in Appendix C.

3.5. Analysis

We investigate the probability that a participant follows the higher-status alter, i.e., chooses the same answer as the higher-status alter. If participants had been equally status oriented as ingroup oriented or if they had not been influenced by the information about alters, they should have followed the higher-status alter and the ingroup alter equally often. To assess whether observed following probabilities deviate significantly from this 50-50 baseline, we use logistic regressions with standard errors adjusted for the fact that each participant answered five critical questions.⁶

A replication package including the data, analysis code, and questionnaires is available at <https://osf.io/xewfz> (DOI: <https://doi.org/10.17605/OSF.IO/XEWFZ>).

4. Results

Fig. 2 shows how often our less-educated participants followed the alter with a college degree (higher-status alter) and the alter who had only a high-school diploma (ingroup alter). On factual questions (Fig. 2A), in 63% of the choices, participants opted for the answer that was supported by the higher-status alter (the remaining 37% of choices coincided with the answer of the ingroup alter). A logistic regression of the dichotomous variable 'followed higher-status alter' on a constant shows that the odds of choosing the same answer as the higher-status alter significantly exceeded 1 (odds = 1.7; $p < 0.001$, Table 1, M1).

On opinion questions (Fig. 2B), participants followed the higher-status alter and the ingroup alter about equally often (51% vs 49%), and the difference is not significant (odds of following the higher-status alter = 1.06; $p = 0.298$; Table 1, M2). Thus, on opinion questions, status orientation and ingroup orientation were about equally strong. Because our design enables only an assessment of the relative strength of the two forces, we cannot exclude that both status orientation and ingroup orientation were absent, or that participants paid no attention to the profiles and answers of alters. We return to this in the Conclusion section.

The comparison of panels A and B of Fig. 2 suggests that participants were more inclined to adopt the higher-status alter's answer on factual questions than on opinion questions. A regression of 'followed higher-status alter' on the binary predictor 'factual question' shows that the odds of following the higher-status alter were 61% higher on factual questions than on opinion questions (odds ratio = 1.61; $p < 0.001$; Table 1, M3). This supports H1 ('relative to ingroup orientation, status orientation is stronger on factual questions than on opinion questions').

Contrary to H2, identification with the ingroup of the less educated did not increase ingroup orientation relative to status orientation. Participants indicated their 'ingroup identification' on a 5-point scale ranging from '1 = Feel highly attached to the group of people with high education' to '5 = Feel highly attached to the group of people with low education' (adopted from Stubager, 2009). Regressions of 'followed higher-status alter' on 'ingroup identification' show that ingroup identification did not significantly affect the odds of adopting the higher-status alter's answer, neither overall (odds ratio = 1.05; $p = 0.451$; Table 1, M4) nor separately on factual questions or opinion questions ($p \geq 0.609$; models not reported).⁷

Findings hardly varied across the five critical questions. Appendix A reports analyses analogous to Table 1 for each question separately. On four of the factual questions, status orientation exceeded ingroup orientation ($p < 0.001$) while this pattern fell short of statistical significance on one factual question ($p = 0.072$). On all opinion questions, the odds of following the higher-status alter did not differ significantly from 1 ($p \geq 0.073$). Participants' inclination to follow the higher-status alter was significantly higher on the

⁶ Analyses were performed in Stata 17 and variance-covariance matrixes were estimated using the clustered sandwich estimator.

⁷ Using instead of the continuous measure a dummy 'low-identifiers' (1 for respondents who chose answering category '1' or '2') also leads to the conclusion that low ingroup identification does not decrease ingroup orientation relative to status orientation.

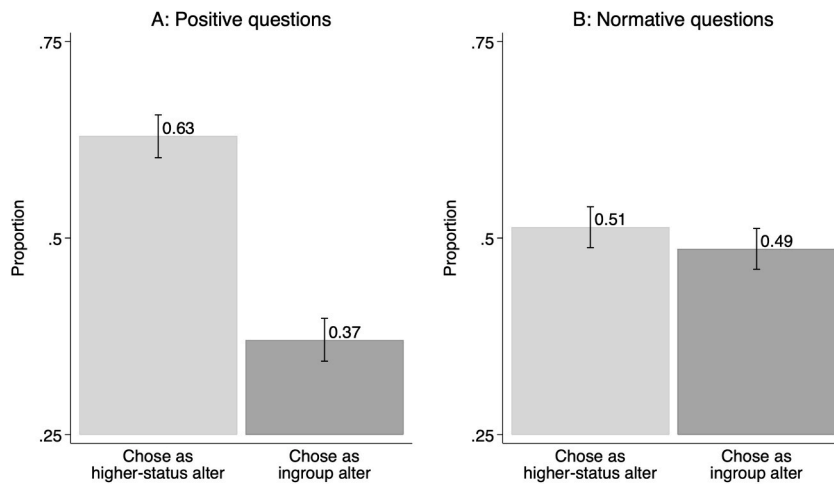


Fig. 2. Proportion of answer choices that coincided with the answer of the higher-status alter and the answer of the ingroup alter, separate for factual questions and opinion questions. Data from all five critical questions. Error bars indicate 95% CIs obtained from logistic regressions and are adjusted for the five repeated measures per participant.

Table 1

Estimation results of logistic regressions with the dependent variable ‘followed higher-status alter’. Effect estimates expressed as odds ratios; *t* statistics adjusted for the repeated choices by the same participants.

	M1 (Factual questions)	M2 (Opinion questions)	M3 (Factual and opinion questions)	M4 (Factual and opinion questions)
Factual question			1.61*** (5.97)	
Ingroup identification				1.05 (0.75)
Constant	1.70*** (8.91)	1.06 (1.04)	1.06 (1.04)	1.17 (0.82)
<i>N</i> choices	1475	1485	2960	2935
<i>N</i> participants	295	297	592	587

t statistics in parentheses.

p* < 0.05, *p* < 0.01, ****p* < 0.001.

factual version than the opinion version of three questions ($p \leq 0.007$) but not the other two questions ($p \geq 0.110$). Finally, ingroup identification did not affect the odds of following the higher-status alter on any of the questions ($p \geq 0.357$). A robustness analysis further shows that the results of the hypotheses tests do not change at the 5% significance cutoff if the data from participants who rushed through the questionnaire is removed (see [appendix D](#)).

In exploratory analyses we further investigated differences by gender and political orientation. Regressions of ‘followed higher-status alter’ on ‘female’ (0,1) indicate that men and women do not differ in the relative degree to which they are influenced by ingroup sources or higher-status sources, neither overall nor separately on factual questions or opinion questions ($p \geq 0.160$; [Table D2](#)).⁸ On the other hand, compared to those who identify on a five-point scale as (slightly) liberal, those who identify as (slightly) conservative had higher odds of following the higher-status alter, overall (odds ratio = 1.26, $p = 0.039$) and separately on factual questions (odds ratio = 1.46, $p = 0.025$) but not on opinion questions (odds ratio = 1.20, $p = 0.191$; [Table D2](#)).⁹ This can have two causes: Conservatives might be more status oriented than liberals, and/or liberals might be more ingroup oriented than conservatives. Our design does not allow disentangling these explanations.

5. Discussion and conclusion

Are people of lower-status groups more strongly influenced by members of a higher-status outgroup or by members of their lower-status ingroup? Consistent with theoretical arguments inspired by status characteristics theory and self-categorization theory, our findings indicate that there is not just one simple answer to this question. On questions concerning beliefs about facts, we observed that competence expectations derived from status characteristics promote social influence more than shared group membership. However, on questions regarding subjective opinions, status orientation and ingroup orientation were about equally strong. We cannot exclude

⁸ Respondents who answered the gender question with ‘Other, namely ___’ ($N = 13$) or ‘Prefer not to say’ ($N = 1$) were coded as missing on the dichotomous variable ‘female’.

⁹ Respondents answering with ‘Neutral/Neither conservative or liberal’ ($N = 162$) were coded as missing on the dichotomous variable ‘conservative’.

that our finding of “equally strong” status orientation and ingroup orientation reflects the absence of both forces on opinion questions, but this appears improbable: Numerous studies document the importance of status ordering and shared group membership in influence processes, our experimental stimuli produced clear influence patterns in the condition with factual questions, and relatively stronger ingroup orientation on opinion questions is in line with theoretical expectations. Moreover, even in the event of this improbable scenario, our results still show that whether the subject matter concerns factual issues or opinions impacts the relative degree to which individuals from lower-status groups are influenced by members of their ingroup versus members of higher-status outgroups.

Our “point estimates” of the relative strength of status orientation and ingroup orientation should be interpreted with caution. In certain alternative experimental and real-world settings, status orientation probably plays an even bigger role. Status orientation could be even stronger on factual questions if correct answers are incentivized, because incentives might increase task orientation and prevent ingroup-flattering answering (Franzen and Mader, 2023; Prior et al., 2015). Studies also suggest, maybe paradoxically, that our anonymous, virtual setup may have favored ingroup orientation at the expense of status orientation: Anonymity can promote influence based on group identity by increasing the tendency to view group members as similar to oneself (because it prevents visible individuation typical in face-to-face interaction; Chung 2019; Lee, 2008; Spears 2021:382). Similarly, our focus on government policy related topics may also have favored ingroup orientation relative to status orientation. Policy related questions may activate group identities particularly strongly, because they have the potential to materially impact members of different groups differently and because group identities often loom large in the political arena. These considerations suggest that in certain situations status orientation dominates ingroup orientation on factual questions even more than observed in our experiments, and that in these situations status orientation might exceed ingroup orientation even on opinion questions. Nonetheless, we would expect that also in these situations, relative to ingroup orientation, status orientation plays a more important role on factual questions than on opinion questions.

At the same time, in certain scenarios ingroup orientation will be more dominant than in our experiment. Perceived conflict and disagreement across educational groups may be rather moderate (Grigoryan et al., 2022; but see also Easterbrook et al. 2020) and many less-educated people identify little with “their group” (Kuppens et al., 2015). Ingroup orientation might be stronger in a contrast of more salient, strongly identified groups (even if we did not find that ingroup identification significantly increases ingroup orientation; see Section 5.2). Second, prior to measuring social influence, we measured ingroup identification as identification with “the group of people with low education” (Stubager, 2009). The strongly hierarchical wording of this identification measure could have temporarily undermined respondents’ ingroup identification and orientation.¹⁰ Third, our anonymous, virtual environment largely eliminated associational motives to align one’s opinion with ingroup sources (cf. Genschow and Schindler, 2016). Fourth, influence based on shared group membership is stronger if an ingroup source holds a position that is prototypical for the group (typical for the ingroup but not the outgroup; Barreto and Hogg, 2017; Spears 2021:379). Our analysis aggregates over the two positions that could be taken on a question, and it can be expected that for prototypical positions, the relative significance of ingroup orientation will be higher.¹¹ In sum, it is thus likely that in certain scenarios ingroup orientation is stronger than observed in our experiment, but we would again expect that also in these scenarios the weight of ingroup orientation relative to that of status orientation is larger when it comes to opinion questions rather than factual questions.

The key message of this study, therefore, is *not* that status orientation exceeds ingroup orientation on factual questions and that status orientation and ingroup orientation are about equally strong in the domain of opinions. This specific pattern might not replicate in different settings. The pattern that we expect to be robust, and that we see as the key message of this study, is that in comparison to ingroup orientation, status orientation is relatively stronger in the domain of beliefs about facts than in the domain of subjective opinions.

5.1. Directions for theory development

Our findings attest to the importance of considering differences in patterns of social influence across the domain of factual questions and the domain of opinion questions. The findings reject the notion that we live in a so-called post-truth era, in which people treat objective facts as if they were no different from subjective opinions. Instead, we find that people differentiate between factual questions and opinion questions and let themselves be influenced differently in their beliefs about facts than in their subjective opinions. Taking into account such differences in patterns of influence could lead to new insights from computational opinion dynamics modelling, where currently “opinions” are often treated as “a generic concept that can also represent a belief [...] a behavior [...] or an attitude” (Flache et al., 2017:2.3). For instance, our findings suggest that influence dynamics will more likely give rise to society-wide consensus on factual beliefs than on subjective opinions, whereas fragmentation is a more likely outcome on opinions than factual beliefs. An open question for future research is then whether perceived disagreement between groups on subjective opinions may create a motivation to also seek disagreement on factual beliefs, contributing to a dynamic of “hyperpolarization” in which groups’ positions on different issues become increasingly correlated (Schweighofer et al., 2020).

Our results also point to possibilities for an extension of status characteristics theory to realms it was originally not intended to cover. Our theoretical elaborations focused on the *relative* fit of the scope conditions of a theory with the context of factual questions and the context of opinion questions. We argued that the scope conditions of status characteristics theory *better* fit the context of factual

¹⁰ Only 17% of our less-educated participants indicated that they feel highly or somewhat attached to the group of people with low education. 65% reported that they do not feel attached any of the groups and 17% even reported that they feel attached to the group of people with high education.

¹¹ Our design does not allow testing this conjecture because it neither enables measuring the prototypicality of positions nor examining influence patterns only one of the two positions that could be taken on a question.

questions than that of opinion questions. Still, status characteristics theory's scope condition of "collective orientation", which requires that actors believe that the task can only be solved by group action and consensus, will not have been met in our experiment even in the context of factual questions. That is, we applied the theory to a setting for which it was not meant to make predictions. The fact that participants of our study often followed higher-status sources on factual questions can, hence, be taken to suggest that the basic principles postulated by status characteristics theory operate also in individual decision-making situations where there is no need for consensus or joint action (cf. [Dippong et al., 2017](#)).

Finally, we suggest that future theoretical research should investigate also strategic and associational motives for adopting the viewpoint of a higher-status outgroup individual. According to status characteristics theory, people accept and adopt the stance of a higher-status person for "informational motives", expecting accurate information. But lower-status group members may also align with views of higher-status outgroup individuals, at least publicly, in order to gain their social approval, i.e., for so-called "normative motives". An indication in this direction comes from a study that found that Chinese Canadians aligned their assessments of artwork with those of European Canadians (but not with fellow Chinese Canadians), driven by the fear of social exclusion by the dominant group (Tafarodi et al., 2002). A theoretical examination of the role of normative motivations may predict that, relative to ingroup orientation, status orientation increases as higher-status outgroup members control more valuable resources.¹²

5.2. Directions for future empirical studies

Future studies should attempt to replicate our finding that, compared to status orientation, ingroup orientation is relatively stronger in the domain of subjective opinions rather than beliefs about facts. Studies should also investigate the generality of this pattern. It is conceivable that this pattern does not obtain, for example, if opinions are polarised along educational divides while factual beliefs are hardly aligned with education. A less-educated person might then ignore an ingroup member's opinion if the opinion is not prototypical for the ingroup. This could lead to ingroup orientation being weaker for non-prototypical opinions than for beliefs about facts, maybe even more so than status orientation being weaker for opinions than factual beliefs.

Our study also has limitations that point towards avenues for future research. First, other studies show a link between ingroup identification and susceptibility to influence from group members ([Ellemers et al., 2002](#); [White et al., 2009](#)). The absence of such a link in our data might reflect that the identification measure that we adopted from [Stubager \(2009\)](#) contains hierarchical wording that some may perceive as degrading those with fewer years of formal education, which could have compromised the reliability of the measurement. Instead of asking about identification with "the group of people with low education", future studies could, for example, ask about identification with people without a college degree. However, a related study that used a neutrally worded identification measure found that educational identification of the less educated does not affect their preference for ingroup political candidates ([Van Noord et al., 2023](#)). Thus, the absence of an effect might be real and constitute an interesting puzzle for further research.

Second, our objective was to evaluate how the *relative* importance of status orientation and ingroup orientation differs between factual questions and opinion questions. Future studies could generate additional insights by employing designs capable of identifying the *independent* effects of higher-status sources and ingroup sources. This could be achieved by including a baseline condition in which no alter profiles are shown or in which alter profiles do not include information on education. Such designs would allow examining, for example, whether there is any ingroup orientation on factual questions.

Third, future experiments should illuminate the underlying mechanisms. One could let participants rate alters with regards to 'competence' and 'similarity to self' and examine whether these ratings mediate effects of shared group membership or status (see [Kalkhoff and Barnum, 2000](#); [Oldmeadow et al., 2003](#)). Alternatively, one could manipulate the competence of alters by providing test scores within alter profiles, indicating their performance on knowledge questions pertinent to the subject domain of questions (a "government policy knowledge score" in our case). This would enable an examination of whether the influence exerted by higher-status sources solely stems from assumed competence or whether other processes play a role as well.

The possibilities sketched for future theoretical and empirical studies make clear that more research is needed to properly understand how lower-status individuals form their viewpoints when receiving conflicting signals from ingroup members and members of higher-status outgroups. However, our study already makes clear that context matters: Relative to how much lower-status group members listen to members of their ingroup, they listen more to higher-status outgroup individuals when forming beliefs about facts than when forming opinions.

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¹² Our theoretical analysis does to some extent include associational motives for aligning one's opinion with ingroup sources. Self-categorization rejects the notion that influence based on shared group membership necessarily takes the form of normative influence and instead postulates that information provided by others is always viewed in the light of self-categorization and is trusted to be valid if it is perceived to be a belief of the ingroup (see e.g., [Spears 2021:372](#)). In this sense, also self-categorization theory suggests that competence expectations play a key role in the influence process, just like status characteristics theory. However, viewing information through the lens of self-categorization and accepting as valid the information that ingroup members provide may reflect a desire the fit in with the ingroup.

Declarations of interest

None.

ORCID iD authorship contribution statement

Vincenz Frey: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Conceptualization. **Andreas Flache:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization. **Dieko Bakker:** Writing – review & editing, Methodology, Conceptualization. **Michael Mäs:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization.

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Supplementary data

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