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Article *in* Journal of Personality and Social Psychology · June 2014

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Journal of Personality and Social Psychology
2014, Vol. 106, No. 6, 961–977

0022-3514/14/$12.00 DOI: 10.1037/a0036338

The Consistency Principle in Interpersonal Communication: Consequences of Preference Confirmation and Disconfirmation in Collective Decision Making

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Interpersonal cognitive consistency is a driving force in group behavior. In this article, we propose a new model of interpersonal cognitive consistency in collective decision making. Building on ideas from the mutual enhancement model (Wittenbaum, Hubbell, & Zuckerman, 1999), we argue that group members evaluate one another more positively when they mention information confirming each other's preferences instead of information disconfirming these preferences. Furthermore, we argue that this effect is mediated by perceived information quality: Group members evaluate one another more positively when they mention information confirming each other's preferences because they perceive this information to be more important and accurate than information disconfirming each other's preferences. Finally, we hypothesize that group members who communicate information confirming each other's preferences receive positive feedback for doing so, which, in turn, leads group members to mention even more of this information. The results of 3 studies with pseudo and face-to-face interacting dyads provide converging support for our model.

Keywords: interpersonal cognitive consistency, mutual enhancement, preference-consistent evaluation of information, group decision making, group discussion

Cognitive consistency is one of the most fundamental principles of social information processing. It plays a key role in almost all areas of social cognition, including persuasion, motivated reasoning, prejudice, and decision making. For example, starting with Festinger and Carlsmith's (1959) seminal study, there is extant research showing that when behavior is inconsistent with attitudes or beliefs, individuals reduce the inconsistency by changing their attitudes, so that the attitudes become consistent with the discrepant behavior (for a review, see Cooper, 2007). Also, decades of research show that people favor information that is consistent with their self-serving conclusions (Frey, 1981), stereotypes (Johnston, 1996), and decisions (Frey, 1986). This preference for consistent as opposed to inconsistent information is often referred to as confirmation bias (Jonas, Schulz-Hardt, Frey, & Thelen, 2001). From a functional perspective, it has been argued that the consistency principle promotes efficient action control (Beckmann & Kuhl, 1984; Harmon-Jones & Harmon-Jones, 2002): Once having decided on a particular course of action, focusing on information that is consistent with this decision helps individuals successfully transform their decisions into action.

Interpersonal Cognitive Consistency

Following Festinger (1957), the lion's share of research has focused on consistency as an *intrapersonal* phenomenon. Notwithstanding the importance of this research, Heider (1958) already directed the attention of researchers to the *interpersonal* nature of cognitive consistency, emphasizing that individuals have a desire to maintain consistent cognitions about other people. Later, Newcomb (1968) argued that "interpersonal balance" should be considered as a special case of consistency.

More recently, there has been a growing consensus that interpersonal cognitive consistency is a driving force in group behavior. The basic tenet is that for a group to function, group members need to be "on the same page" and to agree on how things should be

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The research reported in this article was supported by a grant from the German Science Foundation (Deutsche Forschungsgemeinschaft) to Stefan Schulz-Hardt, project SCHU 1279/3-1.

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done. In particular, interpersonal cognitive consistency plays a prominent role during group decision making. Here individuals need to converge on one of several choice options (Park, Tindale, & Hinsz, 2012). In line with this idea, there is evidence that the degree to which group members adopt shared task representations facilitates group decision quality (van Ginkel, Tindale, & van Knippenberg, 2009), thereby providing support for the idea that an important function of team training is to get group members to develop an appropriate and shared understanding of their task (Hackman, 1993). In the following, we first briefly review overt manifestations of interpersonal cognitive consistency during group decision making, and then focus on those mechanisms that naturally strengthen interpersonal cognitive consistency.

First, and most prominently, dating back to the Asch (1956) studies on conformity pressure, several lines of evidence show that group members have a strong tendency to maintain similarity to their fellow members by conforming to the decision preferences of the others, even when these preferences are obviously wrong. Furthermore, as already shown by Sherif (1935), group members tend to quickly adopt the norms and attitudes of each other. For example, Sherif found a high degree of convergence among the judgments within the group, even within a small number of trials. Once established, norms allow individuals to confirm each other's expectations and guide the group members' behavior toward a common goal (Cialdini & Trost, 1998). When deviance emerges in a group, group members first try to persuade the deviant to join the group's mainstream, but then show hostility toward deviants who resist these persuasive efforts, and, finally, cease to communicate with the deviants and exclude them from the group (Marques, Abrams, Páez, & Hogg, 2001; Schachter, 1951).

There is also evidence for mechanisms that naturally strengthen interpersonal cognitive consistency without imposing overt conformity pressures. As noted by Park et al. (2012), one such mechanism is the sampling bias favoring shared information (i.e., information commonly held by all group members). According to Stasser's collective information sampling model (for an overview, see Stasser & Titus, 2003), group discussions are biased toward shared information according to mathematical probability: Shared information has a sampling advantage because it is available to more group members and, hence, can be mentioned by more members than unshared information. Although focusing on shared information may hamper the quality of group decision making if the correct solution is supported by unshared information, it may help group members to develop trust and to form a "common ground" (Clark & Brennan, 1991).

According to Park et al. (2012), another mechanism that strengthens interpersonal cognitive consistency has been proposed by Wittenbaum, Hubbell, and Zuckerman (1999). According to their mutual enhancement model, group members evaluate each other more positively when discussing shared, as compared to unshared, pieces of information, resulting in positive feedback to group members who communicate predominantly shared information, and this feedback increases their focus on shared information. The logic of the model is as follows: During a discussion, shared information receives social validation, which causes it to be perceived as more accurate and important than unshared information. Hence, communicators of shared information are perceived as more competent and knowledgeable than communicators of unshared information. Moreover, the recipients of shared information feel that the information they possess is accurate and relevant, since someone else found it important enough to mention. In sum, group members are proposed to evaluate one another more positively when they discuss shared rather than unshared information, a process termed *mutual enhancement*. Also, Wittenbaum et al. proposed that individuals who discuss shared information receive positive feedback from the others for doing so (e.g., by giving positive comments or smiling), which, in turn, reinforces communicators of shared information to discuss even more shared information, thereby strengthening group members' common ground for a collective decision.

Interpersonal Consequences of Preference Confirmation and Disconfirmation

Building on ideas from the mutual enhancement model (Wittenbaum et al., 1999), we propose a new model promoting interpersonal cognitive consistency in collective decision making. In a nutshell, we hypothesize that group members evaluate one another more positively when they mention information confirming each other's preferences instead of information disconfirming these preferences. The basic logic of our model builds upon the mutual enhancement model. However, whereas Wittenbaum et al. (1999) argued that group members evaluate one another more positively when mentioning shared rather than unshared information, we argue that group members evaluate one another more positively when mentioning information confirming each other's preferences instead of information disconfirming these preferences. Since the sharedness of information on the one hand and its consistency with the preference of the recipient on the other hand are independent information characteristics (although both may be confounded in certain information distributions; cf. Schulz-Hardt & Mojzisch, 2012), our model proposes an independent new mechanism of interpersonal consistency by transferring the basic logic of the mutual enhancement model from sharedness to preference consistency of information.

Specifically, we propose the following five hypotheses. First, as noted above, we hypothesize that group members evaluate one another more positively (i.e., as more competent) when they mention information confirming each other's preferences instead of information disconfirming these preferences (Hypothesis 1). Second, we propose that information confirming each other's preferences is perceived as being of higher quality (i.e., evaluated as more important and accurate) than information disconfirming these preferences (Hypothesis 2). This hypothesis can be derived from research on the prior belief effect (e.g., Edwards & Smith, 1996; Lord, Ross, & Lepper, 1979), motivated reasoning (e.g., Ditto & Lopez, 1992; Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998), and preference-consistent evaluation of information (e.g., Carlson & Russo, 2001; Greitemeyer & Schulz-Hardt, 2003). Third, we propose that the effect of preference consistency of communicated information on perceived competence is mediated by perceived information quality (Hypothesis 3). Thus, we hypothesize that group members evaluate one another more positively when they mention information confirming each other's preferences because they evaluate this information as more important and accurate than information disconfirming each other's preferences. Fourth, we predict that communicators of information confirming the other group members' preferences receive positive

feedback from these others for doing so (Hypothesis 4). Fifth, we hypothesize that receiving positive feedback for communicating information confirming the other members' preferences leads the communicators to mention even more of such information (Hypothesis 5). Throughout this article, we define preference consistency from the perspective of the recipient of the information, since it is the confirmation or disconfirmation of the recipient's preference that drives the process.

It is important to note that we do not argue that individuals evaluate one another more positively simply due to having the same preferences. Rather, we argue that they evaluate one another more positively when they mention information confirming each other's preferences, since they evaluate this information as more important and accurate than information disconfirming each other's preferences. In other words, even if the sender of a communication prefers a different alternative than the recipient, the sender will be positively evaluated if the communicated information confirms the recipient's decision preference.

The Present Research

The main goal of the present research was to test our new model of interpersonal cognitive consistency. In order to provide such a test, we had to make sure that the preference consistency of information was manipulated independent of its sharedness. By doing so, we were further able to provide a critical test of the mutual enhancement model proposed by Wittenbaum et al. (1999). Note that a closer inspection of the information distribution used by Wittenbaum et al. revealed that the sharedness of the information was at least partially confounded with its preference consistency. Whereas participants in the conditions in which the bogus partner communicated mostly shared information received almost balanced information about the two decision alternatives, participants in the condition in which the partner communicated mostly unshared information predominantly received information that contradicted their decision preference. Hence, it is possible that the positive task capability attributions observed by Wittenbaum et al. were not due to the communication of shared information but rather to the process specified in our model, namely, the communication of information supporting the recipients' decision preferences.

In three experiments, we manipulated both the preference consistency and the sharedness of the information communicated by the discussion partner. In Experiments 1 and 2, we used pseudo dyads consisting of a naive participant and a bogus partner, and manipulated whether the messages sent by this bogus partner contained (a) mostly preference-consistent shared information (i.e., shared information confirming the participant's preference), (b) mostly preference-consistent unshared information (i.e., unshared information confirming the participant's preference), (c) mostly preference-inconsistent shared information (i.e., shared information disconfirming the participant's preference), or (d) mostly preference-inconsistent unshared information (i.e., unshared information disconfirming the participant's preference). We also asked participants to write down which pieces of information they wanted to share with their partner. After the information exchange, participants evaluated the information they received, themselves, and their partner. Additionally, we asked participants to give their partner written feedback on the information they had received from him or her. This allowed us to test the idea that participants' feedback would be more positive for a partner who communicated mostly preference-consistent information than for a partner who communicated mostly preference-inconsistent information. Moreover, in Experiment 2, participants also received bogus feedback from their partner (in response to the information they had exchanged) and, thereafter, were asked to write down which pieces of information they subsequently wanted to discuss with their partner. This allowed us to test the idea that receiving positive feedback for communicating a particular type of information leads participants to mention even more of such information. Finally, in Experiment 3, we sought to replicate the main results of the first two experiments in face-to-face interacting dyads.

Experiment 1

Experiment 1 followed the procedure of Experiment 1 of Wittenbaum et al. (1999). Participants believed they were collaborating on a personnel selection task with a partner allegedly sitting in another room (who, in fact, did not exist). Two modifications were introduced. First, the preference consistency of the information communicated by the bogus partner was manipulated orthogonally to the sharedness of that information. Second, the procedure was extended to test the idea that individuals encourage each other to communicate information confirming each other's preferences (Hypothesis 4). Hence, we asked participants to give their partner written feedback on the information they had received from him or her.

Method

Participants and design. One hundred eighty-six students participated in exchange for course credit or monetary compensation. Three participants had to be excluded because they doubted the existence of their partner, leaving 183 participants (140 women and 41 men, plus two participants who failed to report sex). Participants were randomly assigned to the experimental conditions of a 2 (preference consistency of information: predominantly preference consistent vs. predominantly preference inconsistent) × 2 (sharedness of information: predominantly shared vs. predominantly unshared) between-subjects factorial design.

Materials. Participants received the same (albeit translated and slightly adapted) decision case as participants in Experiment 1 of Wittenbaum et al. (1999). The total information pool contained extracts from the curricula vitae (CVs) of two candidates applying for a job in a university's Marketing Department. The CVs were grouped into four categories: education, professional employment, teaching experience, and references. The categories of the CVs were distributed in such a way that every pseudo dyad received full information. Four versions of the material were used. Each participant randomly received one of the four versions containing three CV categories for each of the candidates. Two of the three categories were shared (available to both the participants and their presumed partner) and the third category was unshared (available to the participants but apparently not to their partner). Participants were led to believe that their partner had received the fourth category that was not available to them. The distribution of shared and unshared information was counterbalanced such that for one half of the participants, professional employment and references

categories were shared, whereas education and teaching categories were unshared (vice versa for the other half).

Analogous to Wittenbaum et al. (1999), each of the four CV categories was more positive for one of the two candidates such that one had more desirable professional employment and teaching experience, whereas the other had more desirable education and references. To pretest candidate desirability, an independent sample of 24 participants rated all four CV categories (in counterbalanced order). Results confirmed that the candidate intended to be superior was selected significantly more often (all ps $< .001$) and judged to be better qualified (all ps $< .001$). If all four CV categories were considered together, both candidates should be equally suitable for the job. Indeed, after reading all four CV categories, participants selected each candidate about equally as often for the position, $\chi^2(1, N = 24) = 0.67$, $p = .414$.

Each participant in Experiment 1 received three CV categories, two of which supported one candidate and one that supported the other candidate. In the course of the information exchange with the bogus partner, participants received a handwritten list with 10 items of information, allegedly written by their partner. The information on these lists was, depending on the experimental condition, predominantly preference consistent and shared (Condition 1), predominantly preference consistent and unshared (Condition 2), predominantly preference inconsistent and shared (Condition 3), or predominantly preference inconsistent and unshared (Condition 4), in each case with a ratio of 8 to 2. A predominantly shared list contained eight shared and two unshared items, and a predominantly preference-consistent list contained eight preference-consistent and two preference-inconsistent items (vice versa for a preference-inconsistent list). Thus, for example, a predominantly preference-consistent shared list contained six preference-consistent shared items, two preference-inconsistent shared items, and two preference-consistent unshared items.[1] For each of the four conditions, one list was created for each of the four versions of the material, resulting in 16 lists.

To ensure that the lists were recognized by the participants as being either predominantly preference consistent or predominantly preference inconsistent, we conducted a second pretest in which one list per participant was presented to 159 students. When participants were asked which candidate was better qualified based on the information in the list, more than 92% of the participants selected the candidate intended to be superior, $\chi^2(1, N = 159) = 114.54$, $p < .001$. Next, qualification ratings of the candidates, which were measured on a 9-point scale from 1 to 9, were analyzed in a 2 (candidate preference induced by the list: Candidate 1 vs. Candidate 2) $\times$ 2 (candidate rated: Candidate 1 vs. Candidate 2) analysis of variance (ANOVA) with repeated measurement on the second factor. Results showed the expected interaction: Candidate 1 was rated as being more qualified ($M = 6.94$) when induced to be superior to Candidate 2 ($M = 4.67$), whereas Candidate 2 was rated as being more qualified ($M = 7.20$) when induced to be superior to Candidate 1 ($M = 4.64$), $F(1, 157) = 207.84$, $p < .001$, $\eta_p^2 = .57$. Hence, we can conclude that the lists are well suited to manipulate the preference consistency of the communicated information.

Procedure. On arrival, participants were alternately led to one of two adjacent rooms and seated at individual desks with, on average, five participants per room. The experimenters explained that each participant would be working on a personnel selection task together with an assigned partner in the other room. Specifically, they would have to collectively decide between two candidates applying for an assistant professor position. Actually, all participants worked independently, and all handwritten messages allegedly written by the participant's partner had been prepared in advance by the experimenters. Participants received the application materials of two job candidates. Before reading the application materials, participants were informed which CV categories they had and their partner did not and which CV categories their partner had and they did not. In addition, participants were assured that they and their partner had the same amount of information at their disposal.

Participants were instructed that they would have to communicate 10 pieces of information about the two candidates to their partner in written form. Analogous to Wittenbaum et al. (1999), after having finished studying the application materials, participants privately indicated their candidate preference and returned all materials to the experimenter.

Next, participants were asked to write down 10 pieces of information that they wanted to share with their partner on a prepared form. After all participants in the room had finished writing down this information, the experimenter collected the information lists and allegedly brought them to their partner. Shortly thereafter, the experimenter returned with handwritten lists presumably written by the participants' partner. Participants rated each piece of information on this list according to its importance, relevance, accuracy, and impact on their candidate preference. Then they reported their candidate preference a second time, and rated their own and their partner's knowledge and competence. Moreover, they answered manipulation check items. Whereas the Wittenbaum et al. experiment ended at this point, we asked participants to give their partner written feedback on the information they had received (to this end, participants received a blank sheet of paper and were asked to write down their feedback).[2] In a postexperimental suspicion check, we asked participants to describe in their own words

[1] Note that each bogus list lacked one cell of the Preference Consistency $\times$ Information Sharedness combination. For example, the preference-consistent shared list missed preference-inconsistent unshared information. We decided to do so in order to keep our Experiment 1 as close to the Wittenbaum et al. (1999) Experiment 1 as possible to ensure comparability. Thus, participants received the same material as participants in Experiment 1 of Wittenbaum et al., and these original Wittenbaum et al. materials did not allow to fully cross preference consistency and sharedness within each list. We can, of course, only speculate about the implications that this partial confound may have had for the analyses. Because we fully replicated our findings for preference consistency in Experiments 2 and 3, and because in these experiments we used modified materials without such a partial confound, we feel rather confident that the partial confound should not have led to an erroneous confirmation of our hypotheses.

[2] Since, in Experiment 1, participants unilaterally gave feedback to their bogus partners, it might be objected that there was a perceived lack of reciprocity. Note, however, that it was left somewhat open as to whether or not the partner would give feedback as well. The sheet for the feedback was labeled "open information exchange," suggesting that the partner received the same sheet and also gave feedback on the participants' lists. Since the feedback of the participants for their partners was quite detailed and directly addressed the partner in most cases, and given that no thoughts about a lack of reciprocity were expressed by participants during their debriefing, we have no indication that participants were sensitized, were suspicious, or thought that there was a lack of reciprocity.

what they thought the study was about and to note any comments they had. Finally, participants were thanked and debriefed.

Results and Discussion

Manipulation checks. To determine whether participants recognized the degree of preference consistency bias in their partner's written list, they were asked to indicate which candidate their partner presumably preferred. Ninety-five percent of the participants who had received written lists that supported Candidate 1 indicated that their partner presumably preferred Candidate 1, and 92% of the participants who had received written lists that supported Candidate 2 indicated that their partner presumably preferred Candidate 2, $\chi^2(1, N = 183) = 138.12$, $p < .001$. Furthermore, participants were asked to indicate to what extent the information they had received from their partner supported one of the two candidates on a 9-point scale from −4 (*information clearly supports Candidate 1*) to 4 (*information clearly supports Candidate 2*). As expected, participants who had received a partner list that predominantly supported Candidate 1 gave lower ratings ($M = -2.01$) than participants who had received information that predominantly supported Candidate 2 ($M = 1.84$), $F(1, 178) = 336.71$, $p < .001$, $\eta_p^2 = .65$. In sum, participants clearly recognized which candidate was supported by the information presumably listed by their partner. Hence, the preference consistency bias of partner information was successfully manipulated.

To determine whether participants recognized the degree of sharedness bias in their partner's written list, we asked them to answer the following two questions on scales ranging from 1 (*not at all new/none at all*) to 9 (*very new/all*): (a) "How new to you were the pieces of information listed by your partner?" and (b) "How many of the pieces of information listed by your partner were originally included in the CV extracts you read?" As expected, participants who received a predominantly unshared list rated the novelty of the information higher ($M = 5.68$, $SD = 1.96$) than participants who received a predominantly shared list ($M = 3.37$, $SD = 1.45$), $F(1, 181) = 81.98$, $p < .001$, $\eta_p^2 = .31$. Conversely, participants who received a predominantly shared list rated the degree of overlap of information on the list with their original CV extracts higher ($M = 6.55$, $SD = 1.72$) than participants who received a predominantly unshared list ($M = 4.04$), $F(1, 181) = 81.50$, $p < .001$, $\eta_p^2 = .31$. Hence, the sharedness bias of partner information was successfully manipulated.

Perceived competence. After reading the information list allegedly written by their partner, participants answered the following four questions on scales ranging from 1 (*not at all*) to 9 (*very*): (a) "How knowledgeable do you feel about the candidates?" (b) "How knowledgeable is your partner about the candidates?" (c) "How competent do you feel to determine the better candidate?" and (d) "How competent is your partner to determine the better candidate?" Ratings of self-knowledge and self-competence were significantly correlated ($r = .58$, $p < .001$), as were ratings of partner knowledge and competence ($r = .63$, $p < .001$). Hence, analogous to Wittenbaum et al. (1999), composite measures of self-evaluation and partner evaluation were created by averaging knowledge and competence ratings for self and partner, respectively.

These evaluations were analyzed in a 2 × 2 × 2 ANOVA of the experimental design with member rated (self vs. partner) as an additional within-subjects factor. Results are depicted in Figure 1. As with the results of Wittenbaum et al. (1999), there was a significant main effect of sharedness, $F(1, 179) = 4.02$, $p = .047$, $\eta_p^2 = .02$. Competence ratings were higher if the partner predominantly communicated shared ($M = 5.73$) compared to unshared information ($M = 5.35$). As predicted by Hypothesis 1, the results also revealed a significant main effect of preference consistency, $F(1, 179) = 8.23$, $p = .005$, $\eta_p^2 = .04$. Competence ratings were higher if the partner communicated predominantly preference-consistent information ($M = 5.79$) than if the partner communicated predominantly preference-inconsistent information ($M = 5.26$). The interaction was not significant, $F(1, 179) = 0.51$, $p = .474$. Also, no significant main effect of the within-subjects factor (i.e., self vs. partner) or significant interactions of this factor with any of the between-subjects factors were found (all Fs < 1.85, all ps > .18). In sum, we found clear support for Hypothesis 1, predicting that group members evaluate themselves and their partner more positively when they mention preference-consistent rather than preference-inconsistent information. This effect was not moderated by the sharedness of information.

Evaluation of partner information. Analogous to Wittenbaum et al. (1999), participants rated each item of information presumably listed by their partner on four dimensions: (a) "How important is this piece of information as a characteristic of the candidate?" (b) "How relevant is this piece of information for reaching a correct decision?" (c) "How accurate is this piece of information?" and (d) "To what extent does this piece of information influence which candidate you prefer?" Results showed that the importance, relevance, and influence of information were more strongly correlated with one another (between $r = .69$ and $r = .80$) than any of these variables was correlated with the accuracy of the information (between $r = .18$ and $r = .20$). Thus, importance, relevance, and influence of information were combined to form a scale (Cronbach's $\alpha = .91$), which represented the decisional importance of the information. Obviously, even a very important item is of no value if one cannot be sure that the information is correct. Hence, following Hastie, Penrod, and Pennington (1983), importance and accuracy were multiplied for each item to represent the perceived quality of information. The average quality scores were analyzed in a 2 × 2 ANOVA of the experimental design.

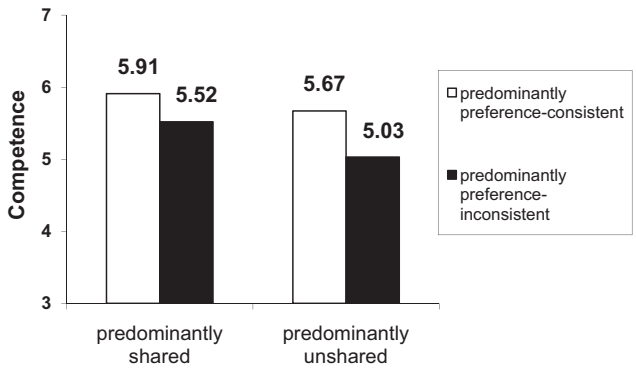

Figure 1. Perceived competence (average of self and partner) as a function of the information communicated by the partner in Experiment 1.

As with the results of Wittenbaum et al. (1999), we found that the information communicated by the partner was ascribed higher quality for predominantly shared lists ($M = 42.74$) than for predominantly unshared lists ($M = 37.34$), $F(1, 179) = 12.24$, $p < .001$, $\eta_p^2 = .06$. Moreover, as predicted by Hypothesis 2, the information communicated by the partner was ascribed a higher quality for lists that were predominantly preference consistent ($M = 42.54$) than for lists that were predominantly preference inconsistent ($M = 37.31$), $F(1, 179) = 11.85$, $p = .001$, $\eta_p^2 = .06$. No interaction was found, $F(1, 179) = 1.63$, $p = .203$, $\eta_p^2 = .01$.

Mediation analyses. In the next step, we aimed to test Hypothesis 3, predicting that the effects of preference consistency of communicated information on perceived competence (based on self- and partner ratings) are mediated by perceived information quality.

If perceived competence was regressed on preference consistency of information, preference consistency received a significant weight, $\beta = .21$, $t(181) = 2.94$, $p = .004$. The same occurred if perceived information quality was regressed on preference consistency, $\beta = .25$, $t(181) = 3.45$, $p = .001$. If perceived competence was regressed on both preference consistency and information quality, information quality received a significant regression weight, $\beta = .25$, $t(180) = 3.45$, $p = .001$, whereas the weight for preference consistency was reduced, $\beta = .15$, $t(180) = 2.08$, $p = .039$. In addition, we tested for mediation employing bootstrapping (Preacher & Hayes, 2008). With 5,000 bootstrap samples, the results showed that the effect of preference consistency on perceived competence was partially mediated by perceived information quality, with a 95% bias-corrected confidence interval of 0.061 to 0.308.

The same analysis was conducted for sharedness. If perceived competence was regressed on the sharedness manipulation, sharedness received a significant weight, $\beta = .15$, $t(181) = 2.06$, $p = .041$. The same occurred if perceived information quality was regressed on sharedness, $\beta = .26$, $t(181) = 3.56$, $p < .001$. If perceived competence was regressed on both sharedness and information quality, information quality received a significant weight, $\beta = .27$, $t(180) = 3.64$, $p < .001$, whereas the weight for sharedness was no longer significant, $\beta = .08$, $t(180) = 1.13$, $p = .262$. With 5,000 bootstrap samples, the 95% bias-corrected confidence interval for the size of the indirect effect excluded 0 (0.027, 0.327), indicating that perceived information quality was a significant mediator.

We also sought to rule out an alternative explanation for the effects of preference consistency on perceived competence: Note that participants in the conditions in which their partner communicated mostly preference-consistent information may have inferred that their partner had the same candidate preference as they did. Indeed, we found that whereas 91% of the recipients of preference-consistent lists presumed that their partner had the same decision preference, this was only the case for 4% of the recipients of preference-inconsistent lists. Hence, it is conceivable that recipients of preference-consistent information perceived their partners and themselves as competent because they presumed that their partner shared the same decision preference. In other words, inferred preference similarity may be an additional mediator for the effect of preference consistency on perceived competence. To rule out this alternative explanation, we used bootstrapping methods for assessing multiple mediation (Preacher & Hayes, 2008). Perceived competence was entered as a dependent variable, preference consistency of the information was entered as a predictor variable, and perceived information quality and inferred preference similarity were entered as proposed mediators. With 5,000 bootstrap samples, an examination of the indirect effects showed that only perceived information quality was a mediator, with a 95% bias-corrected confidence interval of 0.060 to 0.312. By contrast, inferred preference similarity did not qualify as a mediator, with a 95% bias-corrected confidence interval of −0.627 to 0.782. This pattern of results provides robust support for Hypothesis 3.

Feedback for the partner. Participants were given a blank sheet of paper and were asked to give their partner written feedback on the information they had received (e.g., with regard to how helpful they found the information). This feedback was content coded by two independent coders on two dimensions: (a) How positive is the feedback concerning the information communicated by the partner? (b) How important did the participant evaluate the partner information to be? The interrater reliability was high ($r = .80$, $p < .001$). We hence averaged the ratings of the two coders. As valence and importance ratings were highly correlated ($r = .87$, $p < .001$), we formed an index by averaging valence and importance ratings. This index was analyzed in a 2×2 ANOVA of the experimental design.

The results showed a main effect for preference consistency, $F(1, 154) = 4.46$, $p = .036$, $\eta_p^2 = .03$, indicating that participants' feedback was more positive for a partner who communicated mostly preference-consistent information ($M = 5.85$) than for a partner who communicated mostly preference-inconsistent information ($M = 5.19$). This provides support for Hypothesis 4, predicting that communicators of preference-consistent information receive positive feedback from the others for doing so. Regarding sharedness, the feedback was more positive for a partner who communicated mostly unshared information ($M = 5.90$) as compared to a partner who communicated mostly shared information ($M = 5.16$), $F(1, 154) = 5.61$, $p = .019$, $\eta_p^2 = .04$. The interaction was not significant, $F(1, 154) = 2.54$, $p = .114$, $\eta_p^2 = .02$.

In aggregate, the results of Experiment 1 provide clear support for Hypotheses 1–4. Recipients of preference-consistent information evaluated their partners and themselves as more competent than recipients of preference-inconsistent information (Hypothesis 1). This effect was not moderated by the sharedness of information. Furthermore, we found that preference-consistent information was evaluated as more important and accurate than preference-inconsistent information (Hypothesis 2). As predicted, we also found that the effect of preference consistency on perceived competence was mediated by the perceived quality of the information communicated by the partner (Hypothesis 3), but not by inferred preference similarity. Finally, participants gave more positive feedback to partners who communicated preference-consistent information as compared to partners who communicated preference-inconsistent information (Hypothesis 4).

With regard to Wittenbaum et al.'s (1999) mutual enhancement model, Experiment 1 revealed mixed results. In line with the predictions derived from this model, we found that participants rated themselves and their partner more competent if the partner communicated mostly shared (as compared to mostly unshared) information. Also, we found that the effect of sharedness on perceived competence was mediated by the perceived quality of

the information communicated by the partner. However, in contrast to the predictions derived from the mutual enhancement model, participants gave more positive feedback to partners who communicated unshared information as compared to partners who communicated shared information.

Experiment 2

Experiment 2 had three aims: First, we sought to replicate the results of Experiment 1. To this end, we used a modified version of Wittenbaum et al.'s (1999) decision case. Note that for some items in Wittenbaum et al.'s materials, which we used in Experiment 1, the preference consistency only becomes clear in relation to other items. For example, the information that Candidate 1's "teaching evaluations were average" only becomes clear when Candidate 2's "excellent" teaching evaluations are available for comparison. Hence, we modified the items to make each item unequivocally favor or disfavor one of the candidates (e.g., Candidate 1 "had clear and well-founded answers to all questions in class"; Candidate 2 "sometimes had difficulties getting complex issues across in class").

Second, since Experiment 1 only tested Hypotheses 1–4, Experiment 2 was designed also to test Hypothesis 5, predicting that receiving positive feedback for communicating preference-consistent information reinforces the communicator to mention and repeat even more of such information. To test this idea, we extended the procedure of Experiment 1: After participants had read and evaluated the information communicated by their partner, and after they had provided feedback to their partner on the information he or she had communicated, they in turn received bogus feedback from their partner on the information communicated. In this feedback, the partner reacted either positively or negatively to preference-consistent (vs. preference-inconsistent) information or to shared (vs. unshared) information.

The third aim of Experiment 2 was to isolate our proposed preference consistency effects more clearly from possible effects of preference similarity. The mediation analyses of Experiment 1 suggest that the effect of the preference consistency on perceived competence is mediated by information quality and not by inferred preference similarity. To provide a more clear-cut test of the idea that it is not preference similarity that drives the effects, an additional experimental factor was included in Experiment 2 where participants were informed that their partner had the same or held a different candidate preference as they did. Participants in the preference similarity control condition received no such information.

Method

Participants and design. Two hundred thirty-nine students participated in the study. Five participants were excluded because they doubted the existence of the partner, six participants were excluded because it turned out that they had already participated in a pretest, and one participant was excluded after reporting an ambiguous candidate preference, leaving 227 participants (139 women and 87 men, plus one participant who failed to report his or her sex). Note that the pattern of results did not change when all participants were included in the analyses.

Participants were randomly assigned to the experimental conditions of a 3 (preference similarity: congruent vs. incongruent vs. no information) × 2 (preference consistency of partner information: predominantly preference consistent vs. predominantly preference inconsistent) × 2 (sharedness of partner information: predominantly shared vs. predominantly unshared) between-subjects factorial design.

Materials. For Experiment 2, we modified Wittenbaum et al.'s (1999) decision case. First, all pieces of information in the CVs of the candidates were framed as statements given by other people. This was done in order to be able to include clearly negative information in the CVs without losing plausibility. Second, each piece of information was phrased unambiguously positively or negatively. The distribution of the four CV categories to the participants and their alleged partners was identical to that of Experiment 1.

However, in contrast to Experiment 1 and Wittenbaum et al. (1999), where each of the four CV categories was more positive for one of the two job candidates, in Experiment 2 information was arranged in such a way that the two candidates appeared equally suited for the position in all sections of their CVs. This was done to provide participants with an equal number of preference-consistent and preference-inconsistent pieces of information, independent of their preferred candidate. To ensure that participants actually perceived the two candidates to be equally suited for the position in all four sections of the CV, an independent sample of 30 students rated all four CV categories consecutively (in counterbalanced order) according to which of the two candidates was better qualified. Results confirmed the intended equality of the two candidates for all four CV categories: Participants did not differ in their selection of candidates (all ps $> .27$), nor did they judge one candidate to be significantly better qualified for the position than the other (all ps $> .31$). After reading all four CV categories, participants selected the two candidates equally as often, $\chi^2(1, N = 30) = 0.00$, $p = 1.000$. Furthermore, participants attested both candidates similar qualification on the same response scale as in Experiment 1, $t(29) = -0.47$, $p = .641$.

In the course of the information exchange with the bogus partner, participants received a list with 10 pieces of information, allegedly written by the partner. Analogous to Experiment 1, the information on these bogus lists was, depending on the experimental condition, predominantly preference consistent and shared, predominantly preference consistent and unshared, predominantly preference inconsistent and shared, or predominantly preference inconsistent and unshared, in each case with a ratio of 8 to 2. As in Experiment 1, for each of these four experimental conditions, one list was created for each of the four versions of the material, resulting in 16 lists.

Procedure. The procedure was similar to that of Experiment 1. All differences are explained below. After having finished studying the application materials and before writing down the information for the bogus partner, participants privately indicated their candidate preference on a separate sheet. In the conditions where participants learned their partners' candidate preference, participants wrote down their own preference on an additional sheet. After collecting these sheets, the experimenter left the room, allegedly to deliver the sheets to the dyad partner in the room next door. A little later, the experimenter returned with another set of sheets on which the participant's partner had supposedly written the name of the preferred candidate. This name was either identical or not identical with the participant's own preference.

The procedure for the exchange of information lists and for eliciting self and partner competence ratings was similar to that of Experiment 1: Participants were asked to give their partner written feedback on the information communicated. However, in contrast to Experiment 1, participants received written feedback on the information they communicated from their bogus partner in return, which had in fact been prepared by the experimenters. Dependent on the experimental condition and the type of information communicated by participants, each participant received one of eight prepared feedbacks. In this feedback, the partner expressed positive or negative comments on the preference consistency/preference inconsistency or on the sharedness/unsharedness of the information communicated by the participant. Prior to each experimental session, the experimenter determined which attribute of the information the bogus partner would comment on by flipping a coin. For the feedback to be accurate, each participant's information list was analyzed during the course of the experiment according to which of the two levels of the allotted attribute dominated in the list (e.g., whether the participant had communicated mostly preference-consistent or preference-inconsistent items).

In the feedback, the bogus partner's reaction was consistent with his or her own "previous behavior" and, hence, also contingent on the experimental condition of the participant. For example, let us assume the draw had determined that the bogus partner reacted to the preference consistency of the information communicated by the participant and that the participant had communicated predominantly preference-consistent information. Let us further assume the participant was in an experimental condition in which the bogus partner communicated predominantly preference-consistent information. In this case, the participant received a positive reaction from the partner, in which the partner stated that she had found the information very helpful because she had learned that most of this information supported the candidate that she already preferred that shows her that she had drawn the correct conclusions from her information. By contrast, if a participant who communicated predominantly preference-consistent information had been assigned to an experimental condition with predominantly preference-inconsistent communication of the partner, the partner reacted negatively, stating that she did not find the information communicated by the participant helpful, as most of this information supported the candidate that she, already preferred and, hence, the information did not challenge her point of view. The same principle was applied for participants who communicated predominantly preference-inconsistent information. If the draw determined that the bogus partner reacted to the sharedness of the information communicated by the participant, a similar principle was used, with positive or negative feedback reactions of the partner depending on whether or not the information communicated by the participant was known or not known by the partner.

Note that participants made self and partner competence ratings before receiving feedback from their partner. In fact, they made self and partner competence ratings, then wrote feedback to the partner, and then received bogus feedback from the bogus partner in return.

After participants had read their partner's feedback, they were told that they would next discuss the decision case with their partner. Before this discussion commenced, they were asked to write down those 10 pieces of information that they most wanted to discuss with their partner.

In a postexperimental suspicion check, we asked participants to describe in their own words what they thought the study was about and to note any comments they had. Thereafter, participants were thanked, debriefed, paid, and dismissed.

Results and Discussion

Manipulation and suspicion checks. As in Experiment 1, we asked participants to what extent the information they had received from their partner supported one of the two candidates on a scale from −4 *(information clearly supports Candidate 1*) to 4 (*information clearly supports Candidate 2*). As predicted, participants who had received a list that predominantly supported Candidate 1 gave lower ratings ($M = -2.44$) than participants who had received a list that predominantly supported Candidate 2 ($M = 2.32$), $F(1, 223) = 719.98$, $p < .001$, $\eta_p^2 = .76$. Both values differed significantly from 0, $t(111) = -18.51$, $p < .001$, and $t(112) = 19.52$, $p < .001$. We also asked participants to indicate on a scale from 1 (*not at all new*) to 9 (*very new*) how new the pieces of information listed by their partners were for them. Participants who received a predominantly unshared list rated the novelty of the information higher ($M = 5.25$) than participants who received a predominantly shared list ($M = 2.82$), $F(1, 225) = 86.24$, $p < .001$, $\eta_p^2 = .28$. In conclusion, our partner information lists worked as intended.

Although it might seem that participants could be suspicious in the conditions in which the bogus partner's decision and the predominant communication of the bogus partner were at odds (e.g., a partner with congruent decision communicating predominately unshared and preference-inconsistent information), we found no indication that participants were any more suspicious in these conditions than in the conditions in which the bogus partner's decision and the predominant communication of the bogus partner matched (e.g., a partner with congruent decision communicating predominately shared and preference-consistent information).

Perceived competence. After reading the list allegedly written by their partner, participants answered the same four questions as in Experiment 1. Ratings of self-knowledge and self-competence were again correlated ($r = .46$, $p < .001$), as were ratings of partner knowledge and competence ($r = .55$, $p < .001$). Therefore, as in Experiment 1, composite measures of self-evaluation and partner evaluation were created by averaging knowledge and competence ratings for self and partner, respectively. These evaluations were analyzed in a $3 \times 2 \times 2 \times 2$ ANOVA of the experimental design with member rated (self vs. partner) as an additional within-subjects factor. The results are depicted in Figure 2.

As predicted, there was a significant main effect of preference consistency, with the perceived competence being higher if the partner communicated predominantly preference-consistent information ($M = 6.18$) than if the partner communicated predominantly preference-inconsistent information ($M = 5.62$), $F(1, 215) = 11.09$, $p = .001$, $\eta_p^2 = .05$. No other effects were obtained. Particularly, competence ratings did not differ depending on whether the partner communicated predominantly shared ($M = 5.86$) or unshared information ($M = 5.92$), $F(1, 215) = 0.84$, $p =$

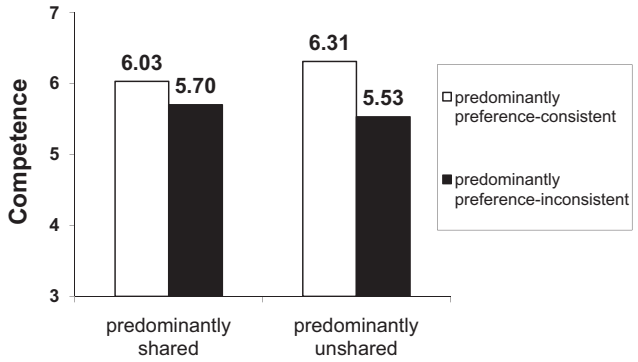

Figure 2. Perceived competence (average of self and partner) as a function of the information communicated by the partner in Experiment 2.

.772. Furthermore, the competence ratings were not affected by partner preference feedback, $F(1, 215) = 1.51$, $p = .223$, nor did this factor qualify other effects (all Fs < 1, all ps $> .39$). Finally, as with the results of Experiment 1, the competence ratings were not affected by the repeated measurement factor (i.e., self vs. partner), $F(1, 215) = 0.13$, $p = .719$, nor did this factor qualify other effects (all Fs < 1.9, all ps $> .15$). Thus, in sum, we again found support for Hypothesis 1.

To provide a further test for Hypothesis 1, we conducted an additional ANOVA including only participants in the control condition who received no information about their partners' candidate preference (since it might be argued that this analysis provides the cleanest test of our predictions). Again, we found a significant main effect of preference consistency, with the perceived competence being higher if the partner communicated predominantly preference-consistent information ($M = 6.10$) than if the partner communicated predominantly preference-inconsistent information ($M = 5.41$), $F(1, 75) = 5.64$, $p = .02$, $\eta_p^2 = .07$. No other effects were obtained. In particular, competence ratings did not differ depending on whether the partner communicated predominantly shared ($M = 5.58$) or unshared information ($M = 5.89$), $F(1, 75) = 1.29$, $p = .26$.

Evaluation of partner information. Participants rated every piece of information contained in their partner's list on a 9-point scale according to (a) how important this piece of information is for evaluating the candidate, (b) how relevant this piece of information is for reaching a correct decision, (c) to what extent they can rely on the accuracy of this piece of information, and (d) how confident they feel that their partner has reproduced this information correctly. The four ratings were correlated separately for each of the 10 pieces of information. As expected, ratings of importance and relevance of the information were strongly correlated (mean correlation $r = .84$), as were ratings of accuracy and confidence in the correctness of the information (mean correlation $r = .62$). Hence, the two importance items and the two accuracy items were combined to form a scale, separately for each of the 10 items of information. As in Experiment 1, importance and accuracy were multiplied for each item to represent the perceived quality of the respective information in the decision-making process. Subsequently, we computed the mean of these 10 quality evaluations to represent the perceived average quality of the information communicated by the partner. These average quality scores were analyzed in a $3 \times 2 \times 2$ ANOVA of the experimental design.

As predicted by Hypothesis 2, results showed a main effect of preference consistency, indicating that information quality was evaluated as higher for predominantly preference-consistent lists ($M = 50.04$) than for predominantly preference-inconsistent lists ($M = 45.94$), $F(1, 215) = 7.88$, $p = .005$, $\eta_p^2 = .04$. Results also showed a marginal (but nonsignificant) effect of sharedness, indicating that the information quality was evaluated slightly higher for predominantly shared lists ($M = 49.19$) than for predominantly unshared lists ($M = 46.75$), $F(1, 215) = 2.91$, $p = .09$, $\eta_p^2 = .02$. Also, the quality ratings were not affected by partner decision preference feedback, $F(2, 215) = 1.21$, $p = .30$, nor did this factor qualify other effects (all Fs < 1, all ps $> .61$).

Mediation analysis. As in Experiment 1, we tested whether the preference-consistency effect on perceived competence was mediated by the perceived quality of the communicated information. If perceived competence was regressed on preference consistency, preference consistency received a significant weight, $\beta = .22$, $t(225) = 3.39$, $p = .001$. The same occurred if perceived information quality was regressed on preference consistency, $\beta = .19$, $t(225) = 2.86$, $p = .005$. If perceived competence was regressed on both preference consistency and information quality, information quality received a significant regression weight, $\beta = .31$, $t(224) = 4.91$, $p < .001$, whereas the weight for preference consistency was reduced, $\beta = .16$, $t(224) = 2.57$, $p = .011$. We also tested for mediation employing bootstrapping methods (Preacher & Hayes, 2008). With 5,000 bootstrap samples, the results confirmed that the effect of preference consistency on perceived competence was partially mediated by the perceived quality of the information communicated, with a 95% bias-corrected confidence interval of 0.045 to 0.303. Hence, Hypothesis 3 was again supported.

Feedback for the partner. As in Experiment 1, participants were given a blank sheet of paper and were asked to give their partner written feedback on the information they had received from him or her. Again, this feedback was coded by two independent coders on two dimensions: (a) "How positive is the feedback concerning the information communicated by the partner?" (b) "How important did the participant evaluate the partner information to be?" Interrater reliability was high ($r = .79$, $p < .001$). We hence averaged the ratings of the two coders. As valence and importance ratings were highly correlated ($r = .90$, $p < .001$), we formed an index by averaging these two ratings. This index was analyzed in a $3 \times 2 \times 2$ ANOVA of the experimental design.

Results showed a significant main effect for preference consistency, $F(1, 210) = 17.67$, $p < .001$, $\eta_p^2 = .08$, indicating that participants' feedback to the partner was more positive for a partner who communicated mostly preference-consistent information ($M = 6.49$) than for a partner who communicated mostly preference-inconsistent information ($M = 5.41$). This again provides support for Hypothesis 4, predicting that communicators of preference-consistent information receive positive feedback from the others for doing so. Moreover, the feedback was also more positive for partners who communicated mostly unshared information ($M = 6.34$) than for partners who communicated mostly shared information ($M = 5.53$), $F(1, 210) = 9.86$, $p = .002$, $\eta_p^2 = .05$. No other effects were found (all Fs < 1, all ps $> .370$).

Intended further discussion. Finally, we sought to test Hypothesis 5, predicting that receiving positive feedback for communicating preference-consistent information reinforces the communicator to discuss even more of such information. After reading the feedback of their partner, participants were asked to write down the 10 pieces of information that they subsequently wanted to discuss with their partner.

This information was coded by two independent coders according to candidate, category of the CV the information was taken from, and valence of the information. Coders agreed in 98% of the ratings, while the remaining differences were resolved through discussion. From this coding, we computed whether a piece of information was preference consistent and shared, preference consistent and unshared, preference inconsistent and shared, or preference inconsistent and unshared for the participant. The coding of unshared information was for both types of information: unshared information originally known by the participant and unshared information originally known by the partner. The total numbers in each of the four categories were related to the total number of items of the respective information type that participants possessed at this point of the experiment (including information participants had received from their partners).[3]

To test Hypothesis 5, we conducted analyses dependent on the partner's feedback. For half of the participants, the partner reacted to the preference consistency of the information on the participant's list. Please keep in mind that we define preference consistency from the perspective of the recipient throughout this article, and because in this case the partner is the recipient, preference consistency is defined from the perspective of the partner.[4]

The crucial issue for Hypothesis 5 is whether participants will send someone more preference-consistent information if this person has reacted positively to preference-consistent information. As participants in the conditions without preference feedback from the partner could not be certain about their partner's decision preference, we selected only participants who had received feedback on their partner's preference for the following analyses. To explore whether the effects are moderated by the partner's decision preference, we included the partner's preference as an additional factor in our analyses. A 2 (decision preference of the partner: congruent vs. incongruent) $\times$ 2 (type of feedback: positive reactions to preference-consistent/negative reactions to preference-inconsistent information vs. negative reactions to preference-consistent/positive reactions to preference-inconsistent information) $\times$ 2 (preference consistency of the items intended for discussion: preference consistent vs. preference inconsistent) ANOVA with repeated measurement on the last factor revealed a significant two-way interaction of type of feedback and preference consistency of the items intended for discussion, $F(1, 52)$[5] $= 4.95$, $p = .030$, $\eta_p^2 = .09$, and, more interestingly, a significant three-way interaction, $F(1, 52) = 5.12$, $p = .028$, $\eta_p^2 = .09$.[6]

To further specify this three-way interaction, we conducted separate 2 $\times$ 2 ANOVAs for both participants in the condition with congruent decision preferences and participants in the condition with incongruent decision preferences. In the case of congruent preferences, there were no significant effects at all. In particular, the critical two-way interaction did not reach significance ($F < .01$, $p > .98$). Thus, in the case of congruent preferences, positive or negative feedback to the communication of preference-consistent or preference-inconsistent information did not affect the intended further discussion. By contrast, in the case of incongruent preferences, the results revealed a significant crossover interaction, $F(1, 52) = 13.45$, $p < .001$. Simple effects analyses showed that after receiving positive feedback on preference-consistent information (or negative feedback on preference-inconsistent information), participants intended to discuss a larger proportion of preference-consistent information ($M = .13$) than preference-inconsistent information ($M = .06$), $t(52) = 2.26$, $p = .028$. Conversely, after receiving negative feedback on preference-consistent information (or positive feedback on preference-inconsistent information), participants intended to discuss a larger proportion of preference-inconsistent information ($M = .15$) than of preference-consistent information ($M = .05$), $t(52) = -3.60$, $p < .001$. In other words, in the case of incongruent preferences, positive or negative feedback to the communication of preference-consistent or preference-inconsistent information affected the intended further discussion (as predicted by Hypothesis 5).

For the other half of the participants, the bogus partner reacted to the sharedness of the information. A 2 (type of feedback: positive reactions to shared/negative reactions to unshared information vs. negative reaction to shared/positive reaction to unshared information) $\times$ 2 (sharedness of the items intended for discussion: shared vs. unshared) ANOVA with repeated measurement on the second factor showed no significant effects (all Fs $<$ 1.6, all ps $> .22$). Thus, whether the partner expressed positive or negative reactions to shared (or unshared) information did not affect what information participants subsequently wanted to discuss.

In conclusion, we were able to replicate the results of Experiment 1 with modified materials. Again, as predicted by Hypothesis 1, recipients of preference-consistent information evaluated themselves and their partner as more competent than recipients of preference-inconsistent information. This effect occurred independently of whether the participants were informed that their partner

[3] Participants were free to write what they wanted to discuss with the partner. The observed drop in the degrees of freedom is due to the fact that some participants did not write down any information that could unambiguously be coded into one of the four information categories. Consequently, these participants were not included in the analysis.

[4] Whereas, following Hypothesis 5, our analyses focused on what information is mentioned with regard to the partner's preference, we also found two effects independent of the partner's preference: On the one hand, participants intended to discuss a larger proportion of information that confirmed their *own* preferences ($M = .13$) than information disconfirming their *own* preferences ($M = .08$), $F(1, 170) = 27.73$, $p < .001$, $\eta_p^2 = .14$. On the other hand, participants intended to discuss somewhat more unshared ($M = .11$) than shared information ($M = .10$), $F(1, 170) = 4.08$, $p = .045$, $\eta_p^2 = .02$.

[5] The drop in the degrees of freedom is due to the fact that participants who erroneously received feedback that was inconsistent with the bogus partner's previous behavior (e.g., the bogus partner had communicated predominantly shared information but reacted negatively to the participant communicating shared information) were discarded from this analysis.

[6] There are two reasons why there was no linear dependence between preference-consistent and preference-inconsistent information (i.e., the proportions of preference consistent and inconsistent items did not add to a constant). First, not all participants followed the instruction to write down exactly 10 pieces of information. Second, and more importantly, we did not use the absolute numbers of items for our analyses. Instead, the numbers in each of the four categories were divided by the total number of items of the respective information type that the participants possessed at this point of the experiment.

preferred the same alternative as they did or not. Moreover, preference-consistent information was evaluated as more important and accurate than preference-inconsistent information (Hypothesis 2). Also, the preference-consistency effect was partially mediated by perceived information quality (Hypothesis 3). Furthermore, participants gave their partner more positive feedback if the partner communicated mostly preference-consistent information instead of mostly preference-inconsistent information (Hypothesis 4). Finally, we found partial support for the idea that receiving positive feedback for communicating information confirming the other members' preferences leads the communicators to mention even more of such information (Hypothesis 5): In cases of congruent decision preferences, feedback by the partner had no impact of the intended further discussion. By contrast, in cases of incongruent decision preferences, positive (or negative) reactions to the communication of preference-consistent or preference-inconsistent information affected the intended further discussion: As predicted, if participants received feedback that valued the communication of preference-consistent information (or devalued preference-inconsistent information), this made them subsequently focus on preference-consistent information (vice versa for feedback that valued preference-inconsistent or devalued preference-consistent information). We will return to this issue in the General Discussion.

With regard to the sharedness of information, Experiment 2 revealed that the exchange of shared versus unshared information had no influence on competence ratings, thereby contradicting Step 2 of the mutual enhancement model. Moreover, in contrast to Step 3 of the mutual enhancement model, participants gave more positive feedback to partners who communicated unshared information as compared to partners who communicated shared information (thereby replicating our results of Experiment 1). Finally, we found that whether the bogus partner expressed positive or negative reactions to shared (or unshared) information did not affect what information participants subsequently wanted to discuss, thereby contradicting Step 4 of the mutual enhancement model.

Experiment 3

Although the first two experiments yielded consistent support for our hypotheses, a possible methodological limitation could be that in both experiments, dyadic interaction was constrained to written communication with a bogus partner. We decided to do so in order to ensure that the only thing being exchanged between participants and their partner was the written information communicated by the partner. Hence, this written information was the only cue that allowed inferences about the partner's competence. In contrast, face-to-face interactions provide a number of additional cues (e.g., physical appearance, eloquence in presenting arguments) that might be used for judging partner competence. Therefore, it is conceivable that the decision-relevant information communicated is less important in face-to-face interactions, which would imply that we might have overestimated our effects—and given that the effects sizes for our effects were not particularly high so far, it is even possible that our effects might be completely submerged in natural discussions. Hence, in Experiment 3, we employed face-to-face interacting dyads in order to test our central hypothesis that group members evaluate one another more positively when communicating preference-consistent information. To this end, we manipulated whether dyads discussed (a) predominantly preference-consistent shared information, (b) predominantly preference-consistent unshared information, (c) predominantly preference-inconsistent shared information, or (d) predominantly preference-inconsistent unshared information. After discussion, participants evaluated their own and their partner's knowledge and competence.

Method

Participants and design. The sample included 248 participants (116 women and 132 men) who formed 124 dyads. The data of one dyad had to be excluded, since the experimenter had inadvertently handed out incorrect candidate information sheets, leaving 123 dyads. Dyads were randomly assigned to the conditions of a 2 (preference consistency of information: predominantly preference consistent vs. predominantly preference inconsistent) × 2 (sharedness of information: predominantly shared vs. predominantly unshared) between-groups factorial design. The dyad was employed as the unit of analysis.

Materials. For Experiment 3, we again slightly modified Wittenbaum et al.'s (1999) decision case. The candidate information was divided into five categories of information (referring to the candidates' education, employment in private industry, teaching experience, success in research, and employment in the academic sector). Each category contained 12 attributes, six describing each candidate. In all experimental conditions, each dyad member received three categories of information that could be either shared or unshared with the discussion partner.[7]

In (a) the preference-consistent and shared condition, each participant received two shared and one unshared category of information. In the shared categories of information, the candidates were equally suited. By contrast, the unshared categories both supported the same candidate. Hence, the dyad members were supposed to prefer the same candidate.

In (b) the preference-inconsistent and shared condition, the information distribution was identical to the preference-consistent shared condition, with one exception: One unshared category supported Candidate A, whereas the other unshared category supported Candidate B. Therefore, the dyad members were supposed to prefer different candidates.

In (c) the preference-consistent and unshared condition, each dyad member received one shared and two unshared categories of information. In the shared category of information and in two of the four unshared categories of information, the candidates were equally suited for the position. The other two unshared categories both supported the same candidate. Hence, the dyad members were both supposed to develop a preference for the same candidate.

Finally, in (d) the preference-inconsistent unshared condition, the information distribution was identical to the preference-consistent unshared condition, with one exception: One unshared category supported Candidate A, whereas the other unshared category supported Candidate B. Hence, the dyad members were supposed to prefer different candidates.

Procedure. Four students participated in each experimental session. On arrival, they were led to one of two rooms, with two

[7] Note that we employed several rotated versions of the material with the same information distribution.

participants in each room. Participants who knew one another were not placed in the same room. After being welcomed by the experimenter, participants were seated at different tables and told that the study concerned collective decision making. Specifically, the experimenter explained that participants would first work on individual material about a personnel selection case. Thereafter, they would be assigned to dyads that should make a collective decision about which of two job candidates should be hired. The discussion would be videotaped. All participants agreed to be videotaped.

Next, participants received a booklet containing the application materials of the two candidates. As in Experiments 1 and 2, participants were informed which categories of information they had and their partner did not, and which categories of information their partner had and they did not. In line with previous studies (e.g., Wittenbaum et al., 1999) and with Experiments 1 and 2, participants had to memorize the candidate attributes, since taking the application materials to the discussion was not permitted. Thereafter, participants were asked to indicate their candidate preference. All materials were then collected by the experimenter.

Next, participants in each room were seated face to face and were asked to start the discussion. Dyads were given up to 20 min to complete their discussion. Thereafter, participants were again seated at different tables and were asked to indicate their candidate preference a second time. Moreover, they were asked to rate their own and their partner's knowledge and competence. Finally, participants were thanked, paid, and debriefed.

Results and Discussion

Discussion coding. Of the 123 dyads, three dyads had to be discarded due to technical problems with the videotapes. To examine the information exchange, two research assistants independently analyzed the videotapes. To be counted as a correct mentioning, a participant's statement had to include the meaning of the item of information and to make clear to which candidate the item was linked. One research assistant coded all 120 discussions. To estimate reliability, the second research assistant independently analyzed 30 discussions (randomly selected from each condition). The research assistants agreed on 93% of coded statements. For the data analysis, we used the codes of the initial rater.

Manipulation check. We first analyzed the impact of the experimental manipulation on the number of preference-consistent items versus preference-inconsistent items mentioned during discussion. A 2 × 2 × 2 mixed factorial ANOVA with the two between-subjects factors of the experimental design and the number of preference-consistent versus preference-inconsistent items discussed as within-subjects factor revealed a crossover interaction, $F(1, 116) = 64.82$, $p < .001$, $\eta_p^2 = .36$. Dyads in the preference consistency condition discussed more preference-consistent ($M = 23.32$) than preference-inconsistent items ($M = 15.15$), $t(58) = 5.24$, $p < .001$, whereas dyads in the preference inconsistency condition discussed more preference-inconsistent ($M = 26.15$) than preference-consistent items ($M = 14.82$), $t(60) = -6.11$, $p < .001$. No other significant effects were obtained (all ps $> .13$).

Next, we examined the impact of our experimental manipulation on the number of shared versus unshared items discussed. A 2 × 2 × 2 ANOVA with the two between-subjects factors of the experimental design and the number of shared versus unshared items discussed as within-subjects factor again revealed a crossover interaction, $F(1, 116) = 152.80$, $p < .001$, $\eta_p^2 = .57$. Dyads in the shared condition discussed more shared ($M = 21.93$) than unshared ($M = 16.11$) items, $t(56) = 4.84$, $p < .001$, whereas dyads in the unshared condition discussed more unshared ($M = 27.76$) than shared items ($M = 12.40$), $t(62) = -12.42$, $p < .001$. Again, no other effects were significant (all ps $> .11$). In conclusion, our manipulation was successful. Moreover, the more extensive discussion of the more plentiful information observed here is consistent with Stasser's collective information sampling model (for an overview, see Stasser & Titus, 2003).

Perceived competence. After discussion, participants made the same knowledge and competence ratings as in Experiments 1 and 2. Ratings of self-knowledge and self-competence were again correlated ($r = .72$, $p < .001$), as were ratings of partner knowledge and competence ($r = .75$, $p < .001$). Therefore, we again averaged ratings of knowledge and competence into a composite measure for both self and partner. These averaged ratings of perceived competence were analyzed in a 2 (preference consistency of information: predominantly preference consistent vs. predominantly preference inconsistent) × 2 (sharedness of information: predominantly shared vs. predominantly unshared) × 2 (member rated: self vs. partner) mixed factorial ANOVA, with member rated as within-subjects factor.

Results are depicted in Figure 3. As predicted, there was a significant main effect for preference consistency of information, with the competence ratings being higher if the dyad members communicated predominantly preference-consistent information ($M = 3.94$) than if they communicated predominantly preference-inconsistent information ($M = 3.62$), $F(1, 119) = 6.08$, $p = .015$, $\eta_p^2 = .05$. In line with Experiment 2, no other effects were obtained. Specifically, competence ratings did not differ depending on whether the dyad members communicated predominantly shared ($M = 3.74$) or unshared information ($M = 3.82$), $F(1, 119) = 0.15$, $p = .70$. Also, the effect of preference consistency of information was not moderated by sharedness of information, $F(1, 119) = 0.82$, $p = .76$. Finally, the competence ratings were not affected by the within-subjects factor of self or other rated, $F(1, 119) = 0.30$, $p = .58$, nor did this factor qualify other effects (all Fs < 1).

Preference similarity as an alternative explanation. Again, it is plausible that the effect of our preference consistency manip-

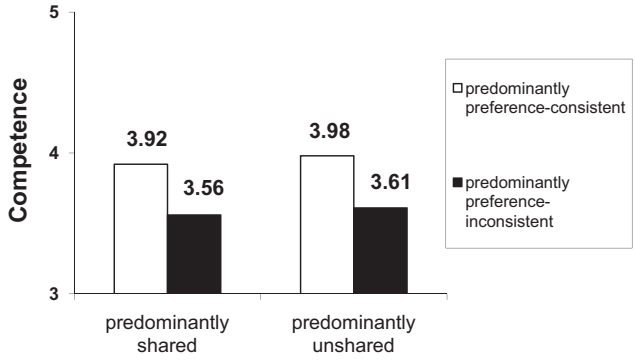

Figure 3. Perceived competence (average of self and partner) as a function of the information communicated in Experiment 3.

ulation on competency ratings may have been due to dyad members holding the same candidate preference and not due to the discussion of preference-consistent information. To examine this alternative explanation, we tested whether the effect of the preference consistency manipulation on perceived competence was mediated by preference similarity. We first dummy-coded whether dyad members preferred the same candidate or not, and then computed a multiple regression analysis in which competence ratings were regressed on preference consistency and the dummy-coded preference similarity variable. Results showed that preference similarity did not receive a significant regression weight ($\beta = .09$, $p = .44$), making it unlikely that preference similarity mediated the effect of preference consistency on perceived competence. To corroborate this conclusion, we employed bootstrapping methods (Preacher & Hayes, 2008). With 5,000 bootstrap samples, the results showed that the effect of preference consistency on competence was not mediated by preference similarity, with a 95% bias-corrected confidence interval of −0.16 to 0.32. Even when using a 90% bootstrap bias-corrected confidence interval, the confidence interval still included 0, thereby providing robust evidence for the idea that the effect of our preference consistency manipulation on competence was not mediated by preference similarity.

In summary, the results of Experiment 3 provide strong support for Hypothesis 1, predicting that dyad members evaluate one another more positively when they discuss preference-consistent rather than preference-inconsistent information. Again, this effect was not moderated by the sharedness of information. Moreover, we were able to rule out the alternative explanation that the effect of our preference consistency manipulation was due to dyad members holding the same candidate preference.

General Discussion

At the start of a discussion, group members may not have much in common. Yet, there are a number of mechanisms that promote convergence toward shared ways of thinking, feeling, and interacting. Whereas earlier research has focused on overt manifestations of these mechanisms, such as conformity (Asch, 1956) and reactions to deviant group members (Schachter, 1951), more recently it has been proposed that there are mechanisms that naturally and smoothly strengthen interpersonal cognitive consistency (e.g., Park et al., 2012).

Building on ideas from the mutual enhancement model (Wittenbaum et al., 1999), we proposed a new model promoting interpersonal cognitive consistency. The core idea of our model is that group members evaluate one another more positively when they mention information confirming each other's preferences instead of information disconfirming these preferences. Moreover, we hypothesized that group members who communicate information that is preference consistent for the recipient receive positive feedback for doing so, which, in turn, leads group members to discuss even more preference-consistent information.

In Experiments 1 and 2, we used pseudo dyads consisting of a naive participant and a bogus partner. We decided to do so in order to have full control over which types of information were exchanged. In Experiment 3, we employed face-to-face interacting dyads. In all three experiments, we consistently found that group members evaluate one another's competence more positively when they discussed mostly preference-consistent instead of mostly preference-inconsistent information (Hypothesis 1). Furthermore, we found that preference-consistent information was evaluated as more important and accurate than preference-inconsistent information (Hypothesis 2). We also found that the effect of preference consistency on perceived competence was mediated by perceived information quality (Hypothesis 3) and not by inferred preference similarity. Moreover, the results of Experiments 2 show that dyad members who communicate information that is preference consistent for the recipient receive positive feedback for doing so (Hypothesis 4). Finally, the results of Experiment 2 provide at least partial support for the hypothesis that receiving positive feedback for communicating information confirming the other members' preferences leads the communicators to mention even more of such information (Hypothesis 5). As predicted, if the participant and his or her discussion partner held incongruent decision preferences, receiving feedback that valued the communication of preference-consistent information (or devalued preference-inconsistent information) made participants subsequently focus on preference-consistent information (vice versa for feedback that valued preference-inconsistent or devalued preference-consistent information). Because, as we have outlined, preference consistency is defined from the perspective of the recipient throughout the article, this means that participants mentioned more information contradicting their own preference (but confirming the preference of the recipient) if they received positive feedback for communicating such information. By contrast, if the participant and his or her discussion partner held congruent decision preferences, there was no such effect. In other words, in cases of congruent preferences, group members positively evaluate others who communicate preference-consistent information, and they provide positive feedback to these others for doing so. However, this feedback seems to have no impact on the group members' further discussion behavior.

Even though we did not predict this latter finding, it fits quite well with the framework of interpersonal cognitive consistency. As noted in the beginning of this article, the basic idea underlying this framework is that for a group to function efficiently, group members need to agree on which course of action to follow. Therefore, mechanisms are needed that promote convergence toward shared ways of thinking, feeling, and interacting. One important implication of this idea is that if group members already agree on a particular course of action, that is, in cases of congruent decision preferences, mechanisms aimed at establishing interpersonal cognitive consistency are more or less superfluous. By contrast, if group members hold incongruent decision preferences, mechanisms are needed that guide their behavior toward shared ways of thinking, such as the communication of information confirming the discussion partner's preference.

In a more exploratory fashion, we also sought to examine whether the proposed preference consistency effects are moderated by the sharedness of the information communicated. The results consistently show that this is not the case. Hence, we can conclude that our model applies to both shared and unshared information.

It is important to keep in mind that our model does not imply that simply agreeing to someone else's opinion leads to being positively evaluated. Instead, we argue (and show) that whether or not group members perceive each other as competent largely depends on the perceived quality of the arguments they commu-

nicate. Since information confirming one's decision preference is, on average, perceived as being of higher quality (i.e., evaluated as more important and accurate) than information disconfirming one's preference, a group member who communicates information confirming the recipient's preference is, on average, evaluated more positively by his or her fellow members than a member who communicates information disconfirming the recipient's preference. Thus, even if the sender of an argument prefers a different decision alternative than the recipient, the sender will be perceived as competent by the recipient if the communicated information is perceived to be of high quality—for example, because it confirms the recipient's preference.

Implications for the Mutual Enhancement Model

Note that our results are largely inconsistent with the mutual enhancement model (Wittenbaum et al., 1999). In Experiment 1, we found that participants rated themselves and their partner more competent if the partner communicated mostly shared (as compared to mostly unshared) information, thereby supporting Step 2 of the mutual enhancement model. By contrast, in Experiments 2 and 3, the exchange of shared versus unshared information had no influence on competence ratings, thereby contradicting Step 2 of the mutual enhancement model. Moreover, in stark contrast to the predictions of Wittenbaum et al., participants responded more positively in their feedback to the partner when the partner communicated mostly unshared as compared to mostly shared information. Hence, even if we assume that there is a weak sharedness effect on competence attributions, this effect does not make recipients of shared information react more positively toward the communicator as compared to recipients of unshared information. This result contradicts Step 3 of the mutual enhancement model. Moreover, even if we had found positive reactions to shared information, our results suggest that they do not affect subsequent discussions (Step 4 of the mutual enhancement model): Participants who were provided with partner feedback praising them for communicating shared information or criticizing them for communicating unshared information were in no way more likely to subsequently discuss shared information than recipients of the opposite feedback pattern. However, before drawing firm conclusions, it is important to note that more subtle forms of feedback to the communication of shared information (e.g., smiling, nodding) than the ones that we examined in our study might be capable of producing the effects that were postulated by Wittenbaum et al. We will return to this issue in the limitations section of our article.

Note that our results do not call into question that communicating shared information increases people's confidence that this information is valid and accurate (Mojzisch, Grouneva, & Schulz-Hardt, 2010; Mojzisch, Schulz-Hardt, Kerschreiter, Brodbeck, & Frey, 2008; Wittenbaum et al., 1999). Moreover, they do not conflict with the finding that cognitively central group members, that is, group members holding a high degree of shared information, exert more influence than more peripheral members, that is, those holding more unique information (Kameda, Ohtsubo & Takezawa, 1997). However, our findings do cast doubt on the idea that mutual enhancement, as proposed by Wittenbaum et al. (1999), can explain the discussion bias favoring shared information.

Implications for Research on Selective Exposure to Information

It is also interesting to compare our work with other studies investigating how people deal with new information confirming or disconfirming their decision preferences. For example, the methodology of our current work contains some features that resemble studies in the "selective exposure to information" literature (e.g., Kerschreiter, Schulz-Hardt, Mojzisch, & Frey, 2008; Mojzisch, Schulz-Hardt, Kerschreiter, & Frey, 2008), in that these studies also contain the formation of an initial preference followed by the presentation of new informational items. In a nutshell, the main difference between these studies and our work is that the mechanisms examined by these studies are an example of intrapersonal cognitive consistency, whereas the mechanisms specified in our model are an example of interpersonal cognitive consistency. More specifically, the research on selective exposure focuses on the idea that people seek for information confirming their decision preferences. Stated differently, selective exposure research focuses on the confirmatory information search after individual decisions. By contrast, the research we report here focuses on the idea that group members positively evaluate other group members who communicate information confirming their preferences, and they provide positive feedback to these others for doing so. Thus, our work focuses on the interpersonal consequences of preference confirmation and disconfirmation during collective decision making.

Of course, one might argue that from a more general point of view, the difference between intrapersonal and interpersonal consistency is just a change in the choice of the dependent variable, whereas the underlying processes remain the same. However, we go one step further by also addressing what happens after such preference confirmation and disconfirmation has taken place. Specifically, we show that in cases of incongruent decision preferences, positively reacting to receiving information confirming one's decision preference increases the likelihood that the sender will communicate more of this information. And in this case, the bias in the communication of information is no longer (solely) dependent on the preference of the speaker, but rather also on the preference of the recipient, which is a difference to studies on selective exposure.

Implications for Biased Information Sampling During Discussion

There is an increasing body of evidence showing that group discussions are biased not only in favor of shared information, but also in favor of information supporting the group members' initial decision preferences (e.g., Dennis, 1996; Faulmüller, Mojzisch, Kerschreiter, & Schulz-Hardt, 2012; Schulz-Hardt, Brodbeck, Mojzisch, Kerschreiter, & Frey, 2006; Toma & Butera, 2009). How do the mechanisms specified in our model contribute to this discussion bias? We think that the answer to this question critically depends on the composition of the group members' decision preferences. We will illustrate this for the relatively simple case of a dyad, where the two members can hold either congruent or incongruent decision preferences.

In the case of congruent decision preferences, contributing information to a discussion that confirms the communicator's decision preference also confirms the recipient's decision preference.

Hence, the recipient will be likely to give positive feedback to the communicator. If this would lead the communicator to mention even more preference-consistent information, it would aggravate the communication bias toward preference-consistent information. However, as shown by the results of Experiment 2, this feedback does not seem to have a measurable impact on the subsequent discussion behavior.

By contrast, in the case of incongruent decision preferences, our model implies that dyad members would receive positive feedback for communicating information that is preference inconsistent for themselves (since this information is preference consistent for the recipient). Thus, if dyad Member 1 favors Candidate A but dyad Member 2 favors Candidate B, Member 1 will be encouraged to discuss items in favor of Candidate B and Member 2 will be encouraged to mention items that favor Candidate A. At first glance, one could object that our model would predict that in cases of incongruent decision preferences, each dyad member would end up with almost exclusively mentioning items contradicting his or her decision preference (i.e., a disconfirmation bias). However, this is unlikely to be the case. Note that there are several strong forces driving group members to discuss information in favor of their own preferences, in particular in cases of incongruent preferences: First, people are typically motivated to be understood by others (Faulmüller et al., 2012). Thus, they try to give reasons for why they favor a decision alternative over the others, which implies sharing information consistent with their own preference. Second, group members might have the motivation to have their own preferred alternative adopted by the others (Wittenbaum, Hollingshead, & Botero, 2004) and, to do so, predominantly share information supporting their own preferences. As a result, in cases of incongruent decision preferences, the mechanisms specified in our model would work in the opposite direction as the forces driving group members to discuss information in favor of their own preferences. However, since these forces are likely to be very strong, the net discussion bias might still be in favor of information supporting the group members' own preferences (albeit to a lesser extent).

In sum, we argue that in cases of incongruent decision preferences, the mechanisms specified in our model attenuate, but not necessarily eliminate, the group members' tendency to discuss information confirming their own preferences. By contrast, in cases of congruent decision preferences, the mechanisms specified in our model do not seem to have any consequences for the group members' discussion behavior.

Limitations and Directions for Future Research

In Experiments 1 and 2, participants were asked to give their partner written feedback on the information they had received. As predicted, participants gave more positive feedback to partners who communicated preference-consistent information as compared to partners who communicated preference-inconsistent information. Experiment 2 found that in cases of incongruent decision preferences, positively reacting to receiving information confirming one's decision preference increases the likelihood that the sender will communicate more of this information.

However, some caution is needed when interpreting these findings. Thus, in a face-to-face discussion, group members' reactions (as a result of discussing a particular type of information) are communicated both verbally and nonverbally. Much of these reactions might be more or less unconscious, as conveyed by nonverbal behavior (e.g., head nods, smiles/frowns) and verbal utterances (e.g., "yeah," "uh-huh"). By contrast, we operationalized this behavior solely as written feedback. Note that operationalizing the behavioral encouragement component of our model in terms of written feedback is a rather conservative measure, reducing the likelihood of Type I errors. Thus, even if group members during discussion may have been likely to nod their heads and smile in response to receiving information confirming their preferences, it cannot be taken for granted that this translated into giving the communicator of such information positive written feedback.

In any case, future research is needed with the aim to address this issue. In a first step, this research might scrutinize the subtle nonverbal responses of group members to the communication of preference-consistent versus preference-inconsistent information. To this end, researchers might employ methods such as the recording of rapid facial reactions using electromyography. Furthermore, to check whether explicitly asking participants to provide written feedback to their partners affects subsequent discussion processes, in a follow-up study it could be varied whether or not participants are explicitly asked to give such feedback.

Future research might also test whether our results can be transferred to Hollander's (1958) notion of idiosyncrasy credits, which refer to a group member's capacity to acceptably deviate from the norms of the group: If minority members start with communicating information that is preference consistent for the majority members (i.e., information that is preference inconsistent for themselves), this might enable them to establish their status as competent and credible group members, which, in turn, might help them to get preference-inconsistent information accepted at a later stage of the discussion.

Finally, it is an interesting question for further research to test whether the mechanisms specified in our model can be transferred to situations in which someone is witnessing a person communicating preference-consistent information to a group member other than the self. We predict that, again, perceiving the communicator as competent would depend on whether the information confirms or disconfirms the observer's preference.

Conclusion

The results of three experiments provide robust evidence for the notion that people evaluate one another more positively when communicating information confirming each other's preferences. These findings resonate with the emerging view of interpersonal cognitive consistency as a driving force in group behavior. In essence, people do not only prefer information confirming their decision preferences (Festinger, 1957), but they also positively evaluate others who communicate this information, and they provide positive feedback to these others for doing so.

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Received February 4, 2013
Revision received February 5, 2014
Accepted February 10, 2014 ■