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What is This?

The Social Side of Abstraction: Psychological Distance Enhances Conformity to Group Norms

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Abstract

Intuition suggests that a distanced or abstract thinker should be immune to social influence, and on its surface, the current literature could seem to support this view. The present research builds on recent theorizing to suggest a different possibility. Drawing on the notion that psychological distance regulates the extent to which evaluations incorporate context-specific or context-independent information, we suggest that psychological distance should actually increase susceptibility to sources of social influence that tend to be consistently encountered across contexts, such as group norms. Consistent with this hypothesis, two studies showed that psychological distance and abstraction increased conformity to group opinion and that this effect persisted in a novel voting-booth paradigm in which participants believed their voting behavior was both anonymous and consequential. We discuss implications of these findings for understanding the social side of abstraction as well as the conditions under which different types of social influence are likely to be most influential.

People tend to intuitively think of the distanced or abstract thinker as someone who is aloof, carefully logical, and immune to social influence—a Spock or Obama who can rise above the push and pull of group pressure and arrive at independent and carefully reasoned opinions. At first glance, considerable research could seem consistent with this view: Distance and abstraction have been linked to decreased attitude alignment in an interpersonal setting, a stronger tendency to behave in line with one's own values and ideologies, greater self-control, less emotional reactivity, and a stronger sense of self-consistency (e.g., Ayduk & Kross, 2010; Eyal, Sagristano, Trope, Liberman, & Chaiken, 2009; Fujita & Roberts, 2010; Hunt, Kim, Borgida, & Chaiken, 2010; Ledgerwood, Trope, & Chaiken, 2010; Wakslak, Nussbaum, Liberman, & Trope, 2008). Yet there is reason to believe that the story is not so simple. Drawing on the notion that psychological distance (e.g., distance in time or space) regulates the evaluative system to incorporate context-specific or invariant sources of information (Ledgerwood, Trope, & Liberman, 2010), we propose that distance will actually increase the extent to which people's evaluative responses reflect group norms because such norms tend to provide a source of evaluation-relevant information across many different contexts. If correct, this reasoning suggests the counterintuitive

prediction that distance and abstraction can make people more susceptible to certain kinds of social influence. In the research reported here, we sought to test this idea.

Distance and Susceptibility to Social Influence

The intuition that distance generally reduces susceptibility to social influence seems to ring true across a number of research domains. For instance, social influences can vary in their distance from a target, and social impact theory suggests that a social influence's strength will be positively related to its immediacy (Latané, 1981; see also Echterhoff, Higgins, & Groll, 2005; Milgram, 1974). The temporal distance of a response deadline seems to have a parallel effect: As decision deadlines draw closer and time pressure increases, group members experience a heightened need for closure and therefore strive toward uniform group opinions (Kruglanski, Pierro, Mannetti, & De Grada, 2006). Group pressures therefore tend

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to grow stronger as groups and decisions become more proximal rather than distal.

Research on the distance of the attitude object itself could appear to tell a similar story. Recent work has shown that people are more influenced by the opinion of an incidental individual (e.g., a stranger or acquaintance) when an attitude object is psychologically close rather than distant (for instance, when a political policy will be implemented in the relatively near rather than distant future; Ledgerwood, Trope, & Chaiken, 2010; Ledgerwood, Wakslak, & Wang, 2010). Meanwhile, this research suggests that distance tends to increase the extent to which people's opinions reflect their own ideological values, as well as the tendency to form new opinions based on aggregated statistical evidence (e.g., clinical research evidence) rather than other individuals' opinions (e.g., an acquaintance's opinion of a new drug). Notably, these effects of distance seem to operate via level of construal: Whereas proximity leads people to think concretely, orienting them toward the particularities of the local social context, distance leads people to think more abstractly, which helps them to transcend immediate contextual details and relate to an attitude object in a way that will be appropriate across a variety of situations (for a review, see Ledgerwood, Trope, & Liberman, 2010).

More broadly, research on psychological distance and abstraction points to a variety of effects that might suggest that an abstract thinker should somehow be more attuned to the self than to others, and thus generally resistant to social influence. Studies have shown that distance and abstraction lead people to be more attuned to their own broad values and morals, to have a clearer and more structured sense of self, and to exert greater self-control in pursuing their own long-term goals (e.g., Agerström & Björklund, 2009; Eyal, Liberman, & Trope, 2008; Fujita, Eyal, Chaiken, Trope, & Liberman, 2008; Wakslak et al., 2008). Taken together, then, the general picture emerging from these literatures could imply that greater distance should lead people to be less socially influenced and more independent in their opinions and attitudes.

However, there are also clear theoretical reasons for predicting that greater distance should increase susceptibility to certain kinds of social influence. In particular, Ledgerwood, Trope, and Liberman (2010) recently posited a functional relationship between distance and evaluative responding, whereby people respond to psychologically proximal objects with local evaluations that incorporate information specific to the current context. Such evaluations can help people flexibly adapt to the demands of the immediate situation. In contrast, psychologically distant objects prompt relatively global evaluations that incorporate sources of information that tend to be consistent across contexts. Such evaluations can help people to transcend the particularities of the immediate situation and relate to an object in a way that will be appropriate in a variety of situations.

Although empirical research from this perspective has focused on showing that distance therefore decreases susceptibility to incidental social influences that are unique to a single context, such as the opinion of a temporary conversation partner (Ledgerwood, Trope, & Chaiken, 2010), we hypothesized that distance should also increase the extent to which a person's evaluative responses reflect sources of social influence that tend to be encountered consistently across contexts, such as group norms. Unlike incidental and context-specific social influences, group norms tend to be relatively consistent across situations: The social norm today is likely to be the same as the social norm next year and will be relevant across a wide range of contexts. Thus, if psychological distance truly increases the extent to which evaluations incorporate information relevant for relating to an object across contexts, it should strengthen the tendency for a person's opinions to align with those of his or her group.

In summary, we suggest that the distance of an attitude object might moderate susceptibility to different types of social influence in fundamentally different ways. Whereas past research has established that psychological distance decreases susceptibility to an incidental individual's opinion, a type of social influence that is tied to one particular context, we posit that distance will increase susceptibility to group opinion, which tends to be encountered consistently across contexts. Moreover, we propose that this effect is not unique to one particular dimension of distance, but rather reflects a more general process instigated by any variable that leads people to think more abstractly.

The Current Research

We conducted two studies to test the hypothesis that psychological distance will increase the impact of group norms on a person's evaluative responses. In Study 1, we manipulated the temporal distance of a policy by varying whether it would be implemented in the near or distant future. We then provided participants with information about the majority opinion before asking them to report their own attitudes toward the policy. In Study 2, we sought to test the hypothesized construal-level process underlying this effect, by directly manipulating abstraction via a procedural prime. We then examined conformity to group opinion in a voting-booth setting, where participants believed their voting behavior was both consequential and anonymous.

Study 1
Method

Sixty-seven University of California, Davis (UC Davis), undergraduates (72% female, 28% male) completed a study described as an online student opinion survey. All participants read an article excerpt (ostensibly from an online campus newsletter), which stated that the Davis City Council was considering whether to approve a proposal that would require all bicycles (the primary mode of student transportation in Davis) to use rear bicycle lights for nighttime travel.

Participants read that if the policy was approved, it would be implemented either the next month (near-future condition) or the next year (distant-future condition). This manipulation has been shown to influence construal level without affecting other variables, such as mood, involvement, or depth of information processing (see, e.g., Ledgerwood, Trope, & Chaiken, 2010; Maglio & Trope, 2012),[1] and it allowed us to vary the psychological distance of the attitude object while holding constant other distances (e.g., distance to the social influence, time until participants made a decision). To manipulate perceived social norms, the article also described the reactions of UC Davis students by noting a recent poll: Depending on condition, the article reported either that 78% of students supported the policy (group-favors condition) or that 78% of students opposed the policy (group-opposes condition).

Next, participants responded to a series of four questions assessing their own attitudes toward the policy (e.g., "Do you think it's a good idea to require rear bike lights?" and "How concerned are you that this policy may have negative consequences?"; the latter item was reverse-coded) on 9-point scales anchored at the endpoints (e.g., 1 = *not at all*, 9 = *extremely*). We averaged responses to form an index of attitudes toward the policy ($\alpha = .82$).

Because participants in online studies may sometimes click through material without reading, we included two attention checks designed to screen out anyone who had not read the sentence containing the time manipulation. The 7 participants who failed the attention checks (e.g., reporting the near or distant time of proposed implementation incorrectly) were excluded from the analyses.

Results and discussion

A 2 (temporal distance: near vs. distant future) × 2 (group norm: favor vs. oppose) analysis of variance (ANOVA) yielded a main effect of temporal distance, $F(1, 56) = 4.03$, $p < .05$, $\eta_p^2 = .07$, which was qualified by the predicted two-way interaction between temporal distance and group norm, $F(1, 56) = 4.91$, $p < .05$, $\eta_p^2 = .08$ (see Fig. 1). As hypothesized, participants tended to conform to group opinion when the policy would be implemented in the relatively distant future, expressing more favorable attitudes when the group favored the policy than when the group opposed it, $F(1, 56) = 3.97$, $p = .05$, $\eta_p^2 = .07$. However, when the policy was going to be implemented in the relatively near future, participants were unaffected by the group norm, $p > .26$.[2]

Of course, it could be argued that people sometimes care less about a distant-future policy than about a near-future one (e.g., Green & Myerson, 2004; Liberman & Chaiken, 1996) and that these results reflect a decrease in involvement that led participants to use the group opinion as a heuristic rather than think about the issue more carefully. In light of considerable research showing that temporal-distance manipulations such as the one we used do not affect feelings of involvement or depth
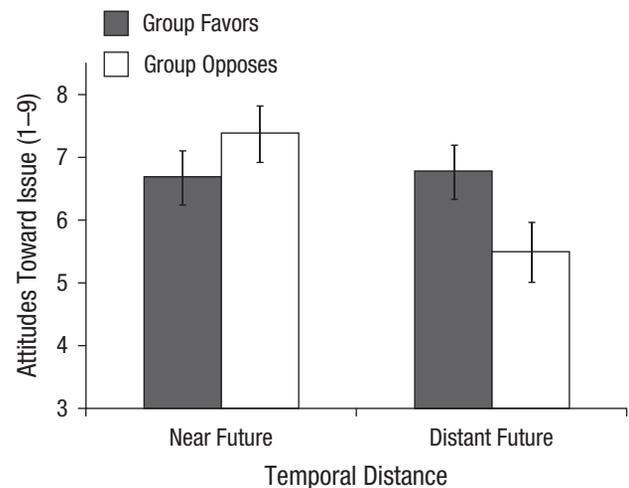
Fig. 1. Results of Study 1: mean rating of attitudes toward a proposed bike law as a function of when the law would be implemented and whether other students were reported to generally favor or oppose the law. Error bars indicate ±1 *SE*.

of processing (e.g., Fujita et al., 2008; Ledgerwood, Trope, & Chaiken, 2010; Maglio & Trope, 2012; see also our own findings in note 1), we doubt this explanation. Nevertheless, it was important to clearly rule out this alternative in the present research. We therefore conducted a second study in which we manipulated level of construal directly, rather than via temporal distance, and included measures of involvement.

Study 2

In Study 2, we sought to zero in on the process we believed was responsible for the effects in Study 1. Specifically, we tested whether directly manipulating construal level would moderate the impact of group norms on participants' evaluative responses. We also created a laboratory paradigm that would allow us to examine the implications of these processes for voting behavior that participants believed to be both anonymous and consequential.

Method

Sixty-two New York University (NYU) undergraduates (approximately 68% female and 32% male)[3] participated in a study that we described as a "nationwide survey collection effort designed by policymakers who want to get a sense of the feelings and priorities of the next generation of voters." Participants were led to believe that as part of a new voting system intended to maximize accuracy and efficiency in the data-collection process, researchers were bringing students into the lab in groups of 4 to vote on one of several issues and that the voting outcomes would be used to inform future policymaking. In reality, each participant completed the study individually.

After seating the participant and checking a clipboard, the experimenter remarked that the student was Participant 4 (and therefore last in line to vote) and suggested that the participant save time by completing another, unrelated study now instead of later. This "other study" was adapted from previous research (Freitas, Gollwitzer, & Trope, 2004; Fujita, Trope, Liberman, & Levin-Sagi, 2006) and constituted our manipulation of construal level. All participants were asked to think about the activity "improve and maintain health." In the abstract-mind-set condition, they were asked to generate increasingly superordinate, abstract answers to the question of why they engaged in this activity (e.g., people might improve their health to feel good, and they might want to feel good in order to have a happy life). In the concrete-mind-set condition, participants were instead asked to generate increasingly subordinate, concrete answers to the question of how they engaged in the same activity (e.g., people might improve their health by going to the gym, and they could go to the gym by walking down the street). Past work has confirmed that this procedural prime successfully manipulates the level at which participants construe subsequently encountered, unrelated objects (e.g., Agrawal, 2005; Fujita et al., 2006).

After completing this task, the participant pushed a button to alert the experimenter. The experimenter returned, remarking "perfect timing," and led the participant down the hall to a different room labeled "Voting Area." To ensure that the participant believed his or her vote was private, the experimenter had the participant enter the room alone and then let the door swing shut.

Participants carried an envelope containing five tokens. They had been instructed that once in the voting booth, they should first decide whether to vote "yes" or "no" on the issue that would be presented there and then decide how many tokens to use depending on how strongly they felt (e.g., one token for a slight preference, five tokens for a strong one; this procedure allowed us to examine actual voting behavior without the loss of statistical power that often accompanies a dichotomous behavioral measure). A card on the voting table indicated that participants were voting on the issue of whether policymakers should support affirmative-action policies.

To manipulate the perceived group norm, we had placed on the table two uncovered boxes labeled "YES" and "NO." In the group-favors condition, the participants saw that all the other students in the session seemed to have voted strongly in favor of the issue (14 tokens in the "YES" box; 1 in a container marked "Extra" to maintain believability). In the group-opposes condition, participants saw that everyone seemed to have voted strongly against the issue (14 tokens in the "NO" box). Participants then voted using their own tokens and returned to the original room. The experimenter later recorded each participant's vote as the number of tokens that he or she had placed in the "YES" box (assigned a positive value) or the "NO" box (assigned a negative value), which created a continuous measure of voting behavior on a scale from −5 to 5.[4]

Last, participants completed a background questionnaire including an attention check to confirm that they remembered the issue (affirmative action) and a manipulation check asking what percentage of NYU students they thought supported the issue. To confirm that there were no unintended effects of condition on how motivated the participants were to think carefully about the issue, we also asked participants to rate how interesting and important the issue was to them and how knowledgeable they felt about it, on a scale ranging from 1 (*not at all*) to 7 (*extremely*). Finally, because conformity studies are often discussed in psychology classes, we carefully probed participants for suspicion before the debriefing, using a funnel technique (Chartrand & Bargh, 1999).

Results and discussion

Eight participants were suspicious of the experimental setup (stating they did not believe the other participants existed or expressing suspicion about being able to see the tokens in the voting boxes), and 2 participants failed to follow instructions (e.g., did not bring their tokens to vote). Analyses were conducted on the remaining 52 participants' data.

Manipulation check. The token placement successfully manipulated participants' perceptions of the group norm: Participants believed a far higher percentage of NYU students supported affirmative action when the tokens were all in the "YES" box ($M = 68.54\%$) than when the tokens were all in the "NO" box ($M = 27.38\%$), $t(48) = 6.92$, $p < .001$.[5]

Voting behavior. A 2 (mind-set: abstract vs. concrete) × 2 (group norm: favor vs. oppose) ANOVA on participants' voting scores yielded a main effect of group norm, $F(1, 48) = 12.54$, $p < .01$, $\eta_p^2 = .21$, qualified by the predicted two-way interaction of mind-set and group norm, $F(1, 48) = 5.04$, $p < .05$, $\eta_p^2 = .09$ (see Fig. 2). Participants conformed to the group norm after they had been led to think abstractly, voting more strongly in favor of affirmative action when the group seemed to support it rather than oppose it, $F(1, 48) = 16.54$, $p < .001$, $\eta_p^2 = .26$. In contrast, participants' voting behavior was unaffected by the group norm when they had been led to think concretely, $F < 1$. Thus, as hypothesized, abstraction increased participants' susceptibility to group influence and changed the way they voted on an important issue that they thought would have real consequences.

Alternative explanations. The mind-set manipulation had no effect on participants' interest in the issue, perception of the importance of the issue, or sense of expertise, ps $> .29$, a result consistent with previous research (e.g., Ledgerwood, Trope, & Chaiken, 2010). Thus, the impact of construal level on susceptibility to group influence was not attributable to an unanticipated effect of mind-set on involvement-related variables.
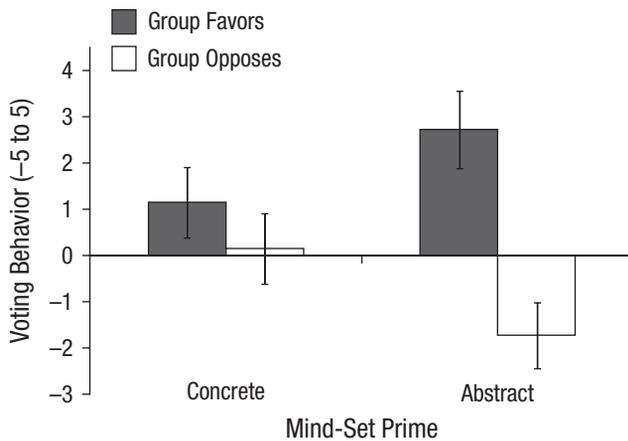
Fig. 2. Results of Study 2: voting on affirmative action as a function of whether the group norm favored or opposed it and whether participants had been led to adopt a concrete or abstract mind-set. Positive numbers indicate the number of tokens placed in the "YES" box, whereas negative numbers indicate the number of tokens placed in the "NO" box. Error bars indicate ±1 *SE*.

General Discussion

Taken together, these findings indicate that psychological distance and abstraction can play a critical role in determining the impact of group norms on people's attitudes and behavior. In Study 1, participants showed greater conformity to a majority opinion when evaluating a distant-future, rather than a near-future, policy. Consistent with the notion that this effect was not due to time per se, but rather was due to a more general process of abstraction, Study 2 demonstrated a similar pattern following a direct manipulation of construal level: Participants who had been led to think abstractly more strongly aligned their voting behavior with the perceived group norm, compared with participants who had been led to think concretely. These results suggest that psychological distance—or more broadly, any variable that increases abstraction—can increase the extent to which an individual's evaluative responses correspond to group opinion.

Such findings provide important evidence for our suggestion that global evaluations of distant attitude objects can incorporate sources of social influence that will tend to help people transcend the particularities of the immediate situation. In this respect, it is important to note that group norms will usually be a source of consistency: Perceived norms can be quickly manipulated in the laboratory, but in the real world, group opinion about many things tends to be relatively slow to change. Thus, tuning into group opinion will typically allow individuals to get "unstuck" from their current context and relate to an object in a way that is likely to be appropriate across a range of different situations, at different time points, and with different group members.

Of course, not all group opinions are created equal. From our perspective, the impact of distance on a person's conformity to group opinion should depend on the extent to which

the group tends to be a consistent aspect of the person's social context. Thus, we predict that distance will enhance the influence of a consistently relevant in-group, but perhaps not the influence of an inconsistently relevant out-group (e.g., a neutral out-group with which an individual has little contact). Likewise, insofar as a negative reference group (e.g., an oppositional out-group) provides people with information about what positions to oppose that is consistent across contexts (Turner, 1991), distance might enhance the extent to which people's evaluations diverge from a negative reference group's opinions. Future research should examine how distance and group type jointly influence conformity.

Perhaps most provocatively, the current results challenge the caricature of the distanced or abstract thinker as one who is somehow divorced from social concerns. Taken together, the literatures reviewed earlier could erroneously imply that humans are social creatures only in the here and now, and somehow rise above social concerns when thinking at a distance. The present research reveals a social side to distance and abstraction, suggesting that they increase the extent to which people tune into global social information that tends to be consistent across contexts. Moreover, it is possible to reinterpret past findings in this light. For instance, numerous studies have demonstrated that psychological distance increases the extent to which people's attitudes and behaviors reflect their own moral and ideological values (e.g., Agerström & Björklund, 2009; Eyal et al., 2008; Ledgerwood, Trope, & Chaiken, 2010). Notably, moral and ideological values tend to be socially shared with long-term significant others and groups. Indeed, part of their consistency derives from the fact that they are anchored in social networks (e.g., Conover & Feldman, 1981; Jost, Ledgerwood, & Hardin, 2008; Stillman, Guthrie, & Becker, 1960; see also Visser & Mirabile, 2004). Thus, rather than assuming that value-consistent behavior reflects an immunity to social influence, one could view this past research through the lens of the present perspective: Distance can increase the extent to which people's evaluative responses correspond to context-independent sources of social influence, and measuring values or ideology provides one way to assess the attitudes people share with these long-standing social influences.

It is also interesting to consider these results in relation to Ledgerwood, Wakslak, and Wang's (2010) findings that temporal distance can increase reliance on aggregated statistical evidence (vs. a single person's opinion). Whereas this previous research could seem to support the idea that distance increases cool and objective thinking, unconstrained by social concerns (by decreasing the impact of an individual social influence and increasing reliance on objectively better-quality statistical data), the present results suggest an expanded understanding of aggregated information that includes aggregated social pressures.

Finally, the present findings have intriguing implications for the potential effects of social influences in a range of contexts, including political opinions and voting behavior in today's

increasingly digital world. Although considering a more psychologically distant issue will tend to decrease the impact of a single stranger's opinion posted in an online forum or tweeted to the evening news, it can also increase the impact of group opinion polls, from those conducted by official polling agencies to informal online surveys.

Thus, a distanced vantage point does not necessarily make people more independent: When thinking about an election that will occur next year, rather than tomorrow, or when voting by absentee ballot rather than in person at the voting booth, individuals may be especially likely to adopt whatever opinion seems to be endorsed by a majority of their group members. Although one might intuitively expect that a distanced or abstract thinker will be immune to social influence, the present findings suggest that distance and abstraction can actually increase susceptibility to group norms and majority opinions. A Spock or Obama may indeed be resistant to the pushes and pulls of incidental individuals in the local social context, but may also be especially likely to conform in the face of group pressure.

Acknowledgments

Declaration of Conflicting Interests

Funding

Notes

1. It is important to note that time works as a manipulation of involvement or personal relevance only when it changes whether participants believe that an issue will or will not have "significant consequences for their own lives" (Apsler & Sears, 1968, p. 162). A typical example of such a manipulation is found in a study by Liberman and Chaiken (1996). These researchers manipulated personal relevance by asking New York University students to consider a new comprehensive-exam requirement starting either the next year, so that "all current students at New York University would be personally affected by this policy," or in 10 years, so that "no current students at New York University would be personally affected by this policy" (p. 273). For our primarily underclassman subject pool, changing whether a policy would be implemented the next month or the next year did not influence their perception that an issue had significant consequences for their own lives, their perception of the issue's importance, or the amount of effort they reported devoting to thinking about the issue and their responses, as confirmed in a separate data set, all $ts < 1$ (see Ledgerwood, Trope, & Chaiken, 2010, for a full discussion of the distinction between these two constructs— time and involvement—and their operationalizations).

2. To confirm the robustness and generalizability of these findings, we conducted another study using a different policy (a proposal to require an online diversity-training course in the wake of bias-driven vandalism on campus) and replicated these results. For details, contact the first author.

3. Gender was recorded for only two thirds of the participants because of an experimenter error.

4. Participants used the full range of this scale. Only 2 abstained (by placing all tokens in the "Extra" container; we scored this voting outcome as a neutral 0 on the scale).

5. The degrees of freedom reflect missing data for 2 participants who did not complete the second side of the questionnaire. These results were not moderated by mind-set, $F < 1$.

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