ENHANCEMENT OF DOMINANT ATTITUDES IN GROUP DISCUSSION

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Two studies were performed in an attempt to generalize the risky-cautious-shift phenomenon to attitudes and to test "information exchange" and "mutual reinforcement" explanations of discussion-produced shifts. Study I confirmed an assumption of the information-exchange hypothesis by extending to the attitude realm the finding that subjects perceive their peers as less in the valued direction than themselves. In Study II, eight of these items were responded to before and after treatment by subjects in discussion, information-exchange, and control conditions. Only discussion-condition groups evidenced significant attitude shifts and polarization effects. Observations of tape recordings of the discussions indicated that a group's initial mean on an item was a significant predictor of the direction of the discussion rhetoric, which in turn was a predictor of group shifts. However, group initial mean did not directly predict group shifts.

A large amount of research in the past decade (cf. Kogan & Wallach, 1967) has investigated the effects of group discussion on responses to questionnaire items on which subjects recommend the amounts of risk to be taken by hypothetical persons facing various life dilemmas (Kogan & Wallach, 1964, Appendix E). It is now well documented that discussion tends to increase risk taking on items where the predominant initial response tendency is in the risky direction, and tends to enhance caution on items which tend to elicit cautious initial responses (Myers, Murdoch, & Smith, 1970; Stoner, 1968; Teger & Pruitt, 1967). One popular explanation of this phenomenon (Brown, 1965) is that discussion provides arguments mostly in support of the dominant value and, also, that mere information about others' decisions indicates to the average subject that relative to others, he is not as strongly in the valued direction as he had supposed. This information is said to be a stimulus for his shift in the valued direction. The first suggestion, which could in behavioral terms be labeled the "mutual reinforcement" explanation, has not been directly investigated, except for Nordhöy's (1962) observation that the content of arguments in Stoner's (1962) original groups tended to favor the direction of group shift. The second explanation, "information exchange," has received more investigation. Stoner (1968), Wallach and Wing (1968), and Levinger and Schneider (1969) all confirmed that individuals do tend to see themselves as riskier than "fellow students" on items where a shift to risk has been found. However, other research (Madaras & Bern, 1968; Murdoch, Myers, & Smith, 1970; Teger & Pruitt, 1967; Wallach & Kogan, 1968) has yielded conflicting data when mere information about other's decisions is exchanged without opportunity for discussion.

If Brown's "value enhancement" theory of group risk-taking effects is correct, it suggests that such discussion effects might generalize to other nonrisk response tendencies. The present research applies to the attitude realm the general hypothesis that discussion enhances the dominant value, if such exists. Evidence that this hypothesis might prove fruitful was provided by post hoc examination of group-shift data obtained on discussion of 12 "risk-neutral" items used in a
study by Wallach, Kogan, and Burt (1968).\(^4\) The mean shift scores on these 12 items were correlated with the means of individual decisions of a small sample of Hope College students. The resulting correlation of .71 suggested that although few significant shifts occurred, the direction and amount of mean shift on an item was predictable from the mean of initial decisions, just as has been observed with the life-dilemma items. Recent research by Moscovici and Zavalloni (1969), Doise (1969), and Myers and Bishop (1970) also supports the hypothesis.

Study I examined an assumption of the information-exchange explanation by asking subjects to respond to 12 attitude items and estimate the responses of fellow students. It was hypothesized that subjects would tend to see others as more neutral than themselves (less in the valued direction) on these non-risk materials. On the basis of data provided by Study I, items were selected for a subsequent study which investigated discussion effects and the extent to which information exchange and mutual reinforcement processes could predict any observed discussion effects.

**STUDY I**

**Method**

Subjects. Participants were 118 introductory psychology students at Hope College who completed the questionnaire at the end of a regular class period.

Materials. From among a number of specially reacted items, 6 were selected which pretesting suggested would elicit initial responses deviating in a predictable direction from neutral. Using the same criterion, 6 items from the Wallach et al. (1968) nonrisk “Opinion Questionnaire” were also included. These 12 items had a common format as illustrated below.

Mary N., a college junior, desires to spend her spring vacation on a biology field trip to another region of the country. Her parents, who have not seen her in several months, would like very much to have her home over vacation. Mary N. is unsure what to do. Since she is interested in becoming a biologist, she considers the field trip a rare opportunity for firsthand research experience. It would also help her test out her interest in becoming a biologist. On the other hand, she knows that her parents have been looking forward for some time to having her home for a few days. Mary N.

*The authors are grateful to Michael Wallach for providing these Items and shift data.*

loves her parents and also appreciates the fact that they are financing her education.

Please put a check next to the ONE statement that best expresses your opinion:

- I strongly favor that Mary N. go home for vacation.
- I moderately favor that Mary N. go home for vacation.
- I slightly favor that Mary N. go home for vacation.
- Undecided
- I slightly favor that Mary N. go on the biology field trip.
- I moderately favor that Mary N. go on the biology field trip.
- I strongly favor that Mary N. go on the biology field trip.

**Results and Discussion**

Responses on the 7-point scale were scored, ranging from -3 (strongly favor the first alternative) to +3 (strongly favor the second alternative). Table 1 summarizes the mean data for all 12 items. The table indicates that on 9 of the 12 items, subjects did on the average view their fellow students as significantly more neutral than themselves. These data extend the results from similar studies cited above to nonrisk opinion materials, suggesting a general tendency to see oneself as more in the valued or dominant direction than one’s fellows.

**STUDY II**

The present experiment investigated the effects of group discussion on responses to selected items from Study I. In addition to the main discussion condition, two other

\(^5\) These instructions are those used by Ivan D. Steiner (personal communication, 1967).
TABLE 1
MEAN OF OWN RESPONSES, MEAN OF RESPONSES ESTIMATED FOR FELLOW STUDENTS, AND MEAN DIFFERENCE BETWEEN OWN AND ESTIMATED FELLOW STUDENTS’ RESPONSES

<table>
<thead>
<tr>
<th>Item no.</th>
<th>Own</th>
<th>Fellow students</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>-0.70</td>
<td>-0.88</td>
<td>0.18**</td>
</tr>
<tr>
<td>4</td>
<td>-2.07</td>
<td>-0.52</td>
<td>1.55****</td>
</tr>
<tr>
<td>5</td>
<td>-1.60</td>
<td>-0.91</td>
<td>0.70***</td>
</tr>
<tr>
<td>6</td>
<td>-0.60</td>
<td>-1.19</td>
<td>0.41**</td>
</tr>
<tr>
<td>7</td>
<td>-1.10</td>
<td>-0.38</td>
<td>1.72******</td>
</tr>
<tr>
<td>8</td>
<td>-0.79</td>
<td>-1.14</td>
<td>0.35*</td>
</tr>
<tr>
<td>9</td>
<td>1.22</td>
<td>1.14</td>
<td>-0.09</td>
</tr>
<tr>
<td>10</td>
<td>1.73</td>
<td>0.53</td>
<td>1.20</td>
</tr>
<tr>
<td>11</td>
<td>1.29</td>
<td>0.58</td>
<td>0.71******</td>
</tr>
<tr>
<td>12</td>
<td>1.56</td>
<td>1.19</td>
<td>-0.72*</td>
</tr>
<tr>
<td>13</td>
<td>1.74</td>
<td>1.34</td>
<td>-0.40***</td>
</tr>
<tr>
<td>14</td>
<td>1.13</td>
<td>0.00</td>
<td>-1.13*****</td>
</tr>
</tbody>
</table>

Note.—$p$ were determined by two-tailed $t$ tests of the deviations of the difference scores from zero. $N = 118$, except for items 8 and 12, on which some subjects failed to respond.

* $p < .10$.
** $p < .05$.
*** $p < .01$.
**** $p < .001$.

Mental values as defined by the mean of initial responses, items from Study I which elicited mean responses more extreme than $-1$ or $+1$ were employed. None of the eight items meeting that criterion appeared to elicit initial responses so extreme as to preclude further shifts toward the extreme. As in Study I, the format was structured such that on half of the items the dominant tendency would be toward the first alternative and on the remaining half, toward the second listed alternative.

Procedure. Subjects were seated around a round table and requested to follow along as the experimenter read the instructions for the Opinion Questionnaire. After all were finished the booklets were collected and the procedures defining the particular experimental condition were administered.

Discussion groups received new identical booklets with instructions paralleling those in Wallach and Kogan’s (1965) discussion without consensus condition. Subjects were asked to discuss each situation for 3 minutes. After 3 minutes had elapsed (or after a 20-second silent interval if discussion finished early), the experimenter interrupted and requested a new decision.

Information-exchange subjects were instructed to share information about initial decisions but without discussion.

Now we would like to give you an opportunity to compare notes by telling each other your initial decisions as best as you can remember them. For each item I will ask one of you to start by simply reading the statement which seems to reflect how you feel. Then you can just continue clockwise around the table, each person reading his opinion. Please do not discuss or comment on the items; just read your choice as it is written. After this exchange of information on each item I will ask you to again mark a decision. In making your final decision you in no way need to feel bound by your previous decisions. Okay, would you look at the first item [pause] and think about which statement best reflects how you feel [20-second pause]. Why don’t we just go around the table, starting this time with you [name] and simply read your choice. . . . That’s good. When making your decision now, remember that we’re not interested in your prior opinion, but rather in just how you feel about the situation now. All right, go ahead and make your decision for the first situation.

Control groups were given a brief anagram-solving task as neutral intervening activity and then asked to reconsider the situations without feeling bound by previous decisions.

Results

Responses were again converted to a $+3$ to $-3$ scale. This time for simplicity of data presentation, $+3$ was scored as strongly favoring the valued alternative and $-3$ as strongly...
favoring the less popular alternative. Initial means on each item averaged across all 160 subjects were calculated. Two items (9 and 12 from Study 1) did not elicit the predicted dominant tendency, and hence these items were not included in the computation of composite shift scores across items.

**Enhancement of dominant value.** For each group, the pre- and posttreatment means of decisions were computed. Table 2 presents these data and the mean shift scores for each condition. It indicates that significant enhancement of initial mean tendency occurred only in the discussion condition. However, an analysis of variance indicated that shift scores for the three conditions did not differ significantly from one another ($F = 2.02$, $df = 2/32$).

**Tendency toward extremity.** Moscovici and Zavalloni (1969) observed that groups were more extreme than individuals. In replication of their observation, Table 2 indicates that postdiscussion mean distances from zero were significantly greater than the mean of prediscussion distances from zero. It is possible that this “polarization effect” of discussion applies to groups but not to individuals. For example, a group with $-1, -1, +1,$ and $+3$ initial decisions and a $+1$ final consensus would be more extreme than its initial mean distance from zero of $.5$. But the group product of $+1$ is not more extreme than the mean initial absolute extremity score of individuals ($1.5$). (Consistent with this analysis, Kogan & Wallach, 1966, did not observe group probability judgments to be more extreme than the mean of initial absolute extremity scores.) Hence, the difference between the average of pre- and postdiscussion individual extremity scores was calculated for each group. Table 2 indicates this difference to be small, but also significant, in the discussion condition.

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**TABLE 2**

**GROUP MEAN SCORES AND GROUP AND INDIVIDUAL EXTREMITY SCORES BEFORE AND AFTER TREATMENT**

<table>
<thead>
<tr>
<th>Condition</th>
<th>$N^a$</th>
<th>Before</th>
<th>After</th>
<th>Difference</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Group</td>
<td>15</td>
<td>1.43</td>
<td>1.66</td>
<td>.24</td>
<td>2.06*</td>
</tr>
<tr>
<td>Group extremity</td>
<td>15</td>
<td>1.47</td>
<td>1.76</td>
<td>.29</td>
<td>2.73**</td>
</tr>
<tr>
<td>Information-exchange</td>
<td>15</td>
<td>2.10</td>
<td>2.24</td>
<td>.13</td>
<td>2.25**</td>
</tr>
<tr>
<td>Group M</td>
<td>10</td>
<td>1.52</td>
<td>1.51</td>
<td>-.01</td>
<td>.21</td>
</tr>
<tr>
<td>Group extremity</td>
<td>10</td>
<td>1.56</td>
<td>1.55</td>
<td>-.01</td>
<td>.23</td>
</tr>
<tr>
<td>Individual extremity</td>
<td>10</td>
<td>2.06</td>
<td>1.98</td>
<td>-.09</td>
<td>1.58</td>
</tr>
<tr>
<td><strong>Control</strong> Group</td>
<td>10</td>
<td>1.63</td>
<td>1.68</td>
<td>.04</td>
<td>.51</td>
</tr>
<tr>
<td>Group extremity</td>
<td>10</td>
<td>1.63</td>
<td>1.49</td>
<td>-.14</td>
<td>.70</td>
</tr>
<tr>
<td>Individual extremity</td>
<td>10</td>
<td>2.08</td>
<td>2.13</td>
<td>.06</td>
<td>1.54</td>
</tr>
</tbody>
</table>

$^aN$ is the number of groups.

* $p < .06$ (two-tailed).

**Mutual reinforcement effects.** The discussion data were further examined to see if mutual reinforcement processes might help predict shift scores. To explore mutual reinforcement effects, it was assumed that the items elicited two conflicting response tendencies and that the expression of an argument favoring one alternative constituted a reinforcement of that response tendency. It was predicted that arguments would tend to favor the dominant (valued) tendency. (See Byrne, 1969, for evidence that hearing an attitude statement similar to one’s own attitude tendency does constitute a reinforcement.)

Audiotapes were made of 14 of the 15 discussion groups (through a ceiling microphone pointed out to subjects before the discussion). For each discussion, two observers independently counted the number of arguments in support of each alternative, and the proportion of arguments favoring the dominant alternative was computed from this. Across all items and groups, the two observers correlated $.77$ in their observation of these proportions, so their observations were averaged. The mean proportion of arguments (reinforcements) favoring the dominant alternative was $.76$, a significant deviation from $.50$ ($t = 10.87$, $p < .001$). The proportion for each item was then correlated across 84 group discussions (6 items $\times$ 14 groups) with the group initial means and group shifts. Results ($r = .49$ and $.37$, respectively, $N = 84$, $p < .001$) indicated that the group initial mean was a significant predictor of the number of
reinforcements in support of the dominant alternative which was, in turn, a predictor of the magnitude of shift in the dominant direction. However, a group's initial mean on an item did not predict the group's shift on that item \( r = -.12 \). This latter finding has also been observed on the risk-taking items (Myers & Arenson, 1970), and may be due in part to regression and ceiling effects—a group already near the extreme on an item cannot shift much further toward the extreme. In summary, although group initial means did not directly predict group shift scores, the initial means did significantly predict the direction of the discussion rhetoric, and this was a predictor of shift scores.

**DISCUSSION**

The present research explored the hypothesis that discussion enhances the dominant value on attitude materials as well as on life-dilemma risk problems. A second purpose was to examine the mutual reinforcement and information-exchange explanations of any such discussion effect.

Study II revealed marginally significant discussion enhancement of mean initial tendencies. This is comparable to results obtained by Moscovici and Zavalloni (1969), who also used a 7-point Likert scale (for pre- and postdiscussion attitude ratings of French students concerning policies of General deGaulle). Moscovici and Zavalloni observed an average preconsensus-consensus shift of \(.28\) in comparison with the pre-post discussion shift of \(.24\) in the present research.

Study II also replicated Moscovici and Zavalloni's (1969) observation that discussion "results in a polarization of responses [p. 134]" when one compares the extremity of group pre- and postdiscussion mean distances from zero. However, this polarization effect was of small magnitude when the mean absolute extremity of individuals' pre- and post-discussion responses were compared.

Why does this small, but apparently reliable, discussion effect occur? Study I confirmed the information-exchange assumption that people tend to see themselves as more strongly in the valued direction than others. Study II therefore provided the necessary and sufficient conditions for information exchange by having subjects report initial responses without further discussion. Contrary to the information-exchange explanation, no shift was observed.

The discussion-based mutual reinforcement hypothesis was examined by content analysis of tape recordings. As predicted, arguments did tend to favor the predominant response tendency. Also, the extent to which arguments favored the dominant alternative did significantly predict the group shift scores. These findings support Brown's (1965) and Vinokur's (1971) suggestion that shift effects are due partly to an enhancement of the prevailing value by the discussion arguments.

**REFERENCES**


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