

indicates the direction of optimum value for the characteristic being studied. These arguments suggest that there is apparently some selective advantage in the mouse's ability to respond, with a change in brain size, to an enriched environment.

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Discussion Effects on Racial Attitudes

Abstract. *We predicted that discussion would enhance dominant group values, leading to increased polarization between homogeneously composed groups of high-, medium-, and low-prejudice high school subjects. In an experimental condition, group members made individual attitude judgments, discussed them, and remade judgments. Control groups discussed irrelevant materials before responding again to the attitude items. As predicted, discussion of the racial attitude items with others having similar attitudes significantly increased the gap between high- and low-prejudice groups.*

In recent years a number of social commentators have noted a growing polarization in attitudes and values within our society. The following social psychological experiment was designed as a laboratory analog of such real-world social phenomena and also as an attempt to extend to social attitudes some recent findings on the effects of group discussion on risk-taking.

Numerous studies in the past decade have indicated that discussion predictably affects responses to "choice dilemma" items on which subjects recommend the amounts of risk to be taken by hypothetical persons facing various life dilemmas (1). In general, discussion tends to produce an increase in risk-taking ("risky shift") following discussion, but this is especially true on items for which prediscussion decisions tend to be already fairly risky. On items for which initial decisions tend to be cautious, decisions following discussion tend to become even more cautious ("cautious shift"). In other words, discussion tends to enhance the mean initial tendency.

Empirically this may be seen as a significant correlation between the mean of initial decisions on an item and the mean amount of risky shift that discussion of that item elicits. For example, Arenson, Myers, and Resnick (2) had 40 small groups discuss 12 dilemma items and a correlation of .89 ($N = 12$, $P < .001$) between mean initial risk

decision and mean risky shift resulted. Other recent research (3) also indicates that the mean of initial risk-taking on an item is a good predictor of the mean amount of risky shift that discussion of that item will elicit.

These data are consistent with the idea that on given items risk or caution may be a prevailing value which is enhanced through discussion (4). One need merely assume that the initial decisions on an item are an index to subjects' prediscussion values on that item. If, for whatever reason, discussion does tend to enhance the dominant value elicited by an item, there is every reason to suppose that discussion-produced shifts should generalize to non-risk materials in which some dominant initial value can be shown to exist. Other investigators have also begun to wonder if the risky-shift phenomenon might be a clue to more general group discussion effects. Levinger and Schneider (5) postulate a general "choice shift" phenomenon and Alker and Kogan (6) speculate on discussion-produced shifts toward the ideological right and left.

In this research high school subjects responded before and after discussion to each of eight racial attitude items. Before discussion they were separated into high-, medium-, and low-prejudice groups. Generalizing from the life dilemma problems, it was predicted that discussion would enhance dominant

values, that the high- and low-prejudice groups would move farther apart in their scale responses to the eight-item questionnaire after discussion in their separated groups.

The subjects were seniors in psychology classes at three western Michigan high schools. About 2 weeks before the discussion experiment, 326 subjects were administered the Woodmansee and Cook (7) Multifactor Racial Attitude Inventory (MRAI) during a regular class period. The MRAI is a 100-item, ten-factor measure of attitudes toward blacks that can be used as a 90-item prejudice measure by ignoring the "overfavorableness factor." The total distribution of resulting prejudice scores was divided into equal thirds, defining the high-, medium-, and low-prejudice subjects. Of these 326 subjects, 256 participated in the subsequent discussion experiment. Thirty others were used in a pilot study and the remaining 40 were either absent at the time of the experiment or were members of three groups eliminated for failure to follow instructions or for lack of participants.

Materials for the discussions were eight racial attitude items selected on the basis of two pilot studies which indicated that initial responses to these items would be predictable from MRAI scores and would not already be clustered at the extremes. For example:

"Some people recently have been saying that 'white racism' is basically responsible for conditions in which Negroes live in American cities. Others disagree. How do you feel?"

Below this was printed a scale for responding, ranging from +9 at the left ("white racism" is responsible), through 0 in the center, to -9 at the right ("white racism" is *not* responsible").

Other items were concerned with such matters as federal versus local control of school desegregation, property rights versus open housing, two-way school busing to achieve integration, boycotting of a discriminatory business, and patience versus activism as an effective black strategy. To counterbalance any tendency to agree with the first alternative, low-prejudice alternatives were on the left end of the 19-point scale on even-numbered items only.

The eight-item questionnaire was administered to a class with instructions to circle a number indicating the direction and strength of opinion. After collecting the initial questionnaires, groups homogeneously composed according to preju-

dice level on the MRAI were formed by grouping chairs at designated points within the classroom. Thirty-six groups in eight classes participated in an experimental (discussion) condition and 15 groups in three other classes participated in a test-retest control condition. Group size ranged from four to seven members.

In the experimental condition, new questionnaires were distributed and the groups were asked to discuss each item for 2 minutes and not to mark their final response until the experimenter requested it, even if a consensus was achieved in less than 2 minutes. After each 2-minute discussion the experimenter interrupted and asked everyone to think about how he felt and then to mark his final decision. Control subjects discussed irrelevant materials [two-choice dilemma problems (8)] and then were retested on the eight items.

For scoring purposes the low-prejudice extreme was always coded as +9 and the high-prejudice extreme as -9. The correlation between MRAI scores and prediscussion total scores on the eight-item scale was .69. This may be taken to validate the eight-item scale as a prejudice measure, and it indicates that the MRAI could be used to compose groups according to probable initial attitude on the discussion items.

The basic dependent measure was the shift score for each group, defined as the mean of the group members' average final response per item minus their mean initial response. Table 1 reports the mean of initial, final, and shift scores according to prejudice level and experimental condition. In the experimental condition the order of magnitude of shifts to prejudice was as predicted (high > medium > low prejudice groups). A two-way analysis of variance on the group shifts yielded a significant interaction effect ($F = 3.23$, d.f. = 2/45, $P < .05$), indicating that, as predicted, the effect of prejudice level on group shifts differed for experimental and control conditions. Note that in contrast to the racial-discussion groups, the high- and low-prejudice control groups were less extreme when retested.

Looking just at the experimental condition groups, a one-way analysis of variance indicated that shifts by low-, medium-, and high-prejudice groups differed significantly from each other ($F = 5.12$, d.f. = 2/33, $P < .02$). Specific t -test comparisons indicated that shifts by low-prejudice groups differed significantly from shifts by medium- ($t = 2.12$, d.f. = 23, $P < .05$) and high-

Table 1. Mean of initial, final, and shift scores per item, by condition. N = number of groups.

Group value	MRAI range	Experimental condition				Control condition			
		N	Initial	Final	Shift	N	Initial	Final	Shift
Low prejudice	64-84	12	2.94	3.41	+0.47	5	2.75	2.43	-0.32
Medium prejudice	54-63	12	1.30	0.67	-0.64	5	-0.56	-1.15	-0.58
High prejudice	19-53	12	-1.70	-3.01	-1.30	5	-2.23	-2.07	+0.16

prejudice groups ($t = 3.05$, d.f. = 23, $P < .01$).

Our main hypothesis was that high- and low-prejudice groups would be farther apart in their average response to the eight items after discussion than before discussion. The data supported the hypothesis, although the magnitude of the shifts was not great. It is not surprising that attitudes cast over a long history of experience would not be dramatically changed after brief discussion. Also, the study does not indicate what elements of the discussion process produced the attitude shifts. The social comparison involved in mere exposure to the attitudinal responses of one's peers may have stimulated shift in the valued direction, or the actual discussion rhetoric and pooling of arguments may have been the crucial element. Nonetheless, discussion with similar others did significantly increase the gap between high- and low-prejudice subjects. Separation on the basis of common values did lead to increased polarization.

These data, along with work by other researchers (see, for example, 9), suggest that the risky shift literature may be leading to greater general understanding of group-discussion effects, including discussion effects as a function of the prediscussion values of the group. If, as McGuire (10) suggests, "informal face-to-face communication of the person with his primary groups, his family, friends, co-workers, and neighbors" is a primary mode of social influence, and if people are attracted to and presumably communicate mostly with those sharing similar attitudes and values (11), then a basic and significant question for further research may be posed: How does informal communication affect attitudes, given some similarity in initial attitude? In the Lewinian tradition, such investigation offers opportunity for basic group research that is also relevant to a polarized society.

If, as the present research suggests, discussion does tend to enhance dominant group attitudes, some of the ambiguity over whether discussion leads to more "effective" attitudes might be resolved by considering the extent to

which the initial tendency of the population is in the direction of what the investigator terms effective. For example, if one were attempting to change the racial attitudes of a group of highly prejudiced individuals through an educational program, it might be advantageous to use other strategies to change attitudes and to delay free discussion until the desired attitudes are more dominant. Or one might preface discussion with remarks which make it likely that the desired comments will predominate [as Lewin (12) did in his classic experiments on discussion effects].

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