Group Decision Making

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Polarizing Effects of Social Interaction

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Research on the effects of social interaction in small groups, a central concern of social psychology in Kurt Lewin's day, has been relegated to the background for much of the past 20 years while social psychologists concentrated on the intrapersonal dynamics of attitude change and other aspects of social cognition. Recently there has been renewed interest in the interplay between psychological and social processes, particularly in the small group and its effects on attitudes, decisions, and behaviors.

The most striking example is the many recent studies of group-induced shifts in attitudes and behavior. Scholarship is a community enterprise and it is difficult to disentangle my insights from those achieved, sometimes simultaneously, by investigators elsewhere. Since our research program on group-polarization is now coming to an end, this symposium does, nevertheless, seem like an appropriate occasion to summarize it. I shall, therefore, describe the development of our research with occasional reference to the larger body of scholarship into which it fits.

This research was stimulated by a surprising effect of group discussion uncovered by James Stoner in 1961. For his master's thesis in industrial management at the Massachusetts Institute of Technology, Stoner decided to compare risk-taking by individuals and groups. He wanted to test the old adage that groups are more cautious and less creatively daring than individuals. His procedure is worth describing because it has been followed in dozens of later experiments.

A small number of participants — usually about five — are scheduled for a given session. First they individually respond to a series of story problems, here called dilemma situations. Each problem describes a decision faced by a fictional character. The
participant's task is to advise the protagonist how much risk should take. The following sample problem illustrates the task.

Henry is a writer who is said to have considerable creative talent but who so far has been earning a comfortable living by writing cheap Westerns. Recently he has come up with an idea for a potentially significant novel. If it could be written and accepted it might have considerable literary impact and be a big boost to his career. On the other hand, if he was not able to work out his idea or if the novel was a flop he would have expended considerable time and energy without remuneration.

Imagine that you are advising Henry. Please check the lowest probability that you would consider acceptable for Henry to attempt to write the novel.

Henry should attempt to write the novel if the chances are at least:

1 in 10 that the novel will be a success.
2 in 10 that the novel will be a success.
3 in 10 that the novel will be a success.
4 in 10 that the novel will be a success.
5 in 10 that the novel will be a success.
6 in 10 that the novel will be a success.
7 in 10 that the novel will be a success.
8 in 10 that the novel will be a success.
9 in 10 that the novel will be a success.

Place a check here if you think Henry should attempt the novel only if it is certain (i.e. 10 in 10) that the novel will be a success.

After individually marking their advice on all the items, the participants then assemble as a group and discuss each item until they agree. The discovery that groups are on the whole more risk-prone than the average individual member was immediately dubbed the "risky shift" phenomenon, and it was followed by a wave of investigations of group risk taking. These subsequent studies have taken place in a dozen different nations, indicating that Stoner's results are not peculiar to MIT graduate students. They also reveal that group decision-making is not an essential component of the procedure; a brief period of discussion followed by individual decision-making will also produce a shift in the group average.

This interest in the risky shift was stimulated not by any great magnitude of the group change — the average shift was only about one scale unit or less — but rather because the reliable effect was unexpected and its cause was not obvious. As one might expect, group members tended to converge after conversation, but the point towards which they converged was usually a lower number than their
initial averages. A lively controversy developed over what was producing the shift. Here was a new puzzle for social psychologists. As always, it was hoped that the solution might yield some important new understandings about human behavior in social situations. Does discussion in juries, in business committees, and in military decision groups generally increase risk-taking?

After about five years of research and speculation on the great proneness to risk of human groups, it became evident that the risky shift was not as general as first thought. For example, some dilemmas did not yield a reliable risky shift, and some items were found to yield reliable shifts to greater caution after discussion. One such dilemma concerned "Roger," a young married man with two school-age children and a secure but low-paying job. Roger can afford life’s necessities, but few of its luxuries. He hears that the stock of a relatively unknown company may soon triple in value if its new product is favourably received or decline if it does not sell. Roger has no savings, but he is considering investing his life insurance money in the company.

Is there a general principle that will allow us to predict why most people give riskier advice after discussing Henry’s situation and more cautious advice after debating Roger's? Fortunately, an excellent predictor exists. These cases differ not only in whether they elicit group shift toward the risky or cautious ends of the scale, but also in the average of the initial prediscussion responses. Chances are that the reader would advise greater risk to Henry than to Roger, even without any discussion with others. As Fig. 1 illustrates, there turns out to be a strong relationship between the average initial response on an item and the average shift elicited by that item. In general, items which usually elicit risky shift will have an initial response average about 5 in 10 or less (as with Henry), and items which elicit a shift toward caution will have an initial response average around 7 in 10 or higher (as with Roger). We therefore see that what the research with dilemmas indicates is not a consistent risky shift tendency, as was originally assumed, but rather a tendency for group discussion to enhance the initially dominant point of view. This was our first insight, in 1966, and it suggested that the group-change effect discovered on dilemmas might better be conceptualized as a group-polarization phenomenon: the average post-discussion response will tend to be more extreme in the same direction as the average of the pregroup responses (the term "group polarization"
Fig. 1. The mean risky shift on a dilemma item is a linear function of the mean of the initial degree of risk-taking selected on a scale of 1 (high risk) to 10 (low risk). Items which elicit high-risk initial tendencies generally elicit shift toward the high-risk extreme after discussion. Items which elicit caution are more likely to elicit shift toward the cautious extreme. (Correlation = 0.89 across 12 items, Myers and Arenson, 1972.)

originated later in the pioneering work of Moscovici and Zavalloni (1969) and Doise (1969).

With this group polarization hypothesis now in mind our research program developed in two directions. First, we explored the generality of the phenomenon by laboratory and field experimentation and, more recently, by searching the literature for examples of naturally occurring group polarization in real life situations. Second, we sought to help develop a satisfactory theoretical explanation of the phenomenon. We hoped that understanding the dynamics of group polarization might enrich our understanding of the nature of social influence.

Generality of group polarization

EXPERIMENTS ON GROUP POLARIZATION

Viewing the risky shift phenomenon as a general tendency for group discussion to amplify the prevailing pregroup inclination stimulated us to see whether polarization could, in fact, be demonstrated on
other, non-risk, dimensions. If it could this would not only confirm the validity of the concept but also disconfirm those explanations of risky shift which were risk specific and those which attributed the shift effect to peculiarities in the instructions or the metric of the dilemma items.

Two research strategies have been used in these studies. In the first procedure, people discuss topics on which they are generally predisposed to feel pro or con. Then it is determined whether talking in groups tends to enhance this dominant leaning, as happens with the choice dilemma items. The general prediction for these experiments is intensification of the initial average.

Our first study (Myers and Bishop, 1971) engaged students in discussion of imaginary decision situations, in each of which a protagonist faced two alternative courses of action. The dominant prediscussion preference was noticeably in the pro or con direction on the Likert scale attached to each item and, sure enough, discussion tended to accentuate these tendencies, but other control treatments did not.

We also experimented with group-induced change in a simulated jury setting (Myers and Kaplan, 1976). As Kalven and Ziesel (1966) concluded, “The jury deliberation process... is an interesting combination of rational persuasion, sheer social pressure, and the psychological mechanism by which individual perceptions undergo change when exposed to group discussion” (p. 489). Do decisions following jury deliberation differ in any predictable way from the average of the predeliberation opinions of individual jury members? Participants discussed traffic cases which elicited a dominant predisposition of either guilty or not guilty. Figure 2 indicates that when the defendants were made to appear low in guilt, the jurors, after discussion, were even more definite in their judgements of innocence and more lenient in their recommended punishments. After discussing high-guilt cases, the participants polarized toward harsher judgements of guilt and punishment. Likewise, Hans and Doob (1976) engaged a heterogeneous sample of adult Canadians in individual or group judgement of a burglary case in which the jurors were informed or not informed of the defendant’s prior conviction record. Group discussion magnified the effect of this independent variable. As Hans and Doob put it, “What is most striking about the overall pattern of results obtained is that what is apparently a weak manipulation (one prior conviction) in the individual verdict
Fig. 2. Discussion in simulated juries magnified initial judgement tendencies on the cases discussed. For each case, subjects rated the degree of guilt from definitely not guilty (0) to definitely guilty (20). Then, assuming the person was found guilty, they recommended punishment from the minimum provided by law (1) to the maximum (7).

condition proves to be a strong manipulation in the group verdict of conviction.”

Group discussion also helps shape our perceptions of other people — take gossip, for example. To see if conversation could polarize the opinions of people who share a mutual feeling, we asked students to respond to 200-word descriptions of hypothetical faculty members made to appear relatively good or bad (Myers, 1975). A “good” faculty member might be described as an effective teacher, though not an outstanding researcher, while the great researcher with little time for students tended to be rated as bad. As predicted by the group-polarization hypothesis, “good” faculty were rated and paid even more favorably after the group discussion, and the contrary was true for the “bad” faculty.

Finally, we have also taken a second look at some previous studies of group risk-taking which used risk tasks other than dilemmas (Lamm et al., 1976). It turns out that the group-polarization
hypothesis fits quite well here, too. If a betting situation is constructed that initially induces individuals to take large gambles (e.g. when there is little at stake), then groups generally take even larger gambles. But if the initial tendency is to bet cautiously, this usually becomes strengthened by the group. For example, McCauley and his associates (1973) observed at a Philadelphia race track that individuals generally preferred the horses with good odds (the favourites) and avoided betting the long shots. He then formed small groups of these Saturday-afternoon betters and offered them money to bet as a group. In groups they bet even more cautiously than they did as individuals.

Collectively, the results of experiments in our laboratory and elsewhere indicate that the group-polarization hypothesis does have external validity on measures other than those used to derive the hypothesis in the first place. Response tendencies generally favored by the subject population tend to be strengthened by group interaction.

A second set of experiments has explored group polarization using a different strategy. Instead of introducing items that elicit a dominant initial tendency toward one pole or the other, this strategy picks issues where opinion is mixed and isolates people who share common attitudes. Their average shift may then be compared with that of other groups of people who share the opposite tendency. The group-polarization hypothesis predicts that discussion with similarly minded other people will increase the attitude gap between the two groups.

For example, we composed groups of relatively high-, medium-, or low-prejudice high school seniors using a measure of racial attitudes (Myers and Bishop, 1970). Group members then responded to new racial attitude items (e.g. concerning federal v. local control of desegregation) before and after discussion. The discussion with others having similar racial attitudes significantly increased the gap between the high- and low-prejudice groups.

There is ample evidence that people tend to associate mostly with others who have similar attitudes and values. Most of us need only to look at our friends to demonstrate this point. Does separation on the basis of shared values generally produce increased polarization between groups? This is an important question.

Other experiments using this homogeneous grouping procedure have yielded only mixed support for the group-polarization
hypothesis. We separated relatively pacifistic and relatively militaristic students into two groups — doves and hawks (Myers and Bach, 1974). Although we predicted that discussion of relevant materials within the two homogeneous “communities” would increase the polarization between them, both the hawks and doves increased in pacifism after discussion.

Other evidence is more supportive. In another experiment we used a measure of sex-role attitudes to separate subjects into conservative (chauvinist) and liberal (feminist) populations (Myers, 1975). As predicted, discussing statements about the role of women, e.g. “women with children should not work outside the home if they don’t have to financially”, increased the attitude gap between the two groups. This outcome resulted from an increased liberalism in the already liberal feminist population — a demonstration of “consciousness-raising” through discussion among the like-minded.

The social psychological research on group polarization has stimulated a number of attempts to explore the phenomenon in business and political arenas. One fascinating experiment (reported separately by Minix, 1976, and Semmel, 1976) engaged groups of Army officers, ROTC cadets, or university students in discussion of hypothetical but credible international military crises, each of which involved some threat to the United States. Instead of the usual
10-point numerical scale, the respondents chose one of ten response options, ranging from bilateral negotiations to use of nuclear force. On each of the six cases the student groups were more inclined to recommend diplomatic alternatives than were the Army officers and in each case these student v. officer differences were further polarized by deliberation within their own groups. Regardless of whether the discussion proceeded to consensus or to a majority vote, the officers groups generally came to recommend even more forceful responses. The ROTC cadets were intermediate in both initial and shift scores. These new results closely parallel our observations of increased intergroup polarization following discussion within groups of like-minded. They also underscore Sidney Verba's contention that face-to-face groups "are important transmission points in political communications, and they exercise a major influence on the political beliefs and attitudes of their members" (1961, p. 2).

Our reviews of other experimental research on the generality of group-induced polarization further confirm the reality of the phenomenon (Myers, 1973; Myers and Lamm, 1975, 1976; Lamm and Myers, 1978). With the reliability of this phenomenon established, we were prompted to wonder whether natural occurrences of the phenomenon could also be detected. Is the phenomenon something more than a hothouse laboratory effect?

NATURALISTIC OBSERVATIONS OF GROUP POLARIZATION

If group polarization is something more than a laboratory creation of social psychologists then we may expect that instances of it will already have been observed and noted by social scientists who are unfamiliar with the experimental literature. Before offering some examples a word of caution is in order. While these observations carry the force of naturally occurring reality it is difficult to disentangle causes, correlates, and effects. The most that can be said is that these interesting observations are consistent with the experimental literature.

Student change during college

Investigations of student change during college have revealed an "accentuation phenomenon." As Feldman and Newcomb (1969) describe it, "initial differences among students in different colleges and in different curricula are accentuated or amplified as students
progress through college. Instances of this same phenomenon also occur with respect to initial differences among students entering different types of residences” (p. 209). For example, attitude differences between American fraternity members and independents are modest at the freshman level — for example, fraternity members are slightly more politically conservative — and accentuated by the senior level.

Chickering and McCormick (1973) concluded from their decade of research on student development at various colleges that if the students who enroll at a particular college have a predominantly practical-vocational outlook they will emerge even more that way. Colleges which attract more intellectually oriented or non-conformist students will further strengthen these tendencies in their students. Another more recent study provides the same conclusion: “In short, the qualities students bring to college generally tend to persist and become accentuated as a result of their college education” (Wilson et al., 1975, p. 123). Other data gathered by Astin and Panos (1969) and Clark et al. (1972) confirm the same point.

It is, to be sure, not entirely clear what produces this accentuation phenomenon. Students are not only attracted to and interacting with similar others, they are also taking classes and concentrating their attention on activities which are compatible with their inclinations. It seems, none the less, reasonable to expect that, as Feldman and Newcomb (1969) surmise, the accentuation phenomenon occurs partly because “the reciprocal influences of members of one another reinforce and strengthen extant orientations” (p. 223).

Social conflict
The possibility that intra-group discussion might enhance inter-group polarization was suggested by our experiments noted earlier. Some field observations are consistent with these laboratory findings. Coleman (1957) concluded from his analyses of opinion polarization during community conflict that “group discussion... is such an important phenomenon in the community controversies that in the case studies examined most descriptions of behavior during the intense part of the controversy were descriptions of discussion and of attempts to persuade or reinforce opinion” (p. 18). Homogeneous grouping was an apparent source of community polarization and the occurrence of social conflict further heightened “the proliferation of associations among those who feel one way, and the attenuation of
association between those who feel differently. One's statements meet more and more with a positive response; one is more and more free to express the full intensity of his feeling" (p. 14). We have seen this happen in our own local community. Proposals for establishment of a halfway house or a correctional institution have typically elicited private apprehensions which, after discussion, become polarized into overt paranoia and hostility.

This dynamic can be seen at work in the well-known Robbers Cave experiment (Sherif, 1966) in which the competition and intra-group dynamics moved the rival groups to extreme antagonism and perceptions of one another; in the Stanford Prison Experiment (Zimbardo, 1975) in which the aggressive reactions of guards appeared to feed on one another in spiraling escalation; and in the emergence of the radical student movement of the late 1960s. Evidence indicates that conservative and radical students existed in two separate social worlds and that interpersonal influence was a substantial contributor to leftist tendencies within the radical subculture (Gold et al., 1976).

Group interaction may magnify conflict partly because, as we have observed in the laboratory, the tendency of individuals to justify their own behavior when in conflict is intensified by discussion with one's group — people are even more inclined toward self-justification when in groups than when alone (Myers and Bach, 1976). This phenomenon of group-enhanced self-justification is part of the "groupthink" process which Janis (1972) has proposed to help explain political decision fiascoes, such as the escalation of the Vietnam War.

Gang delinquency provides yet another example. Enduring gangs reportedly differ sharply from one another but develop homogeneous within-group attitudes. Cartwright (1975) concludes that this occurs as a result of group processes such as "interstimulation" among gang members and "a process of summation, or progressive urging on of members from one deed to another" (p. 7). We observed an analogous tendency in an experiment involving young male felons residing at a correctional institution (Myers et al., 1974). Given some simple ethical-legal dilemmas (e.g. a scenario in which a mature-minded but underage teenager is deciding whether to order a drink), the inmates initially tended to favor the illegal behavior and they favored it even more following discussion among themselves. Prisons are just one example of closed environments which seem to
produce debilitating effects by grouping people with shared deviant traits.

Riley and Pettigrew (1976) have observed that dramatic events can polarize attitudes. Surveys of white Texans — before and after the desegregation of the Little Rock, Arkansas schools in 1957, and the assassination of Martin Luther King and subsequent civil disorders in 1968 — revealed that the initial opinion tendencies of various demographic groups tended to polarize following the dramatic events, a phenomenon Riley and Pettigrew labelled the "counterceiling effect." Moreover, within each demographic group, attitudes toward formal inter-racial contacts were initially most positive and were also the most likely to become even more positive, and vice versa for intimate racial contacts. These two findings parallel the two types of laboratory evidence for group polarization — from studies indicating that positive items elicit positive shift and vice versa.

It seems likely that dramatic events stimulate discussion. When the event is subject to multiple interpretations, intra-group discussion may intensify the dominant local viewpoint. In the absence of dramatic events and their accompanying intra-group discussion, social influences that are common to all groups (e.g. the national media) may reduce attitude polarization.

Urban crowding sometimes seems to exacerbate individual reactions. Freedman (1975) has researched this effect of social density. Crowding, he suggests

>serves to intensify the individual's typical reactions to the situation. If he ordinarily would find the circumstances pleasant, would enjoy having people around him, would think of the other people as friends, would in a word have a positive reaction to the other people, he will have a more positive reaction under conditions of high density. On the other hand, if ordinarily he would dislike the other people, find it unpleasant having them around, feel aggressive toward them, and in general have a negative reaction to the presence of the other people, he will have a more negative reaction under conditions of high density. And if for some reason he would ordinarily be indifferent to the presence of other people, increasing the density will have little effect one way or the other (p. 91).

Although this sounds like a social facilitation effect, Freedman concludes — as have most theorists regarding group polarization — that the density-intensity effect is not an arousal phenomenon. Freedman believes it rather occurs because "high density makes
other people a more important stimulus and thereby intensifies the
typical reaction to them” (p. 105). This fits in with Moscovici and
Lecuyer’s (1972) finding that less group polarization occurred when
people sat in a straight line, with reduced face-to-face contact than
when they talked face-to-face — which surely made the other people
more salient stimuli.

Group counseling
If the group polarization principle helps explain some seemingly
negative effects of group interaction, then it may also help us under-
stand beneficial group effects. Malamuth (1975) had groups discuss
what advice they would give to real human beings whom they met
and who were believed to be facing life dilemmas similar to some of
those in the dilemmas questionnaire. Malamuth’s peer counseling
experiment, which was an analog to actual peer counseling programs,
indicated that “such group counseling experiences result in a more
extreme advice than that given by individuals” (p. 53).

Toch (1965) describes additional examples of the power of
mutual assistance in small self-help groups. Social interaction in
Alcoholics Anonymous groups strengthens the members’ commit-
ment to shared goals. Members of TOPS (Take Off Pounds Sensibly)
sing their weekly pledge:

The more we get together
Together, together —
The more we get together,
The slimmer we’ll be.
For your loss is my loss;
And my loss is your loss,
The more we get together
The slimmer we’ll be.

Religious fellowship
Another apparent example of group polarization in natural settings is
provided by various religious social support systems. Heightened
religious identity is usually achieved by a substantial amount of
interaction among members of the religious body and a certain
amount of insulation from the surrounding society. As Thomas à
Kempis advised, “a devout communing on spiritual things sometimes
greatly helps the health of the soul, especially when men of one
mind and spirit in God meet and speak and commune together.”
Emile Durkheim theorized that "dynamic density" (the extent of intra-group communication) determines the intensity of religious commitment. Some sociologists of religion (e.g. Hoge, 1974) suggest that this may be one reason why the increasing individualism and social mobility of the modern age is associated with decreased religious commitment.

Perhaps American culture's most striking example of intense religious identity emerging from separation with similar others is provided by the Amish, who live, go to school, work, and worship only among themselves. In earlier eras small interacting groups contributed significantly to the dynamic of the early Christian church and, during the 18th century, to John Wesley's Methodist movement. According to a Wesley biographer, the mutual edification and commitment which occurred in these "classes" and "bands," as they were called, was the chief feature of the movement's structure (Schmidt, 1972). Close scrutiny of religious social support systems in *When Prophecy Fails* confirms the power of the small group to amplify the religious impulse (Festinger et al., 1956, see also related observations by Hardyck and Braken, 1962, and Batson, 1975).

In summary, it seems that the group polarization phenomenon uncovered in laboratory experiments is, indeed, manifest in important real-life situations as well.

**Theoretical explanation**

Having established the reality and generality of group polarization our next task was to understand what is causing the phenomenon. Might group polarization research stimulate new insight into human social influence? An adequate theoretical explanation of group polarization will serve the functions of any good theory in the social sciences: it will account for the known conditions under which group polarization occurs, and it will also predict the effects of other conditions not yet studied and suggest when group polarization is not to be expected. This predictive function allows us to test the truth of the theory, and it may suggest some useful applications.

By now the reader may have conjectured his or her own explanations of group polarization. One idea often suggested involves leadership. Someone probably emerges as the most forceful group member and may sway the others. Although this was one of the first
explanations seriously advanced by social psychologists who studied
the phenomenon, it will not explain the results. For example, while
it is indeed true that some members of the group are more verbally
aggressive than others, an additional assumption is required to
explain group polarization — namely, that those who emerge as
leaders are also more extreme in the dominant direction than their
fellow group members. Yet we have found that there is no relation-
ship between the extremity of persons and the extent to which they
dominate the discussion (Myers and Murdoch, 1972). It is, however,
still possible that relatively extreme positions will tend to be more
persuasive than neutral positions.

Research in our laboratory and elsewhere has also discounted some
other plausible ideas. For example, polarization is not simply the
result of becoming more familiar with the materials: private study of
the items does not yield the same effect as discussion.

More attention has been devoted to group decision rule explana-
tions which predict shift by using statistical schemes for combining
individual preference distributions into an expected group product.
Perhaps, for example, a “majority-rule” decision process could
predict the polarization effect without postulating any real attitude
change. If the deviant minority in the tail of a skewed distribution
is being pressured into conformity with the dominant opinion, an
artifactual polarization of the mean response would result. Skewness
does, in fact, often exist when the initial average response departs
from neutrality and polarization obtains, so majority-rule is an
especially plausible decision scheme.

It is something of a surprise, then, that decision schemes which
depend on skewness have generally not been supported by our
findings (some of which have also been observed in other lab-
oratories). Specifically, we have observed that:

(1) Group polarization occurs even when there is no opportunity
for combining pretest decisions (e.g. when there has been no pretest
and no awareness of the response scale while discussing. This involves
a between-groups design in which post-discussion responses are
compared with a no-discussion control group, c.f. Myers et al., 1974).

(2) There generally occurs not only a polarization of the group’s
mean score but also of its median (middle) score (e.g. Myers and
Aronson, 1972). The middle member is, of course, a member of the
majority.

(3) Some group shift occurs in dyads, where obviously there can
be no skewness in the initial responses (see Myers and Lamm, 1976).
Group shift can occur without group convergence, that is, without the emergence of any implicit group product (Myers et al., 1974; Myers, 1977b).

While these data raise questions about the majority-rule scheme as a complete explanation of group polarization, they do not bear upon the general usefulness of decision models. Not only are decision schemes compatible with other explanations which follow, they may sometimes operationalize purported social psychological processes (as noted by James Davis, Norbert Kerr, and Patrick Laughlin in their excellent contributions to this symposium).

With several other plausible explanations of group polarization also set aside, our sleuth continued as we turned our attention to two other theories which we hoped might solve the mystery and expand our understanding of group influence. The informational influence explanation stresses our rational capacities — persuasive discussion arguments are presumed to predominantly favor the initially preferred alternative, thereby enhancing it. Social comparison explanations stress social motivation — people presumably want to perceive and present themselves favorably, so exposure to others’ positions may stimulate them to adjust their responses in order to maintain a desirable image.

**INFORMATIONAL INFLUENCE**

The informational influence explanation postulates that during discussion each subject is processing and weighing information by a process akin to Anderson’s (1971) information integration scheme. The average initial response to an item presumably reflects the prevailing direction in the pool of relevant arguments. As arguments are drawn from this pool during discussion they may reinforce the average initial opinion, especially since it is unlikely that any given person will have already considered all these arguments or found them all salient. In discussing Henry, for example, someone may point out that Henry has little to lose since if his novel flops, as he can always go back to writing cheap Westerns. This thought may be compelling to other group members who have not entertained it before.

We examined this theory with two types of investigations: experimental manipulations of the availability of arguments, and content analyses of arguments generated by individuals and groups. The first group of experiments attempted to disentangle the
argument-exchange component of group discussion from exposure to others’ positions to see if one of these components — exposure to others’ arguments or to their positions — is necessary and sufficient for changed responses. These experiments clearly indicated that when, by various methods, subjects are exposed to relevant arguments but gain no information about others’ positions, they none the less evidence the expected shift. For example, in one experiment, the typical polarization effect was obtained even when the subjects were prohibited from mentioning their initial choices (and the effectiveness of this treatment was empirically confirmed, Myers et al., 1971). In another experiment subjects shared arguments relevant to the substance of the items without awareness of the response scale on which they were eventually to indicate their individual choices, and polarization was still obtained (Myers et al., 1974). Burnstein and Vinokur (e.g. 1973) have obtained similar results when using other clever manipulations to keep subjects from learning the actual opinions of the other group members. It thus seems clear that arguments have a persuasive impact above and beyond any impression they convey about the positions of the persons who spoke them.

The second type of investigation looks inside the “black box” of discussion to examine the arguments which are actually expressed. First we ascertained that the initial average response to an item does indeed reflect the trend of privately considered prediscussion arguments. The initial average also predicts the trend of the arguments expressed during discussion, which in turn predicts the average group shift (Myers and Bishop, 1971). Thus we concluded that the predictive power of the average initial response is captured by the content of the subsequent discussion, suggesting that it is the nature of the expressed arguments which mediates the relationship between initial mean and mean shift.

We next proposed a mathematical model of information influence which assumed that the amount of group shift is determined by three factors: the direction of each argument (which side it favors), its cogency, and its novelty (the degree to which the argument is not already known to group members before discussion). The potency of an argument is presumed low if, being trivial or irrelevant, it lacks cogency or if all group members have considered the argument before discussion. By detailed analysis of the discussion content we were able to demonstrate support for the model (Bishop and Myers,
1974). Our research also confirmed that if, in a given discussion, the spoken arguments depart from the initial responses, it will be the arguments and not the initial response mean which will predict the direction of group shift (Myers and Bach, 1974). Simultaneously, Vinokur and Burnstein (1974; in press) derived a similar model and independently confirmed that the discussion content – its direction, cogency, and novelty – is a causal determinant of group polarization.

This explains why, on a given item, a group that is already quite extreme before discussion will often not show as much polarization as a less extreme group. The initially polarized group already shares the most persuasive arguments, whereas the less polarized group has more to learn from exchanging the available arguments. The theory also clearly implies the conditions under which group polarization is to be expected: when discussion generates potent information predominantly in one direction. Although the average initial tendency gives an index to the direction of available arguments and thus generally predicts shift, the initial tendency is not a direct cause of the shift. It is possible to imagine situations in which a known alternative A is initially favored over unknown B, but shift would be expected toward B because the impact of new information in support of B would be greater than the impact of old arguments for A.

Subsequent research has applied the sophistication of information integration theory to informational influence in group discussion (e.g. Anderson and Graesser, 1976; Kaplan and Schersching, in press). These new experiments further confirm the causal role of cognitive learning in producing group polarization.

But it seems that cognitive learning is not a complete explanation by itself. We and others have observed that passive exposure to arguments outside an interactive discussion content generally produces less shift than actual participation in discussion. Actual discussion stimulates more change than passively reading or listening to the same arguments. This finding is reminiscent of early work by Kurt Lewin (1947) on the superiority of group discussion to lecture in producing behavior change; of more recent educational research indicating that participative discussion has a greater effect than mere information presentation (McKeachie, 1968); of experiments demonstrating the impact of active role-playing as contrasted with passive exposure (see Jones and Gerard, 1967); and of Thomas Crawford's report (1974) of the minimal impact of passively received sermons on racial tolerance.
The work of attitude researchers is germane here, for it appears that passive comprehension of arguments is not a sufficient condition for internalization of attitude change. As Greenwald (1968) has demonstrated, passive learning about the target of an attitude is not sufficient to change the attitude; the subject must actively reformulate, or rehearse, the information in order for an internalization of attitude change to result. (This observation parallels the thinking of theorists like Jerome Bruner and Jean Piaget, who have concluded that children's intellectual development takes place more by self-generated activities, such as active play, than by being passive while taught.) It seems quite reasonable to presume that the social confrontation inherent in debate and discussion motivates covert as well as overt rehearsal, as when people quietly think about their next contribution. Eugene Burnstein's contribution to this symposium speculates creatively concerning the cognitive processes engaged by discussion.

Arguments that are openly expressed may be additionally important as a public verbal commitment toward whatever alternative is defended. We have found that spoken arguments tend to favor the socially preferred choice more predominantly that do privately processed arguments. Responding to other people in conversation elicits a more one-sided line of thought than does private contemplation of an issue. The self-attribution and dissonance reduction dynamics that accompany such overt expression likely contribute to attitude intensification. Although these and other possible mechanisms of group influence have not yet been fully explored it nonetheless seems reasonable to presume that informational influence in group discussion involves group dynamics as well as a pooling of individually processed information. These group dynamics might be incorporated within the information integration perspective by studying how they affect such factors as the distribution and weighting of pieces of information.

SOCIAL COMPARISON

There is little doubt that the substantive information which is communicated and rehearsed in group discussion in an important source of group polarization. But in addition to this information processing, are there also social-emotional processes at work? Might interpersonal comparisons, motivated by a concern for perceiving and presenting oneself favorably, contribute to the amplification of
responses? Several variations on social comparison theory suggest that mere exposure to others’ preferences should be a sufficient condition for polarization. In general, this group of theories (see Pruitt, 1971a, b; Baron et al., 1975; Jellison and Arkin, 1977) proposes that people modify their responses when they discover that others share their inclinations more than they would have supposed. This prompts change either because the group norm is discovered to be more in the preferred direction than previously imagined (and people act to keep themselves a step ahead of the average) or because people are released to more strongly act out their secret preference after observing someone who embodies their ideal more strongly than they do.

This latter idea, called “release theory,” is consistent with conformity studies which indicate that the example of only one person freely deviating from an imposed norm can liberate other individuals to act out their own impulses. If there is any commonality in the sources of polarization in small laboratory groups and in large crowds and mobs, it probably lies in the contribution of social-emotional forces to both. For example, release theory is compatible with observations of the contagion effects of actions by “trigger persons” in crowds of people who share a common impulse.

Although the available research does not so unambiguously confirm social comparison processes theory as it does informational influence processes, the sometimes mysterious and counter-intuitive results of research on social comparison have provided us with a challenging intellectual puzzle.

Differences between self, presumed other, and ideal

The foundational assumption of social comparison theories is that people are motivated to see and to present themselves as better embodiments of socially desired abilities, traits, and attitudes than are most other members of their groups and that they therefore enter the discussion misperceiving the likely positions of their fellow group members. There are many studies, performed in our own laboratory and elsewhere, which have asked participants, after they have responded to questionnaire items, to go back over the items and guess how their average peer would respond and then to go back over the items a third time and indicate what response they would actually admire the most. People typically estimate that
the group norm is more neutral than their own initial responses and indicate their ideal as even more extreme.

This is an interesting phenomenon which, like some of our other laboratory results, seems also to operate in the real world. For example, most business people perceive themselves to be more ethical than the average business person (Baumhart, 1968, Brenner and Molander, 1977). Most people perceive their own views as less racially prejudiced than the norm of their community or of their friends and neighbors (Fields and Schuman, 1976; Lenihan, 1965; O'Gorman and Garry, 1976). An exhaustive series of investigations with adolescent and adult French people confirms the same strong and consistent tendency: people tend to perceive themselves as superior to the average member of their groups (Codol, 1976).

These perceptions are, of course, distorted; the average person is not better than the average person. This self-flattery is probably also a source of much human discontent. When an employer awards merit rises and half of the employees receive less than the median increase, perceptions of injustice are likely to be widespread since few will perceive themselves as less competent than their average peer.

We have observed a puzzling order effect, however (Myers, 1974). The tendency to perceive others as "behind" oneself on the dilemma items exists only when the self response is made prior to estimating the group norm. Evidently it is after people have acted or decided that there is then a tendency to consider their own action as relatively admirable.

One version of social comparison theory suggests that in the group context people typically discover that the group norm is more supportive of their positions than they had supposed (they are therefore outshining the other group members less than they had presumed). Consistent with this line of thinking, we have found that subjects do, indeed, realistically revise their estimates of the group norm after discussion. This even happens if arguments are exchanged but explicit mention of scale responses is prohibited (e.g. Myers et al., 1971, 1974), indicating that under normal circumstances arguments may serve to implicitly convey information about others' positions in addition to their direct persuasive impact.

While these findings are all well established, their theoretical significance is still somewhat ambiguous. Just as social comparison theorists have argued that spoken arguments convey implicit cues about others' positions and may only serve to rationalize shifts once
people are socially motivated to change, so also have informational theorists argued that there are plausible informal influence explanations of these self v. presumed other differences. Burnstein et al. (1974), for example, show that people who adopt extreme choices are presumed to possess cogent arguments and are, perhaps, therefore admired for their ability. Furthermore, the fact that subjects are much less confident about their estimates of others’ choices than about the correctness of their own choices suggests that the tendency to perceive others as more neutral than oneself may simply reflect ignorance about others’ choices. If you really do not know how other people feel, is it not reasonable to check a response near the middle of the scale?

In sum, the group polarization literature provides well-documented confirmation of hypotheses derived from the assumption that people are motivated to see and present themselves in a favorable light, relative to others. But the results are somewhat ambiguous because it is possible to construct a scenario which explains these findings without reference to normative social pressures or desire to engage in rank-order evaluation.

It is therefore fortunate that support for the social comparison assumption has recently emerged from some independent lines of research. Schlenker (1975) has shown that people present themselves with a positive bias, unless public exposure is forthcoming that would debunk a positive self-presentation. Fromkin (1970, 1972) provides evidence that people want to perceive themselves as somewhat different from others. Although a considerable body of research on conformity and reactions to being markedly deviant indicates that people are discomfited by being substantially different from others, it now appears that people also find it unpleasant to sense that they are undistinctive. Fromkin demonstrates that people feel better when they understand themselves to be unique and they will act in ways which will create a sense of individuality.

These conclusions are reinforced by Lemaine’s (1974) analysis of the contribution to one’s identity of differentiating oneself from others. McGuire and Padawer-Singer’s (1976) observation that self concept is defined by differences from comparison others further strengthens the point. When simply asked to describe themselves, sixth grade children were most likely to mention spontaneously their distinctive attributes. Foreign-born children were the most likely to mention their birthplace, redheads their hair color, and so
forth. These contemporary research findings will come as no surprise to personality theorists. As Fromkin notes, Fromm (1941), Horney (1937), and Maslow (1962) long ago proposed that people have a “need for separate identity” or “need for uniqueness.” Situations which diminish one’s sense of individuality purportedly revive the threat of “ego diffusion” (Erikson, 1959), an uncomfortable state of confused self concept. These assorted observations lend strength to social comparison theory’s assumption that people are motivated to see themselves as basically similar to others, yet different — in the right direction and to the right extent.

**Perceived differences and shift**

Given this diverse support for the foundational assumption of social comparison theory, the next question is whether this social motivation does, in fact, contribute to the observed effects of group discussion. We pursued this question in two ways. The first was to inquire whether the perceived difference between oneself and others correlates with an individual’s shift score on a specific item. The expectation here is that people who most perceive themselves as outshining their peers will suffer most disconfirmation of their perceived relative position and so should be most stimulated to shift when informed of the actual group norm. But to the contrary, there is no such correlation between perceived deviation from the norm and subsequent shift, even when one’s own initial choices are held statistically constant (Myers *et al*., 1971). This is a troubling finding for social comparison theory, although Baron *et al.* (1975) suggest that this low correlation may occur because even those who do not actually feel different beforehand may wish to present themselves as strong embodiments of the ideal once they get in the group context. They suggested, as we have, that the extent to which people feel that their present positions underplay their ideals may be a more crucial element of social comparison dynamics. This conclusion is supported by Lamm’s findings that groups composed of individuals with high self-ideal discrepancy on issues discussed, evidenced more shift than did groups with low self-ideal discrepancy (Lamm *et al*., 1971), but that there was no difference in shift between groups of subjects who strongly underestimated peer positions and those who did not underestimate peer positions (Lamm *et al*., 1972).
Polarizing effects of attitude comparison

Because the social comparison explanations assume that the exchange of arguments in discussion is unnecessary, one way to test them is to examine their prediction that mere exposure to others’ responses is sufficient to produce the effect. Our last series of experiments does just this. In contrast to numerous social psychological experiments which provide subjects with contrived misinformation about others’ responses, these investigations provide accurate feedback concerning others’ attitudes, just as happens in many social situations and when opinion polls are published or election returns are broadcast.

Several early studies using this procedure, including one of our own, found minimal polarization from pretest to post-test after mere exposure to others’ choices. We later realized that the pre-exposure commitment was probably a sure recipe for inhibiting response change, or so some of the classic conformity studies seemed to suggest (e.g. Asch, 1956).

Our next experiment therefore removed the pretest commitment by having people respond to three risk-eliciting dilemma items after being informed of the distribution of responses by 40 other people in a control condition (Myers et al., 1974). As predicted, their responses were more polarized than the average of the control responses they were shown — the opposite of conformity! The participants were fairly accurate in their guess of the average observed response, and yet this knowledge stimulated a deviation (polarization) from the observed norm.

Our subsequent experiments have explored further the attitudinal effects of mere exposure to others’ attitude responses. Their purpose was, first, to ascertain whether the phenomenon would generalize across a variety of methods and materials and, second, to explore some psychological dynamics which might mediate the phenomenon.

Since, comparing our first two experiments, it seemed that binding oneself to a pre-exposure choice might, indeed, have been inhibiting response change; a follow-up study (unpublished data) put this conclusion to experimental test. Half of those who observed others’ choices did so after first making a pretest commitment and half did so without pretest. Attitude materials requested subjects to evaluate hypothetical positively or negatively described college professors. Although the social comparison effect was small, only those who had not made a pretest commitment evidenced signi-
significantly more polarized responses than the control distribution which had been observed.

Our next experiment (Myers, 1978) compared two versions of social comparison theory. One version (e.g. Brown, 1974) presumes that exposure to the group norm, or average, is sufficient to stimulate a more polarized response, because people want to keep a step ahead of the average. Release theory (Pruitt, 1971a, b) postulates that the key is not discovery of the peer group average, but rather observation of a group member who models the person's ideal in a relatively extreme form.

These two explanations of attitude polarization were experimentally contrasted by showing some people a complete percentage distribution of others' opinions (therefore incorporating the necessary exposure to some extreme models), while others learned only of the group average (norm). Two types of stimulus materials were drawn from previous research — jury problems and dilemma items. The experimental groups were exposed, in balanced fashion, to the pretest responses on some items but not on others, making each subject his or her own control. With both item sets we observed (see Tables 1 and 2) that responses were significantly more polarized ($P < 0.01$) on items where subjects had observed others' responses than on items where they had not. Contrary to release theory, exposure merely to the average other response was sufficient to polarize responses. Those exposed to the full distribution of others' choice were not significantly more polarized than those who merely witnessed the group norm.

A follow-up experiment (Myers, 1978) used a between-groups comparison to examine the exposure effect (instead of the more sensitive within-subjects design) and it asked an additional question of empirical interest: what if we took the relatively polarized responses of those who had observed others' choices and exposed a third group to these? Would additional polarization occur with a second iteration of the exposure treatment?

The dependent variable in this experiment was, again, a polarization score, defined as the mean gap between responses to four cautious and four risky dilemma items. In the first stage of the experiment 30 pretest subjects completed each item individually. In a second stage 30 more subjects were shown the exact distribution of responses by the 30 subjects preceding them in the pretest condition while thirty control subjects answered without feedback,
TABLE 1

Mean choice dilemma response, by condition

<table>
<thead>
<tr>
<th>Condition</th>
<th>No exposure</th>
<th></th>
<th></th>
<th>Exposure</th>
<th></th>
<th></th>
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<tr>
<td></td>
<td>N</td>
<td>Risky</td>
<td>Cautious</td>
<td>Polarization</td>
<td>Risky</td>
<td>Cautious</td>
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<td>67</td>
<td>4.34</td>
<td>7.62</td>
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<td>Average exposure</td>
<td>52</td>
<td>4.45</td>
<td>7.80</td>
<td>3.35</td>
<td>3.79</td>
<td>7.98</td>
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<tr>
<td>Percent exposure</td>
<td>52</td>
<td>4.27</td>
<td>7.55</td>
<td>3.28</td>
<td></td>
<td></td>
</tr>
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</table>

TABLE 2

Mean jury item response, by condition

<table>
<thead>
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<th>Condition</th>
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<th></th>
<th></th>
<th>Exposure</th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Low guilt</td>
<td>High guilt</td>
<td>Polarization</td>
<td>Low guilt</td>
<td>High guilt</td>
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<tr>
<td>Pretest</td>
<td>67</td>
<td>35.43</td>
<td>70.75</td>
<td>35.32</td>
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<td></td>
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<tr>
<td>Average exposure</td>
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<td>36.54</td>
<td>71.83</td>
<td>35.29</td>
<td>27.12</td>
<td>72.79</td>
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<tr>
<td>Percent exposure</td>
<td>52</td>
<td>40.19</td>
<td>74.71</td>
<td>34.52</td>
<td>31.15</td>
<td>78.37</td>
</tr>
</tbody>
</table>

TABLE 3

Computer experiment mean choice dilemma polarization scores

<table>
<thead>
<tr>
<th></th>
<th>Stage One</th>
<th>Stage Two</th>
<th>Stage Three</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest − 3.55</td>
<td>Exposure₁ = 4.45</td>
<td>Exposure₂ = 4.75</td>
<td>Control = 2.87</td>
</tr>
</tbody>
</table>

Note: N = 30 for each cell

just as did the pretest subjects. In the third stage of the experiment, two more groups were given the same treatments, except that those in the exposure condition were shown the responses of the preceding thirty people in their own condition.

The entire experiment was run by a computer as the subject sat at a high speed terminal. This not only eliminated any possibility of experimenter effects but, more importantly, enabled the instant tabulation of responses and their instant presentation to subsequent subjects with precisely controlled format. As can be seen in Table 3, responses in the two exposure conditions were significantly more polarized than in the control conditions (P < 0.001). The second iteration of feedback did not, however, significantly exaggerate the polarization effect.
Our two most recent experiments explored some additional empirical questions (Myers et al., 1980). In the first experiment we observed that even a small number of others' responses (rather than a large distribution, as in previous experiments) will still produce the effect and we found again that making a public pretest commitment attenuates the polarization effect. Inspired by recent demonstrations of the impotence of abstract, "base rate" information (e.g. Borgida and Nisbett, 1978), we also wondered whether face-to-face exposure to others' choices would produce a greater polarization than when that same information was presented as dry statistics. It did, but not to a statistically significant extent.

What do these comparison effects actually represent? Does learning others' opinions really change one's opinion, or have we simply elicited a change in scale marking behavior? Perhaps subjects' perceptions of the response scale has been altered by exposure to more extreme raters, but their judgements of the issue at hand have been unaffected. In our second experiment of this pair, we observed that the polarizing effect of observing others' judgements generalized to a separate, but related judgement scale. This suggests that the phenomenon represents a genuine attitude change, not just a response effect that is specific to the scale on which others' responses have been observed. This result is compatible with Burnstein and Vinkur's (1977) contention that exposure to others' choices biases subjects' processing of information regarding the item, thus producing genuine attitude change.

Can this reliable comparison effect in laboratory studies also be observed in a field setting? Another experiment asked whether exposure to others' attitudes in a real world setting could polarize initial attitude tendencies (Myers et al., 1977). Evidence from previous studies indicates there is no powerful bandwagon effect resulting from the publication of election polls (Klapper, 1964), but these studies generally present poll results from the general public, rather than from a significant social reference group. We expected that a small bandwagon effect might be obtained if exposure to the opinions of significant others informed people that their preferences were shared more strongly than they were aware. Our second purpose was, much as in one of the preceding experiments, to contrast release theory with the assumption that correctly perceiving the group norm (average) is sufficient to produce shift.
As Fig. 4 suggests and as statistical analyses confirmed, those exposed merely to the average pretest opinion were intermediate between the control and percentage exposure conditions. In this experiment it appeared that exposure to the group norm and to extreme models had small additive effects.

An additional finding evaluated the presumption that if attitude comparison is strengthening the initially dominant point of view, then items for which there is clearly a socially preferred tendency should elicit greater polarization than items initially near the neutral point. This supposition was confirmed by correlational analysis.

Each of the comparison effects reported to this point might

Fig. 4. A polarizing effect of learning others' opinions was found in an opinion survey of 269 members of a local church who were randomly divided into four groups. Pretest condition participants indicated their opinions on issues. (As the figure indicates, they guessed their average fellow member would respond less strongly in the preferred direction on these issues.) After these pretest responses were tabulated, control participants completed the same items without information about others' opinions, while other participants were shown either the average or complete percentage distribution of the personal opinions of people in the pretest condition.
plausibly be interpreted (as by Burnstein and Vinokur, 1975) as resulting from stimulation to think up arguments which others might have had to justify their choices. Thus what appears at first glance to be a social comparison effect might in reality be an information processing effect.

Our last experiment (unpublished data) attempted to examine this by using a simple judgement task which we presumed could not engage rationally considered arguments. Under such conditions an informational influence explanation would predict little comparison effect. Two people at a time judged the attractiveness of attractive and unattractive faces pictured on slides. The second respondent always viewed and rated the slide after hearing the first response. As Table 4 indicates, the second respondent seldom duplicated the first judgement and was almost twice as likely to deviate in the dominant direction — to go the first person one better — as to deviate in the contrary direction.

This is a relatively pure demonstration of comparison-induced polarization of judgements and it also again suggests that a large distribution of judgements is not a necessary requirement for polarization. It is conceivable, however, that even in this argument-poor situation, hearing another’s judgement may have stimulated the listener to think up arguments which the other person might have had to justify that judgement (although the two seconds or so in between responses hardly allowed for much of this). The possibility of this type of cognitive mediation of the social comparison effect is difficult to rule out and, indeed, may support any motivation to outshine others.

What have these experiments established? First, they indicate that comparison-induced polarization occurs using a variety of methodologies and stimuli. The phenomenon appears to be reliable and generalizable, although subtle. Second, some theoretical explanations

<table>
<thead>
<tr>
<th>Stimuli</th>
<th>More positive</th>
<th>Same</th>
<th>More negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attractive</td>
<td>99</td>
<td>26</td>
<td>75</td>
</tr>
<tr>
<td>Unattractive</td>
<td>52</td>
<td>29</td>
<td>119</td>
</tr>
</tbody>
</table>
for the phenomenon appear incapable of handling the results. It is
difficult to conceive how all the findings could be fully explained
by implicit group decision mechanisms (as when only two persons
were present) or by the releasing effects of observing extreme models.
The experiments do not, however, clearly indicate whether observing
others’ responses liberates people to express their secret inclinations
(Levinger and Schneider, 1969) or motivates them to “one up”
the self-presentsations of other people as a self-enhancement strategy
(Brown, 1974; Jellison and Arkin, 1976; Sanders and Baron, 1977),
nor do the experiments rule out a mediational role of self-generated
persuasive arguments.

The likelihood of self-enhancement dynamics is apparent from
some independent lines of research noted earlier (e.g. Fromkin,
1970, 1972). These add credence to the presumption that there
is a human concern for perceiving and presenting oneself favorably
which may contribute to the amplification of socially desirable
response tendencies. The present research is congenial to the pre-
sumption of this personality research and theory — that people want
to differentiate themselves from others, to a small extent and in the
right direction. By “one-upping” the self-presentations of others,
people can see and present themselves as basically similar, yet de-
sirably distinctive. This suggestion complements social psychology’s
historic emphasis on conformity and the avoidance of deviance.

A UNIFYING CONCEPTUAL SUMMARY

We have seen that argument exchange and rehearsal — with or
without social comparison — has significant attitudinal effects.
Informational influence is clearly occurring. Comparing positions
without argument exchange also has a reliable effect, but this might
be due to cognitive processing stimulated by exposure to others’
choices. A fundamental issue thus remains: does social comparison
directly prompt changed responses, or is its effect entirely mediated
by the biased information processing which it induces? Eugene
Burnstein’s provocative chapter in this volume concludes by posing
the issue in even more general terms: is there any social influence
that is not mediated by information processing?

In reality, information processing and social comparison are
interwoven. Arguments imply one’s position and are constrained
by one’s perception of others’ positions. Sometimes people secretly
want to act on an impulse, but are inhibited from fully doing so by
their perception of an external social norm. When several such people find themselves in a group, they soon verbalize their inclinations and discover that others are emitting similar opinions. Since arguments consistent with their shared inclinations are likely to be expressed, received, and rehearsed with greatest enthusiasm, the discussion arguments are more one-sided than are arguments privately processed by each individual (see Myers and Lamm, 1976). The net result is that when people feel a conflict between what they ought to do (an external norm) and what they want to do (an internal preference), discussion with similar others generally induces information processing in support of the internal preference.

This formulation integrates social-motivational concerns (as suggested by Levinger and Schneider, 1969) with the information processing mechanisms which have demonstrable importance. It explains the many experiments in which the initial statistical tendency of a subject population has been magnified by group discussion and it has the virtue of also incorporating other effects of discussion which do not exemplify polarization of the initial average.

Let us briefly consider some of these exceptions to group polarization and see how they, too, are explained. Ivan Steiner’s chapter in this volume offers two instances in which this process seems to have occurred. In Lewin’s (1947) visceral meat studies the women subjects apparently were well aware of government pleas to buy the sweetbread meats and willing to do so, but, until the group interaction, were apprehensive about appearing lower class. The lynching situations likewise embodied a conflict between external social constraints and private inclinations. Both situations liberated and amplified what people secretly wanted to do – in the one case with pro-social consequences and in the other case with anti-social results. As Professor Steiner notes, the groupthink situations summarized by Irving Janis seem to exhibit this same pattern.

A number of similar findings have been reported in the more recent experimental literature. Walker and Main (1973) observed that civil liberties decisions made by individual federal district court judges were predominantly conservative, apparently reflecting their awareness of public sentiment. By contrast, civil liberties decisions made by three-judge panels composed from the same pool of judges were far more libertarian. Walker and Main surmise that the group context enhanced the expression of the judge’s private sympathies for constitutional rights.
Several experiments have faced subjects with a conflict between self-sacrificial altruism and self-serving selfishness. Aggression which benefits oneself is exhibited more strongly by groups than by individuals (Mathew and Kahn, 1975; Wolosin et al., 1975; Yinon et al., 1975). Here again, the secret urges of individuals were accentuated by group interaction, regardless of whether this tendency was reflected in their individual pregroup decisions.

J. M. Rabbage's fourth experiment, reported in this volume, offers fresh new documentation of group-enhanced selfishness. Rabbage's earlier finding (Rabbage and Visser, 1972) that the demands of simulated labor groups polarized following discussion probably reflects a similar process. Lutz von Rosenstiel (pers. comm.) reports that when German university students were asked whether television should be primarily informative or entertaining, they individually advised the former. After group discussion they shifted to an expressed preference for entertainment, which probably better reflected their secret preference.

While these results conflict with the group polarization phenomenon (defined as accentuation of the initial average response), they are entirely consistent with the explanation of that phenomenon. This conclusion should not be surprising. The statistical average cannot cause group polarization; it is only an indicator of some underlying social process which generally occurs when groups discuss issues where they share an acknowledged initial leaning. When social inhibitions cause the initial private leaning to remain unacknowledged prior to group interaction, the same accentuation of private inclinations may nevertheless occur.

It appears, then, that a fundamental social process, including both social motivation and information processing, can explain group polarization and its variants. To repeat the synopsis stated earlier, group interaction will affect responses when people secretly want to act in a given way, but are restrained from fully doing so by their perception of an external social norm. When several such people find themselves in a group, they soon verbalize their inclinations and discover that others are emitting similar arguments and opinions. Since information consistent with their shared inclinations is expressed and received most warmly, the discussion arguments become polarized. The net result is that when people feel a conflict between what they ought to do and what they want to do, discussion with similar others generally induces information
processing in support of their internal preference and this tendency is therefore magnified.

Note

1. This paper summarizes research previously reported in a number of separate papers. The support of a National Institute of Mental Health small starter grant (MH 15999) and of subsequent grants from the National Science Foundation (GS 2891, GS 2891A#1, BNS-7420465) is gratefully acknowledged. (A previous draft of this paper received the 1977 Gordon Allport Intergroup Relations Prize of the Society for the Psychological Study of Social Issues.)

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