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# DYNAMICS OF GROUP DECISIONS

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## SOCIAL EMOTIONS IN DISCUSSION GROUPS

*Hermann Brandstätter*

Previous research on attitude change through persuasive argumentation has focused on a large number of characteristics of the source, the message, and the receiver (see McGuire, 1969), most of which were either not immediately related to the emotional aspects of the influence process, or were not analyzed in the context of discussion. During the last decade the choice shift phenomenon has almost completely absorbed the research activities in the area of group discussion (see Cartwright, 1971; Pruitt, 1971; Sauer, 1974; Meyers, and Lamm, 1976), with little attention paid to social-emotional factors. A variety of explanations for the rather regularly observed movement of mean group preference away from the indifference point toward one or the other pole of bipolar scales have been proposed, one of which has turned out especially promising. The proportion of pro and con arguments arising in the discussion (Burnstein, 1969; Burnstein et al., 1973; Ebbesen and Bowers, 1974; Bishop and Myers, 1974) seems to determine the choice shift, thus pointing to the importance of informational influence (Deutsch and Gerard, 1955).

There is no doubt the distribution of arguments referring to the probabilities and values of possible consequences of a decision is a very potent determinant of attitude change. But what is to be said about the social-emotional components of the conversation that modify the informational influence of arguments in several ways and possibly to a remarkably degree? It is this component of the influence process on which a research

project at the University of Augsburg, Germany, concentrates. Its aim is to explore how preestablished attraction to and actual friendliness of a discussant or an audience affects the participants and observers of a discussion.

To look for the impact of preestablished attraction to and actual friendliness of a discussant on the decision preferences of participants as well as observers of the discussion within the same research project may be justified by functional similarities of attraction and friendliness on the one hand, and participation and observation on the other. (a) Social emotions may be elicited in stable patterns by the mere presence (real or symbolic) of another person (liking or disliking), or by his/her behavior being perceived as friendly or unfriendly. These two kinds of emotional responses are closely related to each other: enduring liking or disliking can best be understood as an effect of prior rewarding (pleasant) or punishing (unpleasant) interaction with a person. Both preestablished liking or disliking and emotional responses to actual behavior also entail expectation of future rewards and punishments, which function as incentives modifying the behavior in a specific way. (b) To participate in a discussion also means to listen to the arguments of the discussion partners and to observe the interaction between others. To observe a discussion as an outsider usually entails partisanship with one speaker or the other and generation of arguments by oneself.

## REVIEW OF EXPERIMENTAL LITERATURE

Before describing the method and results of our research the reader may be reminded of studies dealing with the attraction-persuasion problem that have been published during the last twenty-five years.

The various experiments were based on Festinger's (1950, 1954) theoretical concepts of social comparison (Back, 1951; Festinger and Thibaut, 1951; Gerard, 1954; Argyle, 1957; Jackson and Saltzstein, 1958; Berscheid, 1966); theories of cognitive consistency, particularly Newcomb's (1968) ABX model (Burdick and Burnes, 1958; Brewer, 1968; Sussmann and Davis, 1975); Festinger's (1957) theory of cognitive dissonance (Kiesler and Corbin, 1965; Jones and Brehm, 1967; Himmelfarb and Arazi, 1974); attribution theory (Kelley, 1967; Goethals, 1972; Goethals and Nelson, 1973; Eagly and Chaiken, 1975); classificatory concepts of Kelman (1961) or French and Raven (1959; Mills and Harvey, 1972; Horai et al., 1974); or no specific theory at all (Kiesler, 1963; Mills and Aronson, 1965; Snyder and Rothbarth, 1971).

There is one theoretical paper comparing the persuasive communication with the forced compliance situation, trying to explain by an extension of Heider's (1946) cognitive balance model why in persuasive communication experiments interpersonal influence usually increases with interpersonal attraction, whereas the opposite seems to be true in the forced compliance situation.

The following brief review of the experimental literature on the function of attraction in the persuasion process comprises only the few discussion experiments, almost exclusively performed in the fifties (Back, 1951; Festinger and Thibaut, 1951; Gerard, 1953; Gerard, 1954; Argyle, 1957; Brewer, 1968).

Most later studies used one-way communication in order to show how source attractiveness relates to persuasiveness. Within the perspective of this review, they are less relevant than the early studies. Nevertheless some of them offer useful additional information on conditions modifying the relation between attractiveness and influence which might be effective in one way or another in the group discussion situation too. Because of space limitations they are only mentioned here without further details of the experimental design and results.

## ATTRACTION AND INFLUENCE IN GROUP DISCUSSION

Probably the first experiment on the relation between attraction and opinion change following group discussion was performed by Back (1951), an associate of Leon Festinger at the Research Center for Group Dynamics at the Massachusetts Institute of Technology. The experimental task for each member of a dyad demanded looking individually at a set of three pictures, writing a story about it, discussing their stories, and writing individually a final version of the story. A content analysis of the initial and final stories provided the scales for measuring change. Cohesiveness was varied in three ways: (a) you will like each other; (b) the best group performance will win a prize; (c) you and your partner are more able than any other pair to solve this kind of problems. Although the subjects rated their liking for the partner, no results on differences in liking between the three conditions of cohesiveness are reported. All three kinds of cohesiveness were effective in inducing agreement. Cohesiveness also increased the number of influence attempts.

Festinger and Thibaut (1951) studied groups with six to fourteen members, seated at a round table, each with a letter card for identification and a card showing the scale value of his opinion. The two design factors were pressure for agreement and perceived homogeneity of interests and abilities. Because of contamination of interests and abilities, the results are

not clear with respect to attraction, as Jones and Gerard (1967) point out for this experiment and for a similar one performed by Gerard (1953). Nevertheless this study is noteworthy for its application of continuous measurement of attitude, although the report does not refer to the time series data.

Gerard (1954) obtained less ambiguous results with a face to face discussion of three-person groups who had been informed they were to be or not to be composed of congenial people. High attraction produced more influence attempts, more influence, and more resistance to a later attempt of counterpersuasion.

Argyle (1957) wanted to test the hypothesis that a person, having privately rated the esthetic value of a painting after having exchanged written notes with his partner, would agree more in a final rating when the rating was public and when the partner's messages were unfriendly. Standardized messages, e.g. "What you say is so trivial, for this picture is so meaningless as a whole," or "I respect your opinion, but the picture. . . ." were forwarded to the subjects, either by the experimenter interrupting the exchange of messages or by a confederate. Unfriendly remarks were expected to be more persuasive, based on the assumption that subjects would have a stronger need for acceptance in this situation and therefore yield more in order to be accepted. The hypothesis was not confirmed. There was a tendency in the opposite direction.

Brewer (1968), testing Newcombs ABX model, found that liking in dyads discussing the pros and cons of capital punishment fostered agreement and induced initial perception of high attitude similarity. The relation between initial similarity and postdiscussion attraction and the patterns of communication did not turn out as predicted. In this case, changing one's own attitude seemed to have been the dominant reaction to the perception of imbalance.

#### ATTRACTION AND INFLUENCE IN ONE-WAY PERSUASIVE COMMUNICATION

Most of these studies are aimed at specifying conditions which modify the impact of attractiveness on influence: stated desire to influence (Mills and Aronson, 1965), relevant and irrelevant similarity with attraction held constant (Berscheid, 1966), informing the subjects on the source attractiveness before or after the communication (Mills and Harvey, 1972), expertness of the communication combined with attractiveness (Horai et al., 1974), need for affiliation (Burdick and Burnes, 1958), expected future interaction with the group (Kiesler et al., 1966; Kiesler and Corbin, 1965), source with same or different data basis for judgment (Goethals, 1972), discussion of belief or value issues (Goethals and Nelson, 1973),

desirability of advocated position (Eagly and Chaiken, 1975) agreement and disagreement between two partners, one liked, the other disliked (Sussmann and Davis, 1975) attractive versus unattractive audience applauding or disapproving some of the speaker's arguments (Kelley and Woodruff, 1956; Landy, 1972).

As a résumé of the various studies, it may be stated that a source of communication exerts more influence on the recipients of the communication the better the source is liked for one reason or another only (a) if the subjects have no choice whether to expose themselves to the communication or not, and (b) if the subjects do not expect further interaction with the source.

In the case of free exposure, an unattractive source tends to be more influential than an attractive one (cf. Kaplan and Baron, 1974). The expectation of further interaction with the source results in roughly a U-shaped relation between attraction and influence with high attraction connected with high influence, medium attraction with low influence, and low attraction with medium influence. There is also some evidence that liking is more important in matters of values than in matters of facts, and that need for social approval makes especially sensitive a variation in friendliness of the speaker. Finally, one may partial out or hold constant the perceived expertness of the source and the remembering of arguments without attenuating the genuine effect of liking.

### THEORETICAL CONSIDERATIONS

The theoretical position taken here is described in the following (see Brandstätter, 1976): (a) A person responds to any perceived or imagined situation giving or denying need satisfaction with emotions. These provide him with an immediate, spontaneous feedback of whether something is good or bad for him, whether to approach or to avoid it, to continue an activity or to stop it. There is an intimate tie between motives and emotions, the kind and intensity of motives determining the kind and intensity of emotions that are elicited by characteristics of the situation relevant to the activated motive (cf. Lersch, 1954; for a similar view, cf. Arnold, 1960). (b) Emotions originally elicited only by cognitions of situational characteristics relevant to motives can be conditioned to irrelevant characteristics of the situation (classical conditioning of emotions). (c) The involuntary action tendency of emotions can be monitored (released, suppressed, diverted) by considering the possible consequences of action and by problem-solving in order to arrive over the long run at a gratifying result.

To predict a person's reaction to someone's behavior in a debate, one must know or make several assumptions: (a) whether the behavior elicits positive or negative feelings; (b) to which of the situational elements are these feelings mainly conditioned; (c) how the person intellectually copes with the situation.

Each point may be elaborated in more detail. First, whether another's specific discussion behavior elicits positive or negative emotions depends on personal traits and on the situational context. A person who is rather in need of social approval will be affected more by supportive or discouraging behavior of another person than someone who is self-reliant. To be blamed by a liked person is more startling than by someone who is not attractive.

Second, the emotional response to a rewarding or punishing person tends to be conditioned to other elements of the situation, which are not only simultaneously present but cognitively related to the primary emotional stimulus. The speaker and what he says are perceived as a unit, and therefore emotions elicited by the speaker become conditioned to his arguments and to his position, for which his arguments plead.

Since there are always several situational elements which are cognitively linked to the primary emotional stimulus, the emotional conditioning usually affects more than one element. The intensity of conditioning depends on the strength of the cognitive bond. So if my opponent in a discussion acknowledges the originality of my arguments, which would please me, this emotion will be conditioned not only to the complimenting person, but also to my way of arguing. Two conflicting forces impinge on my attitude toward the topic of discussion. The increased emotional value of my argument strengthens my position, and the increased emotional value of my opponent entices me to yield. The outcome depends on the relative strength of the two cognitive bonds or, the equivalent, on the selection of elements to which I attribute the origin of emotion.

Third, besides the impact of emotional conditioning which is, although cognitively induced, functioning automatically, there usually is also a problem-solving process going on. For example, if I want my opponent to like me, and if I am convinced he wouldn't like me strongly opposing him, I would perceive yielding as a means to acquire or to maintain his benevolence. Whether I actually give in to achieve that goal depends on the whole set of expected consequences, e.g. loss of self-esteem, loss of support by friends, and so on. Theories of cognitive consistency (Abelson et al., 1968), to which many of the experiments on attraction and persuasion refer can be seen as special theories of problem-solving.

Hitherto only the effects of positive emotions have been discussed. What about the effects of negative feelings provoked, for example, by the partner's deprecatory remarks or by his expressed doubts about my

competence or sincerity? Again the negative emotions are going to be conditioned to several elements of the situation, the intensity of conditioning depending on the kind and strength of cognitive bonds between the primary emotional stimulus and the remaining situational characteristics. And there is also problem solving involved, which might interfere with unconditioned and conditioned emotions.

So if my opponent attacks me for my position or my arguments, negative feelings are conditioned both to the opponent and to my position, prompting me on the one side to abandon it, and on the other side calling forth my disliking of the opponent and my resistance to his arguments. Which of the two forces is stronger depends again on the strength of the cognitive bond. If I perceive myself as weak compared with my opponent, attributing the cause of attack to my questionable attitude and viewing the attack as more or less legitimate, the negative emotions will be conditioned to my position, otherwise mainly to my opponent.

Besides being affected by this inescapable emotional conditioning, I am coping with this disturbing situation by intellectual activity, trying to find an acceptable solution or interpretation. So, I might be aware of my emotional reactions, disapprove of them as unacceptable by my standard of objectivity, and agree with somebody else's opinion even if it is imbedded in aggressive remarks.

The results of an experiment will be clear only if it is designed unambiguously, so that most subjects (a) perceive the experimentally manipulated behavior of their opponent in the same way (as emotionally positive or as emotionally negative), (b) are exposed to the same conditioning process, and (c) cope intellectually with a similar strategy.

## GENERAL DESCRIPTION OF THE METHOD

Since all experiments of the Augsburg research project were designed according to the same basic structure, a general description of the method will be presented prior to a discussion of individual experiments.

The subjects of our experiments participated in or observed a discussion among two or three people about various issues. One question was whether members of radical parties should be employed in the civil service. Another question dealt with whether or not acquisition and possession of drugs should lead to more severe punishment. A third was whether or not a job applicant whose record threw some doubt on his abilities should be hired. The fourth question was whether or not to plead guilty in a case before a disciplinary court. As an experimental (independent) variable, the perceived similarity of important values between the subject and his

partner was manipulated in some studies. The manipulation in other studies was the perceived similarity and competence, or perceived similarity and courtesy of discussion style; in still others, the approving or disapproving behavior of an audience. In addition to these experimentally constructed variables, we included as independent variables, in some of our analyses, the discrepancy between the listener's position and the position of the speaker, the order of pro-con arguments, and some personality characteristics. (For further information on the basic structure of the experiments see Brandstätter, 1972.)

There was altogether a wide variation in: (a) the amount of experimental control and restriction of interaction (the subject communicating with a simulated partner on a computer terminal, the subject interacting with a confederate, or a group discussing some problem in a natural way); (b) the medium through which the discussion was presented to the observers (audiovisual, audio, or written form); (c) the population of subjects (students, bank executives, officer cadets, or randomly selected male citizens of the city of Augsburg, varying in age, education, and occupation).

The most important dependent variable in our experiments was a subjective ratio formed by the person through an overall weighing of the pro and con arguments known to him at the moment. Since these ratios were assessed after each argument, we obtained a time series of preference measures for each subject, a procedure which distinguishes our experiments from nearly all other experiments on group discussion, in which subjects' preferences usually were measured just twice, before and after the discussion. Besides the continuous scaling of preferences, the subjects rated the discussants on several dimensions (liking, dominance, competence, and conscientiousness) before and after the discussion. They were also questioned about their interpretations of the experimental situation.

In the early experiments, analyses of variance have been performed on the sum of individual preference changes immediately following the presentation of the argument. In some experiments, a trend analysis of the whole series of single preference changes was performed, when the variance-covariance matrix of the repeatedly measured dependent variable met the prerequisites of the model.

At the present time, we usually perform an analysis of covariance with the initial preference score as a covariate and either the final preference or the correlation between the time series and the series of preference scores as dependent measure of influence. A different option would be to perform a principal component analysis on the whole set of dependent variables (usually ten to twenty), to compute factor scores, and to apply

univariate analysis of variance on each factor score variable or a multivariate analysis of variance on the whole set of factor scores.

In order to find a suitable theoretically based formal representation of the change process, some reanalysis of experimental data was performed. Thereby, the proportional change model (Anderson and Hovland, 1957) has been modified through the inclusion of the distance to the initial position and different weights for the various experimental conditions. The weights can be estimated by polynomial multiple regression analysis on individuals or groups.

To avoid some problems connected with the questionable scale properties of the preference measures we are now testing discrete models of changing probabilities (Bishop et al., 1975; Wiggins, 1973; Coleman, 1964) thereby hoping to overcome the difficulties related to interindividual variance in proneness to change, to inequality of scale units, and to the specific variance-covariance matrix of repeated measures, which often precludes the use of a trend analysis. Simple counting of the number of moves in the direction of the argument or away from it and performing nonparametric significance tests has already proved useful (see von Rosenstiel & Stocker-Kreichgauer, this volume).

To get a clearer understanding of the process of change we are planning to experiment with the method of thinking aloud as well as the measurement of GSR in order to improve the identification of critical, emotion-arousing events.

## A REVIEW OF THE AUGSBURG EXPERIMENTS

The main purpose of the Augsburg research project on group discussion is to explore the very process by which the attraction to the speaker, the friendliness of the speaker, and the applause supporting the speaker affects his influence on participants and observers of a discussion. Up to now the outcome of group discussion but not the process itself had been studied.

### OBSERVATIONAL SETTING

In a series of three experiments, the subjects ( $N_1 = 28$ ,  $N_2 = 82$ ,  $N_3 = 29$ ) had to read an alleged transcript of a discussion about liberalizing drug use, featuring pro and con arguments. Whereas in the control condition all three discussants (one arguing for liberalization, one against, and the third for the status quo) avoided attacks, one of the speakers in the experimental condition, who held an extreme position, was verbally aggressive against his opponent.

The results of these experiments were inconclusive. In the first experiment (Brandstätter and Rüttinger, 1974), there was a statistically nonsignificant tendency for an increased influence of the aggressive speaker (especially on people who held the same position). In the second and third experiments (Rüttinger, 1974), verbal aggressiveness tended to diminish the influence on subjects who held the same position, and also on subjects who held the opposite position. The functioning of verbal aggressiveness seems to be more complex than we had assumed.

Further investigation should consider the possibility of individual differences in perceiving and reacting to verbal aggressiveness, which might have blurred the results of our experiments. It is quite possible that some subjects are intimidated by the attacks and yield, whereas others reject an aggressive speaker and move away from his position. Still others may be pleased to see that their "representative" attacks his opponent who is also their adversary. So far our efforts to find a personality measure correlated with differences in reactions to verbal aggressiveness have not been very successful. However, there is some evidence in our data that verbal aggressiveness is perceived less negatively by subjects who hold a position which implies aggression, and that these subjects yield relatively more to the aggressive speaker than to the nonaggressive speaker.

In a second series of experiments, the subjects were exposed to a discussion between two alleged representatives of two different teacher unions about whether members of radical parties should be employed by the civil service.

In the first experiment of this series (von Rosenstiel and Rüttinger, 1976), forty-nine students in the School of Education watched the discussion on a TV screen. Half of them saw an audience applaud one of the speakers while behaving neutrally towards the other speaker. The other half saw an audience behave neutrally towards both speakers. The data analysis demonstrated that applause increased the influence of the applauded speaker to an astonishingly high degree.

In the second experiment in this series (von Rosenstiel and Stocker-Kreichgauer, 1975), the participants were 257 male citizens of Augsburg, randomly selected from the telephone directory. There were seven different applause conditions combined with three different media conditions (TV screen, tape recorder, and a written form) for a total of twenty-one experimental combinations. The subjects were influenced more strongly by the applauded speaker, especially if the other speaker was treated neutrally by the audience and if the audience was liked.

Stocker-Kreichgauer and von Rosenstiel (1976) performed an experiment with 176 subjects in a 3 × 9 design (audiovisual, acoustic, and

written media presentation and nine social reinforcement conditions: friendly, unfriendly, and neutral behavior of the two discussants in various combinations), using again the civil service problem. The hostile speaker was more influential than the friendly one.

In an experiment carried out by Stocker-Kreichgauer (1976), 136 students watched a videotaped discussion of supervisors about a personnel decision problem. A third participant served as moderator, but he seemed to be biased, as evidenced in various ways by his remarks. Simple agreement or disagreement with the arguments of one side, advanced by the moderator without contributing his own arguments, increased the influence of that speaker who had been favored by the moderator.

#### INTERACTION SETTING

All experiments described above were conducted with subjects who were observers of a discussion presented in various media. Now we proceed to experiments in which subjects interacted with each other.

In an experiment performed by Schuler (1975) the subjects, after reading a case study which contained a mixture of positive and negative judgments about a job applicant's skills, had to decide on whether to accept or reject the applicant for the position of a bank teller. A list of eight arguments were then given to each subject, justifying the decision he had made about hiring or not hiring the applicant. Each subject was told to select those five arguments from among the eight which, in his opinion, were most persuasive and which he would use to try to convince someone else. In sessions consisting of approximately fifteen participants, all of whom were acquainted with each other, each participant judged five members of the group with respect to dominance, liking, and conscientiousness. After these preparations designed to manipulate the variable of liking, the subject got a larger set of fifteen arguments which included the five arguments he himself had selected. The instructor told the subject that two other anonymous participants had each selected five arguments, and that one of his two partners had judged the subject as very likeable, whereas the other had made no judgment of him. The arguments were arranged in such a way that five proposed to accept the applicant, five proposed to reject him, and five pleaded for not deciding without further information, and were presented regularly in alternating order. The subject's task was, as in all other experiments, to rate his decision preference after each argument.

The main results are that the arguments stemming from a liked partner are more influential, and the difference in influence between the liked and the neutral partner diminishes during the series of arguments. The influ-

ence measure used as the dependent variable was the sum of changes of preferences towards the position of the speaker immediately following the arguments of the specific partner.

The effect of the partner's similarity, the partner's competence, and the expectation of a personal encounter in the near future has been tested by Schuler and Peltzer (1975) with the same personnel decision problem. About eighty students, in groups of fifteen to twenty people, interacted on computer terminals with a simulated partner in one of the eight conditions of the  $2 \times 2 \times 2$  design. The main results are that similar partners are liked more, especially when the subject does not expect a personal encounter, similar partners are more persuasive, and the correlation between initial and final rating of liking is higher with dissimilar partners than with similar partners.

The combined effect of preestablished liking and friendliness of behavior has been studied by Peltzer and Schuler (1976) again with the personnel decision problem, and with about eighty subjects interacting on computer terminals. The  $2 \times 2 \times 2$  design combined two levels each of partner similarity (which induced liking), partner's friendliness (in using acknowledging or disapproving remarks before presenting the argument), and the order of arguments (with subject or partner starting the discussion). These are the results: (a) similar partners are liked more than dissimilar ones, to a lesser degree even after a controversial discussion; (b) the difference between similar and dissimilar partners in influencing subjects was greater at the beginning of the discussion than at the end; (c) partners using unfriendly remarks more often elicited unfriendly responses than partners using friendly remarks; (d) yielding to an argument is followed more often by a friendly remark, while withdrawing in the opposite direction is more likely to be followed by an unfriendly remark; (e) the correlation between initial and final rating of liking was higher with dissimilar partners than with similar ones.

In contrast to the preceding experiments, where the participants interacted via computer terminals or by exchanging notes, the fourth experiment (Schuler and Peltzer, this volume) was contrived to test the effect of friendliness on real two-person discussion groups, with a confederate, opposing the subject's view and behaving in a friendly or unfriendly way using nonverbal cues. Participants had to decide on a case from a disciplinary court. Half of the discussions were watched by an observer. Both the observer and the discussants continuously rated their preferences after an acoustic signal every minute. Before and after the discussion, which lasted about twenty minutes, the discussants mutually rated their impressions of each other. The observer rated both discussants.

The results suggested that the friendly confederate was rated by the interacting and by the observing subject as more attractive, and the friendly confederate exerted more influence on both the interacting and the observing subject. The observer's presence had no significant effect on the discussant's behavior. An inquiry by mail six to eight weeks later showed about the same difference in personality ratings, but a diminished difference in influence, though still a significant one.

#### THE FIELD SETTING

To ascertain the generalizability of the experimental results beyond the laboratory situation, videotapes were made of twenty real-life decisions of four-person groups within business organizations, civil service, and university departments. The discussion was unrestricted, but before and after the discussion each participant rated his preference for possible solutions of the problem, the supposed preferences of the other three participants, and perceptions of own and others' competence, friendliness, and dominance. Interaction analysis of the videotapes has been completed and computation is underway. The main topic of this analysis is again of the modifying effect of liking and friendly behavior on persuasiveness. The correlation between friendliness of interaction and movement toward conformity is not significant in the field setting although it is in the predicted direction (Molt et al. 1975, Rüttinger, this volume).

Summing up the results of the various experiments and integrating some of their most interesting features we may state:

(a) Whereas observers of a discussion were more strongly influenced by an unfriendly speaker, participants yielded more to a friendly partner.

Since in the observational setting the discussions stressed the value aspects of the problem and in the interaction setting the discussion focused on facts, the generalization just stated is only tentative. If further experiments systematically varying the content of discussion corroborate the difference between the observed and the experienced friendliness in discussion style, it may be explained in the following way.

Verbal aggressiveness in an observational setting is perceived as less disturbing than in the interactional setting, not only by subjects holding the same position as the aggressor but also by his opponents among the observers. To feel directly attacked by the discussion partner leads to devaluation of the aggressor, thus neutralizing the reinforcement effect of punishment.

(b) Observers of a discussion who stick to the implicitly aggressive alternative were more strongly influenced by the aggressive speaker, whether he adhered to the aggressive or the nonaggressive alternative, than the observers favoring the opposite alternative. There seems to be an

affinity between the implicit aggressiveness of the preferred alternative and the reaction to aggressiveness of discussion style. Whether this is related to stable characteristics of persons who favor punitive actions is not yet clear. It may be that the specific reaction to verbal aggressiveness is related more to a state than to a trait of aggressiveness.

(c) Observers of a discussion are influenced more strongly by that speaker who is supported by an audience (applauding him and/or disapproving of his opponent). This relation is more prominent if the observers like the audience than if they dislike it. This rather plausible result may be explained in terms of vicarious reinforcement.

(d) Whereas the perceived attractiveness of a dissimilar opponent in a discussion does not change much from the beginning to the end of the discussion, this is not true with a similar opponent. In this case, the correlation between initial and final liking is low, and the attractiveness decreases on the average. This result may be explained by cognitive consistency concepts. A dissimilar opponent does not stimulate any change in personal attractiveness rating or decision preference. Being dissimilar and being an opponent in a discussion fit together. The situation is different with a similar and therefore, at least initially, liked opponent. Experiencing this kind of inconsistency leads some persons to change their decision preference, some to devalue the opponent, and some to both reactions. The present data base does not allow any prediction about which of these reactions takes place.

(e) In the field studies the impact of social-emotional behavior on movement toward conformity is not significant. We may assume that uncontrolled variables like quality of arguments, talkativeness, status differences, and kind of decision problems have blurred the effects of friendliness. There are also some doubts about the validity of the measures of conformity and friendliness. So the generalizability of the experimental results has to be tested in more field studies.

## CONCLUSIONS

People involved in a discussion in order to reach a decision try to influence each other and are influenced by each other mainly in three ways: (a) they communicate their preferences and learn the other's stand; (b) they communicate promises and threats, rewards and punishments for yielding or resisting the attempted influence (i.e., they learn the other's demands); (c) they communicate the reasons for these preferences and learn the other's arguments.

The first facet has been studied mainly within the tradition of conformity (Sherif, 1936; Asch, 1951) and social comparison theory (Festinger, 1954).

The second vein of the influence process is related to effect dependence, and as Jones and Gerard (1967) have remarked, has so far been neglected. Except for a series of experiments stimulated by Festinger's theory of informal communication in the early fifties, only a few studies have been performed on that topic during the last twenty years. To be sure, the literature on experimental bargaining and negotiation (Rubin and Brown, 1975) comprises many studies focusing on these variables. But the structure of experimental games is so different from the structure of group discussion on rather poorly defined problems that generalization would be hazardous.

The third area is the domain of integration theory (Anderson, 1971; Anderson and Graesser, 1976). Burnstein et al. (1973) and Ebbesen and Bowers (1974), although not explicitly referring to integration theory, also stress the importance of the relative number of pro and con arguments in explaining the choice shift following group discussion. Jones and Gerard (1967) denote the basis of this kind of influence as information dependence.

Liking of the other person based on past experience, or like of his present behavior can affect each of these three types of influence.

(a) A person in need of social validation of his beliefs and values, and perceiving a discrepancy between his and the other's position, is prone to conform in order to feel secure. To agree with a liked person provides more security than to agree with a disliked one, especially on issues of value.

Most experiments do not differentiate the perception of another's position (stand) from the perception of another's desire to influence (demand). One exception is a study by Mills and Aronson (1965) which suggests that to know someone's position does not itself cause conformity, if the subject assumes that the other does not want to exert influence. The perception of demand is also less effective if there is no way by which the other could check whether his influence attempt results in yielding or not. So one can assume that (in those experimental conditions where the subjects give only a private rating of their preferences and/or overhear a discussion as outsiders) any effect of liking is tied to the perception of the other's stand rather than to the perception of the other's demand, especially if there is no demand stated explicitly, as in those studies where the subjects know only the group consensus.

(b) The demand of a liked person is less objectionable than the demand of a disliked one for two reasons. If liking is based on rewards received in

the past, yielding is an act of restoring equity (Adams and Freedman, 1976). It is also a means of preserving friendship and obtaining rewards or avoiding punishment in the future (Jones, 1964).

Although the subjects of our experiments perceive only weak, if any, effect dependence (Jones and Gerard, 1967), the desire to influence, i.e., to demand, is communicated quite frankly. It is therefore likely that in our experiments both the perception of a stand and the perception of a demand are affected by social-emotional responses.

(c) Whether liking affects not only the influence of stand and demand perception, but also the influence of persuasive argumentation, possibly by enhancing attention and remembering, is hard to say. There seems to be no difference in remembering the arguments of a liked and a disliked person.

Even if the arguments of a liked person were perceived as more convincing than the arguments of a disliked one, this may be due to some kind of post hoc explanation of the subject, e.g., "I have been influenced; therefore, the arguments must have been convincing, since I am a reasonable person who would not be seduced by personal attraction in finding the right answer to a problem."

It will be the admittedly difficult task of further theoretical work and of more sophisticated experimentation to separate the various ways in which social-emotional responses affect the influence process.

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