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REDUCTION OF COGNITIVE DISSONANCE BY SEEKING CONSONANT INFORMATION[1]

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WHEN a person holding an opinion on a matter of importance is exposed to an authoritative communication advocating a contrary opinion, cognitive dissonance and a need to reduce the dissonance are produced (Festinger, 1957). Several means of dissonance reduction are possible: The person may change his opinion to conform more closely with the communication; he may attempt to persuade the communicator to alter *his* opinion; he may distort the content of the communication; he may discredit the communicator; he may reduce the importance of his opinion; or he may attempt to obtain support for his opinion. It is with the last of these modes of reducing dissonance that we are concerned in this study.

Previous studies have shown this mode in operation. Festinger, Riecken, and Schachter (1956) found that a group of people, in whom strong dissonance had been produced by the disconfirmation of their beliefs, began to recruit adherents to their cause. Their efforts to obtain social support were in marked contrast to their behavior prior to the onset of dissonance, when they were reluctant to take in new members and reticent in releasing news about their beliefs to the press. Maccoby (1959) found evidence of seeking consonant social support in two field experiments conducted with mothers. Her data show that mothers in whom dissonance was greatest, as a result of exposure to a contrary communication on child training, were most likely to have discussed the topic of the communication with like-minded persons. In an experimental study of the effects of group discussion on counteracting propaganda, Brodbeck (1956) showed that persons in whom dissonance had been produced displayed a preference to engage in discussion with nonexpert peers whose beliefs were consonant with theirs, thus obtaining social support and restoring confidence in their beliefs to prepropaganda levels. Because of the experimental design, Brodbeck was not able to show that seeking social support increased as a function of magnitude of dissonance.

In a different, but related, vein Ehrlich, Guttman, Schonbach, and Mills (1957) found that persons with postdecision dissonance resulting from the purchase of an automobile were highly selective in the car advertisements they noticed and read. Specifically, they were more likely to notice and read ads about their own make of car than about other makes, and were more likely to read ads about their car than were car owners with old cars. In this case, seeking consonant information rather than seeking social support was the approach taken to reduce dissonance. In a further study Mills, Aronson, and Robinson (1959) found dissonance-reducing selectivity to positive information among students who had made a decision to take one of two alternative types of examinations.

From Festinger's theory and the foregoing data the following two hypotheses are derived for testing. First, a person in whom dissonance has been produced by exposure to an authoritative communication espousing a contrary point of view on an important subject, is more likely to seek authoritative information on the subject than a person who has been exposed to a consonant communication. This prediction is expected to hold only if other means of reducing dissonance are relatively less available than seeking informational support. Furthermore, the prediction is expected to hold only if the communication is authoritative and if its subject matter is important to the subject. If the communication were not perceived as at least minimally authoritative (trustworthy, credible, expert), or, similarly, if the subject of the person's opinion were not important to him, little

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dissonance should result. The hypothesis receives some, though unsatisfactory, support from the field studies of Festinger et al. (1956) and Maccoby (1959). In the first a control group not experiencing dissonance was lacking. In the second study it was only shown that seeking consonant support varied as a function of dissonance; it was not shown that seeking support per se varied with dissonance.

The second hypothesis concerns the selectivity of information-seeking. A person in whom dissonance has been produced by exposure to a contrary communication seeks support, if such is available, from a source that is perceived to agree with his opinion. If the person's opinion is not substantially changed by the communication, he should seek support from a source perceived to agree with his precommunication opinion. If, on the other hand, his opinion is changed substantially to conform with the communication, he should seek support from a source perceived to agree with his new opinion. This is derived from the fact that, once the person has partly reduced dissonance by adopting the opinion advocated by the communication, new dissonance results, produced largely by the psychological incompatibility of the new opinion with cognitions related to the original opinion. In sum, changing opinion produces new cognitive dissonance that can effectively be reduced by obtaining support for the new opinion. This hypothesis receives direct and indirect support from the data of Ehrlich et al. (1957), Maccoby (1959), Mills et al. (1959), and Brodbeck (1956). However, in the Brodbeck study, which is the most relevant to the present experiment, subjects were constrained to communicate *either* with a subject who held consonant opinions or one who held dissonant opinions, whereas in the present study subjects were free to choose whether they wished information or not, in addition to being free to select the source of information. In addition, the discussants in Brodbeck's study were nonexpert peers, whereas in the experiment reported here the sources available to the subjects were experts.

METHOD

The subjects were 100 mothers whose youngest child was in the first grade of five Palo Alto, California, public schools. Fifty-three of these, randomly chosen, were experimental subjects; 47 were control subjects.[3] Each subject was put through the following experimental procedure in her home by one of four trained interviewers.[4]

1. The subject was asked a series of opinion questions on the relative importance of hereditary and environmental factors in child development, in addition to a few background questions and some opinion questions on the issue of permissiveness in child rearing. The key question for the purpose of the experiment was a 10-point scale that followed eight questions on the issue of heredity-environment:

> On the whole, would you say that a child's behavior is mostly learned or would you say that it is mostly inborn? Show your opinion by putting a cross (X) at either end, or any place in between, on the line below.
>
> Mostly Learned ⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢—⊢ Mostly Inborn

Following this was the question, "How sure are you of the answer you gave to the last question?" to which five answers ranging from "very sure" to "not at all sure" could be given.

2. The subject was then asked to listen to an 18-minute tape-recorded talk by a fictitious expert, Dr. Wilkins, emphasizing either hereditary or environmental factors in child development. Both the hereditary and the environmental talk were attributed to the same fictitious expert, for whom a brief biographical sketch was given, and were recorded by the same person. Of approximately the same duration and making about the same number of points, the talks differed only in the point of view advocated—pro-heredity or pro-environment. All factual data referred to had origins in the published literature; no fictitious information or misinformation was given.

Experimental subjects were given whichever of the two talks was contrary to the opinion they expressed on the 10-point scale. For this purpose the subject was considered as having an environmental opinion if she checked any of the five intervals on the left of the scale ("Learned" pole) and as having a hereditary opinion if she checked any of the five intervals on the right of the scale ("Inborn" pole). If the subject placed her check precisely in the middle of the scale, a systematic scheme determined which talk she heard. Control subjects were given whichever of the two talks agreed with their opinion.

3. Following the talk, the subjects were told:

> You have heard Dr. Wilkins' views on "Heredity and Environment." There are, of course, other views that are just as authoritative. Now, we'd like to give you the opportunity to discuss some of the things you heard in the talk, if you want to. Of

[3] A few mothers gave birth to a child between the time the sample was drawn and the study was conducted. Three mothers were mistakenly treated as experimental subjects instead of as control subjects.

[4] Approximately equal numbers of experimental and control subjects were assigned at random to each interviewer. The interviewers were unaware of the specific hypotheses under test.

course, it's up to you. We thought some of you might want to have a discussion, so two people have agreed to talk further on the subject. Both are psychologists with interests relevant to the talk you heard and will be at Stanford in about two weeks."

A brief biographical sketch of each psychologist, emphasizing his expertness, was then read. Except for their names, the speakers were differentiated only by the title of a noted article they had allegedly written. For the pro-heredity speaker the article was entitled, "The Importance of Inheritance and Maturational Factors in the Development of Children"; for the pro-environment speaker it was "The Role of Training and Environmental Factors in Child-Rearing." Both speakers were to give their talks in different rooms, but on the same evening, at the same time, and in the same building.

The subject was then asked: "Since for planning purposes we need to know approximately how many people will attend each of the talks, would you tell me if you want to attend either of the talks and, if so, which one?" The interviewer recorded the subject's preference for either (or neither) speaker and, in addition, recorded all comments made by the subject that would permit an estimation of the degree of the subject's desire to attend the talk of her preference.

4. At the conclusion of the session the subject was asked for her opinion again and her confidence in it. This was done under the guise of the interviewer's checking over the original questionnaire and discovering she had "failed" to record the subject's answers to two questions. At this point the interviewer apologized to the subject and asked her, "Would you please answer these now?"

Approximately 2 weeks following the experimental sessions, a talk on the question of hereditary versus environmental factors in child rearing was actually given for those subjects who availed themselves of the opportunity. At this time the object of the experiment was also explained. Both the talk and the description of the experiment were received with considerable interest. However, as is the case in many field experiments in which there are no constraints, very few subjects attended the talk.

The subjects, taped talks, and experimental procedure described above were well-suited to a test of the hypotheses. Dissonance was assured by a topic for the talk that would be important to the mothers of 6- or 7-year-old children. The taped talks, however, were not so rabidly partisan on either side as to be easily discredited. Nor were they so persuasive as to produce substantial opinion change, thus minimizing opinion change and maximizing information-seeking as modes of dissonance reduction. On the other hand, the talks were explicit enough in the points of view advocated so that distortion of content would be difficult. Attempts on the part of the subjects to reduce dissonance by trying to alter the speaker's opinion were, of course, impossible, and seeking social support from the interviewer was effectively denied by the latter's not interacting with the subject.

RESULTS AND DISCUSSION

With the exception of four experimental subjects and two control subjects, all subjects expressed an initial opinion on the environmental ("Learned") side of the scale. Among the 94 subjects indicating an environmental opinion, 34 experimental and 32 control subjects checked one of the three most extreme intervals on the scale. It is with these subjects that the main analysis will proceed, as this maximizes the opportunity of revealing differences in the groups as a function of the experimental manipulation. Since these subjects all had environmental opinions, it follows that experimental subjects heard a hereditary communication and that control subjects heard an environmental communication.

Success of the Experimental Manipulation

Though the communications were selected because they would not be so persuasive as to produce large amounts of opinion change, it might be expected that if the communications were indeed different and productive of dissonance in the experimental group, the latter would show a significantly greater amount of opinion change in the direction of heredity than would the control group. For this purpose the number of subjects in each condition changing opinion in a hereditary direction may be compared. Sixteen experimental subjects as contrasted to five control subjects thus changed. By chi square test the difference is significant at the .01 level.[6] As a further indication of whether or not dissonance was produced among experimental subjects changes in confidence following the communication may be observed. If the hereditary communication was productive of dissonance for experimental subjects, more experimental subjects should show decreases in confidence in their opinion. The data bear this out, as six experimental subjects but only one control subject showed a decrease in confidence. The difference is significant at the .06 level by Fisher's exact test but is difficult to interpret because all subjects but one showing decreases in confidence also changed opinion slightly.

[6] All chi square tests of significance are two-tailed. The null hypothesis is rejected when $p > .05$.

We may, nevertheless, conclude that the experimental manipulation was successful.

Information Seeking

The first hypothesis to be tested stated, briefly, that persons in whom dissonance had been produced by a communication would be more likely to seek information than persons in whom a communication had produced no (or little) dissonance. An appropriate test consists of a comparison of the number of subjects in each condition who expressed some or no desire to attend a talk, irrespective of any consideration of the alleged point of view of the speaker. Each subject was therefore rated by two coders independently as to whether she expressed some or no desire to attend one of the talks. The coders had no knowledge of the hypothesis being tested and agreed on 65 of their 66 ratings. The single disagreement was resolved by the experimenter against the hypothesis. The data in Table 1 show that experimental subjects were more likely than control subjects to want to attend an authoritative talk. The difference between the groups is significant at the .02 level by Fisher's exact test. It is clear, therefore, that under conditions of *free choice* subjects attempt to reduce dissonance by seeking information.

Selection of Information Source

When the subjects were asked if they wished to attend the talk, they indicated which of two speakers they would prefer to hear—one of them by implication holding a hereditary view and the other an environmental view. It was hypothesized that the experimental subjects would elect to hear a talk consonant with their opinion following the communication. Since only one subject changed opinion entirely, going from an environmental to a hereditary opinion, the data will be analyzed only for subjects who initially had extreme environmental opinions, who either maintained their initial opinion or changed opinion by a small amount only, who wished to hear a talk, and expressed a preference for one of the speakers. To test the hypothesis we may compare the observed distribution of preferences of experimental subjects against an equally split distribution which would be expected if no differential preferences existed. This is shown in Table 2. The difference is significant at the .06 level only.

Though a greater preference for a consonant (i.e., environmental) talk among experimental subjects is suggested by the data, is this greater preference a function of the amount of dissonance produced? In answer we may compare the preferences of experimental and control subjects. The data are given in Table 3. No significant difference in the preferences of the two groups exists; both clearly prefer to hear the consonant, environmental talk. This is contrary to the hypothesis and to previous findings (Brodbeck, 1956; Ehrlich et al., 1957; Maccoby, 1959; and Mills et al., 1959), but an explanation is available if we assume that the subjects who had no desire to hear a talk were those who had no, or at least very little, dissonance. Thus, all or most subjects in Table 3 have some dissonance. As a result, we may expect that both groups should tend to avoid exposure to the dissonance-increasing hereditary talk and seek exposure to the consonant, environmental

TABLE 1
DESIRE TO ATTEND TALK

Desire	Experimental	Control
Some desire	33	25
No desire	1	7

$p = .02$, by Fisher's exact test.

TABLE 2
OBSERVED AND HYPOTHETICAL PREFERENCES OF EXPERIMENTAL SUBJECTS FOR POSTCOMMUNICATION TALK

	Environmental Talk	Hereditary Talk
Observed preference	22	8
Equal preference	15	15

$p = .06$ by chi square.

TABLE 3
PREFERENCES FOR POSTCOMMUNICATION TALK BY EXPERIMENTAL AND CONTROL SUBJECTS

	Environmental Talk	Hereditary Talk
Experimental Subjects	22	8
Control Subjects	19	5

talk, and that the preferences of the two groups should not differ greatly. Nevertheless, since the experimentals should have more dissonance on the average than the controls, we would expect them to show a somewhat greater relative liking for the environmental talk. The tendency is actually in the opposite direction, as Table 3 shows.

SUMMARY

An experiment was conducted to test two hypotheses about the reduction of cognitive dissonance by seeking information. The hypotheses were: (*a*) A person in whom dissonance has been produced by exposure to a communication advocating an opinion contrary to the person's is more likely to seek information than a person exposed to a compatible communication, and (*b*) a person in whom dissonance has been produced by a contrary communication tends to seek information from a source agreeing with his opinion.

The opinions of 100 mothers on the importance of hereditary and environmental factors in child rearing were ascertained by personal interview; they were then exposed to a tape recorded, authoritative communication espousing a hereditary or an environmental point of view. Following the communication they were asked if they wished to attend a talk by an expert allegedly favoring an environmental view or one favoring a hereditary view. For approximately half the subjects the tape recorded talk was contrary to their opinion; for the remaining subjects the talk agreed with their opinion.

The results supported the first hypothesis. The second hypothesis was not sustained, though most subjects indicated a preference to hear a talk by a consonant source. A possible explanation for the failure of the data to support the second hypothesis was given.

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