

TRANSMISSION OF ATTITUDE-RELEVANT INFORMATION THROUGH A COMMUNICATION CHAIN¹

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Female college students summarized the main points of a speech concerning the legalization of marijuana. These summaries were addressed to discussion partners who seemingly favored or opposed legalization. Summaries addressed to prolegalization audiences were thought (by naive judges) to derive from messages that were more favorable to legalization than were summaries addressed to antilegalization audiences. This transmission bias emerged with increasing clarity as the retention interval was lengthened. In another experiment, subjects rated several different transmitters (summarizers). Although it was clear that the transmitters did not necessarily *endorse* the messages that they summarized, the ratings that the transmitters received were nonetheless most favorable if (fortuitously) they had been required to relay information that was *supportive* of the listeners' views.

Communication involves the transfer of information from one person to the next, and thereby enables the individual to learn about situations with which he has not had direct (personal) contact. Social psychologists have long recognized the importance of informal communication networks for disseminating attitudes and information; systematic communication errors are not uncommon, however (Campbell, 1958).

Several investigators have demonstrated that the respondent's behavior in a communication task may be significantly affected by the character of the anticipated audience (Grace, 1951; Schramm & Danielson, 1958; Zajonc, 1960; Zimmerman & Bauer, 1956). Most relevant, perhaps, is the study by Zimmerman and Bauer, in which an experimenter came to a number of classrooms; sometimes she presented herself as representing an organization that favored improved teachers' salaries, and sometimes she seemed to speak for a group of taxpayers who were concerned with economy in government ex-

penditures (and hence opposed pay raises for teachers). Her organization, she explained, wanted to have several students present talks on the subject of teachers' salaries at their next meeting and would select these speakers on the basis of some informal speeches that they (the students) were to write "next week." To help provide ideas for this talk, the experimenter then read a series of statements about teachers' salaries that had presumably been condensed from a magazine article. In half of the classes, the statements that she read supported the need for a teachers' pay raise; the other classes heard statements that opposed any increase in teachers' salaries. Immediately after the experimenter's presentation, the students attempted to reproduce the arguments that they had just heard; there was no sign of an audience effect. When, however, the experimenter returned a week later and collected a second recall measure, the congruence between the statements that the students had heard and the apparent views of their anticipated audience significantly affected their performance. For example, the statements favoring the pay raise were better recalled by those respondents who expected that they might later have an opportunity to address an audience that *supported* this position, as compared with those who expected that they might address a group that did *not* favor a pay raise for teachers.

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Schramm and Danielson (1958) replicated the Zimmerman-Bauer results in a study where the respondents were presented with a two-sided set of arguments, some favoring and some opposing a reduction in the minimum voting age. Subjects were told that these arguments would be useful to them in preparing a speech for a contest that was apparently sponsored either by (a) a group that favored a reduction in the voting age, or (b) a group that opposed this type of change. When tested for recall a week after exposure to the experimental message, the respondents were better able to remember the points that supported (rather than opposed) the position of their anticipated audience.

Despite the replicated audience effect that was obtained in both the Zimmerman-Bauer and the Schramm-Danielson studies, this result may have derived in part from a common set of demand characteristics that were operative in the two experiments. In both cases, the subjects were led to believe that the arguments with which they were presented might subsequently prove useful in a "competition," where their speeches would be compared with those of their classmates. Given the obvious biases of the "sponsoring organizations," the average subject would surely anticipate that his chances of winning might be substantially improved if the main thrust of his remarks were congruent with the sponsor's views. As a result, he might plausibly focus his attention on those aspects of the background arguments that supported the sponsor and would be less concerned with remembering the points that conflicted with the sponsor's position.

Following this line of reasoning, it seemed important to see if similar results might be obtained in a somewhat altered experimental setting, where the respondents were simply asked to relay an attitude-relevant message to a peer who seemingly shared (or did not share) their views regarding the issue at hand. Our prototype study was therefore designed to explore the possibility that within a communication chain, the apparent views of a given listener might induce a systematic bias in the messages addressed to that person by respondents who were attempting

to convey verbally the main points of an attitude-relevant message.

EXPERIMENT 1

The first study in this series was designed to determine if the apparent views of the audience would systematically affect the verbal output of speakers who were asked unexpectedly to summarize a speech that they had heard previously. Following the design of the Zimmerman-Bauer study, delays of varying lengths were interposed between (a) the presentation of the original message and (b) the respondents' (transmitters') summaries. We anticipated that the difference between the summaries addressed to contrasting audiences (pro versus con) would be most strikingly manifested as the delay interval was lengthened, since this would presumably reduce the clarity of the remembered message.

If an audience effect was indeed manifested (at least in the longest of the delay conditions), then the identification of those elements that were necessary for its emergence seemed to be logical "next step." Previous research in this area has invariably focused on respondents who learned about the views of their expected audience *before* receiving the message that they were subsequently to recall. It therefore seemed possible that the transmission biases that were exhibited might derive from a distorted reception (interpretation) of the original information. It is also conceivable, on the other hand, that the distortion process mainly resides in the respondent's transmission of what he remembers. If the audience effect that is discussed above primarily represents a bias in transmission, then it should be possible to demonstrate this phenomenon among respondents who are not aware of their listener's views until they are just about to summarize a body of information that they had received previously. An audience effect that was obtained under these circumstances would presumably reflect a transmission bias, rather than a bias in reception. To explore these contrasting possibilities, half of the transmitters who were assigned to the longest of the delay conditions (where the occurrence of audience effects seemed most probable) were not informed of their

partner's opinions until *after* they had received the background information and were about to pass it on; other respondents in this long-delay group learned about their partner's views *before* receiving the background information.

Method

A group of 96 undergraduate women, all of whom favored the legalization of marijuana, served as paid subjects in this experiment.³ These women were recruited for "an experiment in communication," and they were led to believe that together with a partner, they would have an opportunity to discuss some current social issues. Since the study was to be concerned with verbal communication, nonverbal interaction was eliminated by assigning the subjects to separate booths and requiring them to communicate by means of microphones and headsets. The experimental arrangements made it possible to collect data simultaneously from 2 to 4 subjects.

After entering their booths and receiving some introductory instructions, each subject was informed that she and her partner were first going to hear one, two, or three tape-recorded messages concerning present-day social issues. Through discussion, they were then to resolve any differences of opinion relating to one of the topics, which was to be chosen by the experimenter. Subjects were warned that there was no way of knowing beforehand just how many messages they would hear before starting their discussion; moreover, to make matters somewhat more difficult, one or both of the partners might find that some of these talks had been recorded against a noisy background (this last was included so that later on, the subjects might plausibly be asked to relay a particular message to partners who had seemingly been unable to make sense of the little they had heard).

Early-Information Subjects

For the respondents who learned of their partner's views before hearing the material they were later to summarize, the experimenter began the session by asking the members of each pair to state briefly their opinions about the legalization of marijuana. Each subject then heard what appeared to be her partner (this was actually the tape-recorded voice of a confederate) state either that she was in favor of (or against) the legalization of marijuana. The naive subject then stated her own opinion and heard one or more background talks on different current issues. For all of the subjects, the first of these talks was a relatively neutral 8½-minute speech con-

cerning the legalization of marijuana; the speaker discussed this controversy rather *dispassionately* and did not endorse either of the opposing sides. Two rather similar talks were used for this purpose, each dealing with several aspects of the marijuana issue, and it was these talks that the respondents were subsequently to summarize for the benefit of their partners (see below). Some subjects (in the no-delay condition) heard only the marijuana tape before being asked for their summaries. Other subjects were asked for their summaries after an intervening delay period. For these people, the marijuana talk was followed either by (a) a "filler" message lasting about 6 minutes, concerning the Nixon administration's desegregation policies or the changing pornography laws in Denmark, or (b) an interval of about 12 minutes during which *both* of these messages were played.

There were 72 subjects assigned to the early-information groups, and they fulfilled the specifications of a $2 \times 2 \times 3$ factorial design in which the main variables were audience opinion (pro- or anti-marijuana), message (depending on the particular marijuana speech that had been played), and delay interval (no delay, brief delay, and long delay). Six subjects were assigned to each of the 12 cells in this design.

Late-Information Subjects

Twenty-four subjects first learned of their partners' attitudes (pro or con) just before they were asked to summarize the marijuana talk. As noted earlier, all of the subjects in this group were in the long-delay condition, and thus heard two "filler" messages before being asked to summarize the speech about marijuana. The late-information subjects, combined with those early-information respondents who had (like themselves) been assigned to the long-delay condition, comprised a $2 \times 2 \times 2$ factorial design, in which the independent variables were audience opinion, message, and information timing (early versus late). There were 6 subjects in each of the resulting cells.

The Message Summaries

After the marijuana and "filler" messages (if any) had been played, respondents in all conditions heard the experimenter announce that the topic for discussion was to be the legalization of marijuana; he then asked "Subject A" to confirm the fact that, for her, message reception had been difficult because of the noisy background. Subject A (a confederate whose comments had previously been tape-recorded) indicated that the interference was so severe that it was virtually impossible to make sense of the message. She added that while she herself was in favor of (or opposed to) the legalization of marijuana, she was really unable to tell much about the speaker's views from the little she had heard. To remedy this situation, the experimenter suggested that Subject B (the "unprogrammed" member of the pair) sum-

³ We had originally anticipated the recruitment of an equal number of respondents who *opposed* legalization. However, those opposing legalization constituted a rather small proportion of the population from which we were sampling and hence were excluded from the study.

marize as much of the marijuana talk as she could recall, so that Subject A would have some background on which to base their upcoming discussion. B's spontaneous summary of the marijuana talk was then surreptitiously tape recorded for later analysis (see below).⁴

After concluding this unexpected summary, each subject was asked to complete a short questionnaire concerning such matters as (a) her present views on the marijuana issue, (b) her impression of the views endorsed by the speaker who provided the background talk on marijuana; and (c) her understanding of the purposes of the experiment (to permit the identification of suspicious respondents).⁵ The experimental session was then terminated, with apologies that there had not been sufficient time to permit the discussion that was originally planned. Finally, all of the subjects were interviewed in small groups of two to four for further evidence of suspiciousness and were thoroughly debriefed.

Sources of Data

The experiment yielded two primary data sources: each respondent's summary of the marijuana speech and the questionnaires that were completed at the end of the experimental session. Each summary was converted into a common quantitative framework by a team of 5-7 judges; 70%-100% of the judges on each team favored the legalization of marijuana. The judges were put in the position of naive listeners; they listened to each of the summaries and then, for each one, used a series of rating scales to indicate the viewpoint that they thought had been expressed in the original message (the passage that the transmitters were summarizing). In performing this task, the judges were led to believe that no two transmitters had heard the same original message (this was to encourage an independent assessment of the various summaries) and were not informed of the views held either by the speaker who had provided the summary or by her audience.

The ratings of primary interest focused on the apparent favorability (or unfavorability) of the original speakers' views, as indexed by the judges' ratings. After hearing each message summary, the judges responded on 9-point scales to each of the following items: (a) Was the original message in favor of or against legalization of marijuana? (b) According to the original message, how detrimental is marijuana to the individual user? (c) According to the original message, how detrimental is marijuana use to the rest of society?

⁴ All of the subjects were subsequently given an opportunity to have these recordings destroyed, if they objected to the deceptions that were involved. Only one respondent out of several hundred who have been tested in this situation asked to have her recording destroyed.

⁵ Data from 20 respondents in Experiment 1 were omitted from further consideration due to excessive suspiciousness (17) or other irregularities (3).

To arrive at an overall scale value for each of the summaries, correlation coefficients (r) were calculated between all pairs of judges within a given team, item by item. The four judges whose ratings were most highly intercorrelated were then identified for each item; the transmitters' scores on the individual rating scales were taken as the mean of the ratings assigned by these four "most compatible" judges. The *total score* for a particular summary (representing the overall favorability toward legalization that it implied) was then calculated by averaging the mean ratings that were obtained on the individual items.

Results

Figure 1 presents the mean ratings that were assigned to summaries generated in the various experimental groups. These curves represent pooled results, including summaries from both background talks. Although the summaries that were derived from these "neutral" speeches received significantly different ratings, this pattern was unaffected by the other independent variables in the study (i.e., there were no significant interactions involving the message variable), and hence the two messages have been combined for simplicity of presentation. Figure 1A presents the results obtained in the early-information conditions (where the respondents were informed of their partners' views before hearing the speech about marijuana). These results suggest that the longer the retention interval, the more pro-marijuana were the summaries addressed to listeners who "favored" the legislation of marijuana, and the more anti-marijuana the summaries addressed to those who were "opposed." This pattern is quite congruent with the results reported in the Zimmerman-Bauer and Schramm-Danielson experiments. An analysis of variance which was performed on these data indicated that the difference between the contrasting audience conditions increased linearly with increases in the delay variable ($F = 5.33$, $df = 1/60$, $p < .025$). The modest reversal of the overall trend that appears in the no-delay condition is far from significant.

A second analysis of variance was then performed, focusing exclusively on the summaries that were composed following the long-delay interval. (See Figure 1B.) Our primary concern in this analysis was to compare the magnitude of the audience effect for

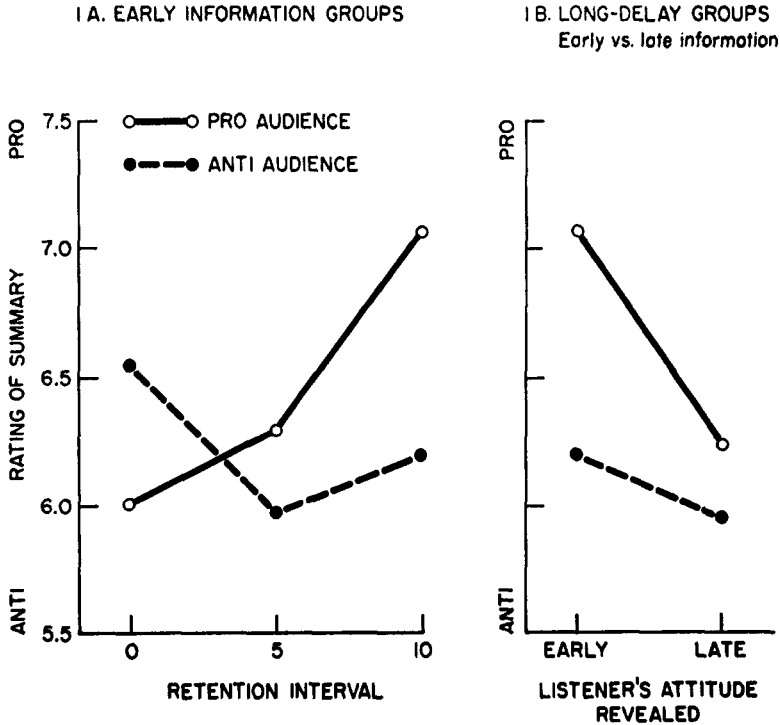


FIGURE 1. Inferences made by the early-information groups (Figure 1A) and the long-delay groups (Figure 1B) concerning the "original" message as a function of (a) the recipient's views, (b) the retention interval, and (c) the point at which the transmitter first learned of her partner's views. (Experiment 1.)

respondents in the early- versus late-information groups. If the audience effect is mainly attributable to a biased reception of the message to be relayed, then it should be substantially reduced in magnitude when the transmitter does not learn about her partner's views until after she has heard the background talk. Such a pattern of results would yield a significant interaction between the views of the audience (pro- versus antilegalization) and the contrasting information groups (early versus late information). This interaction was, however, far from significant in the present experiment ($p > .20$), which suggests that the message summaries were *not* influenced by the timing of the listener's announcement concerning her views on legalization. On the other hand, while there was a main effect attributable to the attitude of the audience when the early- and late-information groups were combined ($p < .06$), the sum-

maries produced by the late-information respondents did not show a reliable audience effect when analyzed separately. There is, as a result, some uncertainty as to the robustness of the audience effect in cases where the transmitter does not learn about the views of her audience until after she has received the information that is to be passed on.

Inspection of Figure 1A suggests that the obtained audience effects are somewhat "asymmetric," in that with the passage of time, they appear to develop more intensively when the transmitter addresses her summary to a prolegalization rather than an antilegalization discussion partner. Thus, when considered separately, there is a significant tendency for the respondents in the prolegalization condition to generate message summaries that are increasingly favorable to legalization as the retention interval is lengthened. For those assigned to discussion

partners who opposed legalization, by contrast, there is no significant difference between the three data points shown in Figure 1A, despite the general downward drift. The difference between these patterns may in part derive from the uniformly prolegalization views of the transmitters. Apart from any other influences, it is conceivable that with increases in the retention interval, there is a systematic tendency for the average transmitter to recall the original message as being increasingly similar to her own prolegalization views; this "drift," in turn, may combine additively with other influences, such as those that derive from the listener's apparent attitude, to yield the "net" displacement patterns that are shown in Figure 1A. According to this analysis, for the respondents who were paired with prolegalization partners, the two sources of bias (i.e., the transmitter's own attitude and the apparent views of her listener) operate in parallel, in that they would both serve to increase the favorableness of the resulting summary. In situations where the listener seemingly opposes legalization, on the other hand, the two sources of bias would work in contrasting directions and hence largely cancel one another, since the transmitter's own attitudes presumably induce a summary that exaggerates the favorability of the original message, while the apparent views of the listener constitute a force in the opposite direction.

Content Analysis

In contrast to the provocative effects that were obtained when global ratings were used to assess the message summaries, a more molecular content analysis yielded relatively uninteresting results. When the recorded relays were analyzed by counting the number of pro- and antimarijuana arguments that were cited, the contrasting audiences did not differentially affect the content of the respondents' summaries. It is likely, however, that the global rating procedure provides a more accurate indication of the meaning that the summaries would convey in the course of a normal conversation (it was explicitly designed to approximate this type of situation); that is, the rating results may have greater

external validity than the results obtained from the content analysis.

Questionnaire Results

Own views. After relaying what they could recall of the original marijuana speech, all of the respondents completed a brief questionnaire that included, among other things, a rating of their own views about legalization (opposed versus in favor). Our first analysis of these data was restricted to subjects in the early-information groups. These respondents showed an increasing tendency to "migrate" toward the positions that their partners had endorsed, as the retention interval was increased (the pattern was grossly similar to the results shown in Figure 1A). The reliability of this trend was corroborated by the fact that the interaction between the audience-attitude and the retention-interval variables included a significant linear component ($F = 4.99$, $df = 1/60$, $p < .025$). In a subsequent analysis, attention was restricted to those respondents who had been assigned to the long-delay interval, including subjects from both the early- and late-information conditions. Here, the influence of the contrasting audiences emerged as a significant main effect ($p = .05$), while the difference between the early- and late-information groups did not significantly affect the obtained results.

The striking parallelism between the message summary results (as depicted in Figure 1) and the own-opinion data suggests the operation of a self-persuasion process (Janis & King, 1954). On the other hand, an even simpler explanation is the possibility that our respondents were directly influenced by the opinions that their partners had expressed, although this influence was not immediately manifested. The absence of consistent within-group correlations between (a) the rated contents of the message summaries and (b) the transmitters' final opinions favors this latter possibility.

Ratings of the original message. At the end of the experimental session, all of the respondents were asked to indicate their judgment as to the opinion held by the speaker who had provided the background information on marijuana. These ratings were not signifi-

cantly affected either by the views of the anticipated audience or by the retention interval.

EXPERIMENT 2

Perhaps the most interesting finding in Experiment 1 was the fact that following a filled retention interval of roughly 12 minutes, the respondents' summaries were systematically displaced toward the views favored by their partners. In casting about for a plausible explanation for this effect, we were struck by the possible relevance of the old story concerning the Persian messenger who breathlessly rode up to the king and informed him that his forces had, unfortunately, lost an important battle. In return for this service, the king ordered the messenger executed, even though the messenger himself clearly was not responsible for the events that transpired on the battlefield. Should the messenger have been reincarnated following this episode, we would anticipate that he might have learned something from his traumatic experience. He might, for example, retire from his post as messenger because of the attendant dangers. Or, if this was impossible, his subsequent messages might well be slanted so as to avoid the king's displeasure. For example, rather than openly announcing the loss of a battle, he would perhaps shade matters a bit, and describe such a battle as "difficult," but still in doubt.

The general notion here is that the innocent bearer of "bad tidings" may well be punished and may eventually learn that the safest course is to systematically bias his messages (within limits) so that they are minimally offensive to his listener(s). Recognizing the dangers inherent in such a situation, political observers have often commented on the problems that result when a chief of state unwittingly surrounds himself with a staff of "yes men" who automatically slant their reports to avoid the chief's displeasure.

One of the most important assumptions in this account revolves about the actions of the message recipient. Our model suggests that the receiver of bad news generally responds unfavorably to the messenger; and yet, apart from anecdotal evidence, there does not seem to be any systematic evidence on

this particular point. Perhaps the most pertinent of the relevant studies are those by Byrne (1969) and his associates, demonstrating that our liking for others is directly related to the number of attitude areas in which they share our preferred views. Note, however, that in the studies by Byrne and his associates, the "other person" is liked or disliked as a consequence of his *own* personal views. If, however, as Byrne has suggested, liking for others operates in accordance with an associativelike model, with each area of agreement functioning as a positive reinforcement, then it is possible that *any event* that occurs in the presence of another may have an impact on our liking for that person, even though the event itself may be largely fortuitous and not under the control of the individual in question. An experiment by Griffitt and Veitch (1971) seems to sustain this line of reasoning.

In the Griffitt and Veitch study, the respondents indicated their evaluative reactions to a stranger who appeared to agree with them concerning either 6 or 18 of the attitude issues that were included in a 24-item questionnaire. Some subjects were tested in small, comfortably spaced groups, while others were tested under conditions of high-density crowding. The temperature of the test chamber, which varied between normal (73.4 degrees Fahrenheit) and hot (93.5 degrees Fahrenheit), constituted an additional independent variable. Apart from the expected effects of attitude similarity (greater liking for those who shared the respondents' views), Griffitt and Veitch reported that the overall response to these "strangers" was significantly affected by environmental factors. Holding attitude similarity constant, subjects who were assigned to the hot room responded less positively to the stranger than did those who were tested under normal temperature conditions; similarly, respondents who were tested in a chamber with low-population density rated the "stranger" more positively than those assigned to the crowded condition.

These results seem applicable to the message transmission task if we make the plausible assumption that message receivers normally feel somewhat uncomfortable when presented with information that challenges

their personal beliefs (Festinger, 1957). Through an associative process, this discomfort may ultimately produce a negative reaction to the *communicator* who has (inescapably) accompanied his noxious, dissonance-arousing message. Experiment 2 was mainly designed to test this hypothesis; we sought to evaluate the proposition that people who convey messages that challenge the views of their listeners are less favorably evaluated by these listeners than are those who convey supportive messages. It is interesting to note the similarity between this prediction and the results reported by Jones and Harris (1967). Jones and Harris found that a person who has expressed a particular attitude position is generally assumed to be in favor of that stand, even by listeners who have been informed that the speaker was merely following instructions, and was not necessarily expounding his own views.

A secondary purpose of Experiment 2 was to explore the "implicit communication theory" of our respondents. If, as seemed intuitively plausible, our respondents believed that in the process of summarizing an attitude-relevant passage, most people would selectively "shape" the original message content to yield a summary that conformed more closely to their own beliefs, then we might anticipate that the respondents would "correct" for this bias when attempting to recover the main thrust of the original message. This reasoning suggests that a message summary which was delivered by someone who apparently favored the legalization of marijuana would be decoded differently than would that same summary when it appeared to emanate from a messenger (summarizer) who opposed legalization.

Method

Overview

The subjects in this study were recruited for a study in communication. They listened to a series of tape-recorded speakers (college students) who attempted to summarize the main elements of a message they had heard concerning the legalization of marijuana. After hearing each summary, the respondents answered several questions regarding (a) the main thrust of the original message and (b) the personality characteristics of the speaker (transmitter).

In designing this experiment, considerable care was taken to insure that the respondents (raters) were fully aware that the summaries which were played to them did not necessarily reflect the opinions of the people whose voices they heard. It seemed important to make this point rather clearly, since we were mainly interested in the reactions evoked by "innocent" message bearers and did not want our results contaminated by a mistaken belief that the speakers (summarizers) were personally sympathetic with the views that they transmitted. The distinction between the views of the transmitters and those conveyed in the messages that they summarized was reaffirmed in several ways during the course of the experiment: (a) The summarizer's purported views about marijuana appeared at the top of the rating sheet that was to be completed in response to each summary; (b) to emphasize this "background information," in introducing each of the tape-recorded speakers the experimenter read aloud from the material that had been provided (e.g., "The girl who recorded this summary is a student in the School of Education. She is opposed to the legalization of marijuana").

After hearing each summary, the respondents were presented with two types of questions. First, they were to try to estimate (in a rating format) the views expressed in the original message on which the summary was based. The three rating scales that were used here were identical to the items that had been provided to the judges in Experiment 1 (see above). The mean of these ratings served as an index of the respondent's inferences concerning the content of the message that each speaker had summarized. As in Experiment 1, to encourage a careful, independent response to the various summaries, the raters were informed that many of the passages they would hear were "based on rather similar inputs that differed mainly in nuance and detail." The summaries were, in fact, derived from four different original messages: one that was pro-marijuana, one anti-marijuana, and two that expressed a relatively neutral point of view.

In responding to each summary, the subjects also completed a second group of rating items that focused on the speaker's apparent personality characteristics. Here they were instructed to give their "honest, subjective reactions" to each speaker, based on what little information there was available (including the speaker's voice, speech pattern, etc.). Each speaker was rated with respect to her likability, overall intelligence, and emotional maturity. The mean of these ratings provided an overall index of esteem for the individual speakers.

Experimental Design

The subjects in this study were summer students at the University of Michigan (12 men and 12 women) who were paid for their efforts; they all favored the legalization of marijuana. Each subject responded to 24 different message summaries. The summaries varied with respect to (a) the content of

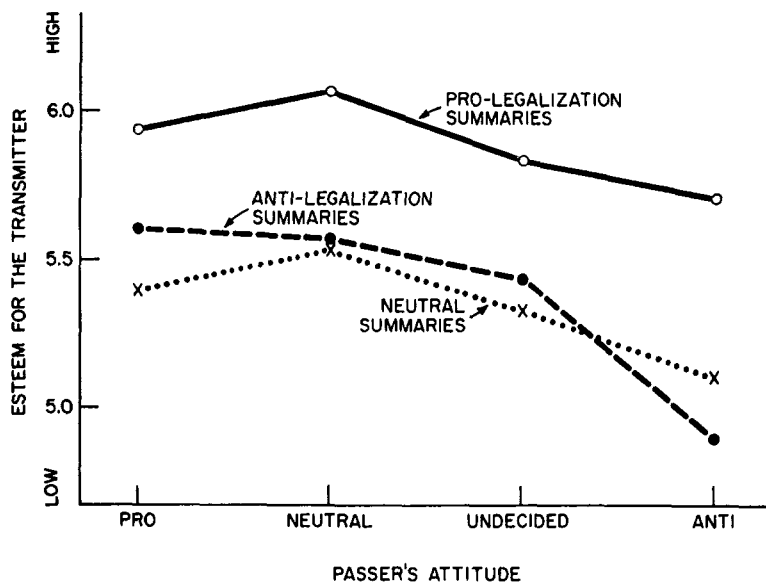


FIGURE 2. Respondents' reactions to the transmitters as a function of (a) the message content that they conveyed and (b) the transmitters' apparent attitudes. (Experiment 2.)

the original messages on which they were based (pro-, neutral-, or antilegalization) and (b) the apparent attitudes of the transmitter (prolegalization, antilegalization, undecided, or unknown). These two variables were combined factorially to produce all 12 (3×4) of the combinations that were possible (e.g., prolegalization summary, undecided transmitter; prolegalization, antilegalization transmitter; etc.). Each of these 12 combinations was presented twice to every respondent, once in the first half of the test session and once again in the second half; while these two presentations were conceptually equivalent, they were based on independently recorded message summaries.

Each of the recorded summaries was presented (to different respondents) as if it had emanated from four different passers. This was accomplished by preparing four different response booklets containing different "background information" about the various transmitters. While respondents who received Booklet I might be informed that a certain speaker favored legalization, those who had received Booklet II (or III or IV) were provided with contrasting background information (e.g., the speaker opposed legalization or was undecided). Each response booklet was completed by three male and three female respondents.

Results

Esteem for the Transmitter

The respondents' reactions to the various speakers were quantified by averaging their ratings across a set of three evaluative scales

(likability, intelligence, and emotional maturity). Figure 2 shows how these ratings were affected by the transmitters' own attitudes and by the message contents that each speaker had been assigned. Note that regardless of the views that were seemingly favored by the transmitters themselves, those who had (fortuitously) been assigned the job of relaying the promarijuana speech received the most favorable ratings. Since all 24 of the raters in this study favored the legalization of marijuana, this result clearly supports our initial theorizing. As shown in Figure 2, the respondents reacted negatively not only to those who had summarized messages that they (the listeners) found challenging, but they reacted in a similarly negative fashion to speakers who summarized *neutral* messages. This aspect of the data was somewhat unexpected and may in part reflect the rater's discomfort in decoding summaries that did not endorse any single clearcut position.

An analysis of variance that was applied to these data confirmed the fact that the respondents' ratings were significantly affected by the message contents that the speakers had summarized ($F = 9.95$, $df = 2/32$, $p < .001$). Unfortunately, however, the interper-

tation of these data is somewhat clouded by the fact that all of our respondents favored the legalization of marijuana. A skeptical reader might be concerned about the possibility that the transmitters who delivered promarijuana messages might have been regarded favorably by virtually *any* respondent, even a respondent who opposed legalization. While this is indeed a logical possibility, it does not seem very likely in an intuitive sense, nor does it seem plausibly derivable from any coherent theory of attraction. Our present view is that these results support the theoretical concerns that led to the design of this experiment, and testify to the fact that we normally respond rather favorably to those who provide us with supportive information.

The ratings that the speakers received were also affected by their "own views" ($F = 7.37$, $df = 3/48$, $p < .001$). This result replicates Byrne's numerous studies relating liking and attitude similarity; that is, the transmitters who seemingly disagreed with the respondents' prolegalization attitudes received less favorable ratings than those whose views seemed more supportive. Surprisingly, however, the neutral transmitters received approximately the same ratings as those who appeared to share the respondents' prolegalization views.

It is interesting to compare the extent to which our respondents' liking for the various speakers was affected by the attitude information with which they were provided, as contrasted with the message contents that the speakers summarized. When we consider only the extremes of these two variables, the overall differences in liking that are attributable to the content of the original messages (pro-versus antilegalization) are slightly larger in magnitude than the differences in liking that derive from the transmitters' own presumed views (pro- versus antilegalization). In brief, the message contents that the transmitters summarized seemed at least as important in affecting their likability as the opinions that they themselves appeared to favor.

Decoding the Summaries

After hearing each summary, the respondents indicated the attitude position that they

believed to have been expressed in the original message. Not surprisingly, a highly significant effect was produced by varying the message content that the speakers were summarizing; summaries derived from prolegalization speeches were (correctly) thought to have emanated from relatively promarijuana messages, as contrasted with those derived from antilegalization speeches. There were, however, no significant effects associated with variations in the transmitters' apparent views. That is, in decoding the various summaries, our respondents were essentially unaffected by the information that was provided about the transmitters' attitudes (the F value for the main effect of the passer's attitude was less than 1.00, as was the interaction between this variable and the original message content). These data thus indicate that our respondents did not, as a group, implicitly "correct for" biases that might have been introduced into the summaries as a consequence of the transmitters' preferred views. While it is conceivable that the individual raters may have made adjustments of this sort, there was clearly no consensus on how such adjustments should be made, for the overall results (across respondents) were far from significant.

EXPERIMENT 3

Experiment 2 established that the average listener did indeed react negatively to those who transmitted challenging, attitude-relevant messages. These results were consistent with the idea that in relaying attitude-relevant information, a transmitter might plausibly attempt to ingratiate herself with her listener by producing a biased summary, designed to decrease the dissonance between the original message content and the views of the listener.

Starting with these premises, it seems reasonable to anticipate that audience-induced communication distortions might be amplified if the transmitter was addressing her summary to someone whom she especially liked. The rationale here seems rather straightforward: If message summaries are slanted because of the transmitters' attempts to ingratiate themselves with their listeners, then this biasing effect should be particularly marked when the listener is someone who is liked, and thus a person whose affective

response to the transmitter would be a matter of some importance. Experiment 3 was designed to test this hypothesis.

Method

Experiment 3 was closely modeled after the methods that were employed in the long-delay conditions of Experiment 1. Once again, a group of paid female subjects ($N = 96$) was recruited for an experiment on "communication" in which, together with a partner, they would each discuss some current social issue.

When the subjects were initially recruited (a few days before the actual experiment), they all completed a questionnaire which was presumably to be used in establishing pairs that would work well together. Each subject, therefore, indicated the sort of person with whom she could "get along" and "communicate" most effectively, and she also described herself, using a series of rating scales.

On arriving in their separate experimental cubicles, all of the subjects found a brief note which indicated either that (a) the experimenter had succeeded in locating a partner whom the respondent would probably find to be a likable person who was easy to get along with; or (b) conversely, that the partner was unfortunately the sort of person whom the subject did not normally like. This method for manipulating liking had previously been successfully employed by Berkowitz and Goranson (1964), among others. To enhance the respondents' motivation for eliciting a positive reaction from these partners, the introductory notes all ended with an indication that despite the experimenter's knowledge as to how the subject would probably react to her assigned partner, it was not at all clear how the partner would react to the subject, and hence, by implication, ingratiating tactics might well be necessary to insure a positive response.

After each subject had finished reading about her assigned "partner," the experimental session proceeded along the lines that had been established for the early-information conditions of Experiment 1 (where the subjects had learned about their partner's views before receiving the message that they were subsequently to summarize). The only noteworthy change was the fact that following receipt of the original marijuana message, the retention interval was lengthened to 23 minutes during which time each subject heard recorded talks dealing with desegregation, pornography laws in Denmark, and the problem of health care in America.

Experimental Design

Through the procedures that are described above, a $2 \times 2 \times 2$ factorial design was established, with 12 female respondents in each cell. The independent variables were partner's opinion (pro- versus anti-legalization), partner's apparent likability (like versus dislike), and message (which of the two "background" messages had this respondent heard?).

Results

Validity Check

At the end of the experimental session, each respondent rated the girl with whom she was paired in terms of likability, intelligence, and emotional maturity. These ratings were combined additively, to provide an overall measure of the respondent's esteem for her assigned partner, and an analysis of variance was conducted on the resulting data. The results indicated that our attempt to manipulate the subjects' affective reaction to their partners was not fully successful, for the difference between those assigned to the like versus dislike conditions was only significant at the .10 level ($F = 3.48$, $df = 1/88$, two-tailed). At a descriptive level, the difference between the contrasting affectivity conditions seemed fairly substantial among the respondents who were paired with prolegalization partners; however, the obtained results were trivial (although in the anticipated direction), among those whose assigned partners were seemingly opposed to legalization.

The Summary Ratings

When subjected to analysis of variance procedures, the judges' ratings of the message summaries showed only one reliable effect of substantive interest: The summaries addressed to prolegalization listeners were thought to derive from speeches that were more favorable to marijuana than were those intended for listeners who opposed legalization ($F = 10.03$, $df = 1/88$, $p < .005$). These results replicated the effects obtained in the long-delay conditions of Experiment 1, for once again, following a modest (23-minute) retention interval, the transmitters produced message summaries that were displaced toward the views seemingly favored by their partners. By contrast, the liking variable did not have a reliable impact on the summaries. Most important, while our theoretical analysis had suggested that the audience effect might be especially pronounced when the respondents were favorably disposed toward their partners, there was essentially no evidence of an interaction between the liking variable and the purported views of the audience ($F < 1.00$).

It is, of course, possible that the apparent failure of the likability hypothesis derives from our relatively limited success in experimentally manipulating this variable (see the preceding Validity Check section). It therefore seemed reasonable to reanalyze these data, this time, however, ignoring the liking conditions into which our subjects had been assigned, and as a substitute, focusing on the esteem for their partners that the respondents had expressed in responding to the final questionnaire. A secondary analysis based on the respondents' rated esteem for their partners did not, however, yield any reliable evidence for the ingratiation hypothesis that had motivated the design of this experiment.

Questionnaire Results

Own views. The respondents' own views were assessed by means of self-ratings at the end of the experimental session. Recall that in Experiment 1 the subjects assigned to the long-delay conditions tended to migrate toward their partners' favored positions (pro- or antilegalization). While this directional trend was replicated in the present experiment, for reasons that are presently unclear, the obtained effect was far from significant ($F < 1.00$), nor did the respondents' assignment to the like (versus dislike) condition have a reliable impact on their final opinions regarding legalization ($F < 1.00$).

Ratings of the original message. The post-experimental questionnaire included a series of rating scales concerning the viewpoint that the initial speaker had endorsed in his background speech. The obtained ratings were reasonably consistent with the freely verbalized summaries that had previously been collected, for those respondents who were paired with prolegalization partners remembered the speaker's position as being more favorable to legalization than did those whose partners seemingly opposed legalization ($F = 3.11$, $df = 1/88$, $p < .10$).⁶ Note, however, that while the message summaries reflected the respondents' public recollection of the background speech (i.e., these remarks had been openly addressed to their assigned

partners), the questionnaire results represent a relatively private recollection, intended primarily for a presumably objective experimenter, and hence devoid of any conscious (deliberate) bias. The present results thus suggest that the views favored by the audience may affect not only the respondents' public re-creations of messages that they have previously received, but they may also have an impact on their private recollection of these messages. While this effect was not manifested in Experiment 1, it is nonetheless a reasonably reliable finding, for it has been manifested at conventional significance levels in two additional studies within this series (not fully reported here).

DISCUSSION

Taken together, Experiments 1 and 3 provide substantial support for the proposition that the average person will often "censor" the information that he (or she) relays to others, so as to reduce the dissonance between the listener's apparent views and the views expressed in the transmitted message. These results seem closely related to recent work by Rosen, Tesser, and their associates (Rosen & Tesser, 1970, 1971; Tesser & Rosen, 1972) which showed that people have a rather general tendency to remain mum about unpleasant messages (the MUM effect). In one experiment, for example, the subjects overheard a message intended for someone else (the recipient); the message was a request for this person to call home regarding some very good (or bad) news as soon as he arrived at the laboratory. When the recipient (a confederate) finally arrived, virtually all of the subjects mentioned the phone call. Those assigned to the good news condition, however, were more likely to mention the content (valence) of the message than were those in the bad news condition. If we make the reasonable assumption that information which challenges the recipient's views constitutes one form of bad news, the convergence between the present results and those of Rosen and Tesser seems obvious.

Experiment 2 indicated that transmitters are likely to be rejected if they communicate information that challenges the views of their listeners. This result, in combination with the

⁶ This finding emerged from an analysis of variance based on the respondents' ratings.

audience-induced displacements that are discussed above, suggests that the average person may, through bitter experience, learn about the negative consequences that will often follow if he transmits excessively challenging information and may, as a result, tailor his verbal output (see Rosen, Johnson, Johnson, & Tesser, 1973, for a somewhat different approach to the relation between attraction and communication).

Whether or not this explanation ultimately proves viable, the present studies suggest that bearers of bad (dissonance-producing) news may quite regularly elicit negative reactions from their listeners. Apart from the data reported in Experiment 2 (see Figure 2), this relationship between the agreeableness of the transmitter's message and her apparent likability was independently confirmed in a subsequent experiment in which the judges who rated the contents of several message summaries also responded to a series of evaluative items regarding such matters as the transmitters' likability, overall intelligence, warmth and friendliness, and emotional maturity. All of the judges favored the legalization of marijuana, and hence would presumably agree with prolegalization summaries; their ratings indicated that they responded most favorably to those respondents whose summaries seemed to derive from relatively prolegalization speeches. The correlations between the transmitter's likability, as measured by the mean of the evaluative ratings that she elicited, and the agreeableness of her message (i.e., its favorability toward legalization) were $+.372$ and $+.499$ for two independent samples ($n_1 = n_2 = 32$); these correlations were significant at the .05 and .01 levels, respectively. The consistency of this correlation between the transmitter's likability and the agreeableness of her message is particularly interesting in view of the relatively limited range of opinions that were represented in the recorded passages, for all of the summaries in this study were based on essentially neutral background information.

As noted earlier, the fact that our judges reacted negatively to messengers who brought them bad tidings represents something of an unwarranted reaction, for these messengers were presumably trying, as best they could,

to follow the experimenter's suggestion that they relay the main points of a speech that they had heard previously, and did not necessarily endorse the views expressed in this background talk. Jones and Harris (1967) have reported several studies showing what is probably a closely related phenomenon. These investigators found that subjects who listened to a speech in which the speaker had been instructed to take a particular attitude stand (e.g., pro-Castro) and who were fully aware that the speaker had no choice in the position that he defended, nevertheless tended to assume that the speaker's true attitudes were probably in line with his overt verbal behavior. Similar results have been reported by Jones, Worchel, Goethals, and Grumet (1971). Taken together with the present experiments, these studies suggest that in interpreting and evaluating the behavior of others, we are likely to be unduly influenced by the overt acts that we see and hear, and are relatively unaffected by the knowledge that these actions may represent assigned role behaviors, rather than the spontaneous expression of some personally felt motive. Jones and Nisbett (1972) suggest that effects like this may derive from a general propensity to account for the behaviors of others in terms of stable personal dispositions, in contrast to the situational variables that seem so potent in guiding our own actions.

Final Remarks

The communication-chain paradigm is well known to social psychologists, although it has rarely (if ever) been subjected to the sort of sophisticated, systematic experimentation that has characterized such areas as attitude change or conformity. Given the feasibility of such research and the potential gains that may be realized, the study of communication chains seems to be a promising area for future investigation.

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