

Do Attitudes Affect Memory? Tests of the Congeniality Hypothesis

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Abstract

Social psychologists have usually hypothesized that attitudinal selectivity biases people's memory in favor of information that is congenial to their attitudes, because they are motivated to defend their attitudes against uncongenial information. However, our meta-analysis found that such effects have been only inconsistently obtained. One reason for these inconsistencies is that the defense of attitudes against attacks does not necessarily entail avoiding the uncongenial information. As shown by our experiments, people often expose themselves to attitudinally uncongenial information, attend to it, scrutinize it carefully, encode it accurately, and remember it fairly well, even though they dislike the information and are not persuaded by it. Given sufficient motivation and capacity, people mount an active defense that enhances memory for the information.

Keywords

attitudes; memory; congeniality effect; memory for attitude-relevant information

Think about the last time you listened to a debate on a controversial issue. Which presentation was more memorable—the one by the

person who agreed with your views or the one by the person who disagreed? Social psychologists have usually assumed that people remember information more easily if it is consistent with their attitudes. If this assumption is right, you would remember more of the points made by the person who had agreed with you. This question of whether attitudes bias memory (and cognitive processes more generally) in favor of attitudinally agreeable information has often been tested and is known in social psychology as the *congeniality hypothesis* (see Eagly & Chaiken, 1993, 1998).

The usual rationale for predicting better memory for information that is attitudinally congenial than for information that is not congenial is that people are motivated to defend their attitudes against material that challenges them. Researchers assumed that people do this by screening out uncongenial information at various stages of information processing: People might avoid exposing themselves to uncongenial information in the first place; if exposed to such information, they might not pay much attention to it, they might distort its meaning, and they might have difficulty storing and retrieving it. In short, it would be consistent with early theorists' assumption that people are motivated to avoid information that challenges their attitudes (e.g., Festinger, 1957) if research revealed that people per-

form relatively poorly in encoding and remembering information that counters their existing attitudes.

The idea that uncongenial information is less memorable than congenial information was supported by several early experiments. Especially well-known are the dramatic findings of Levine and Murphy's (1943) experiment in which 5 pro-Communists and 5 anti-Communists received messages that were favorable or unfavorable to the Soviet Union. As the congeniality hypothesis predicts, the anti-Communists showed better memory than the pro-Communists for the anti-Soviet Union message, and the pro-Communists showed better memory than the anti-Communists for the pro-Soviet Union message.

Subsequent to this experiment, substantial research on attitude memory accumulated, and findings became far less clear. Many researchers produced null effects (e.g., Greenwald & Sakumura, 1967), or occasionally even reversals in which uncongenial information was more memorable than congenial information (e.g., Cacioppo & Petty, 1979). In some experiments, congenial information was remembered better than uncongenial information only under specific circumstances (e.g., Jones & Aneshansel, 1956). In general, evidence for the greater memorability of congenial information became weaker over the years, but the reasons for this erosion remained mysterious.

META-ANALYSIS OF RESEARCH ON MEMORY FOR ATTITUDE-RELEVANT INFORMATION

The apparent inconsistencies of these findings prompted us to undertake a meta-analysis of this research (Eagly, Chen, Chaiken, & Shaw-Barnes, 1999). Meta-analyses

synthesize results of many studies by using quantitative methods, which provide a clearer view of a set of findings than traditional, informal methods of reviewing (see Johnson & Eagly, 2000). More specifically, the quantitative synthesis of research literatures allows the strength and direction of studies' results to be represented precisely and related to studies' attributes (e.g., aspects of their procedure) so that one can detect whether the effects that studies produced were moderated by these characteristics.

Our thorough search for experiments that provided strong tests of the congeniality hypothesis yielded 70 experiments. In order to represent the individual features of each experiment, we coded the experiments' attributes (e.g., how memory was assessed, whether memory was assessed immediately or after a delay). To quantify the outcome of each study's test of the congeniality hypothesis, we computed an effect size, which represented the difference in memory between the experimental conditions presenting congenial information and those presenting uncongenial information. For many studies, we also computed these congeniality effect sizes within particular levels of the manipulated independent variables (e.g., separate effect sizes for differing levels of involvement in the issue and for immediate and delayed administrations of the memory measures).

Following the classic design of Levine and Murphy (1943), the typical experiment presented participants with information on one or both sides of an issue, and the participants' attitudes were pro or con on the issue. The information provided usually pertained to a controversial social issue—such as racial integration in the 1950s, the war in Vietnam in the 1960s, and nuclear power, capital punishment, and abortion in later years. In the usual procedure, attitude

was assessed in a session prior to the experimental session, and the attitude-relevant information was presented and memory was assessed during the experimental session. Some experiments included a delayed memory measure in a later session.

The overall congeniality effect in this literature indicated slightly better memory for congenial information than for uncongenial information. The mean effect size was 0.23, with a 95% confidence interval of 0.18 to 0.27, when expressed by a statistic called *d*. This statistic was calculated for each experiment by dividing the mean difference in memory between the congenial and uncongenial conditions by the standard deviation averaged across conditions. One way of interpreting this number is that, in the average study, memory for congenial information exceeded memory for uncongenial information by an amount that was approximately one quarter of the size of the study's standard deviation. More important, however, the findings differed considerably across experiments: In 60% of them, the direction of the results favored congenial information, and in 40%, the direction favored uncongenial information. Figure 1 displays a plot of the effect sizes.

Analysis of these effect sizes revealed a very strong tendency for the congeniality effect to have eroded over the years. Our analyses suggested that this erosion was likely due in large part to improvements in the assessment of memory. One such improvement was later researchers' routine compliance with the important methodological rule that the people coding study participants' recall of message content be blind to participants' attitudes. Indeed, earlier studies (i.e., published prior to 1960) that did not indicate that coding was blind produced effect sizes that were larger than those of other

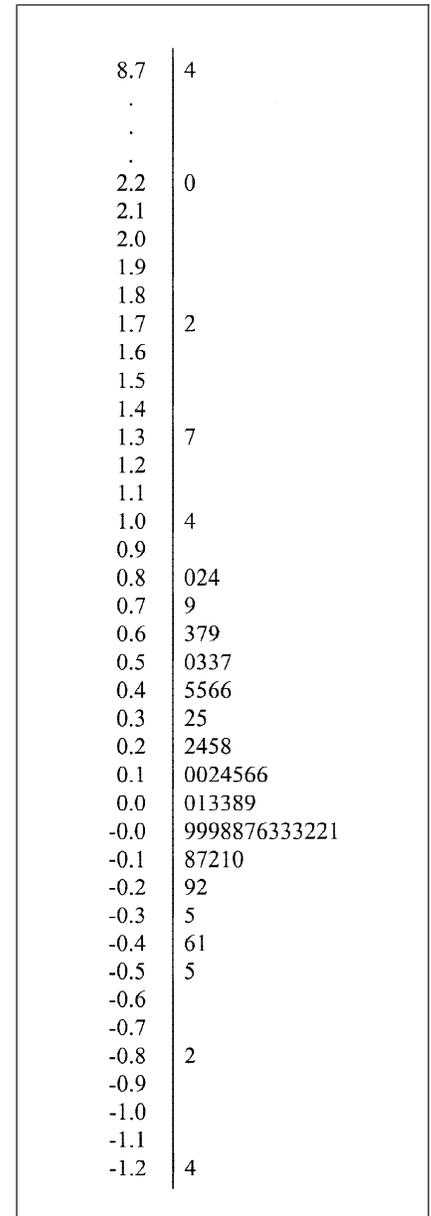


Fig. 1. Stem-and-leaf plot of effect sizes (representing whole studies) from Eagly, Chen, Chaiken, and Shaw-Barnes (1999). Each effect size is represented by a stem, which appears to the left of the vertical line, and a leaf, which appears to the right of the vertical line. The stem gives the value of the effect size to the nearest 10th, and the leaf gives the 100ths' place value. For example, 0.8|024 denotes three effect sizes: 0.80, 0.82, and 0.84; and 0.7|9 denotes one effect size of 0.79. When no leaf appears to the right of a stem (e.g., 0.9), no effect size beginning with that stem value was obtained. The study yielding an effect size of 8.74 was eliminated as an outlier and removed from all but the initial analyses.

recall studies. Also, the less controlled recognition measures of memory, which generally involved counting the number of items correctly recognized, produced larger effect sizes than the recognition measures that were controlled for potential guessing biases (i.e., the recognition sensitivity measures; see Shapiro, 1994). In general, the shift to more stringent procedures for assessing both recall and recognition removed some of the artifacts that likely contributed to the apparent congeniality effects seen in earlier studies.

Although the meta-analysis yielded evidence of several other moderators of the congeniality effect (see Eagly et al., 1999), its most striking outcome is its demonstration of the general weakness of the congeniality effect in experiments that used memory measures that are relatively unlikely to produce artifacts. Despite this outcome, we did not conclude that attitudes have little impact on memory. On the contrary, we questioned the basic idea that congenial information is typically more memorable than uncongenial information. We suspected that one flaw in the reasoning underlying this idea is the assumption that people inevitably avoid information that challenges their attitudes. It may be more likely that under many circumstances people expose themselves to such material, attend to it, scrutinize it carefully, encode it accurately, and thus remember it fairly well, even though they dislike the information and are not persuaded by it. We posited that, given sufficient motivation and capability, people are likely to mount an active defense that would enhance rather than reduce memory for counterattitudinal information. Supporting our reasoning, Edwards and Smith (1996) showed that attitudinally uncongenial statements were scrutinized for a longer time than congenial state-

ments and elicited more thinking, especially thinking that refuted the uncongenial statements. Through active defense, uncongenial information could become memorable, yet pose little threat to existing attitudes, as long as it was successfully refuted. This tendency for thorough processing of counterattitudinal information to improve memory may equal any tendency for proattitudinal information to be remembered well because of its superior fit with existing attitudes, its inherent pleasantness, and other advantages it may possess. We have tested these ideas in new research.

NEW RESEARCH ON MEMORY FOR ATTITUDE-RELEVANT INFORMATION

To maximally illuminate the findings of the meta-analysis, our new experiments used the modal experimental paradigm, which featured the classic Levine and Murphy (1943) design (see Eagly, Kulesa, Brannon, Shaw, & Hutson-Comeaux, 2000; Kulesa, 1999). We thus located participants with opposing attitudes on an important social issue by assessing attitudes in a pretest session. Two weeks later, participants with pro or con attitudes on the issue attended the main experimental session, which included an audiotaped message in which a speaker took a pro or con position on this issue; after the message, memory and other dependent variables were measured. One of the experiments included memory measures administered 2 weeks after the main session.

In these experiments, congenial and uncongenial information proved to be equally memorable. This null effect was obtained under a wide range of circumstances across the conditions of these ex-

periments. Specifically, the effect was null regardless of whether (a) messages pertained to abortion, gays in the military, or the death penalty or presented information on both sides or only one side of the issue; (b) the memory assessment was recognition or recall or was timed to occur soon after the message or 2 weeks later; and (c) participants were or were not activists on the issue, had stronger or weaker attitudes, had more prior knowledge of uncongenial than congenial arguments, or did or did not have their attention constrained to the message. Yet memory proved to be responsive to many other variables. For example, regardless of a message's congeniality, memory was better if participants had stronger attitudes, were activists on the issue, had better verbal skills, and responded to memory measures soon after hearing the message.

Relevant to our hypothesis that people often actively defend their attitudes were findings suggesting that uncongenial messages elicited more careful and effortful processing than congenial messages. Compared with recipients of a congenial message, recipients of an uncongenial message not only rated themselves as giving more thought and attention to the message, but also generated more thoughts that were relevant to the message or issue when asked to list the thoughts that had come to mind as they listened to the message. We categorized these thoughts in two ways: whether they supported or opposed the position the message took on the issue and whether they were global (i.e., very general statements, such as "I agree") or differentiated (i.e., statements containing references to arguments in the message, new arguments, or relevant personal experience). The uncongenial messages elicited many differentiated thoughts that opposed the mes-

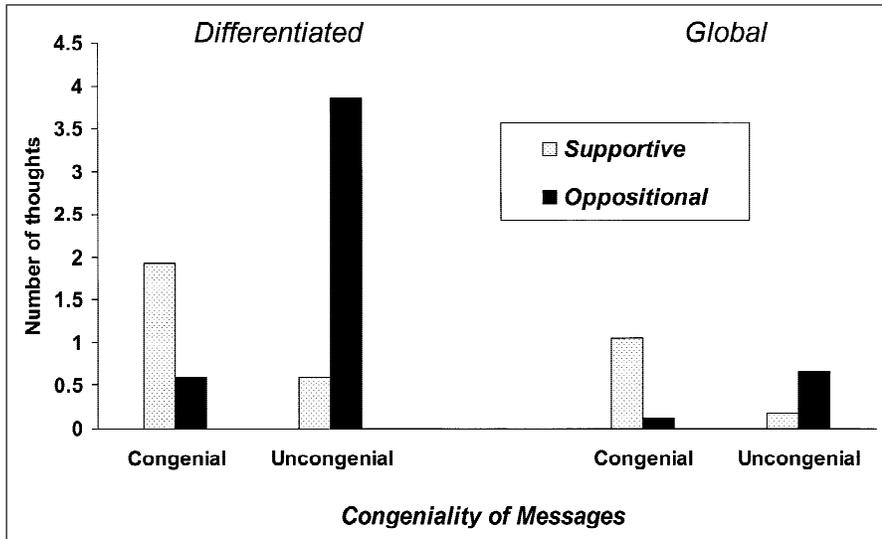


Fig. 2. Number of supportive and oppositional differentiated and global thoughts as a function of the attitudinal congeniality of messages (data graphed from Table 1 in Eagly, Kulesa, Brannon, Shaw, & Hutson-Comeaux, 2000).

sages—in other words, counterarguments. Global thoughts, which were generally less frequent than differentiated thoughts, were more commonly elicited by the congenial than the uncongenial messages, especially if these thoughts supported the message. Figure 2 summarizes the thought data from one of our experiments. Consistent with these findings, participants indicated much less approval of the message and the speaker when the message was uncongenial than when it was congenial.

These findings show that our participants dealt with uncongenial information mainly by active and skeptical scrutiny of its content, whereas they dealt with congenial information with a greater emphasis on confirming its overall match to their attitudes. Our participants' memory could have been enhanced by their careful scrutiny of the information or by simpler processing involving their matching the information to their existing attitudes. Our results supported the idea that careful scrutiny, by producing differentiated thoughts that opposed the message, enhanced memory for the uncongenial messages. Specifically, we con-

sistently obtained significant positive correlations between the number of such thoughts that participants listed in response to these messages and their memory for the arguments contained in the messages. Although measures of cognitive processing have related less consistently to memory for congenial messages, we have obtained some evidence that memory for congenial messages improves to the extent that participants react with global thoughts that support such messages (Kulesa, 1999). We suspect that arguments that are consistent with a person's attitudes are easily remembered, without more elaborate processing, because they fit readily into the structure of what the person already believes about the issue.

Our experiments also demonstrated that achieving good memory for uncongenial information does not necessarily make such information persuasive. On the contrary, in our experiment that presented messages on the highly contentious issue of abortion rights, better memory for uncongenial information was associated with reduced persuasion. To persuade people to accept a posi-

tion that is highly divergent from their own attitudes, it is not necessarily helpful to capture their attention and induce them to pay close attention, because such attention may elicit active resistance to the persuasive goals of the message in the form of counterarguing. Because committed people defend their attitudes in this way, inducing them to change their attitudes may require an incremental approach whereby each exposure to uncongenial information produces only a small amount of change. The potential effectiveness of an incremental approach coheres with our finding of slight movement of participants' attitudes toward uncongenial messages—a shift that remained detectable even 2 weeks later.

CONCLUSION

Attitudes affect information processing, but they do so by processes that differ depending on whether information agrees or disagrees with recipients' attitudes. Attitude researchers failed to understand these effects for many decades because they persevered for so long with simple ideas about the processes that mediate memory and therefore with the prediction of better memory for congenial than uncongenial information. Especially neglected by earlier researchers were the implications of processes by which people actively confront attitudinally uncongenial information, in order to diminish its persuasive impact and thus protect their existing attitudes and beliefs.

The idea that defense of one's attitudes can involve active engagement of challenging information or more passive avoidance of it is in harmony with contemporary dual-process theories of social judgment, which postulate more and less effortful modes of processing

information (e.g., the heuristic-systematic model; see Chen & Chaiken, 1999; Eagly & Chaiken, 1993). These theories suggest that whether recipients of uncongenial messages adopt a cognitively demanding, active approach or an avoidant, passive approach to defending their attitudes would depend on their motivation and capacity to use the more effortful, active approach. Without motivation or capacity, the easier, passive route to defense would be likely, whereas in the presence of both motivation and capacity, the more effortful route of attacking uncongenial material would become more likely. Given the small overall congeniality effect size observed in the meta-analysis, it appears that in the typical study, both motivation and capacity likely were present, thus enabling an active defense that boosted memory for uncongenial information to the level attained for congenial information.

Despite its difficult history, research on memory for attitude-relevant information should thrive once more, now that some important conceptual hurdles have been surmounted. With increased understanding of the processes that mediate memory for congenial and uncongenial information, researchers have the power to control attitudes' effects on information processing. By establishing conditions that enhance or reduce the impact of these mediating processes, researchers should be able to produce better memory for congenial or uncongenial information, or equal

memory for these two types of information. It will be important for researchers to consider variables that influence people's motivations and capabilities for processing attitude-relevant information, especially their motivation to defend their attitudes from counterattitudinal threats (see Chen & Chaiken, 1999).

Research on attitudinal selectivity in memory makes an important contribution to psychologists' broader understanding of memory and information processing. Because much of the information that people receive in daily life is relevant to one or more of their attitudes, memory for this information can be accurately predicted only by taking into account how the psychological processes that the information elicits depend on the attitudinal congeniality of the information. The active resistance processes that uncongenial information often elicits not only improve memory for the information but also enable people to avoid changing their attitudes.

Recommended Reading

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Note

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