

Vividness Can Undermine the Persuasiveness of Messages

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Research that presented messages on 2 social issues tested the idea that vividness effects are most likely when message recipients are not constrained to pay attention to the information. When a low level of attentional constraint was established by presenting a message to Ss in a seemingly incidental manner, vivid messages were less memorable and less persuasive than pallid messages. Process data suggested that the vivid elements in a message (i.e., colorful language, picturesque examples, and provocative metaphors) interfered with Ss' reception of its essential meaning and thereby reduced its memorability and persuasiveness. In contrast, when Ss' attention was constrained by instructing them to attend to a message, its vividness had no impact on their memory for its contents or on its persuasiveness.

Sometimes in research an unexpected finding suggests a new hypothesis, which is quite different, even opposite, from the original one. This, in fact, happened in the present research. We began by hypothesizing that vivid information would have memorial and persuasive advantages over pallid information when people can choose whether they pay attention to information, a condition that occurs very frequently in daily life. Having established such circumstances in a preliminary study, we discovered that vivid information was *less* memorable and *less* persuasive than pallid information, and therefore, we designed a second study to illuminate the process by which vividness can undermine persuasiveness. But before further describing this turn of events, let us consider an often-cited definition of vividness and explanations for the presumed effects of this variable.

In Search of the Elusive Vividness Effect

The vividness of information is, according to Nisbett and Ross (1980, p. 45), its capacity "to attract and hold attention and to excite the imagination." These researchers maintained that information is vivid "to the extent that it is (a) emotionally interesting, (b) concrete and imagery-provoking, and (c) proximate in a sensory, temporal, or spatial way" (1980, p. 45) and claimed that such information has more judgmental impact than pallid information. Moreover, Nisbett and Ross and other investigators (e.g., Bell & Loftus, 1985; Fiske & Taylor, 1991; Taylor & Thompson, 1982) suggested several mechanisms by which information's vividness could enhance its judgmental impact (e.g.,

vivid information may receive more attention or cognitive elaboration; it may produce memorable imagery, specific emotions, or generalized arousal). However, the cogency of these explanations for the vividness effect was called into question by Taylor and Thompson's (1982) narrative review, which suggested that any tendency of vividness to enhance judgmental impact is weak, subtle, and unreliable.¹ This apparent elusiveness has led some researchers to argue that the vividness effect may emerge only when message recipients possess a certain amount of prior knowledge or are characterized by certain needs or motives (Simpson & Borgida, 1991; Taylor & Thompson, 1982). More radically, Collins, Taylor, Wood, and Thompson (1988) maintained that the greater persuasiveness of vivid information is more an illusion than it is elusive. This interpretation emerged from their finding that subjects believed that vivid information was more persuasive, even though they were not more persuaded by it.

When an intuitively compelling effect is not obtained, researchers may have inadvertently established conditions that inhibit it. The critical condition suppressing vividness effects may be that subjects have been constrained to pay close attention to the vivid or pallid information and to encode it carefully, as others have also suggested (e.g., Fiske & Taylor, 1991; Taylor & Thompson, 1982). There may be little opportunity for reception of the information to be determined by its vividness when laboratory procedures place explicit or implicit demands on subjects' attention. Such demands may follow from instructing subjects to pay attention to the information or merely presenting the information as the main focus of their participation.

Consistent with this analysis, some researchers have argued that selective attention may emerge only when vivid stimuli compete for attention with extraneous stimuli. To induce this competition, these investigators have placed vivid and pallid

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¹ Specifically, Taylor and Thompson (1982) concluded, among other things, that communications containing concrete and specific language are not reliably more persuasive than communications containing more abstract and general language, and that vivid information is only moderately more memorable than pallid information, with a substantial number of studies showing no or even reverse effects on memory.

information in the same message (e.g., Reyes, Thompson, & Bower, 1980; Shedler & Manis, 1986, Study 2). Alternatively, they have established "divided attention" by introducing distractors that decrease the amount of attention that subjects can devote to a message (e.g., Taylor & Wood, cited in Collins et al., 1988; Shedler & Manis, 1986, Study 1). However, that studies using these two methods have generally yielded nonsignificant or unpredicted results suggests that they still may constrain subjects to pay careful attention to the vivid or pallid information, if only because they expect to be asked about their reaction to it. Subjects may carefully attend to *all* the information they receive, even if vivid information and pallid information are juxtaposed in the same message or a distraction is imposed.

We reasoned that people must be truly free to adjust the amount of attention they devote to stimuli in order for vivid information to gain memorial and persuasive advantages over pallid information. Therefore, in a preliminary study, we presented subjects with information that appeared to be only an incidental part of their environment, a method that has been used in research on several topics (e.g., Brock & Becker, 1965; Holloway, Tucker, & Hornstein, 1977; Hornstein, LaKind, Frankel, & Manne, 1975). Because the information did not appear to be integral to the experiment subjects were participating in, they were free to vary their attention in response to characteristics of the information.

Radio Study

Each subject waited in the experimenter's office while he went to make copies of questionnaire materials. In his absence, an editorial was presented over a radio that the experimenter's officemate (actually a confederate) was ostensibly listening to while studying. The vivid version of the editorial featured concrete and colorful language; the pallid version contained the same persuasive arguments expressed in more abstract and bland language. The editorial, which had been inserted into a prerecorded broadcast of a local radio station, contained approximately 350 words and consisted of five arguments supporting the position that airlines should not inform the public of terrorist threats they receive (see the Appendix). The recorded material consisted of a song (which was playing when the subject entered the office), a second song, a commercial, the editorial on airline terrorism, and a final song. During this final song, the experimenter returned, thanked the subject for waiting, and accompanied him or her to the laboratory ostensibly to begin the experiment.

During the laboratory session, the subject first completed a 48-item questionnaire pertaining to attitudes toward various social issues. Embedded in this questionnaire was an item on airline terrorism, which served as a measure of persuasion. The subject was then partially debriefed and given a second questionnaire designed to assess attention to, thoughts during, and memory for the radio editorial.

Results indicated that efforts to establish low attentional constraint were successful. Indeed, some subjects devoted considerable attention to the radio editorial, as evidenced by their excellent recall of it, their high level of self-reported attention, and their message-oriented thought-listings. In contrast, other subjects devoted only minimal (if any) attention to the edito-

rial.² Our portrayal of a persuasive message as a radio editorial was also successful: Subjects rarely reported having had any suspicions about the editorial before the partial debriefing they received in the laboratory. Despite these successes, however, no support was obtained for our hypothesis that subjects hearing the vivid version would recall and recognize more editorial arguments and be more persuaded by them than subjects hearing the pallid version. In fact, the pallid version of the editorial produced better recall and recognition and was more persuasive than the vivid version. Specifically, subjects who listened to the pallid editorial recalled more arguments ($M = 3.00$) than subjects who listened to the vivid editorial ($M = 1.20$), $F(1, 10) = 6.39$, $p < .05$. In addition, subjects who listened to the pallid editorial recognized marginally more arguments ($M = 4.14$) than subjects who listened to the vivid editorial ($M = 2.60$), $F(1, 10) = 3.84$, $p = .08$. Finally, the pallid editorial was more persuasive ($M = 10.57$, postmeasure on a 15-point scale) than the vivid editorial ($M = 5.60$), $F(1, 10) = 6.06$, $p < .05$.

Explaining the Negative Effects of Vividness

The most plausible explanation for these preliminary results seemed to be that the colorful language, concrete images, and provocative metaphors contained in our vivid editorial distracted subjects from following its more abstract, logical (and potentially persuasive) line of argumentation. This distraction may have occurred at one or more points in subjects' processing of the message. First, consistent with our recall and recognition findings, subjects may have been distracted in a way that prevented them from completely receiving (attending to and encoding) the content of the message. In fact, numerous studies have suggested that distractions can reduce persuasion by interfering with message reception (e.g., Haaland & Venkatesan, 1968; Romer, 1979; Vohs & Garrett, 1968; Zimbardo, Snyder, Thomas, Gold, & Gurwitz, 1970). Although the distractions used in these studies were not embedded in the messages themselves, it is not unlikely that distracting elements within a message could interfere with message reception. Listeners may, at the point of encountering some picturesque example or provocative metaphor, wander off onto some tangential train of thought and thereby miss vital parts of the message.

Distraction may also have interfered with subjects' processing of the information that they received. Consistent with the emphasis of cognitive-response theory (e.g., Greenwald, 1968) and dual-process models of persuasion (Chaiken, Liberman, & Eagly, 1989; Petty & Cacioppo, 1986a, 1986b), vivid elements in persuasive messages might interfere with recipients' cognitive elaboration of messages and appraisal of arguments they contain. Indeed, research has demonstrated that distractions can

² Because no constraints were placed on subjects' attention while waiting in the office, considerable variability in attention to the radio editorial resulted. Subjects who paid no attention at all to the editorial (as revealed by their inability to recall the general topic or position of the editorial or to recall or recognize any of its arguments) were removed from the data (5 from the vivid condition and 4 from the pallid condition). Thus, although 21 subjects participated in this study, the results of only 12 subjects—5 in the vivid condition and 7 in the pallid condition—are reported.

lower message recipients' ability to cognitively elaborate message content (e.g., Osterhouse & Brock, 1970) and thereby lessen message persuasiveness (e.g., Petty, Wells, & Brock, 1976).

The impact of reduced reception and cognitive elaboration would depend on various attributes of persuasive messages and their context. For example, if a message consisted primarily of arguments that were very weak, both impaired reception and reduced cognitive elaboration could increase message persuasiveness, because the negative impact that specious arguments would otherwise have had on persuasion would be lessened (see Eagly & Chaiken, 1993; Petty et al., 1976). However, in most persuasion contexts in laboratory and natural settings, arguments are designed to be strong, and impaired comprehension and reduced cognitive elaboration should reduce the influence they would otherwise have.

The impact of reduced message comprehension and cognitive elaboration would also depend on the extent to which the situation contained information other than persuasive arguments on which message recipients could base their judgments of message validity (e.g., communicator expertise). In the presence of other information, subjects might, for example, invoke heuristic processing (Chaiken, 1980, 1987; Chaiken et al., 1989), which would allow them to base their judgments concerning message validity on simple decision rules that link various cues to message validity (e.g., the rule that experts' opinions are correct). However, in our research, like most other research on vividness, subjects had little, if any, information other than the message itself. Under these conditions, vivid elements in the message should undermine its persuasiveness because they would reduce subjects' ability to comprehend and elaborate the message without increasing their tendency to rely on heuristic processing or other mechanisms for determining message validity.

Design of the Experiment

In an experiment designed to replicate and explain the previously obtained tendency for vivid information to be less persuasive than pallid information, vivid or pallid editorials were presented under conditions of either high or low attentional constraint. This design allowed us to determine whether vivid editorials were, indeed, less memorable and less persuasive than pallid information under conditions of unconstrained attention, but not under conditions of relatively constrained attention.

In the high-constraint condition, an editorial was presented to subjects along with explicit instructions to pay close attention to it. In this condition, as in the typical laboratory experiments reviewed by Taylor and Thompson (1982), we expected vividness to have little or no impact. In contrast, in the low-constraint condition, an editorial was presented in such a way that subjects were unaware that it was part of the experiment they were participating in. Subjects were therefore not compelled, either by explicit instructions or by their own expectations concerning what would be subsequently required of them, to devote attention to the editorial. In this condition, as in our preliminary experiment, vividness should have undermined message persuasiveness. In addition to influencing the relation between vividness and persuasion, this manipulation of atten-

tional constraint should yield a number of main-effect results. First, high attentional constraint should produce greater recall and recognition for editorial arguments than low attentional constraint. Second, recall and recognition should be less variable under high constraint than under low constraint. Finally, consistent with the idea that attentional constraint heightens cognitive elaboration, a greater number of message-relevant thoughts should be evident under high constraint than under low constraint.

Our attentional constraint manipulation should also influence the relation between recall (of arguments) and persuasion, according to Hastie and Park's (1986) distinction between memory-based and on-line judgment tasks. In memory-based tasks, subjects do not anticipate having to make a judgment about particular information and, therefore, do not attempt to do so as they are receiving it. When, unexpectedly, they are asked to make a judgment, they must do so on the basis of what they have stored in memory. In such cases, significant correlations between memory and judgment measures are usually obtained. In contrast, in on-line tasks, subjects do anticipate having to make a judgment about particular information and, therefore, attempt to do so as they are receiving it (i.e., on-line). When, as expected, they are asked to make a judgment, they need not rely on information stored in memory; instead, they recall the judgment they have already made. In such cases, more equivocal or even zero correlations between memory and judgment measures are usually obtained. Because the low-attentional-constraint condition of the present study would represent essentially a memory-based task, a relatively high correlation between recall and persuasion should be obtained. Because, in contrast, the high-attentional-constraint condition would represent essentially an on-line task, a relatively weak or zero correlation between recall and persuasion should result.

In summary, a vivid message should be less persuasive than a pallid message when subjects are not constrained to pay attention to it, because listeners should be distracted from the message's more abstract and logical line of argumentation. In contrast, the high attentional constraint that is typical of experiments on vividness should eliminate this effect, because subjects should pay assiduous attention to the editorial's meaning and evaluate its arguments, regardless of the vividness of its contents.

Method

Subjects and Design

A total of 171 introductory psychology students (90 men and 81 women) participated for course credit. In a 2 (vividness) \times 2 (editorial) \times 2 (attentional constraint) between-subjects factorial design, subjects were presented with a vivid or pallid version of one of two editorials under conditions of high or low attentional constraint.

Procedure

Subjects participated in groups of 4 or 5 in a small conference room. The male experimenter explained that the study was part of an ongoing research program concerned with attitudes toward various social issues. Subjects were presented with either a vivid or pallid version of one of two editorials under high or low attentional constraint (see de-

tails below). They then responded to questionnaire items designed to measure persuasion and potential mediating processes (see Dependent Variables subsection below). Finally, subjects were fully debriefed, given credit for their participation, thanked, and released.

Editorials

Two 6-paragraph, approximately 350-word editorials were used. The one editorial, also used in the preliminary study, took the position that airlines should not inform the public of terrorist threats they receive. The other editorial took the position that public schools should be dissolved and replaced with private institutions. These positions had been found in pretesting to be relatively counterattitudinal for this population. Each editorial first stated an overall position and then gave five arguments designed to be persuasive.

Two versions of each of the editorials were developed in accordance with the Nisbett and Ross (1980) definition of vivid information. They were also modeled after vivid versus pallid stimuli used by other researchers (e.g., Bell & Loftus, 1985; Collins et al., 1988; Reyes et al., 1980; Shedler & Manis, 1986). Although the two versions of each editorial imparted the same basic information and were of the same length, their wording was either vivid or pallid (see messages in the Appendix). Each message was audio-recorded at approximately 150 words per minute.

Low Versus High Attentional Constraint

Whereas the editorial was presented in an incidental manner in the low-attentional-constraint condition, it was accompanied by instructions to listen to it carefully in the high-attentional-constraint condition.

Low attentional constraint. A male confederate was already in the conference room when subjects entered. The confederate, who was sitting at the far end of a conference table, pretended to be listening to and coding tape-recorded editorials. On the table in front of the confederate were numerous coding forms, various notebooks and disorderly stacks of paper, and two cassette recorders. As subjects entered, they could hear the last few sentences of an editorial concerning corporal punishment in schools being played on a cassette recorder. While they were getting out their experiment credit cards, the experimenter went over to talk with the confederate, just as this editorial finished. The experimenter and confederate talked quietly with each other (although they could be heard by the subjects). Their conversation concerned the "coding" (e.g., "how are the new coding forms working out?"), the "research assistant's" progress ("good, nine down and one to go . . . but I'll go ahead and get out of your way"), and the need for the assistant to continue coding ("no, go ahead and finish up because we need to get this data entered today . . . besides, it's only going to take them about half an hour to complete the questionnaires for this other study . . . and I still need to run upstairs and get copies of the first questionnaire").

After reapproaching the subjects and briefly describing the research program to them, the experimenter told them that they would be completing two questionnaires concerning social issues. They were then given a demographic information form that they were asked to complete before receiving these questionnaires. The experimenter told the subjects that he would need to "run upstairs" for a few minutes to get fresh copies of the one questionnaire. As the experimenter left, he casually instructed the confederate to "go ahead and finish up . . . you'll have a couple of minutes."

While the experimenter was gone, the confederate waited 30 s (to allow subjects to complete the information form) and then played the last editorial of the series that he was ostensibly coding. Either the vivid or the pallid version of one of the editorials was played. After the

editorial was finished, the experimenter returned with copies of the questionnaires. He casually thanked the subjects for waiting, passed out the first questionnaire, explained its general purpose (to examine attitudes toward social issues), and instructed subjects to begin. Meanwhile, the confederate finished coding and began packing up his materials and leaving the laboratory. As he left, the experimenter asked him whether he had been able to finish ("yeah, I just had enough time") and told him to "go ahead and start entering the data in the computer . . . put it in a SAS file."

The first questionnaire contained 48 items, each pertaining to a different social issue. Embedded in the questionnaire was an item (Number 33) concerning the editorial the confederate had played. This persuasion measure was disguised in a longer questionnaire to preserve subjects' perception that the editorial was merely incidental and that their reactions to it were not the focus of the experiment.

Because it was not possible to obtain other measures and still maintain this perception, subjects were partially debriefed after their completion of the social issues questionnaire. The experimenter explained that, although the experiment was in general concerned with attitudes toward social issues, it was more specifically concerned with reactions to the editorial that was played while he was absent from the laboratory. Subjects were then instructed to complete the second questionnaire, which concerned the editorial and how they experienced it.

High attentional constraint. This condition, intended to establish conditions typical of laboratory persuasion experiments, differed in several respects from the low-attentional-constraint condition, including the absence of the confederate. After subjects were seated in the laboratory, the experimenter explained that they would be listening to an editorial and completing a follow-up questionnaire and instructed them to listen carefully to the editorial. They were then given a set of dependent measures similar to those in the low-attentional-constraint condition. The only differences in these measures were that subjects were not given items having to do with suspiciousness (because no deception was involved), and the persuasion measure was not disguised by being embedded in a long questionnaire.³

Dependent Variables

Persuasion. On a 15-point scale anchored by *strongly agree* (1) and *strongly disagree* (15), subjects indicated their agreement with the position advocated in the message they heard. To yield a measure of persuasion, responses to the item were subtracted from a baseline attitude, which was estimated from the mean of subjects' responses on the social issues questionnaire to the item representing the message they did not hear ($M = 9.32$ for the airline terrorism editorial; $M = 11.48$ for the public schools editorial). Positive persuasion scores thus represent change away from this baseline toward the position advocated in the editorial.

Suspicion. Subjects in the low-attentional-constraint condition were asked to indicate when they first realized that the experimenter was interested in their attention to the editorial: while the editorial was being played, while they were completing the social issues questionnaire, or when it was explained by the experimenter. A total of 16% of these subjects indicated that they had this insight either while the editorial was being played ($n = 9$) or while they were completing the social issues questionnaire ($n = 3$). Data from these subjects were retained and do not alter any of the reported results.

Recall of arguments. Subjects were given 5 min to write down as

³ Because the relation between the editorial and the attitude measure was obvious to subjects in this condition, embedding the measure in a questionnaire would have appeared as a deceptive effort to disguise the focus on attitude change.

many of the arguments used in the editorial as they could recall. These arguments were examined by two independent judges according to a "gist" criterion to determine how many of the five arguments were correctly identified. Interrater agreement was relatively high (96%). Disagreements were resolved by discussion.

Recognition of arguments. Subjects were given 3 min to check those arguments they recognized from the editorial. A list of 10 arguments was presented, 5 of which had appeared in the editorial.

Judgments. Using 13-point rating scales with appropriate anchors, subjects responded to the following questions:

1. How much attention do you think you were paying to the editorial?
2. How much attention do you think the average person under the same circumstances would pay to the editorial?
3. How much do you think you were persuaded by the editorial?
4. How much do you think the average person under the same circumstances would be persuaded by the editorial?
5. How interesting did you find the editorial?
6. How difficult was it to understand the editorial?
7. How much did the editorial bring to mind concrete images or mental pictures?
8. How intelligent do you imagine the writer of the editorial is?
9. How difficult was it to follow the editorial's line of argumentation?
10. How "professional" was the editorial?
11. How much did the editorial attract and hold your attention?
12. How knowledgeable do you imagine the writer of the editorial is?
13. How much did the editorial seem to follow a logical train of thought?
14. How plausible or apparently valid were the points made in the editorial?

Distraction. Subjects rated the extent to which elements in the editorial distracted them from its line of reasoning (on a 13-point scale anchored by *not at all* and *very much*). Then subjects were given 2 min to respond to the following instruction: "If there were elements that you found distracting, please list as many of these as you can remember on the spaces provided below." The number of elements listed was determined by two independent judges with 95% agreement. Disagreements were resolved by discussion.

Cognitive responses. Subjects were given 3 min to list any "thoughts or mental images" they had "during the time the editorial was being played." Responses were categorized as either relevant to the editorial's position (either *pro*, *con*, or *indeterminate*) or irrelevant to it. Irrelevant responses were categorized as pertaining to either a *descriptive detail of the editorial* (e.g., "a picture of a Mississippi catfish attending school") or to the *source, medium, or experimental setting* (e.g., "an opinion of what the speaker looked like") or as completely *unrelated* to the editorial or its context (e.g., "thought about my girlfriend in the hospital"). Two independent judges assigned each statement to one category with 85% agreement. Disagreements were resolved by discussion.⁴

Results

Success of Manipulations

Attentional constraint. A number of results pertaining to recall and recognition indicated that the manipulation of attentional constraint was successful. First, the greater recall and recognition of arguments obtained under high constraint ($M_s = 3.11$ and 3.77) than under low constraint ($M_s = 1.89$ and 2.44) indicated that high constraint produced more attention to the editorials, $F_s(1, 163) = 61.95$ and 48.85 , $p_s < .0001$. Second, the

lower variability of recall and recognition under high constraint ($SD_s = .72$ and 1.09) than under low constraint ($SD_s = 1.33$ and 1.55) suggested that attention was less voluntary with high constraint, $F_s(95, 74) = 3.41$ and 2.02 , $p_s < .01$. Finally, the lower correlation between recall and persuasion under high constraint, $r(95) = .21$, than low constraint, $r(74) = .57$, $Z = 2.75$, $p < .01$,⁵ suggested that judgment of the message was anticipated under high constraint (i.e., on-line processing), but not low constraint (i.e., memory-based processing).⁶

Several other findings also demonstrated the success of the attentional constraint manipulation. First, the greater number of cognitive responses relevant to the message's position under high constraint ($M = 1.90$) than under low constraint ($M = 0.63$) indicated more scrutiny of the editorials with high constraint, $F(1, 71) = 15.80$, $p < .0005$. Second, subjects under high constraint indicated that the editorial attracted and held their attention more than subjects under low constraint ($M_s = 7.82$ vs. 6.16), $F(1, 163) = 13.43$, $p < .0005$, and that it followed a more logical train of thought ($M_s = 9.49$ vs. 7.99), $F(1, 163) = 15.01$, $p < .0005$. Finally, subjects under high constraint indicated that it was less difficult to follow the editorial's line of argumentation than subjects under low constraint ($M_s = 3.23$ vs. 4.25), $F(1, 163) = 7.60$, $p < .01$.

Vividness. Attesting to the success of the vividness manipulation was the finding that subjects who listened to a vivid editorial rated it as bringing to mind more "concrete images and mental pictures" than subjects who listened to a pallid editorial ($M_s = 7.50$ vs. 5.99), $F(1, 163) = 10.97$, $p < .005$. Also, subjects who listened to a vivid editorial listed more thoughts relevant to descriptive details of the editorial than subjects who listened to a pallid editorial ($M_s = 1.41$ vs. 0.45), $F(1, 71) = 12.11$, $p < .001$. Other findings showed that vividness did not affect perceptions of other aspects of the editorial or its writer. For example, vividness was not confounded with subjects' perceptions of how interesting ($p = .45$), understandable ($p = .61$), plausible ($p = .43$), or professional ($p = .15$) an editorial was, or how intelligent ($p = .39$) or knowledgeable ($p = .22$) its writer was.

Persuasion

In general, subjects were more persuaded by pallid editorials ($M = 4.68$) than by vivid editorials ($M = 3.14$), $F(1, 163) = 9.18$,

⁴ The conditions with the school privatization editorial were run later in the semester than those with the airline terrorism editorial, and the cognitive response measures were included only for the subjects who received the privatization editorial.

⁵ Neither of these recall-persuasion correlations differed significantly between the vivid and pallid conditions. The correlation between recognition and persuasion did not differ significantly between the high-attentional-constraint condition, $r(95) = .23$, and the low-attentional-constraint condition, $r(74) = .39$. Because recognition is not as dependent as recall on the accessibility of information, a weaker effect was expected (Anderson & Bower, 1972; Bahrick, 1970; Brown, 1976).

⁶ Mackie and Asuncion (1990) argued that decreased message elaboration, not the on-line versus memory-based distinction, is critical to obtaining high correspondence between attitude and recall. Our findings do not distinguish between these two explanations, because the high-attentional-constraint condition that encouraged on-line attitude change also induced greater cognitive elaboration (see next paragraph).

Table 1
Mean Persuasion as a Function of Attentional Constraint, Vividness, and Editorial

Editorial	High constraint		Low constraint	
	Vivid	Pallid	Vivid	Pallid
Airline terrorism				
<i>M</i>	4.61	4.36	3.50	6.65
<i>SD</i>	2.97	3.02	4.35	2.94
School privatization				
<i>M</i>	2.14	2.86	1.64	5.12
<i>SD</i>	2.65	3.65	3.09	4.03
Both				
<i>M</i>	3.55	3.69	2.62	5.95
<i>SD</i>	3.06	3.36	3.87	3.52

Note. Attitude responses were assessed on a 15-point scale and subtracted from baseline data to yield a measure of persuasion. Higher numbers indicate greater persuasion. $N = 171$; cell *ns* ranged from 17 to 28.

$p < .005$. Furthermore, the Vividness \times Attentional Constraint interaction was significant, $F(1, 163) = 9.10$, $p < .005$. As shown in Table 1, in the low-attentional-constraint condition, the pallid editorial was more persuasive than the vivid editorial, $F(1, 163) = 18.63$, $p < .0001$, whereas in the high-constraint condition, the vividness of the editorials did not affect their persuasiveness, $F(1, 163) = 0.04$, *ns*. These findings did not interact with the editorial presented (see the Editorial Effects subsection below).⁷

Process-Relevant Measures

Recall, recognition, and distraction. On recall, the Vividness \times Attentional Constraint interaction proved reliable, $F(1, 163) = 4.63$, $p < .05$, in addition to the main effect of attentional constraint already noted ($p < .0001$). Consistent with Table 2, under low constraint, the pallid editorial produced better recall than the vivid editorial, $F(1, 163) = 8.98$, $p < .005$, whereas under high constraint, vividness did not affect recall, $F(1, 163) = 0.02$, *ns*.

On recognition, a marginally significant Vividness \times Attentional Constraint interaction was found, $F(1, 163) = 3.72$, $p = .06$, in addition to the main effect of attentional constraint already noted ($p < .0001$). Consistent with Table 2, under low constraint, the pallid editorial produced better recognition than the vivid editorial, $F(1, 163) = 8.76$, $p < .005$, whereas under high constraint the vividness of the editorial did not affect recognition, $F(1, 163) = 0.23$, *ns*.⁸

Subjects rated the vivid editorials as more distracting than the pallid editorials ($M_s = 4.69$ vs. 3.58), $F(1, 163) = 7.39$, $p < .01$, and listed more distracting elements from the vivid editorials ($M_s = 0.79$ vs. 0.12), $F(1, 163) = 28.34$, $p < .0001$. Subjects also reported that the vivid editorials followed a less logical train of thought than the pallid editorials ($M_s = 8.16$ vs. 9.52), $F(1, 163) = 13.55$, $p < .0005$, and that their line of argumentation was (marginally) more difficult to follow ($M_s = 3.96$ vs. 3.38), $F(1, 163) = 2.91$, $p = .09$. The Vividness \times Attentional

Table 2
Mean Numbers of Editorial Arguments Remembered as a Function of Attentional Constraint, Vividness, and Editorial

Editorial	High constraint		Low constraint	
	Vivid	Pallid	Vivid	Pallid
Arguments recalled				
Airline terrorism				
<i>M</i>	3.11	3.31	1.80	2.60
<i>SD</i>	0.69	0.68	1.36	0.94
School privatization				
<i>M</i>	3.10	2.90	1.28	1.82
<i>SD</i>	0.70	0.83	1.07	1.63
Both				
<i>M</i>	3.10	3.13	1.55	2.24
<i>SD</i>	0.68	0.77	1.25	1.34
Arguments recognized				
Airline terrorism				
<i>M</i>	3.93	4.19	2.10	3.65
<i>SD</i>	0.98	0.90	1.62	1.35
School privatization				
<i>M</i>	3.43	3.38	1.94	1.94
<i>SD</i>	1.16	1.20	1.00	1.52
Both				
<i>M</i>	3.71	3.83	2.03	2.86
<i>SD</i>	1.08	1.11	1.35	1.65

Note. Recall is the number of arguments recalled from the 5 given in the editorial. Recognition is the number of these arguments recognized out of a list of 10. $N = 171$; cell *ns* ranged from 17 to 28.

Constraint interaction was not significant on any of these dependent variables, however.

Path analytic results suggested that, under low attentional constraint, reduced encoding of message arguments, as reflected in subjects' recall of them, mediated the link between vividness and persuasion. As shown in Figure 1, vividness related significantly to recall, which, in turn, related significantly to persuasion. This indirect effect of vividness on persuasion as mediated by recall was significant, $t(74) = 2.12$, $p < .05$, by Sobel's test described in Baron and Kenny (1986). Recall thus appeared to mediate the relation between vividness and persuasion, although the direct path between vividness and persuasion remained significant in our model. The significance of the direct path was not unexpected given that multiple mediators may be operating in relation to persuasion and that recall is a highly imperfect measure of encoding (see Baron & Kenny, 1986). Although the evidence for mediation would have been more dramatic if this direct path were not significant, this path analysis supports our reasoning that under low attentional constraint, vividness distracted subjects from encoding the message's arguments and thereby undermined persuasion. In contrast to this mediation that occurred under low constraint, under high constraint, vividness had no effect on recall or persuasion ($p_s = .96$ and $.82$, respectively).

Cognitive responses. Mean numbers of cognitive responses are shown in Table 3. As already noted, subjects under high attentional constraint listed more thoughts relevant to the message's position than subjects under low constraint, $F(1, 71) =$

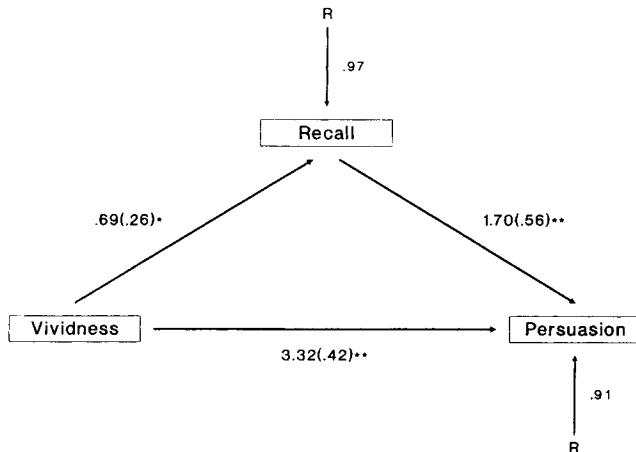


Figure 1. Path analysis of the effect of vividness on persuasion and its mediation by recall under low attentional constraint. (Shown are regression coefficients, with standardized coefficients in parentheses. Smaller numbers indicate residual error [R]. * $p < .05$. ** $p < .0005$.)

15.80, $p < .0005$. Yet, categorization of these thoughts into those that were either pro, con, or indeterminate in relation to the editorial's position revealed no differences between high and low constraint subjects in the numbers of pro or indeterminate thoughts they listed. Only for thoughts that disagreed with the editorial's position did high-constraint subjects list more thoughts than low-constraint subjects ($M_s = 1.05$ vs. 0.11), $F(1, 71) = 21.49$, $p < .0001$. As a consequence of this heightened counterarguing among the high-constraint subjects, they listed more thoughts disagreeing than agreeing with the editorial ($M_s = 1.05$ vs. 0.36), $F(1, 41) = 0.67$, $p < .005$. In contrast, low-constraint subjects listed few thoughts that agreed or disagreed with the editorial ($M_s = 0.11$ vs. 0.11). Because these findings suggest that counterarguing is increased by high attentional constraint, it is important to note that the correlation between subjects' counterarguing and persuasion was significant with high constraint, $r(41) = -.35$, $p < .05$, but not with low constraint, $r(34) = -.04$. These results suggest that persuasion was reduced by counterarguing only when subjects were constrained to pay attention to the message.

In contrast to the effect of attentional constraint on counterarguing, vividness had no impact on subjects' thoughts relevant to the message's position. Yet, as noted as part of our evidence for the success of the vividness manipulation, subjects presented with a vivid editorial listed more thoughts pertaining to descriptive details of the editorial than subjects presented with a pallid editorial, $p < .001$. However, the number of these thoughts did not relate significantly to persuasion under high or low attentional constraint.

Other effects of vividness and attentional constraint. No significant effects were found on the amount of attention that subjects thought they devoted to the editorials or on the amount of attention they thought that others would devote to the editorials under the same circumstances. However, compared with subjects presented with a vivid editorial, subjects presented with a pallid editorial thought they were more persuaded, $F(1, 163) = 5.96$, $p < .05$, and that others under similar circum-

stances would be more persuaded, $F(1, 163) = 7.19$, $p < .01$. Furthermore, subjects under high attentional constraint thought they were more persuaded than subjects under low constraint, $F(1, 163) = 6.77$, $p < .05$.⁹

Editorial Effects

Responses to the two editorials differed systematically. Not only did the airline terrorism editorial produce better recall and recognition than the school privatization editorial, but also it was perceived as more interesting and more professional, as well as containing more plausible or apparently valid points, written by a more intelligent writer, and following a more logical train of thought ($p_s < .01$). Subjects also indicated that they paid more attention to, and that others under similar circumstances would pay more attention to, the airline terrorism editorial ($p_s < .01$). In addition, subjects indicated that they were more persuaded, and that others under similar circumstances would be more persuaded, by this editorial ($p_s < .01$). Finally, subjects were in fact more persuaded by the airline terrorism editorial ($p < .01$), although both editorials were highly persuasive when subjects' postmessage attitudes were compared with the baseline attitudes (see the Method section; $p_s < .0001$). It is important to note that the previously reported Vividness \times Attentional Constraint interaction on recall, recognition, and persuasion did not depend on which editorial was presented ($p_s = .83, .10$, and $.76$, respectively).

Discussion

We began the present research by pursuing the suggestion that vividness effects are most likely under conditions that favor selective attention. To establish such conditions, we created a low level of attentional constraint by presenting subjects with a persuasive message that appeared to be incidental to the experiment they were participating in and an attitude measure that had no apparent relation to this message. For comparison, we also created a high-constraint condition in which subjects

⁷ In view of the interest that gender researchers have shown in women's and men's influenceability (e.g., Cooper, 1979; Eagly & Carli, 1981), we computed all analyses of variances with sex of subjects included as an additional independent variable and found only negligible main effects and interactions involving sex. The persuasion shown by female subjects ($M = 4.19$, $SD = 3.78$) did not differ from that shown by male subjects ($M = 3.65$, $SD = 3.42$), $F(1, 155) = 1.11$, *ns*.

⁸ Subjects in the low-attentional-constraint condition were also asked to recall the general topic of the editorial and recognize which of two positions the editorial took. The only significant effect obtained on these measures was better recall for the general topic of the airline terrorism editorial than the school privatization editorial ($p < .005$).

⁹ These findings are interesting in relation to Collins, Taylor, Wood, and Thompson's (1988) claim that the positive effects of vividness on persuasion are illusory. Although their subjects believed that the vivid messages were more persuasive than the pallid ones, our subjects believed that the pallid messages were more persuasive. Their subjects were wrong; ours were right, although only in the low-attentional-constraint conditions. These findings call into question any assumption that people have a general belief that vividness enhances persuasiveness.

Table 3
*Mean Numbers of Cognitive Responses as a Function of
 Attentional Constraint and Vividness*

Type of cognitive response	High constraint		Low constraint	
	Vivid	Pallid	Vivid	Pallid
Relevant thoughts				
Total				
<i>M</i>	1.86	1.95	0.67	0.59
<i>SD</i>	1.62	1.50	1.33	1.00
Pro				
<i>M</i>	0.29	0.43	0.06	0.18
<i>SD</i>	0.64	0.87	0.24	0.53
Con				
<i>M</i>	0.90	1.19	0.17	0.06
<i>SD</i>	1.26	0.98	0.51	0.24
Indeterminate				
<i>M</i>	0.67	0.33	0.44	0.35
<i>SD</i>	0.86	0.80	0.98	0.70
Irrelevant thoughts				
Total				
<i>M</i>	2.71	1.48	1.50	1.47
<i>SD</i>	2.17	1.40	1.25	1.28
Descriptive detail of editorial				
<i>M</i>	1.95	0.62	0.78	0.24
<i>SD</i>	1.91	0.97	0.88	0.56
Source, medium, or setting				
<i>M</i>	0.14	0.10	0.17	0.41
<i>SD</i>	0.36	0.30	0.51	0.87
Unrelated				
<i>M</i>	0.62	0.76	0.56	0.82
<i>SD</i>	0.97	0.94	1.04	0.95

Note. $N = 77$; cell *ns* ranged from 17 to 21.

were explicitly instructed to attend to the message. Having successfully manipulated attentional constraint, we replicated a pattern of results obtained in a preliminary study. Specifically, whereas under high constraint, vivid editorials resulted in the same amount of recall, recognition, and persuasion as pallid editorials, under low constraint, vivid editorials resulted in *less* recall, recognition, and persuasion than pallid editorials.

Explaining Why Vividness Undermined Message Persuasiveness

As we argued earlier in this article, vividness may undermine persuasiveness when vivid elements (e.g., colorful language, picturesque examples, and provocative metaphors) interfere with the full reception or systematic processing of messages. We reasoned that under typical laboratory conditions in which subjects' reactions to the message are quite obviously the focus of research interest, subjects will guard against lowering their reception or elaboration of the message arguments. In contrast, when subjects do not believe that their reactions are under scrutiny and therefore feel free in directing their attention, vivid elements might attract their attention in a way that lowers their reception and perhaps their elaboration of the message's main

points. By wandering off on tangential trains of thought, subjects might miss vital arguments and perhaps fail to follow the logic of the message or to integrate presented information with their existing beliefs and knowledge. Thus, although vividness may attract attention to given information, it may also distract attention away from the essential meaning of that information.

A number of results support this reasoning. Consistent with the idea that the vivid editorials were distracting are the findings that subjects presented with a vivid editorial rated it as more distracting and listed more distracting elements, and that they reported that it followed a less logical train of thought and that it was more difficult to follow its line of argumentation, than did subjects presented with a pallid editorial. Yet the subjects did not perceive the vivid editorials to be more or less interesting, understandable, plausible, professional, or intelligently or knowledgeably written than the pallid editorials.¹⁰ Under low attentional constraint, this distraction interfered with subjects' encoding of vital parts of the message, as reflected in their impaired recall and recognition of its arguments. In contrast, under high attentional constraint, subjects did not allow the distracting aspects of the message to impair their reception of its essential points. Indeed, path analytic results suggested that recall mediated the link between vividness and persuasion under low but not under high attentional constraint.

The cognitive response measures provide additional insight concerning the processes by which vivid information undermined message persuasiveness. Consistent with the idea that vivid information attracts attention was the finding that subjects presented with a vivid editorial listed more thoughts pertaining to descriptive elements of the editorial than subjects presented with a pallid editorial. When subjects believed that the message was merely incidental, the time they spent thinking about these descriptive elements evidently took time away from their attending to and encoding subsequent arguments. Interestingly, the vividness of the message did not reduce these subjects' thinking about the position the message advocated. We had expected from the standpoint of theories that emphasize cognitive elaboration that under low attentional constraint, the tendency for vividness to undermine persuasion might be mediated by lessened thinking about the message's position and its argumentation. Apparently, thinking of this type was so generally low under low attentional constraint that there was little chance for vividness to produce any further reduction. Consequently, the persuasion-dampening effect of vividness was mediated by its effects on message reception rather than on cognitive elaboration.

Explaining Why Pallid Information Was Persuasive With Low Attentional Constraint

Another important feature of our findings is that reducing attentional constraint increased the persuasiveness of the pallid

¹⁰ The conclusion that vividness was not confounded with irrelevant attributes of the message or with communicator characteristics is also supported by the null persuasion findings in the high-attentional-constraint condition. Were the editorial or its author less favorably perceived in the vivid than the pallid condition, persuasion should have been less with the vivid than the pallid message in the high- as well as the low-attentional-constraint condition.

editorials. Not only were the vivid editorials less persuasive under low than high attentional constraint, $F(1, 163) = 4.35$, $p < .05$, but also the pallid editorials were more persuasive under low than high constraint, $F(1, 163) = 9.47$, $p < .005$ (see Table 1).

Why would the pallid editorials produce an especially large amount of attitude change under low attentional constraint? Especially helpful in answering this question are the cognitive response findings. Specifically, subjects under low attentional constraint listed fewer message-relevant thoughts than subjects under high constraint and, in particular, fewer counterarguments. Moreover, the negative relation between counterarguing and persuasion that was apparent with high attentional constraint was absent under low constraint. These findings suggest not only that low-constraint subjects engaged in less thinking that countered the message, but also that they apparently did not apply the thoughts they did have to the more abstract task of deciding whether the message was valid. Consequently, even though these low-constraint subjects encoded the arguments contained in the pallid editorial less well than high-constraint subjects did ($p < .0001$ for recall; $p < .0005$ for recognition), the message was more persuasive. In contrast, subjects in the high-constraint conditions, who knew full well that their reactions to the message were under scrutiny, produced more counterarguments, which they in disciplined fashion applied to the task of judging the validity of the message.¹¹

Although the reduction of counterarguing that occurred when the message appeared to be incidental should ordinarily facilitate persuasion, this did not occur with the vivid editorials because of the distracting effects of their vivid elements. That is, although lowering attentional constraint reduced subjects' motivation to cognitively elaborate the message, at the same time it allowed the vivid elements in the message to function as very effective distractors from the message's essential line of argumentation. Therefore, despite the effectiveness of the pallid message under low attentional constraint and the main effect that the constraint variable produced on subjects' critical thinking, our distraction explanation of the negative effects of vividness remains valid.

Finally, the importance of message reception in relation to the attitude change induced by the pallid messages under low attentional constraint should be noted. Even though subjects' encoding of these pallid messages was quite imperfect, the relatively high recall-persuasion correlation in this situation suggests that encoding may have a fairly direct causal impact on attitude change. That attitude change in this situation was not the result of much cognitive elaboration of message content suggests that people can be more or less bowled over by persuasive material that they have encoded but not carefully evaluated (see Mackie & Asuncion, 1990). It is particularly impressive that such an effect was produced in our experiment, not with trivial issues, but with widely discussed social issues (e.g., airline terrorism) that subjects can be assumed to be somewhat knowledgeable about. Yet it is possible that this attitude change induced by the pallid message under low attentional constraint would be unstable and vulnerable to counterpersuasion. Were these subjects to meet with counterpropaganda, they would not be able to defend their newly changed attitudes in terms of their consideration of the arguments they had heard in the prior message, because they had not given them much thought.

The relatively high correlation between persuasion and recall of message content obtained when subjects' attention was not constrained is especially interesting in view of some investigators' claims that correlations between recall and persuasion are generally low and consequently provide proof that reception is unimportant in mediating attitude change (see especially Fishbein & Ajzen, 1972, 1981; Greenwald, 1968). Among several reasons why this conclusion should be distrusted (see Chaiken & Stangor, 1987; Eagly & Chaiken, 1984, 1993) is the distinction between on-line and memory-based judgment that guided our reasoning about potential mediation (Hastie & Park, 1986). We argued that high attentional constraint would encourage subjects to change their attitudes on an on-line basis, whereas low attentional constraint would encourage them to estimate their attitudes on the basis of their recall of the message. Consistent with this reasoning, the correlation between persuasion and recall was weak under high attentional constraint but substantial under low attentional constraint. Moreover, that the correlation between persuasion and counterarguing was significant under high attentional constraint (but not under low constraint) is consistent with the view that cognitive elaboration was an integral part of on-line scrutiny of the message. More generally, these contrasting correlational findings for recall and cognitive responses suggest that the high attentional constraint conditions typical of laboratory persuasion research may overemphasize the importance of cognitive elaboration in mediating persuasion but underemphasize the importance of reception and recall of message content.

Generalizability of the Tendency for Vividness to Undermine Message Persuasiveness

The generalizability of the negative effects of vividness was demonstrated by our obtaining the same pattern of results with two different editorials and in two different settings (an office waiting room in our preliminary study as well as a laboratory room in our more ambitious main study). Despite these replications, however, the potential for vividness to undermine recall and persuasiveness is no doubt limited in a number of ways. First and most obviously, vividness is only likely to be distracting under conditions of low attentional constraint, as our results show. In fact, our findings are consistent with the claim that under conditions of high attentional constraint, which have typified most, if not all, vividness studies, the effects of

¹¹ The exact mechanism underlying this tendency to think critically in the high-constraint conditions cannot be determined from this research. These findings may illustrate the effects of awareness of persuasive intent and the conscious countercontrol strategies that people invoke to minimize the effects of obvious efforts to persuade them (see Bornstein, 1989). Awareness of persuasive intent might also have induced reactance that motivated subjects to counterargue (Sensenig & Brehm, 1968; Worchel & Brehm, 1971). Alternatively, critical thinking might have merely been consistent with norms about how to be a "good subject." The effects we obtained for attentional constraint may well be related to early demonstrations that overheard messages can be more persuasive than regular ones (Brock & Becker, 1965; Walster & Festinger, 1962).

vividness are apt to be "weak if existent at all" (Taylor & Thompson, 1982, p. 178).

Also, the potential for vividness to be distracting may be limited to relatively complex messages that follow abstract and logical lines of argumentation, or, more specifically, that contain a number of arguments that are logically related by virtue of their all being linked to a general position. Considering or entertaining a vivid element of such a message may prevent the message recipient from making a logical connection between an argument and the overall position, integrating an argument with current knowledge and beliefs, or encoding subsequent information. In the case of simpler messages, in which there would be fewer logical connections and less subsequent information to interfere with, vividness might attract attention without also distracting attention.¹²

Furthermore, the eloquence of vivid language is also likely to influence its effects. Indeed, it may be that our vivid language was not very eloquent and therefore was inherently distracting and that more eloquent language (e.g., that contained in a Winston Churchill or Martin Luther King speech) might produce a different effect on persuasion. In addition to eloquence, the logical relationship between the vivid elaboration and the essential points or arguments of the message may be critical. Thus, a concrete example that epitomizes the meaning of an argument or point might allow a listener to reconstruct that argument or point simply by remembering the vivid example, whereas a concrete example that does not epitomize or adequately relate to persuasive aspects of the message would not allow any such backward inference or reconstruction.¹³

The potential for vividness to be distracting may in addition be limited to messages that are auditorially presented or, more generally, to messages presented in a modality that allows the recipient no control over the flow of the information. Distraction is most likely to be a problem when information must be considered as it is being presented and cannot be returned to at some later moment. For example, an individual who is listening to a radio editorial and is distracted by some vivid example or metaphor may miss some vital point without having the opportunity to listen again to what was missed. In contrast, a person who is reading the same editorial and is likewise distracted has the option of going back and rereading from the point of distraction. Indeed, that messages were presented auditorially may be critical to our results. Had subjects been presented with written messages in our study and been given the opportunity to scrutinize the messages at their leisure, it is doubtful that vividness would have produced the same distraction effects. Furthermore, the modality of the presented message is also likely to be important in the light of findings regarding the relation between cognitive load and on-line versus memory-based judgment. In particular, Bargh and Thein (1985) found that memory-based judgment is more likely to occur in cases of information overload (because on-line judgment is more difficult). To the extent that auditorially presented messages foster greater cognitive load than written messages, distraction effects in the form of lowered reception and poorer memory for message arguments are especially likely.

Finally, prior persuasion research highlights other likely limits to the vividness effects that we have demonstrated. The persuasive arguments must not be extremely weak (i.e., specious or

absurd), or lowered reception of them would probably enhance persuasion. Indeed, an interaction between argument quality and vividness—with vividness decreasing persuasion with strong arguments but increasing it with weak arguments—would be consistent with much of the research conducted within the framework of the elaboration likelihood model (Petty & Cacioppo, 1986a, 1986b). In addition, the presence of other cues (e.g., an obviously expert communicator) might negate the persuasion-dampening effects of vividness if it allowed the distracted message recipients to rely on features other than argument content for evaluating the validity of the message.

Despite these important limiting conditions, it would not be rare to find the particular circumstances we established in our research occurring in daily life. In fact, these circumstances probably predominate when persuasive messages are encountered. People often find themselves presented with relatively complex, sensibly argued audio or visual information under conditions of quite low attentional constraint: public speeches, classroom lectures, and radio or television discussions, editorials, or advertisements. Our research suggests that, if these messages contain vivid elements that interfere with the reception of their contents, they are less likely to be memorable and persuasive.

¹² In this regard, it should be noted that Taylor and Wood (unpublished research cited in Collins et al., 1988) conducted several studies that followed procedures similar to ours (S. E. Taylor, personal communication, February 18, 1992) but did not yield the same distraction effect. The differing results may be due to differences in the messages—ours being more complex.

¹³ What is being made vivid may also be important. Chaiken and Eagly (1983) showed that some vividness manipulations make the communicator (rather than the message) vivid. Also, Taylor and Thompson (1982) distinguished between a vivid presentation and a vivid message and pointed out that a vivid presentation may be distracting and lead to reduced reception and persuasion. We would argue, however, that the vividness we established had to do with the message itself, not its presentation.

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Appendix

Vivid and Pallid Editorials Used as Persuasive Messages

Airline Terrorism (Vivid Version)

Terrorist threats and acts of violence against airlines are on the rise. The recent bombing of Pan Am Flight 103, in which 258 passengers were killed in a mid-air explosion over Lockerbie, Scotland, is an example of such ruthless terrorism. This cold-blooded killing of innocent people raises a vital question: Should airlines inform the public of terrorist threats they receive?

There are a number of good reasons why airlines should not inform the public of terrorist threats. First, if airlines were to publicize every incoming threat, they would be doing exactly what terrorists want. These foaming martyrs would then increase the numbers of their threats. In fact, they would compete to see whose blood-chilling threats could make headlines in the *New York Times*.

Second, disclosure of threats to the public would encourage phony threats. Threats would be called in by just about anyone, from someone irate about having their patent leather luggage lost on a previous flight to someone trying to prevent a business rival from attending a power lunch on the west coast.

Third, announcing threats would disrupt airline operations. Imagine the confusion caused by hordes of shouting, terror-stricken people elbowing their way to the ticket counter to reschedule their flights every time a bomb threat was announced.

Finally, most would-be flyers do not have the expertise to evaluate terrorist threats. Evaluating the danger of a threat would be like playing Russian roulette with a gun pointed at one's head.

Countering terrorist threats will not be accomplished by warnings to the public. The real answer to airline terrorism lies in replacing yawning, zombie-like security guards with savvy, eagle-eyed experts. It also lies in replacing simplistic metal detectors that go "beep" with state-of-the-art scanners able to detect plastic explosives concealed, for example, in a pair of cowboy boots or a bottle of imported wine.

Airline Terrorism (Pallid Version)

There has been an ever-growing increase in the number of terrorist threats and acts of violence against airlines. In recent years, a number of commercial flights have been targeted by such terrorism. The bombing of one flight resulted in the deaths of many of its passengers. The question that is being raised by many is whether or not airlines should inform the public of terrorist threats they receive.

There are a number of good reasons why airlines should not inform the public of terrorist threats. First, if airlines were to publicize every incoming threat, they would be doing exactly what terrorists want. Terrorists would then increase the number of their threats. In fact, they would compete with each other for news coverage.

Second, disclosure of threats to the public would encourage phony threats. Threats would be called in by just about anyone, from someone dissatisfied with the service they received on a previous flight to someone trying to interfere with another person's travel plans.

Third, announcing threats would disrupt airline operations. Imagine the confusion caused by hundreds of people trying to reschedule their flights every time a bomb threat was announced. The situation would be utterly chaotic.

Finally, most would-be flyers do not have the expertise to evaluate terrorist threats. If terrorist threats were publicized, ordinary travelers would be faced with decisions concerning the likelihood that a threat would be carried out and the danger involved if it were.

Countering terrorist threats will not be accomplished by warnings to the public. The real answer to airline terrorism lies in replacing bored security guards with better trained and more alert personnel. It also lies in replacing unsophisticated baggage inspection equipment with the modern technology that is necessary to detect even well-concealed plastic explosives.

School Privatization (Vivid Version)

A flood of recent studies suggests that U.S. public schools are producing children that aren't much smarter than Mississippi River catfish. Embarrassing headlines that used to ask "Can Johnny read?" now ask "Can he add?" "Can he follow a map?" "Can he think?" A depressing number of young adults can't find Poland on a world map, don't know the meaning of the word *profit*, and think the sun circles the earth. As such ignorance is exposed, worried educators are beginning to suggest that our public school system be dissolved and replaced with private institutions.

There are a number of good reasons why public schools should be dissolved and replaced with private institutions. First, as already mentioned, our public schools are failing to adequately educate our children. For example, even though we are pouring crisp dollar bills into our classrooms by the wheelbarrow, SAT scores are plummeting.

Second, because the underlying philosophy of public schools is to meet minimum standards, excellence among high achievers is being discouraged. For example, while teachers are sweating and turning red in the face trying to get every last student to compute the cube root of 8, fewer students are mastering calculus.

Third, U.S. students are inferior to their international peers, meaning that tomorrow's brain surgeons and computer programmers are more likely to come from places like Tokyo or Delhi than from Chicago.

Fourth, providing parents with tax credits and education vouchers would allow them to choose which schools they send their children to. They could visit a number of schools before making their decisions—just as they would drive around to a number of auto lots before buying a new family car.

Finally, private schools could offer children more specialized educational opportunities. They would not try to turn every would-be cake decorator into a nuclear physicist and every would-be corporate lawyer into a plumber.

School Privatization (Pallid Version)

A number of recent studies suggest that U.S. public schools are failing to adequately educate our young people. Questions are being raised as to whether or not our children can read elementary books, do basic arithmetic, read simple maps, or even think. Many young adults are unfamiliar with world geography, don't know the meaning of basic words, and are ignorant of the most obvious scientific facts. As studies continue to reveal the nature and extent of this problem, concerned educators are beginning to suggest that our school system be dissolved and replaced with private institutions.

There are a number of good reasons why public schools should be dissolved and replaced with private institutions. First, as already mentioned, our public schools are failing to adequately educate our children. For example, even though we are spending more and more money on each child, scores on achievement tests are steadily declining.

Second, because the underlying philosophy of public schools is to meet minimum standards, excellence among high achievers is being discouraged. For example, while teachers attempt to provide every child with basic math skills, fewer of the most capable students are realizing their full potential.

Third, U.S. students are inferior to their international peers, meaning that future professionals in this country are more likely to come from other countries around the world.

Fourth, providing parents with tax credits and education vouchers would allow them to choose which schools they send their children to.

Parents could visit a number of different schools, considering the positive and negative qualities of each before making their decisions.

Finally, private schools could offer children more specialized educational opportunities. Their education could be geared more toward the specific professions to which they are most suited and to which they aspire.

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