

Humorous Lectures and Humorous Examples: Some Effects upon Comprehension and Retention

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This experiment studied the effect of humor and humorous examples upon the comprehension and retention of lecture material. Intact classes of university students ($N = 508$) viewed either a serious lecture or one of three versions of a humorous lecture. The three versions of the humorous lecture included humorous examples related to the concepts in the lecture (concept humor), unrelated to the concepts (nonconcept humor), or a combination of concept and nonconcept examples (mixed humor). A test of comprehension and retention was given twice: immediately after the lecture and 6 weeks later. Results indicated that immediate comprehension was not facilitated by the use of humorous examples. Upon retesting, however, retention of concept humor material was significantly improved by viewing a lecture with humorous examples illustrating concepts. Earlier research findings are accounted for in terms of these results.

The advice to use humor for communication enhancement has been considered in several empirical studies (Berlo & Kumata, 1956; Gruner, 1965, 1966). Only a handful of studies, however, have focused upon the efficacy of humor for lectures in a teaching situation. Although several studies have shown that humor can increase attention and interest in a topic (Gruner, 1970; Markiewicz, 1974), comprehension and acceptance of a message have not been demonstrated to improve when the message includes humor (Gruner, 1967, 1970; Kennedy, 1972; Markiewicz, 1974; Taylor, 1964).

One problem with humor studies that focus on learning is determining the nature of the humor the investigators used. Subjects' ratings of the perceived humorousness of a message were taken in only a minority of studies (Gruner, 1967, 1970; Kennedy, 1972; Lull, 1940). Most reports omit discussions of fundamental questions, such as how the humor was chosen in the first place and how the humor re-

lated to the persuasive or educational message.

Another difficulty with the research on humor and learning has been the method of evaluating learning. No experimenter stated exactly from where in the message that test items were taken. Because of this, two important questions become obvious: Did any test questions assess recall of material presented immediately before or after a humor item? Was humor associated in some way with the major points on which a listener was to be tested? Knowing how the humorous items in a message corresponded to subsequent test questions would allow a more accurate appraisal of humor's effect on learning.

The purpose of the present study was to explore the effect of two types of humor upon learning in a lecture situation. The two types of humor are humor related to the concepts presented in the lecture (or humorous examples) and humor unrelated to the lecture's content. The primary concern is to determine how varying correspondence of humor with the topics of a classroom lecture moderates the comprehension and retention of lecture material.

It is our hypothesis that people have good recall for specific humorous examples. A concept which is illustrated in a humorous manner might be learned more

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easily than a concept presented in a dull style. Humor unrelated to concepts, however, should not enhance learning. Previous research has not addressed this hypothesis because no study has investigated the effectiveness of humor for the presentation of substantive points.

Method

Subjects and Setting

The subjects were 508 undergraduate students at a large public university. These participants were enrolled in 16 sections of introductory psychology and the experiment was part of their regular instruction. Thus, subjects were run in large groups ranging from 23 to 45 students. Closed-circuit videotapes were customarily shown to all sections as part of the course instruction.

Lecture

Subjects saw one of four versions of a 20-min. black and white videotaped lecture about Freudian personality theory. Factual material in the lecture came from the chapter on Freud presented in Hall and Lindzey (1970). Points covered in the lecture included a biographical sketch of Freud; the concepts of id, ego, and superego; anxiety and defenses; stages of psychosexual development; neo-Freudians; and projective techniques of personality assessment.

Style Manipulation

One serious version and three humorous versions of the lecture were recorded on videotape. The humorous versions included humor directly related to some concepts in the lecture (concept humor), humor unrelated to any of the concepts (nonconcept humor), and a combination of some nonconcept and concept humor (mixed humor). Six main concepts were presented in each version and they were spaced evenly throughout the lecture. In the concept humor version, all of the concepts were illustrated by way of a humorous example. For the mixed humor version, three of the six concepts were presented in the form of a humorous example. An Assistant Professor of Psychology delivered all four versions of the lecture.

All humorous lines were practiced with a pilot audience and delivered on videotape with appropriate inflection to maximize their impact. An example of concept humor centered on the difficulty in interpreting sentence completion assessments of personality. After explaining the typical clinical procedure, the lecturer offered a variety of straight and humorous sentence completions. To the sentence "Animals . . ." the speaker responded with "scare me" for the nonhumorous version and used "often try to fool me" as the humorous punch line. Similarly, the stem "I would like . . ." met with "to

be a doctor" for the serious condition and "to drink blood" for the humorous condition. An example of nonconcept humor regarding psychosexual stages of development was the lecturer's comment that "Freudians would probably have a good time deciding what stage Linda Lovelace was fixated at."

Since earlier studies demonstrated that humorous comments enhance interest (Gruner, 1970; Markiewicz, 1974), it was anticipated that using either concept or nonconcept humor would heighten interest in our lecture. Greater interest due to humorous remarks could produce better attention to material after interest had been aroused. If so, students would perform better on items testing concepts presented after a humorous instance than on material covered prior to the use of humor.

Cover story. Immediately before viewing the lecture, the following cover story, which was signed by a member of the faculty, was read to all participants:

The lecture today will be a videotape on personality theories. Sometimes we present new lectures on an experimental basis. We are interested in finding out whether or not this tape provides a useful learning experience for students. To decide how well the tape presents the material, we will need your reactions immediately after the tape is shown.

One set of information we would like to get from each of you is your impression of the videotape. To do this, you will each fill out a checklist to describe the speaker and the content of his lecture. The other measure we would like from you is your answers to a brief quiz on the lecture's content. This quiz will not count towards your class grade; we simply want an indication of how effectively this tape conveyed the information. You may, however, be held responsible for some of this information on your next regular quiz.

Although the quiz and descriptions won't figure into your grade, please fill out your responses carefully and do the best you can on the quiz. This will help us make an accurate evaluation of the tape.

Manipulation check. After the videotape was played, a two-part questionnaire and an answer sheet were distributed to each student. The first section consisted of semantic differential scales describing separately the speaker and the lecture. Six word pairs taken from Smith (1959) were used to rate the speaker and the lecture. These word pairs were as follows: valuable-worthless, interesting-boring, serious-humorous, cold-hot, optimistic-pessimistic, and light-heavy. A numbered, five-choice response space separated each word pair. Subjects were instructed to mark on their answer sheet the number of the choice in each word pair that best described the lecture they had seen.

Comprehension check. The second part of the questionnaire was comprised of 11 multiple-choice questions on the content of the lecture. Of these items, 6 focused on the six critical examples used in the concept humor version. These items were

dubbed humor items. The other 5 items were based upon other information in the lecture and are defined here as nonhumor items. Subjects were instructed to record on their answer sheet which of four alternatives was the best response for each question. Two additional items on the questionnaire were included to code each subject's class section and grade on the previous unit exam.

Retention check. The same 11-item quiz was readministered to the subjects 6 weeks after the initial tape viewing and testing. This retesting was conducted by the instructor of each section.

Results

Manipulation Checks

To assess the effectiveness of the humor manipulations, mean ratings were examined for items asking where the speaker and the lecture stood on the continua serious-humorous and light-heavy. These two continua were selected because Smith (1959) found these variables to be reliable indicators of the humorousness of a message. Table 1 displays the results of this analysis.

Inspection of Table 1 suggests that all of the humorous lectures were perceived as significantly more humorous and light than the serious presentation. Although there were some differences between humorous lecture groups (e.g., the concept humor lecture was slightly less effective than the other humorous presentations), differences between the humorous groups were trivial in comparison to the strong differences between each humor group and the group hearing the serious presenta-

tion. These distinctions were noticeable when audiotapes, which were recorded while subjects viewed the lectures, were compared for volume of laughter. Unlike students viewing the serious version, those viewing humorous versions laughed during the lecture, especially in response to humorous punch lines. Thus there is compelling evidence that the manipulation was effective.

Group Equivalence

The present study was a quasi experiment in which treatments were allocated to intact classes of students. To determine whether there were preexisting differences between classes, scores on tests given prior to the experiment were compared. It was observed that any preexisting differences were statistically nonsignificant. To assure that the minor preexisting differences did not influence the interpretation of other data, prior test scores were used as a covariate and partialled out of all other analyses.

Test Performance

Results of test performance are presented in Table 2. Examination of Table 2 suggests that the groups differed on performance for nonhumor items, but did not differ for humor items. Results of a Scheffé test revealed that those witnessing the lecture containing the humorous examples (concept humor) performed least well on

Table 1
Means, Standard Deviations, and Analysis of Variance Results for Manipulation Check Scale Ratings

Group	Speaker				Lecture			
	Serious humorous		Light heavy		Serious humorous		Light heavy	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Serious	1.69	.79	3.08	.85	1.75	.85	3.25	.92
Nonconcept	2.94 _{ab}	.89	2.63	.84	2.87 _{ab}	.91	2.90	.91
Mixed	3.07 _{ab}	.97	2.59	1.04	2.75 _{ab}	.98	2.90	.97
Concept	2.69 _a	1.10	2.74	.95	2.59 _a	1.07	2.99	.91
<i>F</i> (3, 461)	53.75**		6.85**		33.33**		3.63*	

Note. Groups within columns marked by a common subscript do not differ at the .01 level. Anchors for the scales were serious (1)-humorous (5) and light (1)-heavy (5).

* $p < .05$.

** $p < .001$.

Table 2
Summary of Test Performance Comparison

Group	Item				Total	
	Humor		Nonhumor		M	SD
	M	SD	M	SD		
Serious	4.24	1.26	3.00	.94	7.24	1.76
Nonconcept	4.37	1.55	2.97	.83	7.34	1.98
Mixed	4.09	1.22	2.83	1.04	6.92	1.82
Concept	4.53	1.22	2.68	.88	7.21	1.59
<i>F</i> (3, 473)	2.42		2.96*		1.38	

Note. Data are based on 477 completed tests. Tests with missing responses were not processed.

* $p < .05$.

items based on seriously presented concepts in the lecture. It should be noted that these students performed nonsignificantly better on the items based on the humorous examples.

One test item was based upon a concept presented immediately after a joke in the nonconcept version of the lecture. A comparison of the serious and nonconcept humor groups for performance on this item and another item, taken from a concept presented immediately before the joke, allowed for a test of the hypothesis that humor-induced arousal facilitates learning. Analysis revealed no significant difference between the two groups on either of these test questions. However, performance on the postjoke item for the nonconcept humor group was slightly better and in the direction predicted by the arousal hypothesis ($p < .1$).

Posttest Performance

Table 3 summarizes the posttest performance results. Inspection of Table 3 indicates that the groups differed on performance for humor items, but not for non-humor items. The analysis of variance results were as predicted—groups viewing lectures with more concept-related humor did significantly better on items testing recall of the humorous examples than did the serious lecture group. Although total test scores were not significantly different, results were in the predicted direction.

Discussion

The results of this study suggest that

recall for humorous examples is good. As suggested by the first test, concepts presented in humorous examples were comprehended slightly, but not significantly, more by groups who had been exposed to humorous lectures. The posttest showed significantly greater retention of concept humor information among subjects who had been exposed to more humorous examples. Humorous examples may have served as cues for recalling information. In this case, the speaker's use of humor could have prevented the significant loss of communication effectiveness observed previously with high-credibility sources (Gillig & Greenwald, 1974).

Total test performance was not significantly improved by using humor in the lecture. Total test results for the initial quiz demonstrated that those exposed to humor performed equivalently to those viewing the serious presentation. Although their performance improved upon retesting, students viewing humorous lecture versions still did not perform significantly better than students viewing the serious lecture version. These overall test findings are consistent with the majority of research studies on the relationship between humorous lectures and learning (Markiewicz, 1974).

The present study indicates that the benefits of humor in the classroom are most clearly demonstrable for recall of humorous examples. Attention is probably focused on these humorous examples, which may distract listeners from information presented in a straightforward manner. Therefore, general comprehension and retention of a classroom message

Table 3
Summary of Posttest Performance Comparison

Group	Item				Total	
	Humor		Nonhumor		M	SD
	M	SD	M	SD		
Serious	3.69	1.05	3.00	.88	6.69	1.54
Nonconcept	3.74	1.52	3.07	.96	6.81	1.72
Mixed	3.91	1.18	2.79	.91	6.70	1.66
Concept	4.23	1.49	2.92	.78	7.15	1.70
<i>F</i> (3, 295)	2.83*		1.54		1.19	

Note. Data are based upon 299 completed posttests.

* $p < .05$.

is not significantly improved by the use of humor.

The outcome of the present study can account for the inability of earlier research to demonstrate an effect of humor upon learning. The use of humor significantly increased recall for only those test items based on humorous examples. Other studies on the relationship between humor and learning have rarely stated how their test questions corresponded to the concepts in the lecture. It is probable that the test items in previous studies were not all based on humorously illustrated material. In other words, earlier studies may not have been asking the appropriate test questions for determining the effect of humorous examples upon learning. The present study indicates that a positive effect of humorous examples only results when test items are based on those particular examples.

Our results concerning retention of humorously illustrated concepts provide an additional explanation for the lack of treatment differences reported in earlier humor and learning studies. Initial testing of subjects in the present study produced the expected, but nonsignificant, effect of humor examples on the comprehension of humor-related material. This trend gained statistical significance upon retesting. Some of the earlier research (Gruner, 1967, 1970) did not include any posttest of message content. Such retesting might have demonstrated a significant difference if the test questions related to the humor had been used. Studies which did retest subjects used quiz items which were ap-

parently not based on humorous examples. As shown by the present results, only post-test questions based on humorous material indicate a significant improvement in learning.

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