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Impact of presentation medium and message length on the persuasiveness of case history and statistical information

Bonnie Marie Hoffman

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IMPACT OF PRESENTATION MEDIUM AND MESSAGE LENGTH ON THE
PERSUASIVENESS OF CASE HISTORY AND STATISTICAL INFORMATION

A Thesis
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Psychology

by
Bonnie Marie Hoffman
August 1988
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ABSTRACT

The persuasive impact of case history or statistical information, presentation medium, and message length on decisions about psychology courses was studied. College students received case history or statistical information about psychology classes via videotape, audiotape, or in written form. In the case history video and audio conditions, confederates posing as students discussed their experiences in various psychology courses. In the statistical video and audio conditions, confederates posing as experimenters read mean ratings for various dimensions of psychology classes. In the case history and statistical written conditions, written transcripts of the other conditions were shown to the subjects. The subjects rated how interesting they found each course. A three-way analysis of variance found that there were no significant effects. The importance of a nonsignificant trend for the case history information to be superior to the statistical information only in the written conditions is discussed.
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INTRODUCTION

Much research has focused on the type of information people use when making decisions. Early studies (e.g., McArthur, 1976; Orvis, Cunningham, & Kelley, 1975) found that people utilize consensus information, which is information that indicates that many people respond to a certain stimulus or situation in a similar way. However, some researchers (e.g., Nisbett, Borgida, Crandall, & Reed, 1976; Kahneman & Tversky, 1973) disputed these findings, and two other research areas emerged. One group of experiments discovered that people underutilize or ignore statistical information, which is conceptualized as an extension of consensus information, since it represents data from numerous people. Another set of experiments showed that not only do people disregard statistics, they are also more influenced by case histories, which are anecdotes that describe a certain event or object in detail (Dickson, 1982). Case histories are typically from one or a few persons. Studies that have compared the effect of either behavioral base-rate or statistical data (both representing consensus information) and information from one or a few cases (usually called case histories) on decisions have overwhelmingly found that the case histories have more impact than the statistical data.

This thesis also examines the effect of case histories and statistical information on decisions, but in addition looks at the effects of other variables. In the section that follows, experiments that have examined the effect of consensus or base-rate information are discussed. Next, studies that have compared the impact of case histories and statistical information are reviewed. The literature on presentation
medium, a variable that is hypothesized to interact with information format, is reviewed. Lastly, the hypotheses are presented and the background surrounding the third variable in the experiment, message length, is presented. The larger issue that this experiment will address is how information can best be presented so that it will be most persuasive or effective. The information format, presentation medium, and length of the message all represent different styleds of or channels of information presentation.

Consensus and Base-Rate Experiments

Kelley (1973) proposed that people utilize consensus information when inferring the causes of events or behavior. Numerous studies support his conclusion (e.g., McArthur, 1976; Orvis, Cunningham, & Kelley, 1975; Ruble & Feldman, 1976; Zuckerman, 1978). Nisbett, Borgida, Crandall, and Reed (1976), however, questioned the validity of the consensus axiom. They contended that people are unaffected by their knowledge of the behavior of others—that people do not consider widely-held information when making decisions.

Nisbett et al. (1976) conducted several studies that led to their conclusion. In one experiment, they attempted to minimize depression by giving consensus information that depression is common. The study was spawned by the observation that many college students feel let down or depressed on Sundays by the ominous prospect of having to study. They reasoned that by giving students normative information that the Sunday blues is a common phenomenon, their depression might be alleviated. The subjects in one condition were told that a large percentage of students experience depression on Sundays. Another group was given the same consensus information plus a theory to account for its occurrence. A third group, the control group, was told that the researchers were studying mood patterns. All subjects filled out a questionnaire that assessed their
mood on Sunday prior to receiving any information, and on Sunday one week later. The researchers anticipated that the moods of the participants in the two experimental groups would be elevated on the second Sunday, since they had learned that Sunday depression was widespread. However, Nisbett et al. (1976) found no differences in mood between the two groups.

In addition to the above results, Kahneman and Tversky (1973) found that people ignore base-rate information when they predict to which category a target case belongs. In one of their experiments, Kahneman and Tversky told college students that a personality description had been chosen at random from a set of 100 descriptions from 70 lawyers and 30 engineers. If the vignette included the information that the person was conservative, careful, uninterested in political or social issues, and enjoyed carpentry and mathematical puzzles, the subjects ignored the base-rate information and judged the person to be an engineer. Nisbett et al. (1976) asserted that Kahneman and Tversky's findings supported their contention that people don't use consensus information. Nisbett et al. (1976) pointed out that consensus information is similar to base-rate information, except that consensus information is information about behavioral responses rather than about category membership.

Nisbett and Borgida (1975) conducted an experiment to determine if people would ignore statistics about the incidence of a behavior just as they had disregarded statistics about the frequency of category membership in Kahneman and Tversky's (1973) experiment. The researchers gave subjects detailed information about two previously conducted shock and helping experiments. One group was given the base-rate data for how the participants in the experiment had behaved, and the other group received no base-rate information. Subjects then read descriptions of a few specific individuals (i.e., physical and personality descriptions) or they saw three interviews with purported subjects which included
information such as what their majors were, career plans, and hobbies. The subjects were asked to indicate how they thought the individuals they had seen had behaved in the experiment, and how they themselves would have behaved had they participated. The researchers found that the subjects ignored the base-rate information when they made their decisions. Their choices were similar to those made by subjects in the control group who received no base-rate information.

Hamill, Wilson, and Nisbett (1980) also found that subjects paid no attention to base-rate information. In their experiment, subjects saw a videotape of a humane or an inhumane prison guard. They were then told that the guard they had observed was either representative or unrepresentative of prison guards. Their attitudes toward prison guards were then assessed, and it was found that subjects had responded to the humaneness of the guard they saw, not to the representativeness. In a second experiment, subjects read a case history of an irresponsible woman who had been on welfare for years. One group of subjects also read statistics (a sentence that stated the average length of time on welfare) that implied that the woman was typical of welfare recipients, and the other group read a sentence that implied that she was atypical. A third group of subjects, the informed control, did not read the case history but did read a quiz about welfare which included, in addition to filler items, the length of the average stay (the same as in the atypical condition). When attitudes toward welfare recipients were assessed, Hamill et al. (1980) found that subjects in the typical and atypical groups rated welfare recipients unfavorably. Furthermore, the informed control group did not differ from the control group in their rating. That is, reading favorable statistics did not change the subjects' ratings, as if they judged the statistics to be meaningless.

Salthouse, McKeachie, and Lin (1978) compared anecdotal comments
combined with statistical information to the same comments presented alone. Subjects, who were senior faculty members on promotion committees, were presented with fictitious dossiers of faculty members. Their task was to decide whether the professors should be promoted. The written information was in two forms: The department chairperson's report of the individual's teaching performance (case history condition) or the chair's report supplemented by numerical mean student ratings of teaching effectiveness for all courses that the candidate had taught in the past two years (case history plus statistics condition). Salthouse et al. (1978) found that the mean ratings had no effect on whether the candidate was promoted.

Lin, McKeachie, and Tucker (1984) conducted a similar experiment. They reasoned that student evaluations might be utilized more by promotion committees if they were presented in a more concrete and vivid (as opposed to statistical) manner. Therefore, committee members were presented with statistical summaries of student ratings. These consisted of numerical ratings along a 5-point scale of various aspects of the course (e.g., course structure and difficulty) or statistical summaries supplemented by actual student quotes. For example, if an instructor was rated highly, the accompanying quotes reflected the students' admiration for the instructor's ability. If the instructor was average, the quotes reflected his or her "averageness." The researchers found, as expected, that if a candidate received high student rating, he or she was more likely to be promoted if quotes supplemented the ratings than if they did not. Conversely, if an instructor obtained average ratings, her or she was less likely to be promoted if quotes were seen than if they were not.

**Case Histories versus Statistics**

Most of the previous experiments discovered that information representing a
compilation of information from numerous people—whether it is labeled base-rate, consensus, or statistics—is ignored by people. Two experiments (Lin et al., 1984; Salthouse et al., 1978) found that not only do people disregard statistical information, they also prefer to utilize information, in the form of comments, from only a few persons. Related to this research, many experiments have also found that people are more influenced by detailed case histories than by various types of statistics.

Anderson (1983) presented college students with either two detailed case histories (which included background information and overall job performance ratings) or a statistical summary that indicated either a positive or a negative relationship between trainee firefighters' risk preference and their subsequent success as firefighters. The subjects were then told that the information was fictitious, and asked to indicate their beliefs about the true nature of the relationship. Anderson found that subjects were more influenced by the case history than the statistical data.

The results of an experiment by Koballa (1986) were consistent with those of Anderson (1983). Koballa presented preservice elementary school teachers with two types of information designed to convince them that a science program supplemented by hands-on activities was better than the traditional textbook programs. The participants read either a case history or a data-summary. The case history consisted of one teacher's enthusiastic account of a successful experience with the hands-on program. The teacher recounted such details as her trepidation about using the new program, and the students' excitement when they discovered that their shrimp eggs had hatched. The author of the data-summary (statistical) condition indicated that he or she reached the conclusion that the innovative program was better than the traditional program through an analysis of 5-18 studies that had compared the performance of
children in the two programs. Koballa found that teachers who read the case history were more likely to change their attitudes about the new program than were teachers who read the data-summary.

Dickson (1982) presented female P.T.A. and church group members with written case history or statistical information regarding refrigerator performance. The case history information was given in two forms. The short form contained five brief quotes that were responses to the question of whether their refrigerator had broken down. The longer anecdote described one refrigerator's breakdown in detail and included the consequences of the breakdown. It mentioned annoyances such as spoiled food and difficulty finding a repairman. The brief statistics indicated the percentage of refrigerators that did and did not break down. The longer statistics were reported in a form very similar to the long case histories. For example, in the case history, a sentence was "We threw out about $20 worth of food" and in the statistics the corresponding sentence stated "On average, food wastage amounted to $20" (p. 401). The subjects' task was to estimate the likelihood of a "Brand X" refrigerator breaking down. Dickson (1982) found that the women were more influenced by the case history than the statistical information. However, providing outcome information (in the longer version) did not have an effect on failure estimates.

Apparently, the superiority of case histories over statistics is a robust finding. A search of the literature failed to yield any experiments that found that statistics were more impactful than case histories, or that found no significant differences between the two types of information.

Presentation Medium

Another variable that has been the object of extensive research is the medium through which information is presented. Unfortunately, research examining the
impact of persuasive information presented through various media has yielded mixed results. Early research demonstrated that persuasive messages were the most effective when communicated live or via videotape. For example, Knower (1935; 1936) presented a speech in favor of or opposing prohibition utilizing a live and a written condition. He discovered that the speech was more persuasive when presented live than when written. Wilke (1934) obtained similar results. He presented college students with a speech which advocated a controversial, nontraditional position (either in favor of atheism, contraception, reallocating wealth from the rich to the poor; or opposing war). In the live condition, the speaker gave a speech in person. In the audio condition, the speech was broadcast simultaneously to another room of subjects. A transcript of the speech was shown to the participants in the written condition. Wilke found that the attitudes of subjects who heard the live presentation underwent the greatest change. In addition, participants in the audio condition were persuaded more than were those in the written condition.

More recent studies have also found an advantage for a live presentation of information. Worthington and Feldman (1981) pre- and posttested subjects for ice-water tolerance. In between the sessions, the subjects received a message promoting the use of imagery to control pain. The message was either delivered by a live speaker or was in printed form. Participants who heard the speaker indicated that they felt lower pain in the posttest than did those who read the message. In another experiment, Reitz and Hawkins (1982) employed live, audiotaped and written conditions in order to persuade nursing home residents to engage in daily recreational activities. In the written condition, large signs placed around the nursing home indicated the type of activity planned, the time, and the place. The same information broadcast over a loudspeaker comprised the audio condition. In the audio-live condition, the information was announced over the
loudspeaker, and in addition, the recreation director invited each resident personally. The investigators discovered that when the written and audio recruiting procedures were used, attendance at the activities was very low. When residents were issued a personal invitation, attendance was significantly higher.

However, a number of studies have found no difference in effectiveness among the media (e.g., Borgida, 1979; Erikson, Lind, Johnson, & O'Barr, 1978; Frandsen, 1934; Tannenbaum 1953; Tannenbaum & Kerrick, 1954; Werner, 1978; Werner & Latane, 1976), or have obtained findings opposite of those of previous researchers (e.g., Helmreich, 1976; McGinnies, 1965; Nasser & McEwen, 1976). Frandsen (1963) presented a pro-population control message to subjects in a live, videotaped or audiotaped condition. He found that the three media were equivalent in the amount of opinion change produced. Werner and Latane (1976) confirmed Frandsen's findings. In their experiment, subjects participated in pairs in a discussion about a client in a counseling center. Prior to the discussion, the dyads read different case histories so that they formed opposite opinions about the person. In the live condition, the students communicated face-to-face. In the videotaped condition, they used microphones and headsets, and saw their partners on a television screen. Only microphones and headsets were used in the audio condition, and subjects in the written condition corresponded by writing notes. The authors discovered that opinion change did not differ across the presentation modalities.

In another experiment, Borgida (1979) examined the impact of live versus video presentations. Subjects received witness testimony regarding the character of the plaintiff in an automobile negligence trial. In one condition, the witness was actually present relating testimony. In the other, a court reporter on videotape read a transcript of the witnesses' testimony. Borgida found that the mode of presentation had no effect on judgments of negligence.
The impact of audio versus written headlines was assessed by Tannenbaum (1953), and Tannenbaum and Kerrick (1954). Subjects heard verbal headlines followed by a radio news story or they read newspaper headlines and the accompanying story. One story concerned a murder trial, and the headlines pronounced the defendant guilty, innocent, or didn't say. The second story was about accelerated college programs. The headline advocated the quarter system, trimester system, or was against the program. The researchers discovered that audio and print headlines were equally effective in influencing interpretation of the news story.

Participants in an experiment by Erikson, Lind, Johnson and O'Barr (1978) were exposed to audiotaped or written testimony. The style of speech was either "powerless"—involving the frequent use of hesitant words and a questioning tone, or "powerful"—involving an infrequent use of the above features. The subjects rated the witnesses' attractiveness, credibility, and whether they agreed with the speakers positions. However, no differences were found between the two channels of presentation.

The effectiveness of live, phone and letter conditions was examined by Werner (1978). Subjects were contacted and asked to participate in a psychology experiment. The experimenters recorded their initial responses and also whether subjects who agreed to participate performed the next step—telephoning the campus phone number. Werner found that the media were equally effective, with one exception. Subjects who agreed to participate were more likely to make the phone call if they had been contacted in the face-to-face condition than in the phone condition.

As noted by Taylor and Thompson (1982), several more recent studies have demonstrated that, while one medium is not consistently superior to another, the medium interacts with other factors. Researchers have found, for example, that
under certain conditions a written message is the most effective form of presentation, and under other conditions, a videotaped communication is superior. One of the interacting variables is communicator credibility. Worchel, Andreoli, and Eason (1975) presented subjects with a televised, audiotaped or written message about clean-up of a river with which they agreed or disagreed. The information was presented by a trustworthy or untrustworthy communicator (a newscaster or political candidate, respectively). Worchel et al. found that there were no differences in effectiveness for the three media if the participants agreed with the message. However, if they disagreed, television was the most effective medium for the trustworthy communicator, and radio was superior to the written mode; whereas a written message was the most effective medium for the untrustworthy communicator, followed by radio and television.

In a similar study, Andreoli and Worchel (1978) again employed a message presented across the three modes of presentation by a trustworthy and an untrustworthy communicator. As found previously, television was the most effective medium for the trustworthy communicator and the least effective for the untrustworthy communicator.

Other factors such as the difficulty of the message and the likability of the communicator also interact with the presentation media to produce its differential effectiveness. In an experiment by Chaiken and Eagly (1976), subjects were presented with an easy- or difficult-to-understand message about a company-union disagreement over the three presentation media. They found that if the message was difficult, the written mode of presentation was superior (and audio was better than written). However, if the message was easy, television was the best mode of presentation, followed by audio and then print.

In another study, a likable or unlikable speaker delivered a videotaped, audiotaped or written speech supporting a change to the trimester system. His
remarks about the students at the university were designed to make him appear either likable or unlikable. Chaiken and Eagly (1983) found that the likable speaker was more persuasive when the message was videotaped or audiotaped than when it was written. The findings were reversed for the unlikable communicator. He was the most persuasive in the written as opposed to the videotaped or audiotaped conditions.

Borgida and Nisbett's (1977) Experiment

The present experiment was modeled after one conducted by Borgida and Nisbett (1977), which examined the effectiveness of case histories versus statistics. The researchers' alleged purpose was to learn which courses psychology students planned to take so that the psychology department could plan effectively. All subjects were asked to read the course catalog and indicate which courses they thought they would take. Subjects in the control group received no further information. The experimenters told the two experimental groups that they wanted to give them some additional information on some of the large enrollment courses before they made their decisions.

In the base-rate, or statistical condition, participants read 10 course descriptions. Each description was followed by a mean course evaluation marked on a 5-point scale which ranged from poor to excellent. Also indicated was the number of students in the course who had contributed to the rating. The number ranged between 26 and 132.

In the face-to-face or case history condition, the experimenter read each course description. Next, for each course, between one and four undergraduate psychology majors who had actually taken the courses commented on what they had liked and disliked about the course. Ten students participated. They first rated the course on the 5-point scale and then were permitted to say whatever
they wanted in a 2 min period. Borgida and Nisbett (1977) found that the information presented face-to-face had a significant effect on course choice, and the base-rate information had no effect.

Borgida and Nisbett (1977) performed a second experiment in which, in addition to the mean ratings, subjects in the base-rate condition read a written verbatim transcript of the verbal comments from the face-to-face condition. They were told that the comments were chosen because they were representative of the comments made by students. The researchers found that the subjects' decisions were influenced by the face-to-face information and not the base-rate information.

Current Experiment

Although previous studies have assessed the impact of case history and statistical material on decisions (e.g., Anderson, 1983; Dickson, 1982) or have examined the effects of the various presentation media on decisions (e.g., Frandsen, 1963; Reitz & Hawkins, 1982; Worchel, Andreoli, & Eason, 1975), they have not looked at the effects of both variables in the same experiment. Instead, case histories and statistics have been studied almost exclusively in the written modality. Thus, the main purpose of this experiment was to expand upon that basic paradigm. This was done by adding two additional presentation media, video and audio, to the design so that the interaction between information format and presentation medium could be studied. Although research on the medium of presentation has not shown that one medium is consistently better than the others, one promising finding is that the media interact with other variables (Taylor & Thompson, 1982). For example, Chaiken and Eagly (1976) discovered that one of these variables is difficulty. Because the case history and statistical information may be conceptualized as easy and difficult, respectively, it is therefore reasonable to expect that there may be a significant interaction between these
variables. The effect of a third variable, message length, and its interaction with information format and presentation medium was also examined.

In the present experiment, the subjects' task was very similar to the one in Borgida and Nisbett's (1977) experiment. The subjects were told that the psychology department was in the process of planning courses, and wanted to know how interesting students found certain courses to be. First, the subjects were presented with a list of various psychology classes along with course descriptions. They then received additional information in the form of students' evaluations of the courses. This information consisted of either statistics or case histories, and was presented via one of three presentation media: video, audio, or written. The statistics presented were mean ratings for various aspects of the course. The case histories contained information about the same course dimensions, although in the form of a student's anecdote about the course. The participants were told that the ratings were provided by students who had taken the courses, although they were actually fabricated. In the video and audiotaped conditions, the statistics and case histories were presented by confederates, while in the written conditions the subjects read the information. After receiving information about each psychology course, the subjects rated how interesting each course sounded.

The current experiment expanded upon previous experiments in several ways. First, it was designed to eliminate certain confounds that were inherent in Borgida and Nisbett's (1977) experiment. They examined the effects of information format and presentation medium, but the format, base-rate and face-to-face, was confounded with the mode of presentation which was live versus written. They presented the base-rate information only in written form and the face-to-face information in the live condition. In the second experiment, they presented the case history information in print as well as live, but presented the statistical
information in print only and failed to present it live. By factorially manipulating both information format and presentation medium, the current experiment eliminated this problem.

The current experiment also attempted to control for the length of information that was presented to subjects. Toward this end, both the case history and statistical passages were approximately equal in length. In most experiments, the length of the two informational passages has been equated (e.g., Dickson, 1982; Koballa, 1986). However, this was not the case in Borgida and Nisbett's (1977) first experiment, in which the statistical information consisted of one word, whereas the case histories contained all of the information that students could fit into a 2 min period.

Hypotheses

The first hypothesis was that the case histories would be more persuasive than the statistics. Previous research strongly supports this prediction. The second hypothesis proposed an interaction between information format and presentation medium. As discussed earlier, message difficulty is one variable which has been found to interact with the presentation medium. To reiterate, Chaiken and Eagly (1976) found that easy messages were most persuasive when presented via videotape, less so when audiotaped and least persuasive when written. Difficult messages were more persuasive when written than when videotaped or audiotaped. It was expected the the statistical information would be more difficult than the case history information for the subjects to understand. There is abundant evidence that people do not understand statistics (e.g., Hamill, Wilson, & Nisbett, 1980). If this is the case, then Chaiken and Eagly's (1976) findings predict that the case histories would be most persuasive in the videotaped condition and the statistics most persuasive in the written condition. Therefore, the hypothesis
was that case histories, being easier to understand than statistics, would be most persuasive when videotaped, less persuasive when audiotaped, and least persuasive when written. Statistical information was hypothesized to be the most persuasive when written than when videotaped or audiotaped.

The third hypothesis concerned the length of the case history and statistical passages. Originally, length was included in the experiment as a control measure. Efforts were made to equate the lengths of the case history and statistical passages. However, it was decided to treat length as an independent variable, and to present the passages in long and short form. Due to the paucity of research on message length, a specific hypothesis was not formulated, although several outcomes are possible. One possibility is that the longer case histories and statistics may be more persuasive than the shorter ones. It seems logical that a longer version of persuasive material would be more influential than a shorter version, even though this hypothesis was in possible contradiction to the experiments on message length. Perry and Boyd (1974a) presented messages that were 1, 5, or 10 words long, and found that communication accuracy increased with length. However, in a subsequent study, Perry and Boyd (1974b) discovered that when the messages were 10, 20, or 30 words in length, there were no differences in accuracy.

Another possibility is that there may not be a main effect for length, but that it might interact with another variable. Length might interact with information format, in that increasing the amount of information might be more effective for only one type of information, such as case histories. An increase in length may actually be detrimental for statistical information, as a consequence of the increase in complex information. Length might also interact with the presentation medium. Certain media might enhance the persuasive impact of the material with only short or only long messages.
METHOD

Subjects

The subjects were 54 female and 32 male undergraduates enrolled in psychology and other courses at Chaffey College and California State University, San Bernardino. Most of the subjects received course credit for their participation. The data from 25 subjects were discarded (leaving 86 subjects) because they had either taken one or more of the eight courses about which case history or statistical information was presented, or they had taken more than five psychology courses.

Materials

The statistics and case histories included statistical or anecdotal information about eight psychology courses. To determine which courses should be included in the experiment, a pilot study was conducted in which students from an Introductory Psychology course read a list of 31 psychology courses. Each course title was followed by the description from the university catalog. The students indicated how likely they would be to take each course on a scale from 1-10. The eight courses with the highest number of responses in the 4-7 range (moderately popular) were chosen for the experiment.

The courses were rated on a 5-point scale, which included poor, fair, good, very good, and excellent. Because an attempt was made to persuade participants to take or not to take the courses, the rating of good (equivalent to average) was not assigned to any of the courses. Each of the courses was randomly assigned one
of the four remaining ratings. They included: Behavior Modification (excellent), Communication Processes (excellent), Biopsychology (very good), Cognitive Psychology (very good), Learning and Motivation (fair), Perception (fair), Psychology of Reading (poor), and Industrial Psychology (poor).

The statistics and case histories were structured around a set of four or nine course dimensions which assessed teaching effectiveness. (See Appendices A and B for complete statistics and case histories). The short versions (73-82 words) covered four dimensions, which were (a) overall quality of instruction, (b) ability to make material understandable, (c) receptiveness to students' comments and questions, and (d) perception of the instructor's knowledge of the subject matter of the course. The long versions (170-178 words) covered nine dimensions which included the four listed previously, plus (e) ability to stimulate interest in the course, (f) organization of the course, (g) fairness of evaluation standards, (h) enthusiasm, and (i) ability to intellectually challenge students. In each set of statistics, the first piece of information presented was the mean overall rating. In each case history, the first statement indicated the overall rating of the course.

The statistical information consisted of means for the aforementioned dimensions of the eight courses. The short set of statistics included a mean presented for each of the four dimensions, and the longer set included the mean for each of nine dimensions (See Appendix A). The numbers 5, 4, 3, 2, and 1 corresponded to the ratings of excellent, very good, good, fair, and poor.

The case histories contained the same information as did the statistics, but in a different format. The case histories were fictional, anecdotal accounts of students' experiences in psychology courses. Each dimension was covered by a comment that corresponded to it. For example, for the dimension--"Ability to make course material understandable" and the rating of very good, the comment in one case history was "Extra time was devoted to making sure that students understood the
difficult concepts". The comment in another was "He repeated material, which really helped me to learn it". All of the case histories contained the same general information since they covered the same dimensions (See Appendix B). The comments were generated by the experimenter as well as advanced psychology students in a separate pilot study. The students in the pilot study were given a form that listed a subset of the dimensions, and were asked to list comments that they might give for each dimension at a certain rating.

**Dependent Measure**

The instructions requested that subjects indicate how interesting each psychology course sounded to them on a scale that ranged from 1 (extremely uninteresting) to 10 (extremely interesting). Each course title was followed by the description from the university catalog. Subjects rated a total of 16 courses. Eight courses from a range of areas in psychology were listed first. A list of the eight courses about which the experimental groups received additional information comprised the second set of courses. (See Appendix C for the dependent measure).

**Design**

One within- and two between- subjects factors were manipulated in a 2 X 2 X 3 factorial design. The within-subjects variable was length of the course information (short or long). The between-subjects variables included information format (case histories or statistics) and presentation medium (video, audio, or written). The resulting six experimental groups and the number of subjects in each condition were: Case history-video (10), case history-audio (10), case history-written (7), statistics-video (16), statistics-audio (20), and statistics-written (11). A control group that contained 12 subjects was also included.
All subjects in the experimental groups received information about each of the eight courses. The information was in short form for four courses, and in long form for four courses. Whether each course would be presented in short or long form was determined randomly for each subject and was counterbalanced across subjects. The presentation order for the courses was random.

Procedure

The experimental sessions were conducted in groups. The subjects were randomly assigned to one of the seven conditions. For all conditions, the experimenter introduced herself and explained the ostensible purpose of the experiment. She stated that she was on a committee that was concerned with long range planning for the psychology department and that they were interested in finding out which psychology courses psychology majors and nonmajors find most interesting.

All subjects except those in the control group then read a list of eight courses that were briefly described and rated how interesting they found each course. They were instructed not to rate courses that they had taken or were currently taking. These courses were only included to appear consistent with the apparent purpose of the experiment; consequently, subjects' ratings for these first eight courses were not included in the data analysis. Subjects in the control group read course descriptions and rated all 16 courses. They did not receive any further information.

The experimenter told participants in the conditions other than the control that she wanted to give them information about another set of courses that was more detailed than the university catalog's course description. The procedure was identical in all of the conditions. The subjects first read the course description. Next, the course information (case history or statistical) was presented via
videotape, audiotape, or on paper. Immediately after they received information on a course, the subjects rated how interesting they found the course. This sequence was repeated for each of the eight courses.

Subjects in the case history conditions were told that upper-division psychology students who had taken the courses were asked to comment on them and that they were requested to structure their comments around the dimensions that are used when courses are evaluated. In the case history-video condition, a videotape of a confederate commenting on what he or she liked and disliked about the course was shown for each of eight courses. Each student on the videotape began by rating the course on a 5-point rating scale. The procedure in the case history-audio condition was identical to that in the previously described condition, except that the subjects heard only the audio portion of the videotape without seeing the video portion. In the case history-written condition, subjects read a written transcript of the course comments presented in the other case history conditions.

The subjects in the statistical conditions were told that they would receive the evaluations that previous students had given the courses, and that the evaluations were based on at least 20 students per course. They were told that the ratings would be given for a number of course dimensions, as well as an overall rating, and that a 5-point scale would be used. In the statistics-video condition, subjects saw a videotape of a confederate reading the means for each of the four or nine course dimensions for each of the eight courses. The procedure in the statistics-audio condition was identical to that in the statistics-video condition, except that the subjects heard only the audio portion of the videotape without seeing the video portion. In the statistics-written condition, subjects read the statistical information.

After the subjects rated the courses, they listed their sex and any psychology
courses that they had taken and then were debriefed.
RESULTS

For each subject in the six experimental conditions, a difference (or change) score was calculated for each of the eight courses. This score reflected the for each course. A positive difference score indicated that the change was in the direction hypothesized and a negative score indicated that the change was opposite of the direction hypothesized. In the first analysis, difference scores, rather than raw scores, were analyzed because the variables length and rating were not controlled factorially. Each subject received four long and four short case history or statistical passages. Of these eight courses, there were two per each of the four ratings (excellent, very good, fair, and poor). Although the length (long or short) of each course was counterbalanced across all conditions, it was not counterbalanced for subjects in each separate condition. For example, a subject might have received information in long form for both courses that were rated excellent instead of receiving one long and one short form. Thus, difference scores were used since, unlike raw scores, they were independent of the rating. Consequently, the possible confound was eliminated.

Analysis of difference scores

The mean difference scores for information format, medium, and length are presented in Table 1. All of the scores are positive, which indicates that the ratings had a persuasive effect. In the written condition, the mean scores for case histories are noticeably higher than the scores for the statistics. This is true for both the long and short information. In the videotaped condition, the mean score for
Table 1

Mean Difference Scores as a Function of Information Format, Presentation Medium, and Length

<table>
<thead>
<tr>
<th>Information Format</th>
<th>Short</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video Audio Written</td>
<td>Video Audio Written</td>
<td></td>
</tr>
<tr>
<td>Case Histories</td>
<td>.763</td>
<td>1.242</td>
</tr>
<tr>
<td>Statistics</td>
<td>1.476</td>
<td>.366</td>
</tr>
</tbody>
</table>
However, a three-way mixed analysis of variance (ANOVA) conducted on the data found nonsignificant results for the main effects: information format, $E(1, 68) < 1$; medium, $E(2, 68) = 1.63$; and length, $E(2, 68) < 1$. The effects for information format $X$ medium, $E(2, 68) = 1.77$; information format $X$ length, $E(2, 68) < 1$; medium $X$ length, $E(2, 68) < 1$; and information format $X$ medium $X$ length, $E(2, 68) = 1.31$ were also nonsignificant.

Analysis of raw scores
In the second analysis, the variable of length was collapsed, and raw scores were analyzed for each of the four ratings. The mean scores for information format, medium, and rating are presented in Table 2. The possible scores ranged from 1-10, 10 being best. Table 2 shows that the scores are highest for the rating of excellent, slightly lower for very good, lower by a larger margin for fair, and the lowest for poor. A three-way mixed ANOVA found that these differences between the ratings were significant, $E(3, 204) = 56.33$, $p < .001$. However, significant effects were not found for information format, $E(1, 68) = 1.62$ or medium, $E(2, 68) = 2.26$. The interactions were also nonsignificant: information format $X$ medium, $F(2, 68) < 1$; information format $X$ rating, $E(3, 204) = 1.59$; medium $X$ rating, $E(6, 204) = 1.29$; and information format $X$ medium $X$ rating, $E(6, 204) = 1.36$;

Analysis of raw scores: High scores vs. low scores
The final two analyses examined the effects of the two higher ratings, excellent and very good, and the two lower ratings, fair and poor, separately. The analyses were conducted because of the possibility that effects of the independent variables existed, but were rendered nonsignificant when the high and low ratings were combined in one analysis. In the first analysis, the effects of only the
Table 2
Mean Scores for Each Rating as a Function of Information Format, Presentation Medium, and Length

<table>
<thead>
<tr>
<th></th>
<th>Case Histories</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Video</td>
<td>Audio</td>
</tr>
<tr>
<td>Excellent</td>
<td>6.95</td>
<td>6.70</td>
</tr>
<tr>
<td>Very Good</td>
<td>6.85</td>
<td>6.75</td>
</tr>
<tr>
<td>Fair</td>
<td>3.95</td>
<td>4.80</td>
</tr>
<tr>
<td>Poor</td>
<td>3.50</td>
<td>4.45</td>
</tr>
</tbody>
</table>
excellent and very good ratings were considered. The data can be seen in Table 2. As in the previous analysis, a three-way ANOVA found that the differences between the ratings were significant, $F(1, 68) = 52.93, p < .01$. However, the remaining effects were nonsignificant: information format, $F(1, 68) = 2.74$; medium, $F(2, 68) < 1$; information format X medium, $F(1, 68) < 1$; information format X rating, $F(1, 68) = 3.23$; medium X rating, $F(2, 68) = 1.36$; and information format X medium X rating, $F(2, 68) = 1.33$.

When the effects of only the fair and poor rating were examined, a three-way mixed ANOVA yielded results similar to the previous analysis. The only significant effect was for the differences between the ratings, $F(1, 68) = 4.15, p < .05$. The other main effects were nonsignificant: Information format, $F(1, 68) < 1$; and medium, $F(2, 68) = 2.86$. The interactions were also nonsignificant: information X medium, $F(2, 68) = 1.59$; information format X rating, $F(1, 68) = 1.60$; medium X rating, $F(2, 68) < 1$; and information format X medium X rating, $F(2, 68) < 1$. 
DISCUSSION

None of the hypotheses were supported. Case histories were not found to be more persuasive than statistical information and the presentation media did not interact with the information format. A main effect for the length of the passages was not found, and the message length did not interact with either information format or presentation medium. It should be pointed out that the small sample size may have been responsible for the lack of significant results. It is difficult to conclude that the various factors had no effect, since the results are based on so few subjects.

The finding that case histories were not more persuasive than statistics contradicts the findings of previous studies (e.g., Anderson, 1983; Dickson, 1982; Hamill, Wilson, & Nisbett, 1980; Koballa, 1986; Lin, McKeachie, & Tucker, 1984; Nisbett & Borgida, 1975, 1977; Salthouse, McKeachie, & Lin, 1980) that found that case histories were more influential than statistics. Since the superiority of case histories over statistical information has been a robust finding, but was not found in this experiment, it seems possible that the use of different statistical material in the current experiment could be responsible. One difference between the present experiment and Borgida and Nisbett's (1977) study was that, in this experiment, the amount of information and the content of the case histories and statistics was controlled for. This was not done in Borgida and Nisbett's experiment. Their statistical information consisted of one number, whereas their case histories contained all of the information speakers could fit into a 2 min period. However, several researchers (i.e., Anderson, 1983; Dickson, 1982; Koballa, 1986) did
equate the amount and type of information in the case history and statistical passages and found that case histories were still more influential. Therefore, controlling for the length and the content probably cannot totally account for the lack of differences in the present experiment.

One explanation for why some previous studies found that case histories were better than statistics and the current experiment did not may be attributable to differences in the format or complexity of the statistical material. The statistical material in the present experiment may have been simpler and easier to understand than the statistical passages in previous experiments (i.e., Dickson, 1982; Koballa, 1986). In the current experiment, the presentation of four or nine mean ratings that were all similar created a strong, clear impression of the course and the instructor. The repetitive nature of the information (i.e., the same course dimensions repeated for each course) may have made the information easily comprehensible and may have increased the saliency of the statistical information. In addition, the statistical material was uncomplicated. The only type of statistic that the subjects received was a mean, which was not a difficult piece of information and is a term that many people are familiar with. The subjects were even informed that a mean was the same as an average.

In contrast, the statistical passages described by Dickson (1982) and Koballa (1986) appeared more complex and harder to integrate. Their statistics were embedded within a narrative, which seemed to increase the complexity because the subjects had to extract the statistical information from the narrative. Also, in Koballa's experiment the statistical information was presented primarily using the term percentile point. The passage also included statistical jargon (e.g., "quantitative synthesis of the research", Koballa, 1986, p. 441).

Despite the above speculation, the possibility exists that the present findings are consistent with those of previous researchers (i.e., Anderson, 1983; Dickson,
In the written condition, both the long and short case histories were more influential than the statistics, although the trend was nonsignificant. This trend was not evident in the videotaped and audiotaped conditions. Anderson (1983), Dickson (1982), and Koballa (1986) all presented case history and statistical information in written form. It may be that print is the appropriate and only form in which to see differences between case histories and statistics. Video and audio presentations, by their very nature, may cause information to be more vivid, thus neutralizing any advantage of case histories over statistics. There is considerable experimental support for the idea that vivid information tends to be more persuasive in general. (See Taylor & Thompson, 1982, for a review). Video and audio presentations could conceivably make statistical information more concrete, salient, and interesting, thus rendering it as persuasive as case histories. If it is true that case histories are superior to statistics only in the written condition, this would indicate that the previously established main effect of case histories over statistics was found only because previous researchers restricted their information to one presentation modality. An interaction with presentation medium may exist, and future research is needed to further explore this possibility.

The second major finding was that the presentation medium did not interact with the information format. This finding conflicts with a number of studies that have found that one medium was more effective when it interacted with another variable (e.g., Andreoli & Worchel, 1978; Chaiken & Eagly, 1976, 1983; Worchel, Andreoli, & Eason, 1975). Case histories and statistics were expected to interact with the media in the pattern discovered by Chaiken and Eagly (1976). It is possible that the predicted differences were not found because of the profoundly different ways in which difficulty was conceptualized in the current experiment and in Chaiken and Eagly's experiment. In the present experiment, case histories and
statistics were expected to represent different levels of difficulty, being easy and
difficult, respectively. In Chaiken and Eagly's experiment, the level of difficulty
was manipulated by varying the complexity of the language in the passages. It
may be that there are differences among the media, but only when a narrow
definition of difficulty is used. An alternative explanation of the findings is that the
common belief that case histories are easier to comprehend than statistics is
erroneous. As discussed earlier, the statistics in this experiment, as well as the
repetitive format in which they were presented, probably made them
understandable. Consequently, it may be that an interaction between the
presentation medium and information format was not found because the case
histories and statistics in the present study were both easy to understand.

The remaining variable, message length, did not exert a main effect. The
expectation that the longer case histories and statistics would be more persuasive
than the shorter ones was not supported. This finding is consistent with Perry and
Boyd's (1974b) finding that communication accuracy did not increase when 10,
20, or 30 word messages were used. However, it is plausible that longer
messages are more effective than shorter ones, but that there was not a large
enough difference in the lengths of the messages in this experiment. The short
and long messages covered four and nine points, respectively, and the decision to
use these levels was arbitrary. It may be that the longer message must be much
longer than the shorter one for it to be more persuasive. Message length also
failed to interact with information format or presentation medium.

The nonsignificant results may have been attributable in part to several
problems with the videotaped and audiotaped anecdotes that may have reduced
the believability of the case histories. It was crucial that the case histories appear
to be real evaluations from actual students. If they weren't believable, the subjects
may have discounted the information. The first problem concerned the scripts
being read. To control for the amount of information and the content, the
colleagues read case histories created by the experimenter. The disadvantage
to this control could have been that the colleagues lacked the ease and
spontaneity that they may have possessed if they'd given actual evaluations of
courses they had taken or had written the vignettes themselves. Another problem
was that the information may have sounded as if it was being read—as several
subjects commented. This was probably because the passages were read from
cue cards, and the colleagues were students, not trained actors. A third problem
was that it is very likely that there were differences in persuasiveness and
personal appeal among the five men and women who played the roles of students
on the video and audiotapes. This increased variability may have contributed to
the results. Finally, the vocabulary probably was too formal to sound natural.
While this formality probably seemed appropriate in the written passage, it may
have sounded too forced and unnatural in the video and audiotaped conditions.

The primary recommendation for future research is that the experiment be
replicated, since the small number of subjects in this experiment precludes a
conclusion that the variables under investigation have no effect. The
nonsignificant trend for case histories to be superior to statistics in the written
condition also lends support for a replication.

If the experiment is replicated, efforts should be made to increase the
believability of the video and audiotaped case histories. One suggestion is to
conduct pilot studies in which participants see or hear the tapes and critique them.
Feedback from subjects about the strengths and weaknesses of the case histories
might lead to improvements. Another possibility would be to have the case
histories read by trained actors rather than by friends of the experimenter. There
is also a third possibility that would certainly increase believability, although at the
expense of loss of control of the content. Students who had actually taken the
courses could give their real evaluations. This was the procedure used by Borgida and Nisbett (1977).

The differences between the statistical material used in the present experiment and that used in some of the previous experiments (e.g., Koballa, 1986) suggest a modification of the current experiment. It would be interesting to compare case histories to two or three groups of statistics. One set of statistics would include easier information and a simple presentation format (similar to that used in the current experiment), and a second set would present the statistics in narrative form. A third set, in which more difficult statistical terms or statistical jargon is presented, might also be included. The latter two groups of statistics would be similar to those used in previous experiments. There may be no differences between case histories and statistics when the statistics are easy to comprehend, but case histories may be superior to statistics when the difficulty of the statistics is increased by using harder statistical language or terms, or by burying the statistical information within a paragraph.
## APPENDIX A

### Statistics

<table>
<thead>
<tr>
<th>Course: Behavior Modification</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall quality of instruction</td>
<td>4.8</td>
</tr>
<tr>
<td>Instructor's ability to make material understandable</td>
<td>4.7</td>
</tr>
<tr>
<td>Instructor's receptiveness to students' comments and questions</td>
<td>4.6</td>
</tr>
<tr>
<td>Perception of the instructor's knowledge of the subject matter of the course</td>
<td>4.3</td>
</tr>
<tr>
<td>Instructor's ability to stimulate interest in the subject</td>
<td>4.5</td>
</tr>
<tr>
<td>Organization of the course</td>
<td>4.4</td>
</tr>
<tr>
<td>Fairness of evaluation standards</td>
<td>4.6</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>4.7</td>
</tr>
<tr>
<td>Instructor's ability to intellectually challenge students</td>
<td>4.9</td>
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</table>

<table>
<thead>
<tr>
<th>Course: Communication Processes</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall quality of instruction</td>
<td>4.7</td>
</tr>
<tr>
<td>Instructor's ability to make material understandable</td>
<td>4.3</td>
</tr>
<tr>
<td>Instructor's receptiveness to students' comments and questions</td>
<td>4.8</td>
</tr>
<tr>
<td>Perception of the instructor's knowledge of the subject matter of the course</td>
<td>4.6</td>
</tr>
</tbody>
</table>
Instructor's ability to stimulate interest in the subject 4.9
Organization of the course 4.4
Fairness of evaluation standards 4.5
Enthusiasm 4.9
Instructor's ability to intellectually challenge students 4.7

Course: Biopsychology

Overall quality of instruction 4.3
Instructor's ability to make material understandable 3.7
Instructor's receptiveness to students' comments and questions 3.9
Perception of the instructor's knowledge of the subject matter of the course 4.0

Instructor's ability to stimulate interest in the subject 3.5
Organization of the course 3.9
Fairness of evaluation standards 3.6
Enthusiasm 4.1
Instructor's ability to intellectually challenge students 3.8

Course: Cognitive Psychology

Overall quality of instruction 4.1
Instructor's ability to make material understandable 3.7
Instructor's receptiveness to students' comments and questions | 3.8
Perception of the instructor's knowledge of the subject matter of the course | 3.6
Instructor's ability to stimulate interest in the subject | 4.2
Organization of the course | 3.9
Fairness of evaluation standards | 3.4
Enthusiasm | 4.3
Instructor's ability to intellectually challenge students | 4.1

Course: Learning and Motivation

<table>
<thead>
<tr>
<th>Mean</th>
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<tbody>
<tr>
<td>Overall quality of instruction</td>
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<tr>
<td>Instructor's ability to make material understandable</td>
</tr>
<tr>
<td>Instructor's receptiveness to students' comments and questions</td>
</tr>
<tr>
<td>Perception of the instructor's knowledge of the subject matter of the course</td>
</tr>
<tr>
<td>Instructor's ability to stimulate interest in the subject</td>
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<tr>
<td>Organization of the course</td>
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<tr>
<td>Fairness of evaluation standards</td>
</tr>
<tr>
<td>Enthusiasm</td>
</tr>
<tr>
<td>Instructor's ability to intellectually challenge students</td>
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</table>

Course: Perception

<table>
<thead>
<tr>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall quality of instruction</td>
</tr>
</tbody>
</table>
Instructor's ability to make material understandable: 2.1
Instructor's receptiveness to students' comments and questions: 2.1
Perception of the instructor's knowledge of the subject matter of the course: 2.0
Instructor's ability to stimulate interest in the subject: 1.7
Organization of the course: 2.4
Fairness of evaluation standards: 1.8
Enthusiasm: 1.6
Instructor's ability to intellectually challenge students: 1.7

Course: Industrial Psychology

Overall quality of instruction: Mean 1.4
Instructor's ability to make material understandable: 1.2
Instructor's receptiveness to students' comments and questions: 1.7
Perception of the instructor's knowledge of the subject matter of the course: 1.2
Instructor's ability to stimulate interest in the subject: 1.2
Fairness of evaluation standards: 1.1
Enthusiasm: 1.3
Instructor's ability to intellectually challenge students: 1.5
**Course:** Psychology of Reading

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall quality of instruction</td>
<td>1.6</td>
</tr>
<tr>
<td>Instructor's ability to make material understandable</td>
<td>1.1</td>
</tr>
<tr>
<td>Instructor's receptiveness to students' comments and questions</td>
<td>1.2</td>
</tr>
<tr>
<td>Perception of the instructor's knowledge of the subject matter of the course</td>
<td>1.5</td>
</tr>
<tr>
<td>Instructor's ability to stimulate interest in the subject</td>
<td>1.0</td>
</tr>
<tr>
<td>Organization of the course</td>
<td>1.7</td>
</tr>
<tr>
<td>Fairness of evaluation standards</td>
<td>1.3</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>1.1</td>
</tr>
<tr>
<td>Instructor's ability to intellectually challenge students</td>
<td>1.3</td>
</tr>
</tbody>
</table>
APPENDIX B
Case Histories

Course: Behavior Modification
Rating: Excellent
Length: Long

I gave behavior modification an excellent rating. It wasn't really a course I wanted to take, but it was one of the few courses open when I registered. I ended up being very glad I took it. The lectures were fascinating. They made the class periods fly by. I found the course to be extremely stimulating intellectually. The instructor was very excited about behavior modification and thus made the class feel the same way. The material was presented in a manner that was easily understood. He used illustrations and real-life examples to help make the material clear. I was able to apply some of the techniques to change some of my son's problem behaviors. I was amazed at how much he knew about behavior modification. He could answer any question about it. He encouraged questions in a very open manner, and was eager to hear comments. The course was presented in a well-structured, easy- to- follow manner. He followed the evaluation criteria that was on the syllabus. He always gave explanations for grades given on papers.

Length: Short

Behavior modification was an excellent course. The instructor was very knowledgable. He really knew his stuff. He answered patiently as many questions as the students wanted to ask. The instructor did an excellent job of making material clear and understandable. He taught the information slowly, and used many concrete examples to help the students grasp the concepts. I liked the course so much that if I become a therapist, I will use the behavior modification techniques.

Course: Communication Processes
Rating: Excellent
Length: Long

I rated communication processes as excellent. The course was very challenging. I went away with much to think about after each lecture. She seemed to know everything about helping strategies and the ways in which people communicate. In fact, she knew so much about the subject that she could have written a better textbook than the one we used. The course was well-structured. She covered each topic area thoroughly. She was very clear
about what she expected. She included sample test questions on the syllabus and even wrote a short sample paper. She was sensitive to the class and immediately able to tell if we were confused. The course was so interesting that I went out and read two books on the subject after the quarter ended. She was very enthusiastic. She was excited when she attended conferences, and spent the class period talking about them when she returned. Her enthusiasm and love for the subject was contagious. After taking the course, I am considering entering a helping profession.

Length: Short

I gave communication processes an excellent rating. The instructor was extraordinarily well-informed. She knew every inch of the subject, including the latest developments in the field. She answered questions readily and considered students' comments an essential part of the learning process. I was comfortable speaking up in class. She was very clear and thorough when presenting material. She put diagrams and examples on the chalkboard to help make the information understandable.

Course: Biopsychology
Rating: Very Good
Length: Long

I gave Biopsychology a rating of very good. The instructor knew a great deal about Biopsychology. She was very interested in, and involved with the subject. She had a way of making the material come alive by supplementing it with real-life examples from her experience and research. She was creative in her presentation of the material. For example, she put on a skit to help explain how neurons function. Extra time was devoted to making sure students understood the difficult concepts, since this course involved much more biology than other psychology courses. The exams were tough, but fair. I liked the fact that she respected students' opinions. She made them feel like they had something worthwhile to say. One problem was that we covered too much material. We spent such a short amount of time on each topic, that I felt I didn't know anything in depth. The course helped me to see things in a different light. I had never realized how much the brain and the nervous system affect behavior.

Length: Short

I took Biopsychology last quarter, and gave it a very good rating. There are a lot of unfamiliar scientific terms in Biopsychology, and she taught them very clearly. She used understandable, everyday language rather than technical jargon. She knew a lot about a broad range of topics in Biopsychology. There were a few students who continually asked dumb questions, and I admired her because she was quite patient and never critical of them.
Course: Cognitive Psychology
Rating: Very Good
Length: Long

My overall rating for Cognitive Psychology was very good. I was pleasantly surprised at what an interesting course it turned out to be. The professor never acted like teaching was a chore. He enjoyed what he was doing, and it showed. He livened up the class by conducting class demonstrations. For instance, he illustrated some principles of memory by having the students memorize material. The lectures were easy to follow and easy to outline. He repeated important information which really helped me to learn it. He made clear what was expected and graded fairly. He knew quite a bit about Cognitive psychology. He discussed his own research on decision making in detail. I felt that I got a thorough understanding of the area. If a student asked a question that he couldn't answer, he would go out of his way to find the answer. He appreciated student input. Often he encouraged class discussion after a student made an interesting point. This course really made me think critically about issues rather than just passively memorize information.

Length: Short

I rated Cognitive Psychology as very good. I especially enjoyed the section on memory. The instructor was intelligent and a good lecturer. He tried hard to make the course information clear. He put his notes on file in the library, which I found extremely helpful. I could go over the material again to make sure I understood it. He handed out extra handouts which summarized difficult material. He was also very willing to answer questions.

Course: Learning and Motivation
Rating: Fair
Length: Long

I rated Learning and Motivation as fair. I was looking forward to taking the course because I was eager to find out how humans and animals learn. However, I was disappointed. I was often confused during the professor's lectures which is unusual for me. The students didn't ask questions very often to clarify things because there was not much openness in the classroom. It was very one-sided. He came across as knowing the material, but offered no personal experience. For example, he never discussed his own research on learning. He didn't ask the class questions that would stimulate learning and thinking. He was definitely lacking in enthusiasm. He spoke in a monotone. It was very tedious to listen to. He seemed bored, and his boredom was contagious. On the positive side, the exams were pretty fair. There were no surprises. If you studied, you could do well. The course wasn't as organized as it should have been. He made an effort to cover the topics that were listed on the syllabus, but tended to wander off track.
I took Learning and Motivation last year and rated it fair. The instructor appeared to have a basic grasp of the subject matter, but couldn't offer any in-depth explanations. I wanted to learn more about a particular learning theory, but he didn't know anything about it other than what was in the book. He was often ambiguous about the topic being covered. However, I must give him some credit, because he was genuinely interested in what the students had to say.

Course: Perception  
Rating: Fair  
Length: Long

I rated perception as fair. On the positive side, the concepts were explained straightforwardly, and she was moderately knowledgable about perception. One of the main problems was in the presentation of the material. It was hard to get interested in perception because she didn't make it very interesting. She should have tried extra hard to stimulate interest since, let's face it, perception is one of the duller subjects in psychology. She acted as if she didn't think the subject was worthwhile. She just fed us information. She didn't seem interested in getting us to think critically about the material. A few additional problems were that the course was jumbled and disorganized and she was not at all interested in the students' input. She considered herself the expert. Student's opinions were unimportant. She was very vague and unclear about her expectations for the term paper. She gave very few guidelines to follow even though the paper made up a large percentage of our grade. I had no idea what she wanted.

Course: Industrial Psychology  
Rating: Poor  
Length: Long

I gave Industrial Psychology a poor rating. I took the course because my advisor recommended it. Believe me, I won't be taking his advice again. I don't know where they got this guy, but he sure didn't know much about Industrial Psychology. He was unable to explain the material clearly. He lectured in a vague, confusing manner. He was very short and impatient with students who spoke up in class to say that they didn't understand the material. I can say that the class was organized well. Topics were discussed and tests were given on the dates indicated on the syllabus. I hated the tests, and there were problems with
the papers. The papers were an important part of the course, but he made very few comments on them. Feedback would really have helped improve my work. I never felt at all challenged by the course. He talked in detail about what was in the book which was very boring, since we'd already read the chapters on our own. He must have been teaching just for the money.

Length: Short

Industrial Psychology was a poor course. The teacher never worried if the students didn't understand. He just kept shuffling through the material. He knew the material from the book, but didn't seem to know much about the subject outside of that. I was disappointed, because I was interested in the application of psychology to industry in today's business-oriented world. Another bad point about the course was that the instructor would make students feel stupid when they asked questions.

Course: Psychology of Reading
Rating: Poor
Length: Long

I gave Psychology of Reading a poor rating. The instructor was more interested in showing off her intelligence than in teaching. She talked about abstract ideas and left everyone hopelessly confused. I suppose she was very knowledgeable, although she didn't manage to pass it along to her students. She didn't do anything to make the material interesting and relevant to the students. I wanted to learn how to make reading more attractive to nonreaders so that I could encourage my son to read more, but we didn't learn anything practical like that. She read monotonous prepared lectures word for word. She preferred to ignore students questions so she could rattle on. She was so out of touch with the students that she didn't seem to care if we even thought about the material. She just wanted us to passively listen. The exams were extremely difficult. They were on material that we hardly covered. The only good thing I can say is that the course was organized. She covered the topics she was supposed to.

Length: Short

Psychology of Reading was a poor course. For one thing, she was unavailable to students. She was never around before or after class to answer questions. I had the impression that she was learning the material along with us. She answered questions adequately if they were from the chapter we were studying, but she couldn't answer them at all if they were from chapters we hadn't yet covered. She talked in generalities, and couldn't give detailed, specific information. I learned very little.
APPENDIX C
Dependent Measure

Please read the following class descriptions. Please indicate how interesting each course sounds to you on a scale from 1 (extremely uninteresting) to 10 (extremely interesting). Please circle the number that corresponds with your choice.

**Biofeedback**

A survey of the biofeedback literature with emphasis on research findings, clinical applications and theory underlying voluntary control of brainwaves, muscle activity, heart rate and other bodily responses.

1 2 3 4 5 6 7 8 9 10

**Counseling Psychology**

Basic theories and procedures of psychological counseling.

1 2 3 4 5 6 7 8 9 10

**Nonverbal Communication in Human Social Interaction**

The role of facial expressions, tone of voice, body movements, and proxemics in social interaction, including such topics as charisma, power cues, gender gestures, and the nonverbal detection of deception.

1 2 3 4 5 6 7 8 9 10

**Psychological Development of the Black American**

Cognitive and affective development of the individual Black American. Includes survey of research which relates the total psychological functioning of the Black person to culturally distinct developmental patterns.

1 2 3 4 5 6 7 8 9 10
Psychology of Consciousness

Human consciousness from the perspectives of the experiential, behavioral, and physiological psychology literatures. Includes survey of research and theory on topics such as waking consciousness, dreams, meditation and altered states of consciousness.

Psychology of Mass Media Communication

Influence of mass media (radio, movies, television) on the individual. Developmental aspects will be stressed along with attention to applications in everyday life. Communications research will be highlighted.

Psychology of Social Behavior

Major concepts, issues, and psychological research regarding social influence on individual behavior.

The Psychology of Gays and Lesbians

Analysis of theories and research on homosexuality, social reactions to homosexuality, and gay and lesbian cultural adaptations.

Stop! Please do not rate the rest of the courses until instructed to do so.

Behavior Modification: Principles and Applications

Analysis of the theory, techniques, and ethics of behavior modification.

Biological Psychology

Overview of the biological basis of behavior with emphasis on the relationship between brain function and thought, emotion, perception, language, learning, memory and motivation.
Cognitive Psychology

Research and theories concerning human information processing; topics include sensory processes, attention, memory, language and other higher mental processes.

Communication Processes

Introduction to the nature of the helping process with emphasis on strategies of behavior change, interpersonal communication and basic helping skills. Lecture and laboratory.

Industrial Psychology

Practices of modern industrial and personnel psychology. Includes selection, placement, training, motivation, job analysis, evaluation and human factors.

Learning and Motivation

Survey of research and major theories in animal and human learning and motivation. Applications of learning and motivational principles.

Perception

Selected topics in the field of perceptual processes. Includes review of contemporary theories and research. Class demonstrations and mini-projects

The Psychology of Reading

The psychology of reading with an emphasis on the cognitive processes involved in reading. Topics include ethnography of reading, history of reading, alphabet, pattern recognition, and eye movements in reading, learning to read, reading curricula, and literacy.
REFERENCES


