The influence of the wording of interrogatives on the accuracy of eyewitness recollections

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Previous research has demonstrated that the content of eyewitness recollections is affected by suggestions conveyed during questioning. For the present study, we took advantage of an unexpected occurrence in order to assess the extent to which these reported effects generalize from the recall of specific events viewed under controlled conditions to the recollection of personal characteristics observed naturalistically. After two weeks of teaching, a sudden disability made it impossible for an instructor to meet his classes; students were then questioned about his appearance by a replacement instructor. Questions were phrased either with an indefinite article or with a possessive pronoun which conveyed a false presupposition that the instructor possessed certain personal attributes. More incorrect and uncertain recollections were reported in response to questions containing false presuppositions than to questions phrased with an indefinite article. The results support and extend the existing literature on the suggestibility that characterizes eyewitness testimony.

Generally speaking, the accuracy of eyewitness testimony about a complex event rests with the accuracy of observation. Not all environmental stimulation surrounding an event is processed by the observer; rather, information is selected for processing depending upon the circumstances of the event and the context in which the event is observed. An event to which an observer is intentionally exposed—as in an announced demonstration or experiment—may not be attended to, analyzed, or examined in the same way as would the same event if it transpired naturally, without any instructional priming (Catell, 1887; McCloskey & Egeth, 1983). In naturally occurring events, which characterize the typical conditions associated with eyewitness observation, different aspects of the same event or perhaps even less information may be encoded than in a planned incident.

Thus, the nonexperimental conditions under which most critical eyewitness observations are made (i.e., incidentally rather than intentionally) may bias or compromise the accuracy of the report. Buckhout (1974) highlighted the unreliability inherent in naturalistic observations by staging an on-campus “incident” and then eliciting eyewitness testimony about the event. Testimony obtained at the scene was resoundingly and consistently inaccurate and was characterized by erroneous descriptions of the participants and their actions. Buckhout also examined the

accuracy and confidence of delayed recollections. The content of delayed reports was found to be greatly influenced by the conditions under which the witness was interrogated. Specifically, a higher proportion of correct identifications and the greatest confidence in the identifications were obtained from subjects who were specifically reminded of the on-campus incident and for whom a photograph of the “culprit” was presented in a distinctive, biased manner. Clearly, then, the likelihood of a positive identification is affected by the manner in which witnesses are interrogated.

Interestingly, witnesses can be biased in more subtle ways than those employed by Buckhout. In fact, the recollection of a complex event can be drastically affected by presumably minor linguistic aspects of the interrogation. Thus, Loftus and Palmer (1974) reported that the way in which a question is phrased can significantly influence the answer. The findings from several studies (e.g., Loftus & Zanni, 1975) agree that the selective wording of questions concerning a transpired event may serve to supplement, modify, and even transform an observer's assessment or memory of the event.

A specific detail of this phenomenon examined by Loftus and Zanni (1975) is that the insertion of a definite article in the phrasing of a question (e.g., “Did you see *the* broken headlight?”) results in fewer uncertain responses about the past event and more false “recognitions” than do questions containing an indefinite article (e.g., “Did you see *a* broken headlight?”).

It is important to note that, in the work reported by Loftus and her colleagues, the conditions of observation

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were controlled to the extent that subjects were primed as to the importance of the event they were to witness. That is, presentation and observation were intentional, in contrast to the incidental quality of Buckhout's naturalistic study. Therefore, the impact of linguistic subtleties during interrogation following an incidental observation is not certain. This lack of certainty is particularly significant in that such subtleties may well be unchecked during actual eyewitness interrogation subsequent to the observation of a naturally occurring event.

Clearly the importance of the phrasing of the interrogation subsequent to an incidental event requires examination. Accordingly, we report herein the results of an unexpected event that afforded an examination of linguistic biasing of interrogation following incidental observation. Moreover, the focus adopted here was upon the biasing of recollections about personal characteristics, similar to biasing that would be relevant in criminal identifications.

METHOD

Twenty-eight students taking a summer course in introductory psychology were the subjects. The class met each weekday morning for 2 hours, and the junior author was the instructor. After a week of class had elapsed, the instructor suffered a back injury (herniated discs) that produced a marked limp in his right leg. After the second week of class, the injury became sufficiently debilitating to prevent the instructor from teaching additional classes, and a replacement was found (the first author). Thus, the class had ample opportunity to observe the general behavior and physical appearance (e.g., speech patterns, facial characteristics) of the first instructor. When the third week of the term began, the new instructor took complete responsibility for the class, and the students had no further contact with the original instructor.

After informing the class that the initial instructor would no longer meet with them, the replacement administered a questionnaire containing nine general queries as to the first instructor's behavior and appearance. Students were asked to answer each question based upon their memory of the first instructor. Response alternatives were "Yes," "No," and "I don't know" for each question posed. Five of the queries were distractors; four were critical. The critical queries probed recollections of characteristics that the instructor did not possess and were concerned with personal attributes that students had seen (i.e., moustache, eyeglasses) or heard (i.e., southern accent, lisp). Again, it should be stressed that the first instructor did not possess any of these characteristics (i.e., he did not have a moustache, eyeglasses, southern accent, or lisp).

Two forms of the questionnaire were used: one in which critical questions contained a possessive pronoun (e.g., "Did you detect *his* southern accent?"), and a second in which the same critical items were phrased nonpossessively, by adding an indefinite article (e.g., "Did you detect *a* southern accent?") The forms were distributed randomly so that half of the class received each form.

It should be noted that owing to the nature and suddenness of the incident enabling this test, no instructions prior to the administration of the questionnaire were given.

RESULTS AND DISCUSSION

Table 1 presents the percentage of "yes," "no," and "I don't know" responses to critical questions in which either a possessive pronoun or an indefinite article preceded an attribute which the instructor did not possess. Thus, a "yes" response represents recall of an attribute that was not actually present. Such false alarms were associated with only 5% of the responses to questions with an indefinite article but with 17% of the responses to ques-

Table 1
Percentages of "Yes," "No," and "I don't know"
Responses to Questions Phrased with Either a
Possessive Pronoun or an Indefinite Article

Phrasing	Response		
	"Yes"	"No"	"I don't know"
Possessive Pronoun	17.3	69.2	13.5
Indefinite Article	5.0	90.0	5.0

tions phrased with a possessive pronoun. Furthermore, although correct recall (a "no" response) was high regardless of the form of the question, uncertainty (an "I don't know" response) was more likely among the subjects responding to questionnaires containing possessive pronouns (13% uncertainty) than among subjects responding to queries containing indefinite articles (5% uncertainty). A chi-square analysis on the response distribution represented in Table 1 revealed a significant difference due to the phrasing of the questions ($\chi^2 = 7.76$, $df = 2$, $p < .05$).

A single score was generated for each subject to test for the reliability of the difference between responses to questions phrased with possessive pronouns or indefinite articles (cf. Loftus & Zanni, 1975). "Yes" responses were assigned a value of +1.0, "I don't know" responses were assigned a value of 0.0, and "no" responses were assigned a value of -1.0. A subject's mean score reflected his or her certainty that the instructor had possessed the attribute mentioned in the question; thus, the score provides a measure of misplaced confidence.

An analysis of these data revealed that subjects who were administered questions containing possessive pronouns were reliably more confident of their recollections than were subjects whose questionnaires contained indefinite articles (Mann-Whitney U-test, $\alpha = .02$). That is, the former subjects were reliably more certain of seeing or hearing something that had not been present.

The results of this experiment indicate that the phrasing of a question does exert a significant influence upon the content of recollections. Specifically, the inclusion of possessive pronouns created false presuppositions. For example, the question "Do you remember his moustache?" conveyed the presupposition that the instructor had a moustache and therefore seemed to be asking subjects whether they remembered it. With this form of questioning, subjects frequently reported that they remembered or at the least were uncertain about the falsely presupposed attribute in question. In contrast, when questions were phrased with indefinite articles so that no presuppositions were conveyed, subjects were more likely to recall with certainty that the instructor did not possess the attribute.

Clearly, these data bear directly on the issue of testimony collected in connection with criminal proceedings. Indeed, the present findings are uniquely relevant to eyewitness identifications and descriptions in that they document the malleability of memory for some of the personal characteristics likely to be part of such an identification.

Furthermore, these findings are important to extending the research literature on eyewitness testimony because they were observed in a naturalistic setting: attention was never deliberately directed to the instructor's appearance during the period over which he was observed by the class; also, the class members were unaware that they would be questioned about him.

These extensions to a naturalistic setting and to the reports of personal characteristics lend further support to the work of Loftus and her colleagues (Loftus, 1975; Loftus, Miller, & Burns, 1978; Loftus & Palmer, 1974; Loftus & Zanni, 1975) who reported that subjects incorporated false presuppositions into their memories of events presented in a filmed accident. The results of these studies, together with the present results, strongly indicate that witnesses can be led to remember things they did not observe.

Regarding the limits of the misinformation that will be "remembered," it is interesting to note that Loftus (1979) found that subjects rejected false presuppositions that were blatantly contradictory to what had been observed. In the present context, the suggestion that the instructor had a moustache, eyeglasses, a southern accent, and a lisp seem, at least intuitively, to be blatantly contradictory; yet, these suggestions were not reliably rejected by subjects. This discrepancy may be due to the differences in the conditions of observation (naturalistic vs. controlled, as in the work of Loftus) or to the willingness of subjects to ac-

cept a broader range of suggestions pertaining to personal appearance than to observed events.

Nevertheless, the present study does shed considerable light upon the potentials for leading a witness to make an incorrect identification based upon subtly and semantically conveyed presuppositions about personal attributes.

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