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Long Abstract

Evaluation and Field Implementation of the Cognitive Interview

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Sanders (1986) asked Sheriff's deputies and detectives across the state of New York, "What is the central and most important feature of criminal investigations?" The majority of respondents answered "eyewitnesses". Nevertheless, few reported that they had any training on interviewing witnesses. While hundreds of studies have sought to document and give theoretical explanations for the unreliability of witness memory (see Loftus, 1979, and Yarmey, 1979, for reviews), only recently has research been conducted on police interview techniques to increase the completeness of a witness' report.

In response to the need to improve interview techniques, Geiselman, Fisher, and colleagues (1984, 1985, 1986) set out to develop an interview procedure based on generally accepted scientific principles of memory. The resulting procedure, called the Cognitive Interview, is based on two such principles. First, a memory is composed of several elements. The more elements a memory jogging aid has in common with the memory, the more effective the aid is likely to be. Second, a memory has several different ways of being retrieved, so information that is not accessible with one method may be accessible with a different one. Based on these two principles, Geiselman and Fisher suggested a set of four instructions that police could give to witnesses during interviews. (1) Try to reconstruct the

environment that surrounded the original event and also think about your feelings and reactions to the event. (2) Report everything; do not edit anything out of your description, even things your may consider unimportant. (3) Report the events in different orders: forward, backward, or starting from the middle. (4) Adopt different perspectives you may have had during the event, or of other prominent people at the event. In addition to these general instructions, the Cognitive Interview also contains specific suggestions to facilitate recall of appearance, names, numbers, speech characteristics, etc (Geiselman, Fisher, et al. 1986).

New Developments

While the Cognitive Interview proved to be more effective than standard witness interviews, there was still considerable room for improvement. The earlier studies examined only adult witnesses, and in laboratory situations. Our goals to improve the technique were to broaden the scope of the Cognitive Interview to include interviewing child eyewitnesses, to refine the technique to improve its effectiveness, and most important, to increase the validity of the technique by making it more responsive to the needs of law-enforcement interviews in the field, with real victims and witnesses of crime. Our ultimate aim was to test the refined technique under field conditions.

Interviewing Children

Children between the ages of 7 and 12 years were shown a film of a simulated liquor store robbery. Three days later, they were interviewed by research assistants trained to use the

original Cognitive Interview (Geiselman & Padilla, 1988). Each tape recorded interview was transcribed by other research assistants, and these transcriptions were given to another member of the research team who scored them for accuracy of recall. Three performance measures were tabulated: the number of correct bits of information, the number of mistakes (inaccurate reporting of information that appeared in the film), and the number of confabulations (reporting of information that did not appear in the film in any form).

The Cognitive Interview produced 21% more correct bits of information than the standard interview (37.1 versus 30.7). The number of mistakes and confabulations did not differ as a function of type of interview (5.0 versus 6.4; and 6.4 versus 6.3). As in the other studies where adults were used, this pattern of results held for even the most critical facts from the film. Also, as before, the length of the interview could not account for the advantage of the Cognitive Interview.

It was possible that an analysis of the individual interviews would reveal problems with some of the cognitive techniques, such as a failure of the children to understand the procedures or a failure of the children to use them effectively to avoid errors in recall. While some changes in the interview format were indicated, it is important to keep in mind that the current adult version of the Cognitive Interview enhanced recall significantly without increasing errors in comparison to standard interview techniques. Of all the memory retrieval techniques, the change-perspectives approach was the one that could be seen

clearly as problematic with children. Of the 51 confabulations produced in the Cognitive Interview, 31 could be linked directly to this method. Thus, even though the entire Cognitive Interview package produced no more mistakes and confabulations than the standard interview format, we suggest that the change-perspectives technique be used only with adults, where reliable success has been documented (Geiselman et al. 1986).

Refining the Cognitive Interview

Our initial refinements of the Cognitive Interview were based on carefully analyzing interviews collected in the laboratory. There were characteristic differences between effective and ineffective interviewers. We therefore modeled good and poor interviewers, building in those attributes of good interviewers and deleting those faults characteristic of poor interviewers. One typical difference is that effective interviewers asked more open-ended questions and allowed the witness to dominate the interview, whereas ineffective interviewers asked more direct, short-answer questions and played a more central role in the interview.

To increase the validity of our observations, we also examined police interviews conducted in the field. Although the interviews varied considerably from one to another, three problem techniques appeared universally. First, interviewers often interrupted the eyewitness in the middle of a narrative description. On the average, interviewers interrupted within 7.5 seconds after the respondent began his response. Second, interviewers used an excessive number of short-answer questions.

The average interview contained three open-ended questions and 26 short-answer questions. (Short-answer questions often are less valuable than open-ended questions, especially when used extensively, since they elicit less elaborated responses.) Third, in many of the field interviews, the sequence of questions seemed unplanned and generally unrelated to the mental activities of the witness. Furthermore, it appeared that this haphazard question order frequently created a barrier, which obstructed memory. Several other errors also were noted, often reflecting poor wording or presentation style (see Fisher et al. 1987, for a more detailed analysis).

After analyzing the laboratory and field interviews, we revised the originial Cognitive Interview. The revised Cognitive Interview includes four basic principles: memory-event similarity, focussed retrieval, extensive retrieval, and witness-compatible questioning. The following is a brief description of the core principles (see Fisher, 1987).

Event-interview similarity:

This principle is identical to the "reconstruct the environment" principle of the originial Cognitive Interview. Memory of an event, such as a crime, is enhanced when the psychological environment at the interview is similiar to the environment at the originial crime. The interviewer, therefore, should try to reinstate in the witness' mind the external (e.g., weather), emotional (e.g., feelings of fear), and cognitive (e.g., relevant thoughts) features that were experienced at the time that the crime occurred. The witness need not be placed

physically back in the same environment; mentally recreating the environment is sufficient.

Focussed retrieval:

Memory retrieval, like other mental acts, requires concentrated effort. One of the interviewer's roles, then, is to assist the witness to focus concentration. Any disruptions of the retrieval process, such as noise disturbances or interrupting the witness' report, will impair performance. Frequently, witnesses will not attempt to search memory in a concentrated manner because of the additional mental "work" involved. In those instances, the effective interviewer must encourage the witness to make the extra effort.

Extensive retrieval:

In general, the more attempts the witness makes to retrieve a particular episode, the more information will be recalled. Witnesses should therefore be encouraged to conduct as many retrieval attempts as possible. Many witnesses will terminate their retrieval after the first unsuccessful effort. This is particularly problematic for older witnesses. It is important, therefore, for the interviewer to encourage witnesses to continue trying to retrieve, even if they claim to not know a particular detail.

Witness-compatible questioning:

Successful retrieval of an event will depend, in part, on how compatible the questions are to the form in which that witness has learned the information. It is important, therefore, for the interviewer to tailor the interview to the witness. A

unifrom style of questioning, asked of all witnesses alike, will not effectively tap the memories of each witness. It is more effective for the interviewer to be flexible and alter his or her interviewing style to meet the needs of each witness than to use a rigid, uniform style of questioning and force the witness to adjust his or her memory to the interviewer's questioning. Try to place yourself in the witness' frame of mind and then ask questions that are relevant to that perspective.

Experimental Tests

Two experiments were conducted to examine the revised Cognitive Interview. In the first experiment, subjects were shown a simulated violent crime (either a bank or liquor store robbery). The films were provided by the Los Angeles Police Department and have been used in other eyewitness studies (Geiselman et al. 1985, 1986). Two days later, the witnesses were interviewed about the film by research assistants trained to use the original or revised Cognitive Interview. The interviews were tape recorded and scored for accuracy against the original film. As seen in Table 1, the revised Cognitive Interview elicited approximately 45% more information than the original technique, which had been shown earlier to be 30%-35% more effective than a standard witness interview (Geiselman et al. 1985, 1986). Furthermore, the advantage of the revised technique did not come at the expense of additional errors. The error rates were approximately 18% in both groups. When compared to similar observing conditions in the earlier studies, the revised Cognitive Interview elicited almost twice as many correct

statements (96%) as the standard police interview.

Table 1. Recall in Revised and Original Cognitive Interviews

| | Revised | Original |
|---|---|---|
| Number of correct facts | 57.50 | 39.56 |
| Error rate | .17 | .19 |

Field Study

Having demonstrated reliably in the laboratory that the Cognitive Interview can elicit more information than a standard witness interview, we entered the most important phase of the research program, testing the Cognitive Interview in the field. Does the Cognitive Interview elicit more information when detectives conduct interviews with real victims and witnesses of crime?

We again enlisted the assistance of the Metro-Dade Police Department to conduct the field research. Initially, 16 experienced detectives from the Robbery Division were selected for the study, all of whom tape recorded their next several interviews. In all, 79 interviews were recorded, primarily with victims of commercial robbery or purse-snatching. Based on these preliminary interviews and on recommendations of the detectives' commanding officer, two equivalent groups were formed. One group was trained on the Cognitive Interview. The second group served as a control.

The effectiveness of the Cognitve Interview can be examined

in two ways: by comparing the number of facts elicited before and after training for each of the seven detectives who completed the entire training program, and by comparing the number of facts elicited by the trained versus untrained detectives. As table 2 shows, the Cognitive Interview was found effective in both the before-after comparison (Table 2a) and in the trained-untrained groups comparison (Table 2b). As a group, the seven trained detectives elicited 47% more information after than before training. Of these seven, six elicited more information (65% to 173% more) after than before training. Only one detective did not do appreciably better after than before. Not coincidentally, an analysis of the post-training interviews showed that he was the only one of the seven detectives who did not follow the recommended procedures. Across the two groups, the trained detectives collected 63% more information than the untrained detectives. Prior to training, the two groups were equivalent.

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Table 2a. Training Effectiveness: Before vs. After Training

| | Before Training | After Training |
|---|---|---|
| Number of Facts Elicited | 26.8 | 39.6 |

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Table 2b. Training Effectiveness: Untrained vs. Trained

| | Untrained Detectives | Trained Detectives |
|---|---|---|
| Number of Facts ELicited | 24.2 | 39.6 |

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As with the laboratory studies, we were concerned not only with the amount of information elicited by the Cognitive

Interview, but also with its accuracy. To what degree might the additional information elicited by the Cognitive Interview simply reflect lower accuracy? To estimate accuracy, therefore, we examined corroboration rates, the degree to which elicited statements are corrobarated by other reliable sources of information (e.g., other victims or witnesses to the crime). Of 24 interviews where corroborating information was available (16 by pre-trained and 8 by post-trained interviews) there were 325 corroborable statements. Overall, the confirmation rates were extremely high and were not different for the pre-trained (93.0%) and post-trained (94.5%) interviews. The similar corroboration rates for the Cognitive Interview and standard witness interview duplicates the laboratory findings with accuracy rates, and again suggests that the added information elicited by the Cognitive Interview does not come at the expense of additional incorrect information.

Conclusions

Historically, little training has been available for investigators on interviewing witnesses and victims, but our critiques of both laboratory and field interviews indicate that current standard interview techniques can be improved considerably through training. The results of each of the studies reported here confirm that cognitive interviewing reliably enhances the completeness of a witness's recollection, and without increasing the number of incorrect or confabulated bits of information generated. Based on the examination of several interviews, a revision of the original Cognitive

Interview was made, which was found further to enhance the quality of witness reports. The procedures are easy to learn and can be readily adopted in routine police interview procedures. In fact, the Cognitive Interview currently is in use as standard training at several police departments and at other law enforcement agencies.

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