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Accuracy of Investigators' Verbatim Notes of Their Forensic Interviews with Alleged Child Abuse Victims

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Verbatim contemporaneous accounts of 20 investigative interviews were compared with audiotaped recordings thereof. More than half (57%) of the interviewers' utterances along with 25% of the incident-relevant details provided by the children were not reported in the "verbatim" notes. The structure of the interviews was also represented inaccurately in these accounts. Fewer than half (44%) of the details provided by the children were attributed to the correct eliciting utterance type. Investigators systematically misattributed details to more open rather than more focused prompts. These results underscore the superiority of electronic recording when the content and structure of investigative interviews must be preserved.

Many legal systems accept hearsay testimony in cases involving child witnesses, with investigators, therapists, and parents permitted to report statements allegedly uttered by children in their presence (Bulkley, 1992; Myers, 1992; Sternberg, Lamb, & Hershkowitz, 1996). Concerns about the accuracy with which statements can be recalled have prompted demands that investigative interviews should be recorded electronically (e.g., McGough, 1995), but although electronic recording is now mandatory in the United Kingdom (Memorandum of Good Practice, 1992) and Israel (Sternberg et al., 1996), only eight states in the United States either recommend or mandate electronic recording (Devon Lee, National Center for Prosecution of Child Abuse, personal communication, December 2, 1999). Contemporaneous notes or notes made shortly after the interview are frequently accepted in place of electronic records, although the accuracy of such notes has seldom been investigated systematically and has never been studied in real-world field contexts.

The accuracy of "verbatim" contemporaneous notes was assessed in the present

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study by comparing them with transcribed audio recordings of the same interviews. Fortuitously, these parallel records were made by Israeli youth investigators during the period that the investigative service began requiring audio recordings in place of the verbatim notes that had hitherto been required. The verbatim notes, like the electronic records, were designed to record the substantive conversations in their entirety, ensuring the availability of complete and accurate records when the investigators later prepared their interpretative reports or testified in court. As such, the notes studied here were more likely to be accurate than the notes typically preserved by investigative interviewers who do not electronically record their interviews.

Researchers assessing the accuracy with which adults can remember verbal statements and conversations believe that gist memories (memory for content) and source or verbatim memories (memory for structure) are represented and stored independently (e.g., Brainerd & Reyna, 1993; Garrod & Trabasso, 1973; Sachs, 1967; Schacter, Harbluk, & McLachlan, 1984; Stafford, Burggraf, & Sharkey, 1987). In most of the relevant studies, however, recollections of conversations with adults have been assessed using recognition memory probes, which require identification rather than free recall of the original statements (e.g., Bransford & Franks, 1971; Gernsbacher, 1985). By contrast, Neisser (1981) engagingly analyzed John Dean's recollection of his conversations with Richard Nixon. Despite Dean's confidence in his accuracy, he frequently misattributed statements and misrepresented details, not remembering the "gist" of any single interchange accurately while correctly representing the common characteristics of a whole series of events (Neisser, 1981).

Bruck, Ceci, and Francoeur (1999) were the first to explore the accuracy of adults' memories for information-seeking conversations with children using free-recall memory probes. As expected, the mothers they studied accurately represented the meaning of the information disclosed by their children 3 days earlier, but misrepresented conversational structure by failing to mention their own prompts (reporting highly prompted information as though it was spontaneous), changing the identity of speakers, and quoting incorrectly, sometimes altering gist in the process. In a related study (Bruck, Ceci, & Melnyk, 1999), mental health trainees who interviewed four children about experienced events had difficulty remembering which of the children made certain statements and could not remember which details were produced spontaneously and which were prompted using leading questions. Similarly, the experienced interviewers who participated in Warren and Woodall's (1999) analog study claimed to have asked few if any leading or even specific questions of the 5-year-old children they interviewed, although more than 80% of the questions they asked were in fact specific or leading. In addition, notes made shortly after the interview included only 20% of the questions the interviewers actually asked. Despite their professional training and experience, therefore, forensic investigators and mothers appear to make similar errors, even though it is crucially important for forensic interviewers to recall such important features of structure as the attribution of investigative statements to their speakers as well as the timing and sequencing of different statements or utterances.

Failure to recall the structure of interviews correctly is particularly important because the accuracy of information retrieved from children is a function of the

means by which their memories are tapped. Information elicited in laboratory/ analog contexts using open-ended questions, which minimize interviewer input and maximize spontaneous free recall, is more accurate than information obtained using focused or recognition prompts (Cassel & Bjorklund, 1995; Dale, Loftus, & Rathbun, 1978; Dent, 1982; Dent & Stephenson, 1979; Dietze & Thomson, 1993; Geiselman, Fisher, Cohen, & Holland, 1986; Hutcheson, Baxter, Telfer, & Warden, 1995; Oates & Shrimpton, 1991) and the same appears to be true in forensic contexts as well (Lamb & Fauchier, in press; Orbach & Lamb, 1999, in press). Focused recognition probes introduce investigator input, which may elicit biased responses to yes/no questions, prompt the confirmation of incorrect information (Brady, Poole, Warren, & Jones, 1999), or potentiate the selection of incorrect options suggested by the interviewer (Brady et al., 1999; Dent, 1982, 1986; Dent & Stephenson, 1979; Oates & Shrimpton, 1991; Schwartz-Kenney & Goodman, 1999). For these reasons, information provided by alleged victims in forensic contexts cannot be evaluated when the eliciting circumstances are unknown or inaccurately reported (Bruck et al., 1999; Lamb, Sternberg, Orbach, Hershkowitz, & Esplin, 1999).

The goal of the present study was to determine how well forensic interviewers could represent their investigative interviews with children in the form of contemporaneous "verbatim" notes from which no information was meant to be excluded. Based on the findings reported earlier, we expected that the investigators would (1) fail to represent fully the children's responses and the investigators' eliciting utterances and (2) misrepresent the types of utterances which elicited each of the reported details. Specifically, we predicted that the investigators' notes would report fewer details and fewer utterances than transcripts of the audio recordings, and that details provided by the children would be attributed in the interviewers' ostensibly verbatim notes to more open, rather than more focused, eliciting utterances than transcripts of the audiotaped interviews would show.

METHOD

We compared the audiotaped recordings of 20 forensic interviews of alleged sexual abuse victims (5 male and 15 female 4- to 14-year-olds; $M = 9.72$ years old; $SD = 2.57$; the age of 1 child was unclear) with the investigators' verbatim contemporaneous accounts ('notes') of the same interviews. The cases available for study were not a random sample of the investigative universe, but those for which verbatim contemporaneous accounts of the interviews were available. The forensic interviews were conducted by eight (three male and five female) youth investigators in Israel, all of whom had many years of experience ($R = 6-23$ years; $M = 12$ years) conducting forensic interviews of children and taking verbatim contemporaneous notes for forensic purposes as required by Israeli law (Sternberg et al., 1996). All investigators had an academic degree in social work, psychology, or education. Three investigators contributed 1 interview each to the sample, two investigators contributed 2 interviews each, and the other three investigators contributed 3, 4, and 6 interviews, respectively. Most of the interviews (18) were conducted during 1991, with 1 interview conducted in 1989 and 1 in 1990.

Audio recordings of the interviews were transcribed by professional transcribers. Investigators' verbatim notes from the same interviews were transcribed and typed in an interview format by experienced graduate-level research assistants who were unaware of the purpose of the study. All transcripts were checked against the original material (handwritten sheets or audio recordings) to ensure their completeness and accuracy. Two other graduate students, trained intensively in the coding of investigative interviews using the present coding system, independently and separately coded the transcripts of the audiotaped interviews and the interviewers' transcribed notes. The coders were unaware of the purpose of the study or of the fact that some transcripts were derived from audio recordings and some from handwritten notes. Both types of records were coded in the same way. The coding involved identifying informative details reported by the children in each of their responses and categorizing each of the interviewers' eliciting utterances.

The unit for measuring information conveyed was the "detail," defined as a word or phrase identifying or describing individuals, objects, or events (including actions) integrally related to the alleged incident being investigated. All details were forensically relevant; nonsubstantive information was not coded. Details were quantified using techniques first developed by Yuille and Cutshall (1986) and subsequently elaborated by Lamb et al. (1996). Allegation-specific details (about sexual acts or sexual body parts, for example) that specified the outline of the abusive event (changing such details would change the alleged plot) were defined as 'central.' Descriptive details (e.g., descriptions of the suspect or location) about the incident that were not allegation-specific (changing such details would not change the alleged plot of the alleged incident) were defined as "peripheral," although they were all substantive and forensically relevant.

In order to determine whether substantive details—descriptions of the alleged abusive events—were correctly noted and attributed accurately to their eliciting prompts, we also categorized the investigators' prompts. The unit for measuring the investigators' utterance types was the "utterance," defined as a "turn" in the discourse or conversation, using the categories developed by Lamb et al. (1996). Interviewer utterances during the portion of the investigative interviews concerned with substantive issues were placed in one of the following categories:

1. *Invitations.* Utterances, including questions, statements, or imperatives, prompting free-recall responses from the child. Such utterances do not delimit the child's focus except in a general way (for example, "Tell me everything that happened"), or use details disclosed by the child as cues (for example, "You mentioned that he touched you. Tell me everything about the touching").

2. *Directive utterances.* These refocus the child's attention on details or aspects of the alleged incident that the child has already mentioned, providing a category for requesting additional information using "Wh-" questions (cued recall).

3. *Option-posing utterances.* These focus the child's attention on details or aspects of the alleged incident that the child has not previously mentioned, asking the child to affirm, negate, or select an investigator-given option using recognition memory processes, but do not imply that a particular response is expected.

4. *Suggestive utterances.* These are stated in such a way that the interviewer strongly communicates what response is expected (for example, "He forced you to

do that, didn't he?") or they assume details that have not been revealed by the child (for example: Child: "We laid on the sofa." Interviewer: "He laid on you or you laid on him?").

Interviewer's utterances not related to the alleged incident under investigation (e.g., references to the interviewer's and child's roles) interjected within the substantive portion of the interview were coded as "nonsubstantive." Any incident-related information provided by children following such utterances was coded as 'spontaneous,' i.e., provided spontaneously by children rather than in response to an information-eliciting prompt.

Content analyses of the children's responses in both types of record focused on (1) the number of new informative "details" about the reported incidents, (2) the utterance types with which the investigators elicited each of the responses, and (3) the numbers of "central" and "peripheral" details reported. In addition, details reported in the investigators' verbatim notes were coded as "confirming," "contradicting," or "differing from" details disclosed in the audiotaped recordings.

Before coding transcripts for the study, two raters were trained on an independent set of transcripts until they agreed on the identification of at least 89% of the details and utterance types. During the course of coding, 20% of the transcripts were independently coded by both coders to ensure that the coders remained reliable with each other. Two native Hebrew-speaking raters agreed more than 90% of the time regarding their judgments about whether the information in the notes confirmed, contradicted, or differed from details contained in the audio recordings.

RESULTS

As predicted, the investigators failed to report in their notes many of the details provided by the children and many of the utterances used to elicit them. They also misrepresented the structure of the interviews. Specifically, first of all, the investigators' notes recorded significantly fewer informative details provided by the children than the audio recordings did when compared using paired *t* tests. The notes reported a total of 3,993 informative details ($M = 199.65$, $SD = 125.05$), compared with 5,301 details in the audio recordings ($M = 265.05$, $SD = 152.39$; $t_{19} = 4.56$, $p < .001$). Thus 1,308 (25%) of the substantive (i.e., forensically relevant) details provided by the children were not represented in the investigators' notes. Of the 2,544 ($M = 127.20$, $SD = 91.11$) substantive details in the audio recordings that were deemed central, 453 (17.8%) were ignored. Only 26 of the details (0.004%) noted by the investigators were contradicted by the audio recordings, however, suggesting that errors of commission were rare, although errors of omission were very frequent.

Second, the investigators' notes reflected a total of 806 substantive interviewer utterances ($M = 40.30$; $SD = 25.02$), whereas the audio recordings of the same interviews included 1,889 utterances ($M = 94.45$; $SD = 43.97$; $t_{19} = 6.17$, $p < .001$), leaving 1083 utterances (57.3%) not accounted for in the investigators' supposedly verbatim notes. As shown in Table 1, all types of interviewer utterances were

Table 1. Differences in the Noted and Recorded Numbers of Substantive Interviewer Utterances

Utterance type	Recorded number	Noted number	<i>t</i>
Invitation	6.15 (3.92)	3.80 (3.32)	3.98*
Directive	48.35 (29.39)	17.95 (10.38)	4.81*
Option-posing	34.65 (16.61)	16.05 (12.11)	6.43*
Suggestive	5.35 (4.23)	2.50 (3.12)	5.02*
Total	94.45 (43.97)	40.30 (25.02)	6.17*

Note: Numbers in parentheses are standard deviations.

* $p < .001$ for paired sample *t* tests, $df = 19$.

significantly underreported, although fewer invitations (38%) were omitted than were directive (63%), option-posing (54%), and suggestive (53%) utterances.

Third, as expected, the investigators' notes misrepresented the utterances with which information was elicited from the children. Only 2,651 (44%) of the 5,301 informative details in the audiotaped accounts were attributed to the correct eliciting utterance type in the investigators' notes. A Wilcoxon signed ranks test further revealed a systematic tendency to misattribute details to more open rather than more focused prompts ($z = 16.48$, $p < .001$). Investigators' notes attributed 25% of the reported details (which in total represented 75% of the audiotaped details) to more open prompts (i.e., invitations) than their actual eliciting prompts in the audio recordings, and only 10% to less open prompts (i.e., directive, option-posing, and suggestive) than was actually the case.

DISCUSSION

The goal of the present study was to assess the accuracy of investigators' contemporaneous notes of their investigative interviews, which frequently serve as the basis for courtroom testimony regarding statements made to them. The analyses revealed that the investigators' notes misrepresented both the information elicited from the young interviewees and the way the information was elicited. An alarming number of incident-relevant details (25% of the total) were not recorded at all in the investigators' notes, with 17.8% of the central, i.e., allegation specific, details not reflected in the investigators' notes. Because central details pertain most directly to the alleged sexual offenses (by definition, they identify the perpetrator, sexual actions, and sexual body parts), the central details that the investigators failed to report may have been forensically crucial and could well affect the disposition of such cases. As expected, the interviewers' ostensibly verbatim notes also represented the eliciting utterances incompletely; more than half of the substantive interviewer utterances were ignored completely and the types of prompts used to elicit information from the children were misrepresented. Such errors appear very likely to distort judgments about the extent of interviewer contamination, the accuracy of children's testimony, the validity of children's allegations, the severity of the alleged abuse, and perhaps even children's credibility.

Distortions like those described here are of great significance in forensic con-

texts: Both the incomplete reporting of utterances and the misidentification of eliciting utterance types seriously impede the evaluation of children's accounts. Researchers have demonstrated that information elicited using recognition prompts and focused questions is significantly more likely to be inaccurate than information elicited using open-ended prompts (e.g., Dent, 1982; Dent & Stephenson, 1979; Oates & Shrimpton, 1991), and thus the effect of the investigators' note-taking bias was to exaggerate the ostensible accuracy of the information they reported receiving from young interviewees. For example, by failing to report 54% of the option-posing utterances and 53% of the suggestive utterances, the note takers ignored suggestive and error-inducing interview practices, presenting possibly tainted information as though it was likely to be accurate.

The mothers in Bruck, Ceci, and Francoeur's (1999) study omitted similar information when recalling conversations with their children, presenting highly prompted responses as though they were spontaneous, while the interviewers studied by Bruck, Ceci, and Melynck (1999) and Warren and Woodall (1999) likewise underestimated their heavy reliance on both specific and leading questions.

Because children's statements about abusive experiences are often reported to triers of fact (primarily judges and juries) by therapists, physicians, parents, and investigators, our findings concerning the ways in which these statements may be misrepresented even by the best-intentioned of reporters are disturbing. Though the necessarily small size and special nature of our unique sample mandate caution in generalizing from the findings, the results reported here nevertheless amplify concerns that interviewers cannot be expected to provide complete and accurate accounts of their interviews without electronic assistance. Even when they made contemporaneous verbatim notes, these investigators tended to understate their role in eliciting the information and to ignore many of the details, including central details, reported. Because the majority of those who speak for children in legal contexts do not even attempt to construct verbatim contemporaneous accounts of their interviews, furthermore, their accounts are certain to be even more error-prone and misleading than the investigative notes studied in this report. The American Prosecutors' Research Institute actively discourages the electronic recording of investigative interviews, and agencies in only a small number of jurisdictions within the United States require that forensic interviews be electronically recorded. The most widely quoted practice guidelines—those produced by APSAC—refer to various forms of record keeping, including noncontemporaneous notes, and summary notes (not even verbatim notes) are the norm. The results reported here make clear that electronic recording may constitute the only means of memorializing the structure and content of investigative interviews accurately. Indeed, even audio recordings, though manifestly superior to verbatim contemporaneous notes, as demonstrated in this study, may ignore some nonverbal gestures and cues, rendering video recordings superior. Recognizing the superiority of electronic recordings, both Israel and the United Kingdom have required that forensic interviews be electronically recorded for about a decade, and these policies have been viewed favorably by law enforcement and child advocates.

This study was made possible by the fortuitous availability of both verbatim and electronic records of the same investigative interviews, a circumstance that

rarely exists. This study thus did not involve a random sampling of interviews recorded using verbatim notes, but the results reported here may understate rather than overstate the magnitude of the problem for several reasons. First, the interviews were conducted by eight of the most senior and experienced forensic interviewers in Israel, all of whom had years of experience preparing verbatim records for forensic purposes, as mandated by Israeli law, and were thus likely to have made better notes than forensic interviewers in general. Second, all were clearly aware of their legal and moral responsibility to record the interview structure and content as completely and fully as possible, not simply to summarize the contents and paraphrase the children's utterances. Third, all the investigators studied knew that these interviews were being audiotaped, and were motivated thereby to record the interviews as accurately as possible. Fourth, the majority of investigators reconstruct their interviews after the fact, instead of making verbatim contemporaneous notes. For all these reasons, the verbatim notes we studied were almost certainly more complete and more accurate than the modal or typical notes preserved by forensic interviewers. Like the convergence of our results with those obtained in laboratory/analog studies (Bruck, Ceci, & Francoeur, 1999; Bruck, Ceci, & Melnyk, 1999; Warren & Woodall, 1999), therefore, these factors combine to raise serious questions about the ability of interviewers to recall the content and structure of their interviews with the degree of precision needed for forensic purposes.

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REFERENCES

- Brady, M. S., Poole, D. A., Warren, A. R., & Jones, H. R. (1999). Young children's responses to yes-no questions: Patterns and problems. *Applied Developmental Science, 3*, 47-57.
- Brainerd, C. J. & Reyna, V. F. (1993). Memory independence and memory interference in cognitive development. *Psychological Review, 100*, 42-67.
- Bransford, J. D. & Franks, J. (1971). The abstraction of linguistic ideas. *Cognitive Psychology, 2*, 231-238.
- Bruck, M. (1999). A summary of an affidavit prepared for *Commonwealth of Massachusetts v. Cheryl Amirault LeFave*. *Applied Developmental Science, 3*, 110-127.
- Bruck, M., Ceci, S. J., & Francoeur, E. (1999). The accuracy of mothers' memories of conversations with their preschool children. *Journal of Experimental Psychology: Applied, 5*, 1-18.
- Bruck, M., Ceci, S. J., & Melnyk, L. (1999, March). *The effect of interviewer bias on the accuracy of children's reports and interviewer's reports*. Paper presented to the biennial meeting of the Society for Research in Child Development, Albuquerque, New Mexico.
- Bulkley, J. (1992). Recent Supreme Court decisions ease child abuse prosecutions: Use of closed-circuit television and children's statements of abuse under the confrontation clause. *Nova Law Review, 16*, 687-690.
- Cassel, W. S. & Bjorklund, D. F. (1995). Developmental patterns of eyewitness memory and suggestibility: An ecologically based short-term longitudinal study. *Law and Human Behavior, 19*, 507-532.

- Ceci, S. J. & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin*, *113*, 403–439.
- Dale, P. S., Loftus, E. F., & Rathbun, L. (1978). The influence of the form of the question on the eyewitness testimony of preschool children. *Journal of Psycholinguistic Research*, *7*, 269–277.
- Dent, H. R. (1982). The effects of interviewing strategies on the results of interviews with child witnesses. In A. Trankell (Ed.), *Reconstructing the past: The role of psychologists in criminal trials* (pp. 279–297). Stockholm: Norstedt.
- Dent, H. R. (1986). Experimental study of the effectiveness of different techniques of questioning mentally handicapped child witnesses. *British Journal of Clinical Psychology*, *25*, 13–17.
- Dent, H. R. & Stephenson, G. M. (1979). An experimental study of the effectiveness of different techniques of questioning child witnesses. *British Journal of Social and Clinical Psychology*, *18*, 41–51.
- Dietze, P. M. & Thomson, D. M. (1993). Mental reinstatement of context: A technique for interviewing child witnesses. *Applied Cognitive Psychology*, *7*, 97–108.
- Fivush, R. (1993). Developmental perspectives on autobiographical recall. In G. S. Goodman & B. L. Bottoms (Eds.), *Child victims, child witnesses: Understanding and improving testimony* (pp. 1–24). New York: Guilford Press.
- Garrod, S. & Trabasso, T. (1973). A dual memory information processing interpretation of sentence comprehension. *Journal of Verbal Learning and Verbal Behavior*, *12*, 155–168.
- Geiselman, R. E., Fisher, R. P., Cohen, G., & Holland, H. (1986). Eyewitness responses to leading and misleading questions under the cognitive interview. *Journal of Police Science and Administration*, *14*, 31–39.
- Gernsbacher, M. A. (1985). Surface information loss in comprehension. *Cognitive Psychology*, *17*, 324–363.
- Hershkowitz, I., Lamb, M. E., Sternberg, K. J., & Esplin, P. W. (1997). The relationships among interviewer utterance type, CBCA scores, and the richness of children's responses. *Legal and Criminological Psychology*, *2*, 169–176.
- Hutcheson, G. D., Baxter, J. S., Telfer, K., & Warden, D. (1995). Child witness statement quality: Question type and errors of omission. *Law and Human Behavior*, *19*, 631–648.
- Lamb, M. E. & Fauchier, A. (in press). The effects of question type on self-contradictions by children in the course of forensic interviews. *Applied Cognitive Psychology*.
- Lamb, M. E., Hershkowitz, I., Sternberg, K. J., Esplin, P. W., Hovav, M., Manor, T., & Yudilevitch, L. (1996). Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development*, *19*, 627–637.
- Lamb, M. E., Sternberg, K. J., Orbach, Y., Hershkowitz, I., & Esplin, P. W. (1999). Forensic interviews of children. In A. Memon & R. Bull (Eds.), *The psychology of interviewing: A handbook* (pp. 253–277). New York: Wiley.
- McGough, L. S. (1995). For the record: Videotaping investigative interviews. *Psychology, Public Policy, and Law*, *1*, 370–386.
- Memorandum of Good Practice* (1992). London: Her Majesty's Stationery Office.
- Myers, J. (1992). *Legal issues in child abuse and neglect*. Newbury Park, CA: Sage.
- Neisser, U. (1981). John Dean's memory: A case study. *Cognition*, *9*, 1–22.
- Oates, K. & Shrimpton, S. (1991). Children's memories for stressful and non-stressful events. *Medical Science and Law*, *31*, 4–10.
- Orbach, Y. & Lamb, M. E. (1999). Assessing the accuracy of a child's account of sexual abuse: A case study. *Child Abuse and Neglect*, *23*, 91–98.
- Orbach, Y. & Lamb, M. E. (in press). The relationship between within interview contradictions and eliciting interviewer utterances. *Child Abuse and Neglect*.
- Powell, M. B. & Thomson, D. M. (1996). Children's memory of an occurrence of a repeated event: Effects of age, repetition, and retention interval across three question types. *Child Development*, *67*, 1988–2004.
- Sachs, J. (1967). Recognition memory for syntactic and semantic aspects of connected discourse. *Perception and Psychophysics*, *2*, 437–444.
- Schacter, D. L., Harbluk, J. L., & McLachlan, D. R. (1984). Retrieval without recollection: An experimental analysis of source amnesia. *Journal of Verbal Learning and Verbal Behavior*, *23*, 593–611.
- Schwartz-Kenney, B. M. & Goodman, G. S. (1999). Children's memory of a naturalistic event following misinformation. *Applied Developmental Science*, *3*, 34–46.
- Stafford, L., Burggraf, C., & Sharkey, W. (1987). Conversational memory: The effects of time, recall mode, and memory expectancies on remembrance of natural conversations. *Human Communication Research*, *14*, 203–229.

- Sternberg, K. J., Lamb, M. E., & Hershkowitz, I. (1996). Child sexual abuse investigations in Israel. *Criminal Justice and Behavior, 23*, 322–337.
- Warren, A. & Woodall, C. E. (1999). The reliability of hearsay testimony: How well do interviewers recall their interviews with children? *Psychology, Public Policy, and the Law, 5*, 355–371.
- Yuille, J. C. & Cutshall, J. L. (1986). A case study of eyewitness memory of a crime. *Journal of Applied Psychology, 71*, 291–301.