

The Suggestibility of Young Children

Maggie Bruck and Stephen J. Ceci¹

Department of Psychology, McGill University, Montreal, Quebec (M.B.), and Family Studies and Human Development, Cornell University, Ithaca, New York (S.J.C.)

Since the beginning of the 1980s, there have been a number of legal cases in which young children have provided uncorroborated testimony involving sexual abuse. Although it seemed from the evidence that the children in many of these cases were subjected to a number of suggestive interviews, the primary issue in deciding guilt or innocence was the degree to which such interviews could actually bring children to make serious allegations.

Until recently, scientific data provided little insight into this forensic issue. Specifically, although there were a number of studies showing that young children are more suggestible than adults (reviewed by Ceci & Bruck, 1993), these studies were limited to examinations of the influence of single misleading suggestions on children's recall of neutral, and often uninteresting, events. In other words, the conditions of the studies were not similar to the conditions that brought children to court. This empirical vacuum forced a new conceptualization of issues related to children's suggestibility, which, in turn, resulted in an outpouring of new research in the area. In general, two features of

the newer research make it more relevant to forensic issues. First, the studies are designed to examine children's suggestibility about events that are personally salient, that involve bodily touching, and that involve insinuations of sexual abuse. Second, the concept of suggestive techniques has been expanded from the traditional view of asking a misleading question or planting a piece of misinformation, so that now studies examine the larger structure and the components of suggestive interviews. In this article, we provide an overview of the results of these newer studies of children's suggestibility.

INTERVIEWER BIAS AND SUGGESTIVE INTERVIEWING TECHNIQUES

We have proposed that *interviewer bias* is the central driving force in the creation of suggestive interviews. Interviewer bias characterizes an interviewer who holds a priori beliefs about the occurrence of certain events and, as a result, molds the interview to elicit from the interviewee statements that are consistent with these prior beliefs. One hallmark of interviewer bias is the single-minded attempt to gather only confirmatory evidence and to avoid all avenues that may produce disconfirmatory evidence. Thus, a biased interviewer does not ask questions that might provide alternate explanations for the allegations (e.g., "Did your mommy tell you, or did you

see it happen?"). Nor does a biased interviewer ask about events that are inconsistent with the interviewer's hypothesis (e.g., "Who else beside your teacher touched your private parts? Did your mommy touch them, too?"). And a biased interviewer does not challenge the authenticity of the child's report when it is consistent with the interviewer's hypothesis. When a child provides inconsistent or bizarre evidence, it is either ignored or interpreted within the framework of the biased interviewer's initial hypothesis.

A number of studies highlight the effects of interviewer bias on the accuracy of children's reports (reviewed in Ceci & Bruck, 1995). In some studies, children are engaged in a staged event. Later, naive interviewers, who did not witness the event, are given either accurate or false information about the event and then told to question the children. Interviewers who are given false information are unaware of this deliberate deception, which is carried out to create a "bias." In other studies, children are asked to recall a staged event by an experimenter who intentionally conveys a bias that is either consistent or inconsistent with the staged event. In both types of studies, when questioned by interviewers with false beliefs, children make inaccurate reports that are consistent with the interviewers' biases.

According to our model, interviewer bias influences the entire architecture of interviews, and it is revealed through a number of different component features that are suggestive. We briefly describe some of these in this section.

In order to obtain confirmation of their suspicions, biased interviewers may not ask children open-ended questions, such as "What happened?" but instead resort to a barrage of specific questions, many of which are repeated,

Recommended Reading

- Ceci, S.J., & Bruck, M. (1995). (See References)
 Poole, D.A., & Lindsay, D.S. (in press). Assessing the accuracy of young children's reports: Lessons from the investigation of child sexual abuse. *Applied and Preventative Psychology*.

and many of which are leading. This strategy is problematic because children's responses to open-ended questions are more accurate than their responses to specific questions. This finding has been reported consistently since the beginning of the century (e.g., see Ceci & Bruck, 1995) and is highlighted in a recent study by Peterson and Bell (1996), who interviewed children after they visited an emergency room for a traumatic injury. Children were first asked open-ended questions (e.g., "Tell me what happened"), and then asked more specific questions (e.g., "Where did you hurt yourself?" or "Did you hurt your knee?"). The children were most likely to report the important details accurately in response to open-ended questions (91% accuracy); errors increased when children were asked specific questions (45% accuracy). Forced-choice questions (e.g., "Was it black or white?") also compromise the reliability of children's reports because children tend not to respond, "I don't know" (e.g., see Walker, Lunning, & Eilts, 1996), even when the question is nonsensical (Hughes & Grieve, 1980).

Not only does accuracy decrease when children are asked specific questions, but there is increased risk of taint when young children are repeatedly asked the same specific questions, either within the same interview or across different interviews (e.g., Poole & White, 1991). Under such circumstances, young children tend to change their answers, perhaps to provide the interviewer with the information that they perceive he or she wants.

Some interviewers convey their bias by asking leading questions and providing information about the alleged target events. When these techniques are repeated across multiple interviews, children's reports may become tainted. For example, in one study (Bruck,

Ceci, Francoeur, & Barr, 1995), 5-year-old children visited their pediatrician and received an inoculation. One year later, they were interviewed four times about salient details of that visit. Children who were repeatedly interviewed in a neutral, nonleading manner provided accurate reports about the original medical visit. In contrast, children who were repeatedly given misinformation about some of the salient details were very inaccurate; not only did they incorporate the misleading suggestions into their reports (e.g., falsely claiming that a female research assistant, rather than the male pediatrician, inoculated them), but they also reported nonsuggested but inaccurate events (e.g., falsely reporting that the female research assistant had checked their ears and nose).

Interviewers can also use subtle verbal and nonverbal cues to communicate bias. At times, these cues can set the emotional tone of the interview, and they can also convey implicit or explicit threats, bribes, and rewards for the desired answer. Children are attuned to these emotional tones and act accordingly. In one study, for example, children were asked to recall the details of a visit to a university laboratory that had occurred 4 years previously (Goodman, Wilson, Hazan, & Reed, 1989). At the 4-year follow-up interview, the researchers deliberately created an atmosphere of accusation by telling the children that they were to be questioned about an important event and by saying, "Are you afraid to tell? You'll feel better once you've told." Although few children remembered the original event from 4 years earlier, a number of the children assented to suggestive questions implying abuse; some children falsely reported that they had been hugged or kissed, or that they had had their picture taken in the bathroom, or that they had been given a bath.

Thus, children may give incorrect information to misleading questions about events for which they have no memory, if the interviewer creates an emotional tone of accusation.

Stereotype induction is another possible component of a suggestive interview. For example, if a child is repeatedly told that a person "does bad things," then the child may begin to incorporate this belief into his or her reports. A study of preschool children illustrates this pattern (Leichtman & Ceci, 1995). On a number of occasions, the experimenters told the children about their "clumsy" friend Sam Stone, whose exploits included accidentally breaking Barbie dolls and ripping sweaters. Later, Sam came to the children's classroom for a short, accident-free visit. The next day, the teacher showed the children a torn book and a soiled teddy bear. Several weeks later, a number of these 3- to 4-year-old children reported that Sam had been responsible for these acts; some even claimed that they had seen him do these things. Children who had not received the stereotype induction rarely made this type of error.

Techniques that have been especially designed for interviewing children about sexual abuse may be potentially suggestive. For example, anatomically detailed dolls are commonly used by professionals when interviewing children about suspected sexual abuse. It is thought that the use of the dolls overcomes language, memory, and motivational (e.g., embarrassment) problems. However, the existing data indicate that the dolls do not facilitate accurate reporting. In some cases, children are more inaccurate with the dolls, especially when asked to demonstrate certain events that never happened (e.g., Gordon et al., 1993). Thus, dolls may be suggestive if children have not made any allegations but are asked by an interviewer who sus-

pects abuse to demonstrate abuse with the dolls.

Our recent studies provide evidence for this hypothesis (Bruck, Ceci, & Francoeur, 1995; Bruck, Ceci, Francoeur, & Renick, 1995). Three- and 4-year-old children had a medical examination during which some of them received a routine genital examination. After the children were interviewed about the examination, they were given an anatomical doll and told, "Show me on the doll how the doctor touched your genitals." Approximately 50% of the children who had not received a genital examination falsely showed touching on the doll. Furthermore, when the children who had received a genital examination were asked the same question, a number of them incorrectly showed that the doctor had inserted a finger into their genitals; the pediatrician had never done this. Next, when the children in the study were given a stethoscope and a spoon and asked to show what the doctor did or might do with these instruments, some children incorrectly showed that he used the stethoscope to examine their genitals, and some children inserted the spoon into the genital or anal openings or hit the doll's genitals. None of these actions had occurred. We concluded that these false actions were the result of implicit suggestions that it was permissible to show sexualized behaviors. Also, because of the novelty of the dolls, children were drawn to insert fingers and other objects into their cavities.

Guided imagery is another interviewing technique that is potentially suggestive. Interviewers sometimes ask children to try to remember if or pretend that a certain event occurred and then to create a mental picture of the event and to think about its details. Because young children sometimes have difficulty distinguishing between memories of actual events and

memories of imagined events (e.g., Parker, 1995; Welch-Ross, 1995), when asked to pretend about or imagine certain events, children may later come to report them as real and believe them to be so. This hypothesis is supported by studies in which young children were repeatedly asked to think about real as well as imaginary events, creating mental images each time they did so. In one of these studies (Ceci, Loftus, Leichtman, & Bruck, 1994), children increasingly assented to false events with each successive interview. When these children were told after 11 sessions that some of the imagined events had not happened, most of the children who had previously assented to false beliefs continued to hold onto their false statements. These data indicate that a number of the children had actually come to believe that they had experienced the false events.

CONCLUSIONS AND QUALIFICATIONS

In summary, interviewer bias is revealed by a number of suggestive techniques, each of which can compromise the accuracy of young children's reports. In this section, we qualify and elaborate on this conclusion by raising several points. First, although most developmental studies have focused on the suggestibility of preschool children, there is still reason for concern about the reliability of older children's testimony when they are subjected to suggestive interviews. There is ample evidence that children older than 6 years of age are suggestible about a wide range of events (e.g., Goodman et al., 1989; Poole & Lindsay, 1996; Warren & Lane, 1995) and that adults' recollections are impaired by suggestive interviewing techniques (e.g., Hyman & Pentland, 1996; Loftus & Pickrell, 1995).

Second, although there are consistent findings of age differences across studies, there are nevertheless individual differences. Some preschoolers are very resistant to interviewers' suggestions, whereas some older children will immediately fall sway to the slightest suggestion. Researchers are a long way from understanding the source of these individual differences but are beginning to assess the association between suggestibility and a number of cognitive characteristics (e.g., knowledge base, memory), psychosocial factors (e.g., compliance, self-esteem), and interviewing techniques (e.g., the use of various suggestive components).

Third, contrary to previous claims that children are suggestible only about peripheral details (e.g., Melton, 1992), the newer studies show that children are also suggestible about central events. These central events may involve bodily touching that may have sexual connotations. Thus, in some suggestibility studies, children falsely claimed that a nurse licked their knees, a scientist put something "yucky" in their mouths, a pediatrician inserted a spoon into their genitals, and a man kissed their friends on the lips and removed some of the children's clothes.

Fourth, the number of suggestive interviewing techniques (which reflects the degree of interviewer bias) can account for variations in suggestibility estimates across and within studies. If a biased interviewer uses more than one suggestive technique, there is a greater chance for taint than if he or she uses just one technique. For example, we (Bruck, Ceci, & Hembrooke, in press) constructed interviews that combined a variety of suggestive techniques (visualization, repeated questioning, repeated misinformation) to elicit children's reports of true events (helping a visitor in the school, getting punished) and false events

(helping a woman find her monkey, seeing a thief taking food from the day care). After two suggestive interviews, most children in this study had assented to all events, a pattern that continued to the end of the experiment.

Fifth, the procedures used in most studies do not allow one to determine if the children's false reports reflect false belief (false memory) or merely knowing compliance to the interviewer's suggestion. There may be a time course for the emergence of these different states. Children may start out knowingly complying to suggestions, but with repeated suggestive interviews, they may come to believe the suggestions and incorporate them into their memories. There are a few studies that show that when suggestions are repeated to children over time, a number of the children do develop false beliefs (e.g., Ceci et al., 1994; Leichtman & Ceci, 1995; Poole & Lindsay, 1996). Furthermore, if the suggestive interviews cease for a period of time, these false memories fade (e.g., Huffman, Crossman, & Ceci, 1996; Poole & Lindsay, 1996).

Sixth, children who have undergone repeated suggestive interviews appear highly credible. When highly trained professionals in the fields of child development, mental health, and forensics view videotaped interviews of these subjects, they cannot reliably discriminate between children whose reports are accurate and children whose reports are inaccurate as the result of suggestive interviewing techniques (see Leichtman & Ceci, 1995). We have attempted to isolate the linguistic markers that might differentiate true narratives from false narratives that emerge as a result of repeated suggestive interviews (Bruck et al., in press). We have found that with repeated suggestive interviews, false stories quickly come to resemble true stories in terms of the number of de-

tails, the spontaneity of utterance, the number of details not previously reported (reminiscences), inconsistency across narratives, the elaborativeness of the details, and the cohesiveness of the narrative. It is only the greater consistency of narratives of true events that differentiates them from narratives of false events. Thus, suggestive interviewing procedures can result in highly credible but inaccurate witness testimonies.

Finally, although we have focused here on the conditions that can compromise reliable reporting, it is also important to acknowledge that a large number of studies show that children are capable of providing accurate, detailed, and useful information about actual events, including traumatic ones (for reviews, see, e.g., Fivush, 1993; Goodman, Batterman-Faunce, & Kenney, 1992). What characterizes these studies is the neutral tone of the interviewers, the limited use of leading questions (for the most part, if suggestions are used, they are limited to a single occasion), and the absence of any motive for the children to make false reports. When such conditions are present, it is a common (although not universal) finding that children are relatively immune to suggestive influences, particularly about sexual details. When such conditions are present in actual forensic or therapeutic interviews, one can have greater confidence in the reliability of children's allegations. It is these conditions that one must strive for when eliciting information from young children.

Note

1. Address correspondence to Maggie Bruck, Department of Psychology, McGill University, 1205 Dr. Penfield, Montreal, Quebec H3A 1B1, Canada; e-mail: bruck@hebb.psych.mcgill.ca.

References

Bruck, M., Ceci, S.J., & Francoeur, E. (1995, March). *Anatomically detailed dolls do not facilitate pre-*

- schoolers' reports of touching*. Paper presented at the biannual meeting of the Society for Research on Child Development, Indianapolis, IN.
- Bruck, M., Ceci, S.J., Francoeur, E., & Barr, R.J. (1995). "I hardly cried when I got my shot!": Influencing children's reports about a visit to their pediatrician. *Child Development*, 66, 193-208.
- Bruck, M., Ceci, S.J., Francoeur, E., & Renick, A. (1995). Anatomically detailed dolls do not facilitate preschoolers' reports of a pediatric examination involving genital touching. *Journal of Experimental Psychology: Applied*, 1, 95-109.
- Bruck, M., Ceci, S.J., & Hembrooke, I. (in press). Children's reports of pleasant and unpleasant events. In D. Read & S. Lindsay (Eds.), *Recollections of trauma: Scientific research and clinical practice*. New York: Plenum Press.
- Ceci, S.J., & Bruck, M. (1993). The suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin*, 113, 403-439.
- Ceci, S.J., & Bruck, M. (1995). *Jeopardy in the courtroom: A scientific analysis of children's testimony*. Washington, DC: American Psychological Association.
- Ceci, S.J., Loftus, E.W., Leichtman, M., & Bruck, M. (1994). The role of source misattributions in the creation of false beliefs among preschoolers. *International Journal of Clinical and Experimental Hypnosis*, 62, 304-320.
- Fivush, R. (1993). Developmental perspectives on autobiographical recall. In G.S. Goodman & B. Bottoms (Eds.), *Child victims and child witnesses: Understanding and improving testimony* (pp. 1-24). New York: Guilford Press.
- Goodman, G.S., Batterman-Faunce, J.M., & Kenney, R. (1992). Optimizing children's testimony: Research and social policy issues concerning allegations of child sexual abuse. In D. Cicchetti & S. Toth (Eds.), *Child abuse, child development, and social policy* (pp. 139-166). Norwood, NJ: Ablex.
- Goodman, G.S., Wilson, M.E., Hazan, C., & Reed, R.S. (1989, April). *Children's testimony nearly four years after an event*. Paper presented at the annual meeting of the Eastern Psychological Association, Boston.
- Gordon, B., Ornstein, P.A., Nida, R., Follmer, A., Creshaw, C., & Albert, G. (1993). Does the use of dolls facilitate children's memory of visits to the doctor? *Applied Cognitive Psychology*, 7, 459-474.
- Huffman, M.L., Crossman, A., & Ceci, S. (1996, March). *An investigation of the long-term effects of source misattribution error: Are false memories permanent?* Poster presented at the biannual meeting of the American Psychology-Law Society, Hilton Head, SC.
- Hughes, M., & Grieve, R. (1980). On asking children bizarre questions. *First Language*, 1, 149-160.
- Hyman, I.E., & Pentland, J. (1996). The role of mental imagery in the creation of false childhood memories. *Journal of Memory and Language*, 35, 101-117.
- Leichtman, M.D., & Ceci, S.J. (1995). The effects of stereotypes and suggestions on preschoolers' reports. *Developmental Psychology*, 31, 568-578.
- Loftus, E.F., & Pickrell, J.E. (1995). The formation of false memories. *Psychiatric Annals*, 25, 720-725.
- Melton, G. (1992). Children as partners for justice: Next steps for developmentalists. *Monographs of the Society for Research in Child Development*, 57(5, Serial No. 229), 153-159.
- Parker, J. (1995). Age differences in source monitoring of performed and imagined actions on immediate and delayed tests. *Journal of Experimental Child Psychology*, 60, 84-101.
- Peterson, C., & Bell, M. (1996). Children's memory for traumatic injury. *Child Development*, 67, 3045-3070.
- Poole, D.A., & Lindsay, D.S. (1996, June). *Effects of parents suggestions, interviewing techniques, and*

age on young children's event reports. Paper presented at the NATO Advanced Study Institute, Port de Bourgenay, France.

Poole, D.A., & White, L. (1991). Effects of question repetition on the eyewitness testimony of children and adults. *Developmental Psychology, 27*, 975-986.

Walker, N., Lunning, S., & Eilts, J. (1996, June). Do

children respond accurately to forced choice questions? Paper presented to the NATO Advanced Study Institute: Recollections of Trauma: Scientific Research and Clinical Practice, Talmont Saint Hilaire, France.

Warren, A.R., & Lane, P. (1995). The effects of timing and type of questioning on eyewitness accuracy and suggestibility. In M. Zaragoza

(Ed.), *Memory and testimony in the child witness* (pp. 44-60). Thousand Oaks, CA: Sage Publications.

Welch-Ross, M. (1995). Developmental changes in preschoolers' ability to distinguish memories of performed, pretended, and imagined actions. *Cognitive Development, 10*, 421-441.

Recalling the Unrecallable: Should Hypnosis Be Used to Recover Memories in Psychotherapy?

Steven Jay Lynn, Timothy G. Lock, Bryan Myers, and David G. Payne¹

Department of Psychology, Binghamton University, Binghamton, New York

Our observations have shown . . . that the memories which have become the determinants of hysterical phenomena persist for a long time with astonishing freshness and with the whole of their affective colouring . . . these experiences are completely absent from the patients' memory when they are in a normal psychological state, or are only present in highly summary form. Not until they have been questioned under hypnosis do these memories emerge with the undiminished vividness of a recent event. (Breuer & Freud, 1893-1895/1955, p. 9)

Recommended Reading

- Brown, D., Schefflin, A.W., & Hammond, D.C. (1997). *Memory, trauma treatment, and the law*. New York: Norton.
- Kirsch, I., & Lynn, S.J. (1995). The altered state of hypnosis: Changes in the theoretical landscape. *American Psychologist, 50*, 846-858.
- Lynn, S.J., Martin, D., & Frauman, D.C. (1996). Does hypnosis pose special risks for negative effects? *International Journal of Clinical and Experimental Hypnosis, 44*, 7-19.
- McConkey, K.M., & Sheehan, P.W. (1995). *Hypnosis, memory, and behavior in the forensic setting*. New York: Guilford Press.

Of course, not too long after this famous quote, Freud spurned hypnosis² in favor of other techniques such as free association, dream analysis, and interpretation. But the idea that hypnosis is a royal road to unconscious or suppressed memories lingers to the present day. Survey research (cf. Lynn, Myers, & Malinoski, in press) indicates that between 20% and 34% of modern psychotherapists use hypnosis to help patients "recall the unrecallable" and to establish the historical "truth" or basis of current problems. Hypnosis would be valuable in such instances if it were a reliable technique for recovering accurate memories. However, in this review, we contend this is not the case.

It is worth noting at the outset that a review of the use of hypnosis in forensic situations (see Karlin & Orne, 1996; Schefflin, in press) is beyond the scope of this article, and that when hypnotic procedures are combined with behavioral and psychophysiological procedures, there is a proven benefit for interventions that are not focused on retrieving memories (Kirsch, Montgomery, & Sapirstein, 1995). The

concerns and caveats we present here apply specifically to the use of hypnosis as a technique for unearthing historically accurate memories³ in psychotherapy.

ACCURATE AND INACCURATE MEMORIES IN HYPNOSIS

On the basis of his review of 34 studies, Erdelyi (1994) concluded that hypnosis does not increase recognition of previously presented meaningful stimuli (e.g., poetry, meaningful pictures) or recognition or recall of nonmeaningful stimuli (e.g., nonsense syllables, word lists). Although Erdelyi noted that hypnosis increases recall of meaningful stimuli, it also increases false recollections. Indeed, when hypnotic and nonhypnotic conditions are compared and the sheer volume of responses is controlled, hypnotic recall is no more accurate than nonhypnotic recall (e.g., Erdelyi, 1994).

Support for Erdelyi's conclusions can be found in a meta-analysis reported by Steblay and Bothwell (1994). Their analysis summarized 24 studies, among which were studies that appeared after those included in Erdelyi's review. Steblay and Bothwell found no reliable differences in performance on structured tests of accurate recall⁴ when subjects were hypnotized versus when they were not hypnotized. It is true that three studies in Steblay and Bothwell's analysis did report a superiority of recall in hypnotized subjects when

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.