Memory Processes in Children: Implications for Investigations of Alleged Child Sexual Abuse

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Allegations of child sexual abuse naturally raise the ire of the populace at large, as well as the fears and apprehensions of those who may be falsely accused as perpetrators. Within this emotionally charged and litigious climate, the memory functions of children have become a matter of acute interest for those professionals involved in the ensuing investigations and legal proceedings. This is especially true, given that the child witness, approaching a court of law, is likely to encounter numerous circumstances that will invite memory distortion. These circumstances include interviews by concerned adults and protective service workers, as well as cross-examination by a defense attorney. Well-intentioned efforts may be replete with leading questions or subtle inferences that may distort episodic memory. The present paper will discuss developmental aspects of long-term memory functions in children, events, and cognitive processes that may contribute to memory distortion, and recommendations for improving procedures related to the investigations of alleged child sexual abuse.

Allegations of child sexual abuse naturally elicit concern for the child's mental and physical well-being. Psychotherapists often serve to create a climate in which healing can take place. Here, the child's subjective truth is treated with respect and understanding. Parallel concerns may be elicited within the legal system when allegations of child sexual abuse are made. Here, the goal is to develop a neutral climate, in which the rights of both the accused and the accuser may be protected, as the legal system examines the evidence, in search of an objective truth. Psychotherapists often lack the forensic training that prepares them to take a neutral and objective stance while conducting investigations related to allegations of child sexual abuse. Unfortunately, their lack of skill may damage the credibility of the child's testimony. The authors hope to present empirical evidence and subsequent recommendations that will protect the child's right to be heard in the courtroom. An objective stance is difficult, yet essential, if one wishes to protect this right, within an adversarial system.

Developmental Features in the Long-Term Memory of Children

Historical accounts of the Salem witch trials indicate that many of the accused

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individuals were actually convicted and hanged on the basis of the testimony of a child witness. During a three-month period, 20 people were hanged. Their fate was intertwined with the testimony of a group of girls called the "circle girls." These girls, ranging in age from five to 12, testified that they had observed the accused engaged in acts of witchcraft or wizardry such as flying on broom sticks or turning themselves into dogs or cats.¹

Skepticism as to the veracity of the testimony of a child witness has continued on into the present day within the American judicial system, the scientific community, in the minds of mental health providers, and as a matter of conventional wisdom. This viewpoint was further propagated by research conducted at the turn of the century, which led to conclusions that children were both inaccurate and highly suggestible. Brown² made a clear declaration of this opinion: "Create, if you will, an idea of what the child is to hear or see, and the child is very likely to hear or see what you desire."

Recent evidence has demonstrated that these earlier conclusions were largely unfounded. Instead, more recent findings have demonstrated that any global statement about the memory function of children is a simplistic approach to a complex phenomenon. Instead, the amount, type, and accuracy of information that children remember will be related to the child's age, the presence or absence of retrieval cues, the demand characteristics of the situation, and the personal significance of the original information.

Potential Sources of Error

Errors in memory functioning can occur as a result of problems during the encoding phase, the retention period, or the retrieval phase.

Encoding Wells and Leippe³ designed an experiment to explore the role of individual differences in information processing strategies, and their effect upon the type of information that is recalled. Adults who witnessed a mock theft as a part of an experiment were asked to identify the "thief" from a photo spread. The ability to identify the "thief" was considered to be a measure of the degree to which the subject had encoded focused versus peripheral information. Subjects were also asked to respond to 11 questions that tested their memory for peripheral details. The results indicated that subjects who attended to the "thief's" characteristics (and could accurately identify the "thief") did so at the expense of peripheral detail. The reverse was also true, with subjects who scored high on their memory for peripheral detail tending to demonstrate poorer performance in identification of the "thief."

A second aspect of the study confirmed that mock jurors tended to discount the testimony of subjects' eyewitness testimony of the event if they scored low on their recall of peripheral detail. This finding was quite robust, despite the fact that an accurate memory for peripheral detail was associated with a diminished ability to correctly identify the thief in a photo spread.

A follow-up study compared the recall performance of children with that of

adults, after viewing slides of a simulated crime. The authors⁴ hypothesized that adults would tend to focus their attention on the thief (instead of peripheral details), and would thus be more successful in answering descriptive information about the thief. Conversely, they hypothesized that children would be more likely to attend to both the thief and the peripheral details of the event. The analysis of the results vielded a significant interaction between subject age and question type. Descriptive questions about the subject were answered more accurately by adults, whereas children (average age = eight years) answered the descriptive and the peripheral questions with equal degrees of accuracy. The authors interpreted these results as follows: "This finding suggests that adults are more likely to focus their attention on the relevant details of the suspect and ignore extraneous information whereas children appear to encode incoming information without discrimination."

Apparently, differences in information processing exist between adults and children, and these differences influence the type of information that is likely to be encoded. The authors also cited a study by Yarmey and Kent⁵ and used these results to infer the existence of a developmental continuum. "The results of the present experiment, in conjunction with Yarmey and Kent's research with the elderly, suggest a developmental continuum ranging from very little selectivity in children to moderate levels of central focusing in young adults and finally to extreme levels of central focusing in the elderly."

In a review of the literature, Loftus and Davies⁶ described the information encoded in children's memory store as more fragmented and less complete than that of an adult. Research that explores the thought processes of experts suggests that experts are quite selective as to the nature of the material that they attend to. This allows them to carefully select relevant information and ignore information that is irrelevant to the task at hand. Children may be viewed as lacking expertise, and thus are not very selective in the information that they attend to and encode. Interestingly, this may actually improve their value as eyewitnesses, since their attention does not have the selective bias of an adult, perhaps allowing them to encode very significant details of an event.

Other age-related differences in attention and encoding were noted by Chi and Ceci.⁷ These authors found that, prior to the age of seven, children tend to encode the perceptual attributes of stimuli, whereas after that age, the conceptual attributes are more likely to be encoded.

In other areas, children's memory appears to function very much like that of an adult. For instance, when children (mean age = 10.8 years) were compared with college students on their ability to learn and categorize nine-sided shapes according to their similarity to a given prototype, there was little evidence of any qualitative age-related differences between ill-defined category learning in children and adults.⁸

Retention Nurcombe⁹ notes the dearth of information on the effects of

long delays upon the reproducibility of episodic memory in childhood. However, Loftus¹⁰ has studied the effect of retention time in adult memory processes, and has concluded that "subjects were especially prone to suggestion when considerable time, say several days, had elapsed between the initial event and the introduction of misinformation." Apparently the memory trace becomes more malleable with time. This is especially true if the original event was not clearly encoded at the outset.

Retrieval In his review of the literature, Nurcombe9 describes some developmental differences in memory retrieval functions. Young children (ages four to six) cannot understand temporal concepts very well. The ability to master concepts of historical time and sequence is usually not acquired until a child reaches the age of 10. Therefore, younger children have difficulty dating events or recalling a series of events in sequence, using free recall. Without prompting, they recall much less information than an adult. However, when the memory task depends upon recognition rather than free recall, four- to five-year-old children can perform as well as adults on memory tasks.

Cole and Loftus,¹¹ in their review of the literature, concluded that children tend to have quite accurate memories during free recall, although the amount of information that is retrieved is limited in comparison with adults. The extensiveness of children's capacity for free recall gradually increases with age, and approximates that of an adult by the time a child reaches the age of 12.

Age-related differences also surface with regard to children's ability to effectively use retrieval cues. Kobazigawa¹² investigated whether children tend to become more efficient in their use of retrieval cues with increasing age. Children from the first, third, and sixth grades were included in the study. In sum, the first graders did not spontaneously use retrieval cues effectively. Third graders did use the retrieval cues more skillfully than first graders, but still did not recall much more than they did by free recall. The authors speculated that the children failed to conduct an exhaustive search of their memory. Finally, sixth graders appeared to use the cues effectively, and to conduct an exhaustive search of their memory, without prompting. Although these age-related differences were present, age differences disappeared when experimenters explained to younger children that the cues could be used to prompt their memory, and encouraged them to conduct an exhaustive search of their memory.

Naylor's¹³ review of the literature was consistent with the above conclusions. He concluded that young children tend to omit details from information retrieved through free recall, unless they are prompted for details. However, as children are prompted for greater detail, they do so at the expense of accuracy, and become more inclined to cite erroneous information. Naylor's review also informs us that familiar activities are more easily recalled by children, especially if cues or the original context is reinstated, although by the age of five,

most children can rely upon verbal prompts.

Memory Distortion

Perception of an event is no guarantee for the accuracy of the information that is later retrieved. In the following paragraphs, various sources of memory distortion in children will be described. These include proactive and retroactive interference, stress, and fantasy.

Proactive Interference Proactive interference has been defined as an event in which previously learned information interferes with a person's memory for a current stimulus. This is probably the least worrisome culprit in the distortion of children's memories. More likely, the lack of previously learned semantic structures will interfere with memory processes because the child is unfamiliar with incoming information and has no preexisting framework within which to store the memory.

As a child's cognitive development proceeds, semantic memory becomes more complex. New experiences are either assimilated into the semantic memory network, or the memory network changes to accommodate the new information. Here we see that one's recall has the potential to be influenced by preconceptions that were used to endow an experience with meaning.

Children's interpretations of events will thus be influenced by their own developmental level. It follows that sexual events will be interpreted differently, depending upon the child's developmental level. Children become aware of sex differences and verbalize these dif-

ferences, at about the age of four. However, children do not usually have accurate knowledge about procreation until they reach the approximate age of 12. Events of sexual abuse may register in the child's memory as a variety of different events. They often do not have the prior experience or understanding to frame the event conceptually, and may not even consider it an abusive event until years later. If, on the other hand, a very young child is quite precocious about sexual matters, a red flag should be raised. Even here, it is wise to consider that the child may have acquired his or her knowledge from a variety of sources such as watching sexually explicit videos or listening to other children's accounts of sexual activities.14

Retroactive Interference Retroactive interference refers to a phenomenon in which the introduction of new material interferes with memories of previously learned information. This sort of event is usually referred to, in literature on eyewitness testimony, in the context of "suggestibility" or "leading questions."

Eth¹⁵ states that adults' ability to organize information by semantic clustering is one reason that their long-term memory is more efficient than that of children. Interestingly, if suggestive lines of questioning are used in investigating sexual abuse, and a well-developed knowledge structure is required to comprehend that subtlety, children may actually be less easily influenced than an adult eyewitness, in some situations. However, if an event is understandable and interesting to a child as well as an adult, and the memory trace is equally strong for both of them, then there may be no differences in suggestibility between a child or an adult eyewitness.⁶

Loftus¹⁰ has put forth a general model of forgetting in which new memories actually overwrite old memories, resulting in the loss of the original memory. Conversely, Bekerian and Bowers¹⁶ have put forth an alternative model in which all memories, once encoded, remain intact. Here, forgetting is a function of retrieval errors, rather than a loss of the original information. Apparently, the order in which stimuli are presented in memory experiments may explain the discrepant results between empirical tests of the two models cited above. Whereas the random ordering of stimuli at the time of retrieval destroys the thematic content of the memory cue, sequential ordering preserves the theme, and thus leads to improved memory accuracy.

The above studies were conducted with adult subjects. In contrast, the following studies were conducted using a child population, which increases their relevance for the theme of this article.

Dale, Loftus and Rathbon¹⁷ investigated the effect that word choice during questioning had upon the subsequent memories of preschoolers. The preschoolers viewed short films and then were questioned, using a variety of word forms, some of which were suggestive (i.e., "Did you see a ..." versus "Did you see the ..."). The results indicated that the type of syntax used did not influence the results, unless the object referred to had not actually been present in the film. If suggestive syntax was used when the object of query was not present in the film, the youngsters were more likely to indicate that they had seen such an object in the film.

Goodman¹⁸ attempted to study the recall of traumatic events by young children. The setting was naturalistic; a doctor's office where children received their immunization shots prior to entering school. She found that their recall of the event was quite accurate, if not complete. Five- and six-year-olds were better able to resist suggestions than were three- and four-year-olds. Those suggestions that they did yield to were most often related to peripheral details, instead of events that involved the actions of persons in the clinic.

Goodman¹⁸ also studied children's responses to more neutral events. In this study, the children were quite resistive to suggestions that they might have been abused. However, the author cautions that these findings may not generalize well to a situation in which a trusted loved one repeatedly tries to suggest that abuse had occurred. This possibility is generating growing concern as increasing instances are uncovered in which parents have encouraged their children to make false allegations of sexual abuse to sway court decisions regarding child custody during divorce proceedings.

Studies that attempt to evaluate the suggestibility of children do demonstrate discrepant findings. Ceci, Ross, and Toglia¹ noted these discrepancies and hypothesized that preschoolers may be particularly susceptible to post-event suggestion. One-hundred-eighty-two children ranging in age from three to 12

vears participated in the study. All of the children listened to a story, accompanied by illustrations. One day later. the children were presented with either biased or unbiased information about the story, depending upon which group they had been assigned to. Two days later, the experimenters met individually with the children and presented a forcedchoice recognition test in which the children were asked to select two illustrations that had accompanied the original story. Results indicated that post-event presentation of erroneous information significantly reduced the accuracy of three- to four-year-olds' recognition memory. In contrast, although the older children who were assigned to the biased condition also experienced lower levels of accuracy, children ranging in age from five to 12 did not differ significantly in their accuracy level. Thus, preschoolers appeared to be particularly susceptible to suggestion.

In a second part of their experiment, these researchers then addressed the controversy over whether post-event information overwrites the original memory and destroys it, or whether the new information exists in parallel as a second memory trace. Three groups of preschoolers were used in this second experiment. Their findings support the inference that, although original memories may indeed be altered by the subsequent introduction of misinformation, the original memory trace is not necessarily overwritten by the introduction of erroneous material. Instead, the type of methodology used in memory research may artificially inflate the amount of memory distortion that is created by introducing post-event erroneous information. Rather than suffering from a total memory loss for the original event, subjects may be responding to the recency of the erroneous information, which was the last stimulus presented, and the easiest to recall.

Although this does not conclusively settle the controversy over the effect of suggestion upon original memory traces. it does offer hope for investigators of child sexual abuse. Despite the ubiquitous suggestive effects of numerous contacts with inexperienced interviewers, occasional attempts to "coach" children, environmental stressors, and even the impact of courtroom proceedings themselves, such research does raise the hope that initial memory traces may be suppressed, but are not destroyed. The authors summarize: "Our own data indicate that very young children's memories can be distorted through post-event suggestions, not that they inevitably will be," Perhaps, as interviewing techniques improve, we can come closer to reaching the initial memory trace, and surpass more of the distortion.

The above findings may leave the reader feeling as if, indeed, children are quite suggestible and perhaps unreliable as providers of eyewitness testimony. Instead, it appears that children may be less reliable, as reliable, or more reliable than adults, depending on the interaction of their age and developmental level with other variables such as interest value, delay interval, language sophistication, and the type of memory task that is employed.⁶

Stress Terr¹⁹ describes in her article on child witnesses the intense stress that children are subjected to in cases of divorce, where children are repeatedly indoctrinated by a parent, on whom the child depends "for food, sleep, shelter, and approval." The technique involves repeatedly telling a false story of abuse to the child, until the child comes to believe it. In addition, instances of *bona* fide abuse also produce extreme stress. which in turn can precipitate perceptual and cognitive mistakes, fantasies, elaborations, and retractions of prior statements of abuse. The child may contradict himself or other evewitnesses. Such contradictions may be a reaction to intense distress and do not necessarily indicate that the child is suggestible or is fabricating information.

It is difficult for a child to challenge parental perceptions when they differ from his/her own. This is exacerbated by the child's emotional and physical dependency on the parent, and the wish to please and be accepted. Allen and Newtson²⁰ studied adult influence on children's perceptions in a laboratory situation. They found that parental influence decreased abruptly from the first through the fourth grades, then increased somewhat in the tenth grade. Thus, parental pressure could be applied in a manner that would cause the child to doubt his/her own perceptions of an event, and to adopt the perception that was described by the parent.

Schuman²¹ noted that during divorce, parents as well as children tend to regress. The children may exhibit this in the form of greater dependency needs, a richer fantasy life, and a greater susceptibility to suggestion. Parents, in turn, tend to regress by focusing more on their sexuality, or becoming bitter and vindictive, with an increase in faulty perceptions.

Lovalty conflicts also arise and children become quite protective of their parents, even abusive parents. They may feel guilty for breaking up the family unit or may feel responsible for sending a parent to jail. They may also form genuine attachments to people outside of the family who are abusive, but mix their abusiveness with much affection and attention. Later the child may feel guilty for his/her own participation in the sexual act. All of these factors generate intense distress. Prosecutors are not at all surprised when a child retracts a previous allegation of abuse, due to these stress factors. Occasionally, the child's reality testing becomes compromised in the emotionally charged courtroom situation, even though his/her reality testing had been intact during the initial evaluation and preparation for court proceedings.¹⁴ These are some of the stressors that create either genuine or apparent disturbances in the memory functions of children who are involved in investigations of alleged child abuse.

Fantasy Freud was well known for his proposition that children are largely unable to discern fact from sexual fantasy. He believed that many of his patients who had described childhood episodes of sexual activity with their parents were actually suffering from an unresolved oedipal complex. Recent research provides inconsistent results, with in-

consistencies dependent on the nature of the real versus imagined task.

Johnson and Foley²² empirically investigated the phenomenon of "reality monitoring," in which a person's ability to differentiate fact from fantasy was examined. These authors conducted a series of experiments designed to investigate the degree to which children are able to make the distinction. Results were as follows: Children as young as eight years old were just as capable as adults at differentiating the memory of a presented picture from the memory of an imagined scene. In addition, six-yearolds performed as well as adults in remembering whether they had said something, or whether another person had. However, the six-year-olds were at a significant disadvantage compared with older subjects when they were asked to differentiate between a statement that they had vocalized from one that they had imagined themselves saving. Six and nine-year-olds were equally able to listen to two different speakers and recall who had said what. Finally, children as young as six years old were able to differentiate from memory whether they had performed an action or had watched another person perform an action. There were no developmental differences in subjects' ability to recall which of two experimenters had performed an action. However, six- and nine-year-olds had greater trouble than adults in differentiating whether they had performed an action or imagined themselves doing so.

In sum, it is overly simplistic to state that children are never more confused than adults about discriminating reality from fantasy. Conversely, depending on the task, children sometimes differentiate imagined from actual events as well as adults. In general, young children had difficulty discriminating action plans that had been carried out themselves, from those that they had imagined themselves performing. However, this does not necessarily imply that they would have difficulty discriminating between actions that they observed another person performing from what they imagined that person to do. That distinction is important in investigations of alleged child abuse.

Benedek and Schetky¹⁴ note that external events should differ from internal psychic events along several dimensions. External events should contain more temporal and spatial information, and should also contain more sensory information and detail in comparison with internal psychic events. They also suggest that when interviewing a child to investigate allegations of sexual abuse, the question should be posed: "Is this real or pretend?"

Johnson and Foley²² poignantly address this situation.

A provocative illustration that the issue of children's testimony is complex was provided by Allport and Postman²³ in *The Psychology* of *Rumor*. Adults who viewed a picture of a subway scene often erroneously reported that a black man was holding a razor, and holding it aggressively, when, in fact, a white man held the razor in the scene. Children, if they recalled this detail, never confused who was holding the razor. Freud²⁴ suggested that the "untrus-tworthiness of children is due to the predominance of their imagination, just as the untrus-tworthiness of the assertions of grown-up people is due to the predominance of their prejudices." At this time, it remains unclear

whether the imagination of children or the prejudice of adults is the more dangerous enemy of justice.

Recommendations for Interviewers

The general topic of "interviewing techniques" far exceeds the scope of this article. Thus, we have limited ourselves mainly to those recommendations that are implied by empirical research on children's memory processes. We would also like to make note of our potential caveat: such empirical findings arise largely from laboratory settings and may not generalize beyond that setting. After integrating the findings discussed in this review, we will go on to include specific recommendations that have been made by other authors.

1. Interviews should be conducted as soon as possible after an allegation of abuse has been made. Normal processes of memory decay and opportunities for memory distortion multiply over time.

2. The interview should be conducted in a neutral setting that is physically comfortable, yet does not distract the child or encourage fantasizing. Young children have difficulty distinguishing imagined conversations or activities from real ones. Therefore, any fantasy play runs the risk of contaminating the child's original memory trace.

3. The person who conducts the interview should not confuse the role of therapist and investigator. To do so would create a dual role for the professional and a potential ethical dilemma. An interview conducted during the course of an investigation serves a forensic purpose and will come to play within the legal system, which is based upon adversarial procedures. Conversely, therapy serves an entirely different role. Issues are intrapsychic, rather than legal, and are based on the client's perceptions. The objective "truth" is secondary. In addition, the child may easily become confused by an individual who engages in play therapy and the use of fantasy upon one occasion, and then encourages seriousness and objectivity upon a separate occasion.

4. The reality-testing of the child should be evaluated at the outset to determine whether perceptual disturbances may have influenced accurate encoding of the original memory trace. Deficits in vision or hearing may also contribute to distortion of the original memory trace.

5. The interview should proceed from free-recall to later prompting for detail. The results of each phase of the interview should be presented separately, in the ensuing report. The free recall of a 12-year-old approximates that of an adult. Open-ended questions that avoid the use of suggestive words or syntax should be used to elicit free-recall for an event. Once prompting for further detail begins, the accuracy of children's reports begins to deteriorate. Therefore, information elicited by free-recall versus prompting differs in its level of accuracy and should be presented within the legal system accordingly.

6. Young children cannot understand temporal or sequential concepts very well. Obviously, to recount the frequency of abuse or describe dates and times, a child must first have an under-

standing of these constructs. Conversely, if an hour is equated with the length of their favorite TV program, or sequential events are related to meaningful events in the course of their day, children can be quite accurate with regards to temporal and sequential relationships. These matching techniques should be used during the interview process to accommodate the demands of the interview to the cognitive development of the child.

7. The interviewer should capitalize on developmental differences in memory processes to either support or question the credibility of the child's reported memory for an event. Children are not as discriminating as adults when in comes to focusing their attention. Thus, they may attend to peripheral details that are seemingly irrelevant to an adult. The "odd" comment about an object in a room, or a nearby sound, would be a natural part of a child's description. whereas an adult is more likely to focus on the characteristics of the alleged perpetrator. In addition, children less than seven years old tend to encode the perceptual attributes of stimuli, whereas children over seven begin to encode more of the conceptual attributes. Thus, a younger child might naturally describe sights, sounds, and smells whereas an adult would be more likely to recall motives, intent, and reactions. In addition, the younger child will have difficulty describing events in sequence and may offer a rather disjointed report during the free-recall phase of the interview. Reports that seemingly defy the memory and cognitive skills of children may cue the interviewer to adults' attempts to coach a child. As an alternative explanation, the child's intellectual capacity may be advanced. Both possibilities should be considered.

8. Preschoolers are especially susceptible to suggestion. The interviewer should be aware of the effect of very subtle suggestive cues. Syntax can be very suggestive. For example, a phrase such as "Did you see a . . . " is less suggestive in nature than "Did you see the" An even better approach would be to make a more open-ended request: "Describe whatever you saw."

9. Explore the child's semantic memory structures, and then adapt yourself to them within the context of the interview. This includes exploring the child's own terminology for body parts and sexual activities. It is important to understand the meanings and interpretations they have constructed for sexual activities. If a child appears to be very sexually precocious for his or her age, explore where those words or behaviors were learned. They may have been learned through first-hand exposure to sexual events, exposure to pornographic or erotic materials, observations of family members, or from siblings or playmates. You should also learn how the child views the investigation itself and its purpose. For example, has the child decided that "telling on daddy" is a way to win the approval of another adult? Or, "If I say bad things about my mom, then I can go live with my dad."

Other authors have made useful recommendations regarding the interview process. Terr¹⁹ suggests that interviewers use four guiding principles when interviewing potential child witnesses. First, look for corroborating psychiatric findings. This will either strengthen or weaken the credibility of the child's described memories. Although a "child abuse syndrome" is more of a myth than an reality, the child should exhibit symptoms that are often related to trauma. Some of these symptoms include: constricted affect, persistent sadness, reenactment of a traumatic event in play, art work, or verbal descriptions, a sense of futurelessness, and unusual fears. Again, the presence of these symptoms does not confirm that abuse has occurred.

Second, the psychiatric evaluation process should be separated from the treatment process, both mentally and verbally. Specific suggestions were offered to help maintain the integrity of the two different roles, and to minimize memory distortion. The interviewer should avoid using leading or suggestive questions that will add words to the child's original account. The interviewer should also limit the use of anatomically detailed dolls to situations in which the child has spontaneously remembered, told, or played-out a sexual drama. This precaution may avoid the introduction of suggestive sexual themes. Sodium amytal techniques or hypnosis should be avoided because of the potential that these activities may disqualify the child as a witness and little is known as to the effect of sodium amytal on memory. Similarly, hypnosis may result in unpredictable memory processes. Finally, evaluations should be conducted individually, rather than in groups, to avoid

the suggestion of symptoms from one child to another.

Melton and Limber²⁵ concur with the importance of separating the role of therapist and investigator. They state: "A particularly egregious example of mixture of roles in a manner that violates fidelity and privacy is when psychotherapy is used as a prosecutorial investigative tool."

Terr¹⁹ develops a third point by recommending that word-for-word notes be kept during the initial interview, with supplementary notes to document later significant events that may surface. Here, the memory of the interviewer becomes an issue, as well as the credibility of the child's report. It is becoming a highly recommended practice to videotape all interviews so that the presence or absence of subtle suggestions by the interviewer can be verified by an independent source.

Fourth, Terr¹⁹ recommends that the interviewer take care to gather sufficient data. This includes interviewing all family members or significant others who are willing to participate in the investigatory process. The alleged offender should be interviewed, preferably by the child's evaluator, or at least by a separate one. Observation of the child with the alleged offender can be especially helpful. All requests for interviews, as well as results of such interviews should be documented and saved for future reference. Also, police personnel, court employees, and judges should be consulted so that pertinent records (i.e., medical reports, crime reports, autopsies, eyewitness statements, etc.) can be reviewed. These

sources of additional information will help the interviewer formulate an opinion about the accuracy and credibility of the child's memory and descriptions.

As a precaution against potential fabrication by the child, Nurcombe⁹ recommends that the interviewer look for these cues: Is there external consistency? That is, does the child consistently give the same account to different people? Is there internal consistency? That is, does the child's story make sense? Are the details stable or do they change as the interview progresses. Does the child spontaneously offer details about the event, or is the description vague? Is the child quite suggestible? Here, the author described a somewhat controversial interviewing technique:

Interviewer: I see lots of children who've been in situations like this. Many of the kids I've seen get aches and pains in the legs and feet. How about you? Child: Yes. Interviewer: Where? Child: (Pointing to the soles of the feet.) In the ankles. In the feet.

The controversy surrounding this direct test of suggestibility is that the child may be responding to powerful demand characteristics of the situation, rather than demonstrating that his/her statements of abuse have been coached or contrived.

As an alternative, the child's reaction to a challenge of confabulation appears to be less controversial. Even though it may be somewhat intimidating and may carry its own demand characteristics, there is no attempt by the investigator to trick or deceive the child. A gentle form of confrontation was recommended by Nurcombe.

Interviewer: Sometimes kids make up stories

in their minds. Like daydreams. After a while they think the stories are true when they were really only daydreams. Maybe that's what you did. Maybe you made that story up and then began to believe it yourself.

This technique has the distinct disadvantage of discouraging a child who is putting himself or herself at great risk by disclosing a *bona fide* event of abuse. For this reason, the nonverbal communication of the interviewer should be very accepting and warm, and this question should be left until the end of the interview, in case it undermines rapport with the child.

Nurcombe⁹ provides an example of a way in which the potential for coaching by an adult may be explored. This also should be left for the end of the interview.

Interviewer: It occurred to me that your mother might have told you to say those things about your father. Maybe she put the idea ir, your head. Child: Who told you that? Interviewer: It occurred to me. Is that what happened?

Finally, Nurcombe⁹ suggests that the interviewer investigate the child's past history for evidence that the child may have had an underlying malicious motive for fabricating a statement. However, if the child does admit to fabricating, the interviewer should help the child identify a reason that this may have occurred, out of sensitivity for the child's feelings.

Interviewer: How come you invented that story about the big brother? I wonder why you needed to do that? Child: I don't know why. Interviewer: Maybe you were angry about something? Child: I didn't like him. I didn't want him to come. Interviewer: Can you tell me about that?

In sum, the veracity of children's testi-

mony in a courtroom was, in the past, renounced almost unanimously. Remnants of this skepticism remain today, both in the scientific community and within the judicial system. The research findings are not always clear and consistent, and much is yet to be learned about age-related differences in memory processes and the interaction of these processes with other concomitant variables. However, the issue is being given rigorous attention, with empirical investigations that are slowly offering guidelines for improvements in our current procedures.

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