

The Suggestibility of Children: Evaluation by Social Scientists

(From the Amicus Brief for the Case of *State of New Jersey v. Michaels (1994)*,
Presented by Committee of Concerned Social Scientists)

In the past decade, there has been an exponential increase in research on the accuracy of young children's memories and the degree to which young children's memories and reports can be molded by suggestions implanted by adult interviewers. Although some of these studies document the strengths of young children's memories, increasing numbers of studies highlight their weaknesses when they are interviewed under certain conditions. As will be explained, these same interview conditions, which have a high risk of contaminating young children's reports, characterize the available investigative interviews carried out with the 20 child witnesses in the Kelly Michaels case. In this brief, we present a summary of the pertinent social science research that addresses the issues of children's suggestibility. Our primary focus is on the conditions under which preschool children are most suggestible. Referring to interviews used with Wee Care children, we conclude that the procedures of interviewing these children were so faulty that they may have substantially increased the risk that the children's subsequent reports were mere reflections of the interviewers' suggestions.

This brief also contains a summary of some of the conditions which have been shown to increase the reliability of young children's reports, and which act as a safeguard against the production of false reports. The Wee Care children were not interviewed under these safer conditions. Finally, we will argue that the failure to record the initial interviews with any of the child witnesses rules out the possibility of ever reaching any firm conclusion as to whether any abuse actually occurred. In other words, the primary evidence has been destroyed.

A. Research on Children's Suggestibility

Children's suggestibility has been a focus of research since the turn of the twentieth century. There have been many studies that examine the influence of a single misleading suggestion on children's recall of an event; generally, these studies indicate that in a variety of conditions, young children are more suggestible than adults with preschoolers being more vulnerable than any other age group (see attached article by Ceci and Bruck, 1993a for the most recent review of this literature). In the past 5 years, there has been a major paradigmatic shift in this research in an attempt to make it more forensically relevant. As more and more children are called to court to provide uncorroborated testimony, especially in cases involving child sexual abuse, social scientists have turned their attention from studying the effects of a single misleading question on children's recall of neutral, nonscripted, and often uninteresting events, to examining the accuracy of children's testimony under a range of conditions that are characteristic of those that bring children to court. One important area of study concerns the effects of different interviewing techniques on the reliability of children's reports. These studies go beyond the examination of how a single misleading question influences children's reports; rather, they examine the effects of a host of implicit and explicit suggestive techniques that can be woven into the fabric of the interview through the use of bribes, threats, repetitions of certain questions, and the induction of stereotypes and expectancies (Ceci & Bruck, 1993a).

It is important to understand that this is a rapidly expanding area of inquiry. Reviews of the literature that were published only a few years ago, are now out-of-date. For example, in 1989, Cornell University hosted an international conferences which called together major researchers in the area of child testimony (J. Doris ed. 1991). At that conference some researchers made the following types of statements:

C: At the same time.

Comment: This type of exchange is very common in these transcripts: When the child says something that is not part of the interviewer's hypothesis (in this case, that the children chopped off their penises), the interviewer ignores it. There is no attempt to pursue it, probably out of fear that the child may embellish this claim with even more incredible claims. Furthermore, in this last section, the child finally begins to make allegations after much initial resistance. Previous research indicates that when children want an interview to end, they often increase the quantity of false statements (Pettit et al.)

At this point the child and interviewer began discussing a stream of events in which the child alleged that the defendant urinated in his mouth and he urinated in her mouth; he and others were made to walk in her urine and slide on the classroom floor in her urine. Nowhere in this interview, or numerous others by this and other mental health professionals is there any evidence that an alternative hypothesis was being tested. Specifically, there is no attempt by this interviewer to try to get the child to assent to an incompatible hypothesis, e.g., one in which the child's pediatrician put his penis in the child's mouth, or the sheriff made him drink his urine, or that he was just teasing about the defendant bleeding. As can be seen, there is no attempt to encourage the child to deny that any of this happened. Although it is not possible to know how much of what the child is reporting is factually accurate, there is a certain suspiciousness about his disclosures – and this is even more troubling in the interviews of some of his classmates. Partly, this is due to the heavy-handed use of coercive tactics ("If you tell me real quick, we can go get popsicles") refusal to believe that the child has forgotten or has a legitimate motive for not wanting to repeat an earlier remark he allegedly made to his mother, (e.g., the child may realize the former statement is false), but partly there is an absence of incredulity on the part of the interviewer which may reflect some interviewers' confusion between taking everything the child says seriously, vs. believing everything a child says.

To summarize, a consideration of the nature of the interviews conducted with the Wee Care children raises a possibility that their statements were in response to highly suggestive and coercive interviewing techniques. Our analyses of the transcripts of the initial interviews with the Wee Care children also reveal that despite all examples of coercive and suggestive interviewing practices, the children made relatively few accusations of sexual abuse, and when these did occur, for the most part, these were one word responses to investigator's suggestive questions. It is rare to find any elaborated account by a child even after all the suggestive interviewing practices. (An instructive exercise to support this conclusion involves reading only the child's portions of the interviews, deleting all of the interviewers' questions and comments).

B. Children's Credibility

Although children's reports may be highly influenced by a number of suggestive influences, this does not necessarily mean that the children will appear credible when they parrot interviewers' erroneous suggestions. Of particular concern is whether a juror, or a child development researcher, or a child therapist can differentiate children whose reports are accurate from those whose reports were a product of suggestive interviews. The existing evidence suggests that one cannot tell the difference between these two kinds of children. The evidence is based on some of the results from studies already discussed in this brief.

It will be recalled that in the Pettit et al study, there were seven children who were absent from the classroom when a major event occurred, and yet six of these children later reported that they were present. On closer analysis, these researchers found that the reports of three of these six

absent children were indistinguishable from those of their classmates who actually did view the events.

Some researchers have opined that the presence of perceptual details in reports is one of the indicators of an actual memory, as opposed to a confabulated one (Schooler, Gerhard, & Loftus, 1986; Raskin & Yuille, 1989). However, in the Sam Stone study for example, the presence of perceptual details was no assurance that the report was accurate. There was a surprising number of fabricated perceptual details that children in the combined stereotype plus suggestion condition provided to embellish the non-events (e.g, claiming that Sam Stone took the teddy bear into a bathroom and soaked it in hot water before smearing it with a crayon; claiming that there was more than one Sam Stone; claiming that they saw Sam Stone go to the corner store to buy chocolate ice cream).

It is one thing to demonstrate that children can be induced to make errors and include perceptual details in their reports, but it is another matter to show that such faulty reports are convincing to an observer, especially a highly trained one. To examine the believability of the children's reports, videotapes of their final interviews were shown to approximately 1,000 researchers and clinicians who work on children's testimonial issues (Leichtman & Ceci, in press). These researchers and clinicians were told that all the children observed Sam Stone's visit to their daycare centers. They were asked to decide which of the events reported by the children actually transpired and then to rate the overall credibility of each child.

The majority of the professionals were highly inaccurate. Experts who conduct research on the credibility of children's reports, who provide therapy to children suspected of having been abused, and who carry out law enforcement interviews with children, generally failed to detect which of the children's claims were accurate and which were not, despite being confident in their judgments. The highly credible yet inaccurate reports obtained from the children may have resulted from a combination of repeated interviews with persistent and intense suggestions that built on a set of prior stereotypes. Similarly, it may become difficult to separate credibility from accuracy when these children, after repeated interviews, give a formal video-taped interview or testify in court.

Similar results were obtained when psychologists who specialize in interviewing children were shown videotapes of the children in the Mousetrap study (Ceci, in press). Recall that these children had been simply asked to repeatedly think about whether a fictitious or real event had actually happened. Again, professionals could not reliably detect which of the events in the children's narratives were real and which were not. One reason for their difficulty may be that they cannot imagine such plausible, internally coherent narratives being fabricated. In addition, the children exhibited none of the tell-tale signs of duping, teasing, or tricking. They seemed sincere, their facial expressions and affect were appropriate, and their narratives were filled with the kind of low-frequency details that make accounts seem plausible, as shown in the following account:

My brother Colin was trying to get Blowtorch (an action figure) from me, and I wouldn't let him take it from me, so he pushed me into the wood pile where the the mousetrap was. And then my finger got caught in it. And then we went to the hospital, and my mommy, daddy, and Colin drove me there, to the hospital in our van, because it was far away. And the doctor put a bandage on this finger (indicating)

Some researchers are developing techniques that may ultimately be used to detect when children's reports are accurate and when their reports are inaccurate. These involve fine-grained analyses of the linguistic content of the statements, the gestures, voice quality, and other affective measures.

However, these techniques have not yet been validated on children who have undergone repeated and highly suggestive interviews. Furthermore, even if such techniques were available, they could only be used by highly trained professionals, not by jurors, or even by specialists in child development. These techniques are being developed precisely because of the difficulty that professionals and non-professionals all share in distinguishing between children's reliable and unreliable reporting.

To summarize, when children have undergone suggestive interviewing or are exposed to some of the components of suggestive interviews, they frequently appear highly credible when they are inaccurate, even to well-trained professionals.

C. The Time-Course of Suggestibility Effects

How long-lasting are the effects of suggestions? Perhaps it could be argued that suggestive interviewing techniques change children's reports but only for a short time; and sometime after suggestive interviews have ceased, then children's reports revert to accurate accounts. Following this line of reasoning, if children's accounts of events are consistent over long periods of time even after the cessation of suggestive interviews, then these reports must be faithful versions of what actually happened to the children. This is a difficult but important issue to address. Based on some anecdotal and scientific evidence, however, we argue that misleading suggestions can indeed have long lasting effects; indeed, they can sometimes give rise to life-long illusory beliefs. The longevity of the suggestibility effects is primarily influenced by the overall strength of the suggestions. Thus the same factors that increase the risk of erroneous reports also increase the longevity of these reports and beliefs. To repeat these include such factors as: the forcefulness of the suggestions, the perceived authority of the provider of the suggestions, the use of threats and bribes, reinforcement for reports of abuse, negative reinforcement or ignoring denials, retractions, or implausible reports, creation of an accusatory atmosphere, peer pressure, and the suggestive use of anatomically detailed dolls. Further aspects of the social and mental life of the child may serve to solidify and strengthen their false reports and false beliefs long after the interviews are over. That is, if the children continue to think about the suggested events and to talk about them and to hear others around them talk about them, their beliefs in the reality of these events may solidify.

These arguments are supported by numerous anecdotes of long-lasting but erroneous memories of childhood events (e.g., see Lindsay & Read, in press). Perhaps the most famous of these involves the inaccurate memory of one of the great developmental psychologists Jean Piaget (Piaget, 1962).

"..one of my first memories would date, if it were true, from my second year. I can still see, most clearly, the following scene, in which I believed until I was about fifteen. I was sitting in my pram, which my nurse was pushing in the Champs Elysees, when a man tried to kidnap me. I was held in by the strap fastened round me while my nurse bravely tried to stand between me and the thief. She received various scratches, and I can still see vaguely those on her face..... When I was about fifteen, my parents received a letter from my former nurse...she wanted to confess her past faults, and in particular to return the watch she had been given as a reward...She had made up the whole story...I, therefore, must have heard, as a child, the account of this story, which my parents believed, and projected into the past in the form of a visual memory."

The false memories were with Piaget for at least a decade. A second piece of evidence to support the contention that some children maintain their beliefs about fabricated stories that are a product of suggestive interviews, long after the suggestions of ceased, comes from the "mousetrap"

study. Several weeks after the last interview, one of the subjects who had told about his finger being caught in the mousetrap was re-interviewed. When his mother brought him to the lab, she told the experimenters that both she and her husband thought that the study was completed, and therefore two days earlier they explained to their son that the story about the mousetrap was fictitious and had never happened. She said that her son initially refused to accept this debriefing, claiming that he remembered it happening when the family lived in their former house. She and her husband continued to explain that the whole story was just in his imagination, that nothing like this ever happened. Despite the debriefing, the experimenters decided to re-interview the child. When asked if he ever got his finger caught in a mousetrap, the child stated that he remembered this happening, and he proceeded to supply a richly-detailed narrative. When the interviewer challenged him, asking him if it was not the case that his mother had already explained that this never happened, the child protested, "But it really did happen. I remember it!" While this child's insistence, in the presence of his mother, is not proof that he believed what he was saying about this fictitious event, it does suggest that he was not duping the adults for any obvious motive, given that the demand characteristics were all tilted against his claiming that he remembered this.

This child provides a vivid example of the long-last effects of suggestions. His pattern of behavior is also common in other children involved in Mousetrap studies. That is, there are also other children who hold on to their original beliefs even when their parents debrief them and tell them that the events were only imagined (Ceci, Crotteau, Smith & Loftus, in press). And, there are children who continue to say that the events occurred even when they are told right before the final memory test that the experimenter had it wrong (e.g. Ceci, Loftus, Leichtman & Bruck, in press; Lindsay, Gonzales & Eso, in press).

These data suggest that the effects of suggestions may be extremely long-lasting. Some children hold onto their beliefs long after the suggestions have terminated. Thus, if the Wee Care children's testimony was a product of suggestive interviewing techniques, then their false allegations might persist long after the interviews had terminated. It is also important to note that these suggestive interviews continued for a long time and still may be continuing to the present. That is, although the investigative interviews ceased in July of 1985, all but one of the 20 child witnesses were seen in therapy (IS THIS CORRECT?); some may still be in therapy. The children were interviewed (and coached??) by the prosecutor's office before appearing as witnesses at trial. Each child was interviewed two to three times by Eileen Treacy before the trial; as we show below, the interviews with Treacy were more suggestive and coercive than those conducted at the beginning of the investigation.

ET: Let me ask you this; did she touch boys, did she touch girls, did she touch dogs?

3C: She touched boys and girls

ET: Did she touch them with telephones? Did she touch them with spoons? What kinda spoons?

3C: Teaspoons

ET: Can you make a mark where she hurt you?Make a mark. Just show me where Kelly hurt you. Then I can show that to the judge

ET: Tell me about 7C. What happened to 7C?

3C: I don't know

ET: 7C told me about some of the stuff that happened to you

3C: (no response)

ET: She cares about you. Some of the kids told me that things happened with knives at Wee Care. Do you remember anything like that?

ET: I see and did the kids want Kelly to do that peanut butter stuff?

3C: I didn't even think that there was a peanut butter

ET: Well what about licking the peanut butter?

3C: There wasn't anything about peanut butter.

ET: (brings out dolls). Ok now what about the private areas? What happened in the private areas?

4C: I don't know

ET: That's harder to talk about?

4C: Yeah

ET: Does it make you embarrassed?

4C: I don't know

ET: Did you ever see Kelly's private spots?

4C: I am not too sure

ET: What about her boobies?

4C: I don't even really know about..

ET: There's some pictures that Sara (McArdle, the prosecutor) has

4C: What kind of pictures?

ET: Kelly like doin something to 2C and I was so surprised. What was she doing?

4C: Um, I forgot but I know she did it.

ET: She do something with a fork to 2C?

4C: Sara would know though

ET: Now when Kelly was touchin the kids with the spoons and the knives, did she touch them inside of their private spots or outside?

4C: I don't remember.

ET: Did Kelly ever put her elbow on your private spots?

4C: Um...maybe

ROBERT CAN YOU PUT IN THE SECTION FOR 5C THAT IS SUMMARIZED ON P. 35 AT THE BOTTOM OF DAN'S SUMMARIES OF EACH CASE. IT STARTS ET LEADS LEADS LIKE CRAZY NOW.

(after some questioning, Treacy gets 6C to say that Kelly's private parts were the same as little girls)

ET: Did Kelly have hair? 6C: Nah, I know cause it's grown ups... I know about that

ET: So I guess that means you saw her private parts huh? Did Kelly ask the kids to look at her private parts, or to kiss her private part or..

6C: I didn't really do that....I didn't even do it..

ET: But she made you

6C: She made me. She made me .. But I couldn't do it...So I didn't even really do it. I didn't do it.

ET: Did it smell good?

6C: shhh

ET: Her private parts?

6C: I don't know

ET: Did it taste good? Did it taste like chocolate?

6C: Ha, ha. No, I didn't even do it.

ET: You Wee Care kids seem so scared of her

6C: I wasn't. I'm not even.

ET: But while you were there, were you real scared?

6C: I don't know

ET: What was so frightening about her, 6C, what was so scary about her?

6C: I don't know. Why don't you ask her?

ET: Did she drink the pee pee?

6C: Please that sounds just crazy. I don't remember about that. Really don't.

In addition to the suggestions provided by mental health and forensic professionals, it is possible that the parents of these children continue to subtly suggest Kelly's guilt to these children. Thus if Wee Care children indeed continue to report past incidents of sexual abuse, it is possible that these reports reflect the long-lasting effects of much earlier suggestions, or that these reports reflect the effects of past and current suggestions which have been maintained over the period of years (1985-to the present). If the children were not abused, the beliefs of the legal authorities, the therapists, and the parents may provide a permanent architecture of suggestion to maintain the children's false allegations and beliefs. In other words, living in an environment where the primary belief is that "Kelly abused children" provides a constant source of suggestion to these children; as a result these children's reports and beliefs may be permanently tainted....

E. How To Obtain Reliable Reports From Children

Some critics may argue that this brief contains a biased presentation of the literature; that there are a number of studies that show that children are not suggestible, or that they are no more suggestible than adults. It is true that we have focused on those studies that emphasize the weaknesses of children's memories, because the conditions in those studies have the most relevance to the interviewing conditions of the Wee Care children. Other studies that emphasize the strengths of young children's memories (e.g, see Goodman, Batterman-Faunce & Kenney, 1992 for a review) do not contain the same types of suggestive interviewing procedures as described above. What characterizes many such studies is the neutral tone of the interviewer, the limited use of misleading questions (for the most part, suggestions are limited to a single occasion) and the absence of the induction of any motive for the child to make a false report. When such conditions are present, it is a common (although not a universal) finding that children are much more immune to suggestive influences, particularly about sexual details. Hence studies of children's strengths were not cited in the main part of this brief because the interviewing conditions of these studies do not typify those under which the Wee Care children were interviewed and therefore they have limited relevance to the issues in this case. However, there are two important implications of the studies which focus on the strength of children's reports. The first point is that although children are mainly highly accurate in studies in which they are interviewed by a neutral experimenter, asked minimal leading questions, and not given any motivation to produce distorted reports, there are nevertheless a few children in such studies who do give bizarre or sexualized answers to some leading questions. For example, in the Saywitz et al. study of children's reports of their medical examinations, one child, who never had a genital exam, falsely reported that the pediatrician had touched her buttocks and on further questioning claimed that it tickled and that the doctor used a long stick. In a study of children's recalls of their visit to a laboratory (Rudy & Goodman, 1991) one small child claimed that he had seen bones and blood in the research trailer (see Goodman et al., 1992, for additional examples). Thus, children do occasionally make spontaneous, strange, and unfounded allegations. However, as Goodman and her colleagues point out, many of these allegations can be understood by sensibly questioning the child and parents further. Often these allegations reflect the child's source confusions or his anxieties.

One can only imagine what would have happened were these few rare spontaneous allegations followed-up in the same way as they were in the Wee Care investigations. Perhaps participating researchers and adults would have ended up being falsely accused of many heinous acts. Also one can only imagine what would have happened in the Wee Care case if the child's initial allegation that "Kelly took my temperature" was investigated with the same sensitivity and understanding that Goodman and her colleagues showed in trying to understand their subjects' bizarre statements. A second important implication of studies that emphasize the strength of children's memories is that they highlight the conditions under which children should be interviewed if one wishes to obtain reliable reports. Again, when children are interviewed by

unbiased, neutral interviewers, and when leading questions are kept to a minimum, and there is the absence of threats, bribes and peer-pressure, then children's reports are less at risk for taint. It is not our intention to write a section on "good interviewing" practices in this brief. There have been several guidelines for the interviewing of children in sexual abuse cases. (e.g, White, Santilli, & Quinn, 1986; Yuille, Hunter, Joffe & Zaparniuk, 1993; also see section in the Appeal document that examines New Jersey interviewing procedures) At the most general level, all these guidelines share the following common elements. Interviewers are told to encourage the child to say as much as he or she can in his own words about what happened (Can you tell me about what happens at naptime?) Then more general questions to prompt recall are asked (Can you tell me anything else?). Following this the child might be asked more specific (not leading) questions to elaborate on the previous description (e.g., Who is in the room at naptime?; Do people do anything special at naptime?). And some interviewers advocate the use of leading questions as a last resort, if the child provides no information in the interview (Did anything scary happen at naptime? Did anyone ever touch you in a bad place at naptime?). The available Wee Care interviews indicate that interviews do not unfold in this way. Rather, after establishing some rapport with the children, the interviewers jump to specific and leading questions.

Even those researchers who emphasize the strengths of children's memories are highly critical of the interviewing tactics used with the Wee Care children:

Although there may be times when one needs to ask specific questions of children, several important caveats must be heeded. First, in actual practice, leading questions should be avoided when possible: Even if the child can maintain an accurate report, his or her and the interviewer's perceived credibility are likely to suffer. Second, there is a broad range of suggestion and coercion that can characterize an interview, and probably almost everyone would agree that some interviewers and parents go too far. Browbeating a child through repeated suggestive questioning is quite different from asking a few questions (Goodman, 1993, p. 15).

F. Missing First Interviews

The first allegation in this case was made on April 30, 1985. On May 1, 1985, the Essex County Prosecutor's office initiated an investigation: between May 2 and May 8, they interviewed five children and four parents. There are no electronic copies of these interviews. Between May 22 and July 8, 1985, Lou Fonolleras, an investigator from DYFS, conducted 82 interviews with Wee Care children and 19 interviews with their parents. None of the interviews were taped before June 19; less than half of the children's interviews and none of the parents' interviews were recorded. In addition, most of the other interviews are not recorded (1985-present). There are no recorded interviews with 16C, the child who made the initial allegation. Many of Treacy's interviews were not recorded.

The failure to have audio- or video-taped records of the initial interviews with these children makes it impossible to determine the accuracy of the children's subsequent statements. There is scanty information concerning how these children were initially questioned, and also concerning how many times they were questioned. Summaries of these missing interviews and electronic recordings of later interviews in which children do make allegations do not substitute for the missing original interviews. Written summaries of unrecorded interviews are subject to a number of distortions, especially if the interviewer is questioning a number of children and parents daily, as was the case. It is a well documented fact in the psycholinguistic literature that when asked to recall conversations, most adults may recall the gist, but they cannot recall the exact words used, nor the sequences of interactions between speakers. This linguistic information rapidly fades

from memory, minutes after the interactions have occurred (see Rayner & Pollatsek, 1990, for a review).

In the case of child witnesses, it is crucial to document the details by which their reports were obtained. For example, we must know whether and how often the interviewer asked the child leading questions. We must know whether the interviewer prodded the child's reports with the use of anatomically detailed dolls, etc. We also must know the verbatim statements and questions of the interviewer as well as the verbatim responses of the children. Because this verbatim information fades most rapidly from memory (within a matter of minutes), it is crucial that it be electronically recorded. Without this information, one cannot begin to evaluate the reliability of the children's allegations. It is also the case, that the gist of previous interviews may be inaccurately summarized in later reports due to certain biases or misperceptions of the interviewer. If the investigator has a bias that the child was sexually abused, then this can color his interpretations of what the child said or did; and it is this interpretation that appears in the summary rather than a factual account of what transpired. Finally, although there are some examples of taped interviews (e.g., 3C) in which there seem to be few leading questions and in which the child gives coherent reports of abuse, this is not the first interview and it is impossible to evaluate the reliability of these statements without knowing about the details of the first interview. If in the first interview, this child had been subjected to the same techniques that occur in the taped interviews, then the reliability of this child's statements would be highly suspect.

G. Generalizing from Research to the Real World

A consideration of the nature of the interviews conducted with the Wee Care children raises the possibility that their statements were in response to highly suggestive and coercive interview techniques. The social science research has documented how even subtler forms of these techniques can produce highly inaccurate reports in children. It is true that no study mirrors all of the influences operating in any particular real-world case. Indeed, many aspects of the interviewing procedures in the Wee Care case will never be examined in research studies, because researchers and their institutional review boards would deem the practices that occurred in the interviews with the Wee Care children grossly unethical, whether they be used on naive research subjects, on children suspected of sexual abuse, or on children with confirmed diagnoses of sexual abuse.

So, this brings us to the question of how much weight we should attach to the social science literature, given that no study perfectly mimics the constellation of variables observed in the Wee Care interviews. As little as 3 or 4 years ago, experts in this area would have had little empirical evidence upon which to base an opinion. However, as is clear from our review of the literature, in recent years a number of researchers across North America have conducted studies that share many of the features of the Wee Care case. This recent research indicates that suggestive interviewing procedures can lead young children to give false reports of real-life experiences which include erroneous claims about interactions involving physical contact between an adult and a child. The research also shows that very few young children would fabricate detailed claims of bizarre sexual abuse in response to one or two mildly leading questions. And, as we have seen, many of the Wee Care children initially appeared to resist repeated and forceful suggestions before capitulating to the interviewers' insinuations. The research also shows, however, that with more powerful and persistent methods of suggestion, such as those described in this brief, a substantial percentage of children can be led to make false reports of events that never occurred, including events that involve their own bodies and that would have been quite traumatic had they occurred. Based on this literature, and based on our analyses of the Wee Care interviews, it is our opinion that the constellation of factors operating in the Wee Care case would constitute an extraordinarily powerful suggestive atmosphere, one that is far stronger than those

that have given rise to false reports in the research studies that we have described in this brief. Most scientists admit to being "fallibilists", that is, to recognizing that knowledge is incremental, and therefore, while we may never possess perfect knowledge about a phenomenon, we must base our inferences on the most scientifically rigorous evidence we have available. Thus, even though there is not one study that reflects all the variables that were operative in the Wee Care interviews, we do have scientifically adequate knowledge about most of these, and this knowledge leads prudent scientists to conclude that if a study did include the sum total of the variables that were operative in Wee Care, we would obtain a large numbers of erroneous reports by preschoolers. In fact, many of us believe that the available evidence is such that we anticipate even larger numbers of erroneous reports than were reported in the research reviewed earlier in this brief. In sum, although there is always some risk when generalizing from scientific studies to real world analogs, scientists believe that the best basis for doing this is to extrapolate from the corpus of research that comes closest to matching the constellation of variables that operate in the real world, even if the match is less than perfect. The alternative is to eschew insights, predictions, or hypotheses gained from systematic, controlled studies in lieu of anecdotes, personal opinions, and ideological views.

Summary

We have argued that the investigation of child sexual abuse allegations is a complex matter fraught with problems. Scientists have begun to contribute important insights to these problems, though clearly more research is needed. Regardless of the complexities of the research, the present state of scientific knowledge permits us to make the following general statements about the reliability of the testimony of the child witnesses.

1. There are reliable age effects in children's suggestibility, with preschoolers being more vulnerable than older children to a host of factors that contribute to unreliable reports.
2. Although young children are often accurate reporters, some do make mistakes --particularly when they undergo suggestive interviews; and these errors can involve not only peripheral details, but also central, predictable (i.e., scripted) events that involve their own bodies. It is also the case that suggestive questioning not only distorts children's factual recall, but it also has a strong influence on their interpretation of events.
3. Measures can be taken to lessen the risk of suggestibility effects. To date, the factors that we know most about concern the nature of the interview itself--its frequency, degree of suggestiveness, and demand characteristics.

A child's report is less likely to be distorted, for example, after one interview than after several interviews (the term "interviews" here includes informal conversations between parents and child about the target events).

Interviewers who ask non-leading questions, who do not have a confirmatory bias (i.e., an attachment to a single hypothesis), and who do not repeat close-ended yes/no questions within or across interviews, are more likely to obtain accurate reports from children.

Interviewers who are patient, non-judgmental, and who do not attempt to create demand characteristics (e.g., by providing subtle rewards for certain responses) are likely to elicit the best quality reports from young children.

Thus, at one extreme we can have more confidence in a child's spontaneous statements made prior to any attempt by an adult to elicit what they suspect may be the truth. At the other

extreme, we are more likely to be concerned when a child has made a statement after prolonged, repeated, suggestive interviews.

4. Finally, it is also important that the court appreciate the complexity of the interrelationships of the factors affecting children's suggestibility. As in most areas of social science, effects are rarely as straightforward as one might wish. Even though suggestibility effects may be robust, the effects are not universal. Results vary between studies and children's behavior varies within studies. Thus, even in studies with pronounced suggestibility effects, there are always some children who are highly resistant to suggestion. We have seen this in our own studies as well as in the transcripts of the Wee Care interviews: in some cases, no matter how much an interviewer may try to suggest that an event occurred, some children will consistently resist and not incorporate the interviewer's suggestion or point of view. On the other side, although suggestibility effects tend to be most dramatic after prolonged and repeated interviewing, some children incorporate suggestions quickly, even after one short interview (e.g., Clarke-Stewart, et al., 1989).

The authors of this brief are fully aware of the immense obstacles that face those who are charged with investigating and reporting suspected child maltreatments. In no way do we want to convey the attitude that we deny the seriousness of the problem of child sexual abuse in today's society. The focus of our research and our arguments, however, is that unless one is very careful in the interviewing procedures that one uses with young children suspected of abuse, that one may never make an accurate determination of whether or not abuse occurred. This is because there are a number of interviewing procedures that have the potential to make non-abused children look like abused children. These are the same conditions that were used in the interviews with the Wee Care children. Given our present state of scientific knowledge, there are no valid scientific tests to determine which of the children's reports were accurate. The fact that these children underwent extremely suggestive interviews makes the determination of accuracy impossible.

The authors of this brief also wish to convey their deep concern over the children in this case. Our concern is that if there were incidents of sexual abuse, the faulty interviewing procedures make it impossible to ever know who the perpetrators were and how the abuse occurred. Thus poor interviewing procedures make it difficult to detect real abuse. But we have further concerns. And these involve the interviewing techniques which we view as abusive in themselves. After reading a number of these interviews, it is difficult to believe that adults charged with the care and protection of young children would be allowed to use the vocabulary that they used in these interviews, that they would be allowed to interact with the children in such sexually explicit ways, or that they would be allowed to bully and frighten their child witnesses in such a shocking manner. No amount of evidence that sexual abuse had actually occurred could ever justify the use of these techniques especially with three- and four-year-old children. Above and beyond the great stress, intimidation, and embarrassment that many of the children so obviously suffered during the interviews, we are deeply concerned about the long-lasting harmful effects of persuading children that they have been horribly sexually and physically abused, when in fact there may have been no abuse until the interviews began. The authors of this brief will be permanently disturbed that children were interviewed in such abusive circumstances regardless of the ultimate guilt of the accused

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(m)ost research on children as eyewitnesses has relied upon situations that are very different from the personal involvement and potential trauma of sexual abuse. Researchers have used brief stories, films, videotapes or slides to simulate a witnessed event. A few have used actual staged events but these events are also qualitatively different from incidents of child abuse (Goodman & Clarke-Stewart, p. 92-93).

As will become clear in our presentation, this statement no longer characterizes the relevant research. Researchers have developed paradigms to examine children's reports of salient and personally-experienced events that involve their own bodies. No longer do older maxims hold that when children are inaccurate in their reporting about such events it is because they make errors of omission (i.e, they fail to report important events) rather than errors of commission (i.e. they insert inaccurate details). Rather the newer research indicates that under certain conditions, young children also make errors of commission about personally experienced events involving their own bodies.

In the section below, we summarize some of the major findings of this area of research. We also provide examples of how different suggestive interview techniques were used in the investigative interviews with the Wee Care children.

1. The Effects of Interviewer Bias on Children's Reports

A review of interviews of children suspected of sexual abuse reveals that some interviewers blindly pursue a single hypothesis that sexual abuse has occurred. In such interviews, the interviewer typically fails to rule out rival hypotheses that might explain the behavior of the child and as a result often concludes that the child was sexually abused. Some investigative and therapeutic interviewers claim that such techniques are necessary because sexually abused children are so scared or embarrassed that they will never willingly or spontaneously tell any interviewer, including their own parents of the past abuses. Therefore, they claim, it is necessary to use all available strategies to get the child to reveal sexual abuse. These strategies include the use of repeated leading questions, repeated interviews, bribes or threats, and the induction of stereotypes and expectancies (Ceci & Bruck, 1993a). Such strategies may prove successful when the child has been sexually abused; that is, the interviewer will be successful in drawing out a report of sexual abuse from the child. However, as we document below when interviewers have strong preconceived impressions of what happened, these biases can also result in the generation of false confessions from children.

The following three studies show that interviewers, who are given false information about certain events, often shape children's reports to be consistent with their inaccurate beliefs about what happened through the use of leading questions and other implicit suggestive techniques.

Clarke-Stewart, Thompson and Lepore (1989) conducted a study in which 5- and 6-year-olds viewed a staged event that could be construed as either abusive or innocent. Some children interacted with a confederate named Chester as he cleaned some dolls and other toys in a playroom. Other children interacted with Chester as he handled the dolls roughly in a mildly abusive manner. Chester's dialogue reinforced the idea that he was either cleaning (e.g., "This doll is dirty, I had better clean it"), or playing with the doll in a rough suggestive manner (e.g., "I like to play with dolls. I like to spray them in the face with water").

The child was then questioned about this event several times, on the same day, by different interviewers who differed in their interpretations of the event. The interviewer was either 1) accusatory in tone (suggesting that the janitor had been inappropriately playing with the toys instead of working), 2) exculpatory in tone (suggesting that the janitor was just cleaning the toys

and not playing), or 3) neutral and non-suggestive in tone. In the first two types of interviews, the questions changed from mildly to strongly suggestive as the interview progressed. Following the first interview, all children were asked to tell in their own words what they had witnessed (this is referred to as "free recall"). They were then asked some factual questions (e.g., "Did the janitor wipe the doll's face?"), and some interpretive questions regarding the janitor's activities (e.g., "Was the janitor doing his job or was he just being bad?"). Then, each child was interrogated by a second interviewer who either reinforced or contradicted the first interviewer's tone. Finally, children were asked by their parents to recount what the janitor had done. When questioned by a neutral interviewer, or by an interviewer whose interpretation was consistent with the activity viewed by the child, children's accounts were both factually correct, and consistent with the janitor's script. However, when the interviewer contradicted the script, children's stories quickly conformed to the suggestions or beliefs of the interviewer; by the end of the first interview, 75% of children's remarks were consistent with the examiner's point of view, and 90% answered the interpretive questions in agreement with the interviewer's point of view, as opposed to what actually happened. Children changed their stories from the first to second interviews only if the two interviewers differed in their interpretation of the events; thus, when the second interviewer contradicted the first interviewer, the majority of children then fit their stories to the suggestions of the second interviewer. If the interviewer's interpretation was consistent across two interviews, the suggestions planted in the first session were quickly taken up and mentioned by the children in the second session. Moreover, when questioned by their parents, the children's answers were consistent with the interviewers' biases. Finally, although the effects of the interviewers' interpretations were most observable in terms of the children's responses to the interpretive questions about what the janitor had done, 20% of the children also made errors on the factual questions in the direction suggested by the biased interpretation, even though no suggestions had been given regarding these particular details. On a more practical level, these results suggest that if children experience an ambiguous event (e.g., touching), depending on the interviewers' beliefs about the touching, and how these beliefs get translated into questions, children may relate that it was good touching ("my teacher was only rubbing my back"), or bad touching ("my teacher was rubbing my bum").

Pettit, Fegan and Howie (1990) examined how interviewers' beliefs about a certain event affects (a) their style of questioning children about those events and (b) the accuracy of children's subsequent reports. Two actors, posing as park rangers, visited the classes of preschool children to ask them to help a bird find a nest for her eggs. During the presentation, one of the rangers accidentally knocked a cake onto the floor. When the cake fell and shattered on the floor, there was an abrupt silence and a halt to all activities. Seven children, who were members of the class, did not view this event but had been taken to other parts of the school. Two weeks later, all children were questioned about the event.

Interviewers' beliefs about the event were manipulated. Some interviewers had full accurate knowledge of the event. Some were given inaccurate information (i.e. false beliefs). Other interviewers were given no information about the event. The interviewers were told to question each child until they found out what happened, and to avoid the use of leading questions. Despite the warning to avoid leading questions, 30% of all interviewers' questions could be characterized as leading, and half of these were misleading. Interviewers with inaccurate knowledge (false beliefs) asked four to five times as many misleading questions as the other interviewers. Overall, children agreed with 41% of the misleading questions, and children who were interviewed by biased interviewers gave the most inaccurate information. Thus if an interviewer's belief is contrary to what the child actually experienced, the interview is characterized by an overabundance of misleading questions which results in children providing highly inaccurate information. A similar finding was reported by Ceci, Leichtman & White (in press). Here, preschoolers were exposed to a touching-game, and then were interviewed one month later. The

interviewer was given a one-page report containing information about what might have occurred. Some of the information was accurate and some was inaccurate. The interviewer was asked to conduct an interview to determine how much information the child could, in fact, still recall. The only instruction given to the interviewer was that she should begin by asking the child for a free narrative of what had transpired, avoiding all forms of suggestions and leading questions. Following this, the interviewer was instructed to use whatever strategies she felt necessary to elicit the most factually accurate report from the child.

When the interviewer was accurately informed, she got children to recall correctly most of the events that had transpired. Importantly, there were no false reports when the interviewer was correctly informed. However, when she was misinformed, 34% of the 3- to 4-year-olds and 18% of the 5- to 6-year-olds corroborated one or more false events that the interviewer erroneously believed had transpired. Thus, in the misinformed condition, the children made errors of commission. After two such interviews, children continued to give detailed, but false, accounts of bodily touching (e.g., some falsely claimed that their knees were licked and that marbles were inserted into their ears). Finally, the children in the misinformed condition seemingly became more credible as the interview unfolded. Many initially stated details inconsistently, or with reluctance or even denial, but as the interviewer persisted in asking about nonevents, some children abandoned their denials and hesitancy. These studies provide important evidence that interviewers' beliefs about an event can influence their style of questioning, which in turn can affect the accuracy of children's testimony. The data highlight the dangers of having only one hypothesis about the event in question--especially when this hypothesis is incorrect. Interviewers' biases, their blind pursuit of a single hypothesis, and their failure to test alternate, equally believable, explanations of the children's behavior are rife in the interviews conducted with the Wee Care children. These biases are revealed in the interviewers' persistently maintaining one line of inquiry (through the use of repeated leading questions, bribes and threats) even when children consistently replied that the questioned events never occurred. Interviewers' biases are also revealed in their failure to follow-up on some of the children's inconsistent or bizarre statements, for doing so might disconfirm their primary hypotheses. A long section of interaction illustrates some of these claims as do the following shorter pieces of dialogue in which the interviewer (Q) engages one child (A) in the following interactions during one of the initial investigatory interviews.

Q: Do you think that Kelly was not good when she was hurting you all?

A: Wasn't hurting me. I like her

Q: I can't hear you, you got to look at me when you talk to me. Now when Kelly was bothering kids in the music room

A: I got socks off

Q: Did she make anybody else take their clothes off in the music room?

A: No

Q: Yes

A: No

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Q: Did you ever see Kelly have blood in her vagina?

A: This is blood

Q: Kelly had blood in her vagina

A: Yeah

Q: She did? Did you ever get any of that blood on your penis?

A: No. Green blood

Q: Did you ever see any of your friends get blood on their penis from her vagina?

A: Not green blood but red blood

Q: Tell me something, tell me about the piss box. The piss box that's in the music room?

A: No, up there. All the way up there

Q: Is the piss box the bench at the piano? When you open up the bench: is that the piss box?

A: Yeah

Q: It is?

A: Yeah

Q: And what happened, she would open it up?

A: And, popped it up

A: She popped it up and then what would you do?

A: Jump in it?

Q: Jump in it?

A: Yeah

Q: And would you have to pee in it? AL Yeah (about 10 questions later, the topic comes up again)

Q: So the pee-pee box is the bench at the piano and you flip it open?

A: No

Q: What is the pee-pee box?

A: This is the pee-pee box

Q: That's not a pee-pee box. That's a crayon box

Q: Did Kelly ever make you kiss her on the butt?

A: No

Q: Did Kelly ever say--I'll tell you want. When did Kelly say these words? Piss, shit, sugar?

A: Piss, shit sugar?

Q: Yeah, when did she say that, what did you have to do in order for her to say that?

A: I didn't say that.

Q: I know, she said it, but what did you have to do?

(In this section, the child is asked to use anatomically detailed dolls and different utensils)

Q: Okay, I really need your help on this. Did you have to do anything to her with this stuff?

A: Okay. Where's the big knife at. Show me where's the big knife at.

Q: Pretend this is the big knife because we don't have a big knife

A: This is a big one

Q: Okay, what did you have to do with that? What did you have to...

A: No..take the peanut-put the peanut butter

Q: You put what's that, what did you put there?

A: I put jelly right here

Q: Jelly

A: And I put jelly on her mouth and on the eyes

Q: You put jelly on her eyes and her vagina and her mouth

A: On her back, on her socks

Q: And did you have to put anything else down there?

A: Right there, right here and right here and here

Q: You put peanut butter all over? And where else did you put the peanut butter?

A: And jelly

Q: And jelly?

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A: And we squeezed orange on her.

Q: And you had to squeeze an orange on her?

A: Put orange juice on her

Q: And did anybody--how did everybody take it off? How did she make you take it off?

A: No. Lick her all up, eat her all up and lick her all up

Q: You had to lick her all up?

A: And eat her all up

Q: Yeah? What did it taste like?

A: Yucky

Q: So she made you eat the peanut butter and jelly and the orange juice off of the vagina too?

A: Yeah

Q: Was that scary or funny?

A: Funny, funny and scary.

This interview is one of many that shows how interviewers did not seriously consider any evidence that was contrary to their primary beliefs. Thus when children's responses contained discrepant, inconsistent, incomprehensible or no information, the investigators only considered these responses to be consistent with the fact that abuse had taken place or else they chose to ignore these statements. We are struck by the inconsistencies and the bizarre statements made by the children in response to the interviewers' questions. Most adults interacting with children in these situations would try to figure out just what the child was thinking about or why the child might be so confused to make such statements. Yet this simply did not happen. The children were never asked common sense questions such as: "Did this happen to you or are you just pretending that it happened to you?" or "Did you see this happen or did someone tell you that it happened?" Children were never challenged about their statements, "Are you sure that this happened or are you telling me a joke?" Competent investigative interviewers would have used such techniques in order to understand how the alleged acts could actually be carried out in a short period of time in a very public place.

Our contention that the Wee Care interviewers held preconceived biases that these children were abused is not an inference, but is based on their statements justifying the use of their interviewing procedures. These interviewers believed that their major objective was to get the children to admit to sexual abuse.

Dr Susan Esquilin, a child therapist, presided over two heavily attended parent meetings when allegations were first made. She conducted five group therapy sessions with the Wee Care children and eventually assessed or treated 13 of the 20 child witnesses. She stated that her goal was to induce the children to discuss sexual abuse. In the first group therapy session, she told the children that they were assembled together because of some of the things that had happened at the

9 Wee Care and with Kelly. Based on courtroom testimony, it seems that 4 children made allegations after their contacts with Esquilin. (5C, 11C, 14C, and 20C)

Lou Fonolleras, an investigator from the Division of Youth and Family Services (DYFS), conducted 82 interviews with Wee Care children and 19 interviews with Wee Care parents, between May 22 and July 8 1985. At trial, Fonolleras described his interviewing techniques as follows, "The interview process is in essence the beginning of the healing process." To rationalize his use of persistent questions with the children, he stated, "because it is my professional and ethical responsibility to alleviate whatever anxiety has arisen as a result of what happened to them." Fonolleras justified his telling children about other children's allegations by saying, "children who needed some reassurance...(that) they were not alone". Finally one other detail is of importance in understanding the bias and pursuit of a single hypothesis in Fonolleras' interviews. He himself had been abused as a child. And in at least one recorded interview he uses this to lead the child's testimony. At least 10 children made initial allegations after their interviews with Fonolleras. Eileen Treacy, an expert for the prosecution, also interviewed these children several times between November 1985 and February 1987. At trial she testified on her interviewing techniques, "So you open the interview in an effort to disempower Kelly of these super powers that she allegedly has or that the kids thought she had and also to let the children know that telling about these things was okay and they would be safe." Finally, we do not limit our consideration of interviews to those held between children with legal and therapeutic professionals, but also extend these to conversations between parents and their children. Although we do not have any recordings or descriptions of the structures of these conversations, parents were soon instilled with the belief that abuse had taken place. Two weeks after 16C made the initial allegation, Peg Foster a sex abuse consultant told the parents at a school meeting that three children had been abused and urged them to discover whether their own children had been abused.

Having documented that interviewer expectancies lead preschoolers to respond in ways that are compatible with these expectancies, and that the Wee Care interviewers possessed strongly held expectancies that the children were abused, we now review the components of suggestive biased interviews that have the largest impact on producing inaccurate reports from young children.

2. The Effects of Repeated Questions

A number of studies have shown that asking children the same question repeatedly within an interview and across interviews, especially a yes/no question (e.g., Poole & White, 1991), often results in the child changing her original answer. Preschoolers are particularly vulnerable to these effects. Children often do this because they seem to reason, "The first answer I gave must be wrong, that is why they are asking me the question again. Therefore I should change my answer". At other times, children may change their answer to please the adult who is questioning them; they reason that the "adult must not have liked the first answer I gave so I will give another answer". At other times, children's answers may change because the interviewer's previous suggestions become incorporated into their memories.

For example, Cassel and Bjorklund (1993) questioned children and adults about a videotaped event they had viewed one week earlier. The subjects were asked leading questions and if they did not fall sway to the lead, then they were asked a more suggestive follow-up question. Kindergarten children were most affected by this manipulation. As expected, compared to adults and older children, they were most inaccurate in answering the first misleading questions; but also when the second more suggestive question was asked, they were more likely than older subjects to change their answers and to incorporate the desired answer into their second responses.

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Interviewers of the Wee Care children frequently repeated questions. They repeated questions when a child denied abuse or when then the the child's answer was inconsistent with what the interviewers believed. Although there are instances when children tenaciously rejected the interviewer's persistent suggestive questions, upon repetition of a question children often changed their answers to ones that were consistent with sexual abuse.

Q: When Kelly kissed you, did she ever put her tongue in your mouth?

A: No

Q: Did she ever make you put her tongue in her mouth?

A: No

Q: Did you ever have to kiss her vagina?

A: No

Q: Which of the kids had to kiss her vagina?

A: What's this?

Q: No that's my toy, my radio box. Which kids had to kiss her vagina?

A: Me

3. The Effects of Repeating Misinformation across Interviews

In most earlier studies of children's suggestibility, misinformation was planted only one time. However, our review of available transcripts reveals that not only is misinformation repeated within interviews, but it is commonly repeated across many different interviews.

A number of studies show that if children are repeatedly given misleading information in a series of interviews, this can have serious effects on the accuracy of their later reports (for a review, see Poole & White, in press). Not only can the misinformation become directly incorporated into the children's subsequent reports (they use the interviewers' words in their inaccurate statements), but it can also lead to fabrications or inaccuracies which do not directly mirror the content of the misleading information or questions.

For example, Bruck, Ceci, Francouer & Barr, (submitted) found that children will give highly inaccurate reports about a previous visit to a pediatrician's office if they are given multiple suggestions in repeated interviews. The children in this study visited their pediatrician when they were five years old. During that visit, a male pediatrician gave each child a physical examination, an oral polio vaccine and an inoculation. During that same visit, a female research assistant, talked to the child about a poster on the wall, read the child a story and gave the child some treats.

Approximately one year later, the children were re-interviewed four times over a period of a month. During the first three interviews, some children were falsely reminded that the pediatrician showed them the poster, gave them treats, and read them a story, and that the research assistant gave them the inoculation and the oral vaccine. Other children were given no information about the actors of these events. During the final interview, when asked to recall what happened during the original medical visit, children who were not given any misleading

information were highly accurate in their final reports. They correctly recalled which events were performed by the pediatrician and by the research assistant. In contrast, the misled children were very inaccurate; not only did they incorporate the misleading suggestions into their reports, with more than half the children falling sway to these suggestions (e.g., claiming that the female assistant inoculated them rather the pediatrician), but 45% of these children also included non-suggested but inaccurate events in their reports by falsely reporting that the research assistant had checked their ears and nose. None of the control children made such inaccurate reports. Thus, when suggestions are implanted and incorporated, young children use these in highly productive ways to reconstruct and distort reality (see Chester Study above by Clarke-Stewart et al., and Sam Stone Study below by Leichtman & Ceci for similar results).

Unfortunately, we do not have any of the initial interviews with the Wee Care children and thus we cannot ascertain the degree to which the allegations that emerge in much later taped investigatory interviews reflect earlier implanted suggestions. It is also possible that some of the allegations that occurred in these investigatory interviews reflect suggestions implanted from earlier conversations with parents who were urged by professionals and by other parents to look for signs of abuse in their children.

It is also important to note that the suggestive interviews did not end in July 1985 with the completion of Fonelleras' investigation. Children were interviewed before they appeared before the grand jury. Children were questioned by therapists, and they were questioned by members of the prosecutors' office leading up to trial. These children were also questioned by the prosecution and the defense attorneys at the trial.

A consideration of the research findings suggests that if the children had not been abused, then this magnitude of repeated suggestive interviews could have the effect of increasing and cementing false reports.

4. Emotional Tone of the Interview

Children are quick to pick up on the emotional tones in an interview and to act accordingly. There is much information that can be conveyed in the emotional tone including, implicit or explicit threats, bribes, and rewards. For example, in some studies when an accusatory tone is set by the examiner, (e.g. "we know something bad happened", or "it isn't good to let people kiss you in the bathtub", or "you'll feel better once you tell", or "don't be afraid to tell"), then children in these studies are likely to fabricate reports of past events even in cases when they have no memory of any event occurring. In some cases, these fabrications are sexual in nature (see review in Ceci & Bruck, 1993b). For example, four years after children played with an unfamiliar research assistant for five minutes while seated across a table from him, Goodman and her colleagues asked these same children to recall the original experience, and then asked them a series of questions, including abuse-related suggestive questions about the event (Goodman, Wilson, Hazan & Reed, 1989; also described in Goodman & Clarke-Stewart, 1991). At this time, the researchers created what they described as "an atmosphere of accusation", by telling the children that they were to be questioned about an important event and by saying such things as, "Are you afraid to tell? You'll feel better once you've told". Although few children had any memory for the original event from four years earlier, their performance on the suggestive abuse questions was mixed. Five out of the fifteen children incorrectly agreed with the interviewer's suggestive question that they had been hugged or kissed by the confederate, two of the fifteen agreed that they had their picture taken in the bathroom, and one child agreed that she or he had been given a bath. The important conclusion of this study is that children may begin to give incorrect information to misleading questions about events for which they have no memory, when the interviewer creates an aura (emotional tone) of accusation.

There are many other studies in the social science literature to show that reinforcing children for certain behaviors regardless of the quality of the behaviors also increases the frequency of these types of behaviors. Telling children "you are a really good boy" is one of example of this. In some situation, when used appropriately, these types of supportive statements make children feel at ease and make children more responsive and accurate than when they are provided with no feedback or support (e.g., . Goodman, Rudy, Bottoms, & Aman, 1990). However, if used inappropriately, these types of statements can also produce inaccurate statements. Thus, it has also been found that when interviewers are overly supportive of children, then children tend to produce many inaccurate as well as many accurate details (e.g., Geiselman, Saywitz & Bornstein, 1990). Certainly, there appears to be some trade-off in the effect of positive and neutral support on the accuracy of children's reports.

Although the quality and quantity of positive support and reinforcement provided in many of the research studies exemplify good interviewing techniques, ones that most interviewers would use, the types of "encouraging" statements made by some of Wee Care children's investigators would never be considered as acceptable examples of how children should be encouraged in an interview:

McGrath: Do you want to sit on my lap? Come here. I am so proud of you. I love big girls like you that tell me what happened -- that aren't afraid because I am here to protect you. Did you ever see what's this right here?... You got such pretty eyes. You are going to grow to be a beautiful young lady. I'm jealous, I'm too old for you.

Detective McGrath rationalized this behavior by saying "this way she may feel more comfortable and more at ease." However, these statements may have far greater consequences; they may change the balance of accuracy in children's reports. Threats and bribes also influence the emotional tones of interviews. However, these elements have never been systematically investigated, because it would be ethically impermissible to include such statements in research interviews with young children. But from everything we know about the principles of child development and about principles of punishment and reward, these statements should dramatically decrease the accuracy of children's statements. In the Wee Care interviews, there are numerous examples of bribes. Some children were given police badges in exchange for their incriminating statements. Sometimes the bribe took the form of promises to terminate the interviews ("Well, we can get out of here real quick if you just tell me what you told me last time we met" or, " Tell me what Kelly did to your hiney and then you can go."). Sometimes uncooperative children were explicitly threatened ("Now listen you have to behave" or, "You are acting like a baby").

The Wee Care interviewers often created an atmosphere of conspiracy and tried to enlist the children's cooperation. For example:

Your mommy tells me that you guys are interested in busting this case wide open with us, is that right? ----- That's why I need your help, especially you older kids...because you can talk better than the younger kids...and you will be helping to keep her in jail longer so that she doesn't hurt anybody. Not to mention that you'll also feel a lot better once you start. -----

These statements on the part of the Wee Care interviewers reflect their biases and their attempts to get children to admit abuse. And as we have argued, such statements may have deleterious effects on the subsequent accuracy of young children's reports.

5. The Effects of Peer Pressure or Interaction on Children's Reports

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The effects of letting children know that their friends have "already told" is a much less investigated area in the field of children's testimonial research. In addition, suggestions or misleading information may also be planted by peers. However, there are at least three relevant studies. First, Binet (1900) found that children will change their answers to be consistent with those of their peer group even when it is clear that the answer is inaccurate.

In the Pettit et al study described above, there were seven children who were absent from their classrooms when the target event (the cake falling off the piano) occurred. Yet when questioned two weeks later, six of these children indicated that they were present. One presumes that these six children gave false reports so that they would feel they were part of the same group as their friends who did participate. Importantly, this study also shows how the peer group's actual experiences in an event can contaminate non-participants reports or fabricated memories of the event.

Finally, Pynoos and Nader (1989) studied people's recollections of a sniper attack. On February 24, 1984, from a second story window across the street, a sniper shot repeated rounds of ammunition at children on an elementary school playground. Scores of children were pinned under gunfire, many were injured, and one child and passerby were killed. Roughly 10% of the student body, 113 children, were interviewed 6 to 16 weeks later. Each child was asked to freely recall the experience and then to respond to specific questions. Some of those children who were interviewed were not at the school during the shooting, including those already on the way home and those on vacation. Yet, even the non witnesses had memories: "One girl initially said that she was at the school gate nearest the sniper when the shooting began. In truth she was not only out of the line of fire, she was half a block away. A boy who had been away on vacation said that he had been on his way to the school, had seen someone lying on the ground, had heard the shots, and then turned back. In actuality, a police barricade prevented anyone from approaching the block around the school." (p. 238). One assumes that children heard about the event from their peers who were present during the sniper attack and they incorporated these reports into their own memories.

The investigators constantly told the Wee Care children that their friends had already told.

"All the other friends I talked to told me everything that happened. 29C told me. 32C told me... And now it's your turn to tell. You don't want to be left out, do you?"

"Boy, I'd hate having to tell your friends that you didn't want to help them"

Parents also told their children that they had been named as victims by other children. Child 1C finally disclosed to his mother after she had told him that others had mentioned him as a participant. The above evidence suggests that this strategy may co-opt children into making false reports.

6. The Effects of being Interviewed by Adults with High Status

Young children are sensitive to the status and power of their interviewers and as a result are especially likely to comply with the implicit and explicit agenda of such interviewers. If their account is questioned for example, children may defer to the challenges of the more senior interviewer. To some extent, it is this power differential and its recognition by the child that is one of the most important explanations for children's increased suggestibility. Children are more

24 likely to believe adults than other children, they are more willing to go along with the wishes of adults, and to incorporate adults' beliefs into their reports. This fact has long been recognized by researchers since the turn of the century and has been demonstrated in many studies (Ceci & Bruck, 1993a for review).

The Wee Care children were interviewed by law enforcement agents or by social workers who made reference to their connection to law enforcement agents. The children were explicitly made aware of the status of their interviewers by such comments as:

"I'm a policeman, if you were a bad girl, I would punish you wouldn't I? Police can punish bad people"

 "I'm going to introduce you to one of the men who arrested Kelly and put her in jail."

A recent study by Tobey and Goodman (1992) suggests that interviews by high status adults who make such statements may have negative effects on the accuracy of children's reports. In their study, 4-year-olds played a game with a research assistant who was called a "baby-sitter". Eleven days later, the children returned to the laboratory. Half of the children met a police officer who said

"I am very concerned that something bad might have happened the last time that you were here. I think that the babysitter you saw here last time might have done some bad things and I am trying to find out what happened the last time you were here when you played with the babysitter. We need your help. My partner is going to come in now and ask you some questions about what happened."

A research assistant dressed-up as a police officer then questioned these children. The other children never met the police officer; they were only questioned by a neutral interviewer about what happened with the baby-sitter. When the children were asked to tell everything they could remember, the children in the police condition gave fewer accurate statements and more inaccurate statements than children in the neutral condition. Two of the 13 children in the police condition seemed to be decisively misled by the suggestion that the baby sitter had done something bad. One girl said to her mother, "I think the baby-sitter had a gun and was going to kill me." Later, in her free recall, the same child said, "That man he might try to do something bad to me...really bad, yes siree." The second child inaccurately reported his ideas of what something bad might be, by saying "I fell down, I got lost, I got hurt on my legs, and I cut my ears." Goodman (1993) summarizes these findings as follows:

"One should be concerned not only with the actual questions but also with the context of the interview. An accusatory or intimidating context leads to increased errors in children's reports (p. 15)."

Another feature of some of the Wee Care interviews was that there was often more than one adult questioner present in the interview. One might argue that this might be a safe-guard to ensure that the child tells the truth--especially if one of the adults is the child's parent. However, it also seems that additional adults merely multiply the number of questions that the child is asked about the same theme-"Tell us how you were sexually abused by Kelly". And these increased questions may increase children's willingness to defer to the adults' agenda rather than to their own memories of whether an event actually occurred.

In the following 13C is interviewed by Fonelleras (L) and Detective Mastroangelo (R)

- 25
- L: What little girls did she do that to?
13C: (names a child)
L: Who?
13C: (repeats)
L: really
R: You want to show us again what she did with the fork?
L: Show us again what you just showed us
R: She put the fork where?
13C: The vagina
R: OK, whose vagina?
13C: um
R: Do you know. Who, honey?
13C: Down there.
L: OK but who's this little girl?
13C: Huh?

7. The Effects of Stereotype Inducement

As we have argued above, suggestions do not have to necessarily be in the form of an explicit (mis)leading question such as, "Show me how she touched your bottom." One component of a suggestive interview involves the induction of stereotypes. That is, 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. As the following two studies demonstrate, stereotype induction can have a very powerful effect on children's subsequent reports.

In the first study (Lepore & Sescio, in press), children ranging in age from 4- to 6-years old played some games with a man called Dale. Dale played with some of the toys in a researcher's laboratory room and he also asked the child to help him take off his sweater. Later, an interviewer asked the child to tell her everything that happened when Dale was in the room. For half the children, the interviewer maintained a neutral stance whenever they recalled an action. For the remaining children, the interviewer re-interpreted each of the child's responses in an incriminating way by stating, "He wasn't supposed to do or say that. That was bad. What else did he do?" Thus, in this incriminating condition, a negative stereotype was induced. At the conclusion of these incriminating procedures, the children heard three misleading statements about things that had not happened ("Didn't he take off some of your clothes, too?", "Other kids have told me that he kissed them, didn't he do that to you?" and, "He touched you and he wasn't supposed to do that, was he?") All children were then asked a series of direct questions, requiring "yes" or "no" answers, about what had happened with Dale.

Children in the incriminating condition gave many more inaccurate responses to the direct yes-no questions than children in the neutral condition. Interestingly, 1/3 of the children in the incriminating condition embellished their responses to these questions, and the embellished responses were always in the direction of the incriminating suggestions. The question that elicited the most frequent embellishments was: "Did Dale ever touch other kids at the school?" Embellishments to this question included information about who Dale touched (e.g., "He touched Jason, he touched Tori, and he touched Molly."), where he touched them (e.g., "He touched them on their legs."), how he touched them (e.g., "....and some he kissed....on the lips"), and how he took their clothes off ("Yes, my shoes and my socks and my pants. But not my shirt."). When they were re-interviewed one week later, children in the incriminating condition continued to answer the yes/no questions inaccurately and they continued to embellish their answers.

24 The second study also demonstrates the powerful effects of stereotype inductions especially when these are paired with repeated suggestive questioning. A stranger named Sam Stone paid a two-minute visit to preschoolers (aged 3 to 6 years) in their daycare center (see Leichtman & Ceci, in press). Following Sam Stone's visit, the children were asked for details about the visit on 4 different occasions over a 10-week period. During these 4 occasions, the interviewer refrained from using suggestive questions. She simply encouraged children to describe Sam Stone's visit in as much detail as possible. One month following the fourth interview, the children were interviewed a fifth time, by a new interviewer who asked about two "non-events" which involved Sam doing something to a teddy bear and a book. In reality, Sam Stone never touched either one. When asked in the fifth interview: "Did Sam Stone do anything to a book or a teddy bear?" most children rightfully replied "No." Only 10% of the youngest (3 to 4-year-old) children's answers contained claims that Sam Stone did anything to a book or teddy bear. When asked if they actually saw him do anything to the book or teddy bear, as opposed to "thinking they saw him do something," or "hearing he did something," now only 5% of their answers contained claims that anything occurred. Finally, when these 5% were gently challenged ("You didn't really see him do anything to the book/the teddy bear, did you?") only 2.5% still insisted on the reality of the fictional event. None of the older (5 to 6-year-old) children claimed to have actually seen Sam Stone do either of the fictional events.

A second group of preschoolers were presented with a stereotype of Sam Stone before he ever visited their school. Each week, beginning a month prior to Sam Stone's visit, these children were told a new Sam Stone story, in which he was depicted as very clumsy. For example:

You'll never guess who visited me last night. [pause] That's right. Sam Stone! And guess what he did this time? He asked to borrow my Barbie and when he was carrying her down the stairs, he tripped and fell and broke her arm. That Sam Stone is always getting into accidents and breaking things!

Following Sam Stone's visit, these children were given 4 suggestive interviews over a ten-week period. Each suggestive interview contained two erroneous suggestions, one having to do with ripping a book and the other with soiling a teddy bear (e.g., "Remember that time Sam Stone visited your classroom and spilled chocolate on that white teddy bear? Did he do it on purpose or was it an accident?" and "When Sam Stone ripped that book, was he being silly or was he angry?"). Ten weeks later, when a new interviewer probed about these events ("Did anything happen to a book?" "Did anything happen to a teddy bear?"), 72% of the youngest preschoolers claimed that Sam Stone did one or both misdeeds, a figure that dropped to 44% when asked if they actually saw him do these things. Importantly, 21% continued to insist that they saw him do these things, even when gently challenged. The older preschoolers, though more accurate, still included some children (11%) who insisted they saw him do the misdeeds.

Stereotype induction was rampant in the initial Wee Care interviews. The interviewers explicitly repeated in various interviews that Kelly was bad. Based on analyses of the existing interviews, the investigator told 15 of the 34 interviewed children that Kelly was in jail because she had done bad things. The investigators told the children that they needed their help to keep Kelly in jail. The investigators also promoted fear by asking leading questions about whether Kelly had threatened them or their families if they were to tell on her. Sometimes the investigators suggested that she had claimed to have supernatural powers ("Kelly said a lot of things to some kids and I think that she might have said them to you too, like she had some special powers like she can come through a wall and she could lift our bed and stuff like that..."). The investigators constantly told the children that they were now safe and could talk because Kelly was in jail.

It is interesting that despite these statements that pervaded the interviews, in the early interviews at least, the children did not completely incorporate the suggested stereotypes of Kelly. Sixteen of the 34 children never said they were afraid of her and the remaining children never volunteered that information. Some children claimed that Kelly was bad, but these claims were never completely justified by the children. For example, in one of the few examples we have of two transcribed interviews for the same child, we see that in the first of the transcribed interviews (but not the first interview) the child is repeatedly asked about bad things that Kelly did. She denies that Kelly did anything bad to her. In the next (transcribed) interview, the following exchange takes place:

Q: Was Kelly a good girl or a bad girl?

A: She was a bad girl.

Q: She was a bad girl. Were there any other teachers who were bad?

A: No

Q: Kelly was the only bad girl? What did Kelly do that made her a bad girl?

A: She readed

Q: She what?

A: She readed and she came to me and I said no, no, no.

Q: Did she hurt you?

A: I hurted her.

Q: How did you hurt her?

A: Because I didn't want to write and she write and I said no, no, no, no and I hit her.

When other children made statements that Kelly was bad, it is impossible to tell whether these statements reflect the fact that Kelly actually did bad things or whether these reports reflect the children's adoption of the interviewers' suggested stereotypes of Kelly, an indeterminacy exacerbated by the general absence of recorded initial interviews.

8. The Use of Anatomically Detailed Dolls

Anatomically detailed dolls are frequently used by professionals, including child therapists, police, child protection workers, and attorneys, when interviewing children about suspected sexual abuse. They were used repeatedly in the interviews with the Wee Care children. One rationale for the use of anatomical dolls is that they allow children to manipulate objects reminiscent of a critical event, thereby cuing recall and overcoming language and memory problems. Another rationale is that their use is thought to overcome motivational problems of embarrassment and shyness. The dolls have also been used as projective tests. Some professionals claim that if a child actively avoids these dolls, shows distress if they are undressed, or shows unusual preoccupation with their genitalia, this is consistent with the hypothesis that the child has been abused (see Mason, 1991). The use of anatomically detailed dolls has raised scepticism, however, among researchers and professionals alike. Two related arguments are frequently invoked against their use. The first is that the dolls are suggestive, that they encourage

28 the child to engage in sexual play even if the child has not been sexually abused (e.g., Gardner, 1989; Terr, 1988). A child, for instance, may insert a finger into a doll's genitalia simply because of its novelty or "affordance," much the way a child may insert a finger into the hole of a doughnut. Another criticism is that it is impossible to make firm judgments about children's abuse status on the basis of their doll play because there are no normative data on nonabused children's doll play. Over the past several years, researchers have conducted a number of studies to address these concerns.

In several studies, researchers have compared the doll play of children suspected of having been sexually abused with children not suspected of having been abused. In addition, there have been a score of studies examining the doll play of non-abused children. Reviews of this literature (Berry & Skinner, 1993; Ceci & Bruck, 1993a; Wolfner, Faust, & Dawes, 1993) indicate that many of the studies are methodologically inadequate and do not allow for firm interpretations about the potential usefulness or risks of using dolls. Furthermore, other data indicate that some of the play patterns thought to be characteristic of abused children, such as playing with the dolls in a suggestive or explicit sexual manner, or showing reticence or avoidance when presented with the dolls, also occur in samples of nonabused children.

More recent studies have focused on how accurately young preschoolers use dolls to represent themselves. For example, DeLoache (1993) used dolls to interview 2.5-, 3-, and 4-year-old children about a play session they had had with a male experimenter. The dolls did not help the children report their experiences. The younger children in particular gave fuller and more accurate accounts of where they had been touched without the dolls than they did with the dolls. When asked to place stickers on the doll in the same places that stickers had been placed on their own bodies, the younger children were not very successful. Indeed, many of the children did not seem to realize that they were supposed to treat the doll as a representation of themselves. Further, several children in this and a subsequent on-going study rejected the suggestion that they "pretend that this doll is you." This last finding is important, since a reluctance to play with dolls in forensic or therapeutic interview sessions is often taken as a possible indicant of abuse. Generally these results indicate that very young children may not have the cognitive sophistication to use a doll to represent their own experiences. Hence, the use of dolls may actually impede or distort, rather than facilitate and clarify, their ability to provide accurate testimony.

Two studies have examined how accurately non-abused children use the dolls to show how they were touched during a pediatric visit. In both studies, half the children received genital examinations and half did not. If the dolls provide children with a tool that will allow them to overcome their shyness, and embarrassment concerning sexual matters, then reports of genital touching should be more accurate when children are allowed to re-enact events with the dolls. The results of both studies fail to support this hypothesis. The first study included 5- and 7-year old girls (Saywitz, Goodman, Nicholas & Moan, 1991). When the children were asked for a verbal report of their genital examination, 78% of the children who had received a genital examination failed to disclose genital touching. When given the opportunity to provide the same information with the dolls ("Show me with the dolls what happened"), 83% of these children failed to disclose genital touching. However, when the experimenter pointed to either the genitalia or buttocks of the doll and asked a direct question, "Did the doctor touch you here?", only 22% of the responses were incorrect denials. Children who did not receive a genital examination never made a false report in the verbal free recall or doll enactment conditions. However, when the experimenter pointed to the genital or anal region of the doll and asked, "Did the doctor touch you here?", 9% of these children inaccurately claimed that they had been touched. These results indicate that regardless of interviewing technique, 5- and 7- year old children rarely make false reports about genital touching. These data also indicate that the dolls

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do not assist the children to divulge potentially embarrassing material, unless the interviewer uses highly directive questioning. As the next study shows, however, a very different pattern of results is obtained for younger children.

Three-year old children visited their pediatrician for their annual check-up (Ceci & Bruck, 1993b). Half the children received a genital examination where the pediatrician gently touched their buttocks and genitals. The other children were not touched in these areas. Immediately after the examination, an experimenter pointed to the genitalia or buttocks of an anatomically detailed doll and asked the child, "Did the Doctor touch you here?" Only 45% of the children who received the genital exam correctly answered yes; and only 50% of the children who did not receive a genital exam correctly answered "No" (i.e. 50% of these children falsely reported touching). When the children were simply asked to "Show on the doll" how the doctor had touched their buttocks or genitalia, accuracy did not improve. Now only 25% of the children who had received genital examinations correctly showed how the pediatrician had touched their genitals and buttocks. Accuracy decreased in part because a significant number of female subjects inserted their fingers into the anal or genital cavities of the dolls; the pediatrician never did this. Only 45% of the children who did not receive genital examinations were accurate by not showing any touching. That is 55% of the children who did not receive genital examinations falsely showed either genital or anal touching when given the dolls. Thus these data indicate that three-year-old preschool children are inaccurate when reporting how and where they were touched, even when the touching occurred five minutes prior to the interview. Children who were not touched demonstrated on the dolls that they were touched and children who were touched either refused to admit that they were touched, or at the other extreme they showed penetration when none had occurred. The use of the dolls increases this type of inaccurate reporting in three-year-old children.

The interview procedures in this study also elicited a number of other behaviors that adults might interpret as sexual. When the children were given a stethoscope and asked to show what the doctor did with it, some children incorrectly showed that he used the instrument to examine their genitals. The children were also shown a small spoon and asked whether the doctor had used it (the doctor had not used a spoon). A number of the children were inaccurate, stating that he had given them medicine with it. The children were then asked one time, "How might he use this spoon?" A small but significant number of children (18%) inserted the spoon into the genital or anal openings or hit the doll's genitals.

These "sexualized" behaviors do not reflect three-year-old children's sexual knowledge or experiences but two other factors. First, the types of questions and props used in the interviews (asking children to name body parts, including genitals, showing children anatomically detailed dolls and asking children to manipulate these dolls) make the children come to think that it is not only permissible but it is expected to respond to the interviewers' questions using these same terms. Second, the children insert fingers or objects into the dolls openings for the same reasons they would insert a finger into the hole of a doughnut; it is there, it is something to manipulate. In the initial interviews with the Wee Care children, anatomically detailed dolls were shown to the children before they said anything about abuse in 24 of the 39 interviews. Most of the leading and suggestive aspects of the transcribed interviews involve the interviewers' interactions with the dolls and their asking children sexualized questions in the contexts of the demonstrations with the dolls. In 17 of the 39 sessions silverware was given to the children with dolls. The children were asked such questions as:

Interviewer: Did Kelly ever do anything to you with a knife that hurt you ?

Child: No.

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Interviewer: Did she ever do bad things or hurt you with a spoon?

Child: No.

Interviewer: Did she ever do bad things or hurt you with a knife?

Child: No.

Interviewer: Okay. What about a wooden spoon?

Child: No.

Children were asked to speculate about how silverware could have been used.

Interviewer: Why don't you show me how you think a little girl can be hurt by the fork?

And

Interviewer: Why don't you show me what Kelly did with the big wooden spoon.

Often, as shown above, the children resisted these suggestions, but sometimes after much repetition, the children responded by poking the silverware into the genitalia or buttocks of the doll:

Interviewer: Can you think of a way somebody might have used this to hurt little girls?

Child: (indicates the tummy)

Interviewer: Where else do you think a little girl could have gotten hurt with a wooden spoon?

Child: The belly button.

Interviewer: Where else do you think a little girl might get hit with a wooden spoon? How do you think Kelly used this fork to hurt little girls?

Child: Belly button.

Interviewer: Where else?

(finally after many more persistent questions)

Child: Bottom.

Researchers Bruck & Ceci, were much more successful than the Wee Care interviewers in eliciting sexualized reports from children when they were first asked how one might use a spoon! Remember, the three-year-old children in the Bruck and Ceci study were only asked one time about how a spoon might be used. There are difficulties in drawing parallels between the behaviors of children in research studies and the behaviors of children in actual forensic contexts or clinical settings. Transcripts of some of these sessions with children suspected of having been sexually abused reveal the following practices by interviewers: naming the dolls after defendants (In 12 of the transcribed interviews, Wee Care investigators named a doll Kelly rather than allowing the child to do so); berating the dolls for alleged abuses against the child (e.g., shaking a finger at the male doll who has been named after the defendant, and yelling: "You are naughty for hurting Jennifer!"); assuming the role of fantasy characters in doll play; creating a persistent

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atmosphere of accusation; and asking a stream of suggestive questions that reflect the sexual knowledge of the adult interviewer. Non-abused children in research studies were never subjected to such highly suggestive experiences; they were never given prior motivation to play with the dolls suggestively or aggressively. If they had been, it is possible that their play with the dolls would contain many explicit sexual events, reflecting prior interviewing techniques rather than sexual abuse.

Because the initial interviews with the Wee Care children were not recorded, we cannot determine how Wee Care children were first interviewed with the dolls and how they responded to their introduction. But we do know from comments in the later transcribed interviews that children had interacted with the dolls on previous occasions. This raises the issue of whether any sexualized behavior or sexualized reports in the transcribed interviews reflects the children's prior exposure to the dolls rather than their attempt to demonstrate how they were sexually abused. That is, the dolls may serve as a nonverbal suggestive device which promotes subsequent sexualized play and sexualized verbalizations, none of which are accurate indicators of past abuse. These concerns are raised by the behavior of one non-abused child who served as a pilot subject in a study of young children's interactions with anatomically detailed dolls (described in Ceci, in press and Ceci & Bruck 1993b). A three-and-a-half year old non-abused girl was examined by a pediatrician. She was not given a genital examination. Immediately after the examination, when interviewed by the experimenter, she correctly said that the doctor had not touched her genitals or buttocks. Furthermore, when shown an anatomically detailed doll and told to show how the doctor had touched her genitals and buttocks, she correctly stated that he had not touched her. Three days later, the same child was given an anatomically detailed doll and asked to show all the things that the doctor had done in her previous visit. This time, she inserted a stick into the vagina of the doll and said that this had happened at the doctor's office. However, upon further questioning, she said that the doctor did not do this. Three days later, the child was asked to use the anatomically detailed doll and to show her father everything that had happened at the examination. This time, she hammered a stick into the doll's vagina and then inserted a toy earscope into the doll's anus. When asked if this really happened, she said "Yes it did." When her father and the experimenter both tried to debrief her with such statements as, "Your doctor doesn't do those things to little girls. You were just fooling. We know he didn't do those things", the three-year-old tenaciously clung to her prior claims that she had just demonstrated on the doll (a videotape of this child's doll play is enclosed with the brief, maybe). Thus, repeated exposure to the doll, with minimal suggestions, resulted in highly sexualized play for this one 3-year-old subject. Although this pilot observation calls for more systematic research on the influence of repeated exposure to anatomically detailed dolls in interviews with sexual themes, the dramatic and startling results of this one subject demonstrates vividly the potential suggestiveness of anatomical dolls with non-abused 3-year-olds.

Wolfner and his colleagues (1993) concluded their recent review article on the use of anatomical dolls with the following statement:

evidence available that would justify clinical or forensic diagnosis of abuse on the basis of the dolls. The common counter is that such play is "just one component" in reaching such a diagnosis based on a "full clinical" picture....[Doll] play cannot be validly used as a component, however, unless it provides incremental validity and there is virtually no evidence that it does."(Wolfner, et al., p. 9).

Since this statement was written, we now have data on three-year-old children's interactions with anatomically detailed dolls (Ceci & Bruck, described above). If replicated, these data would appear to suggest that dolls ought not be used in interviews with young children, as their use promotes sexualized behavior and false reports in non-abused children.

9. Less Invasive Methods Source Attribution Errors

In the previous sections, we have presented some of the elements of interviews that may produce inaccurate reporting. To a large extent, these elements are quite salient; their presence can be easily isolated in recorded interviews. Some authors of this brief have recently conducted three different types of studies that illustrate how suggestions that are delivered in a much milder and less detectible manner can also have repercussions on children's memories and reports. These three studies focus on the theoretical construct of "source attribution error". This refers to the problems that both children and adults have in separating the sources of their memories. In some cases, this may be particularly problematic for some children. For example, 6- and 9- year-old children make more errors than adults when discriminating between actions they performed and actions they merely imagined themselves performing (Foley & Johnson, 1985). When asked to remember which of two people said what, preschool children have a more difficult time than adults, if the two people speaking share similar physical characteristics (Foley & Johnson, 1985; Lindsay, Johnson, & Kwon, 1991).

Zaragoza and her colleagues (Ackil & Zaragoza, 1993) have used some of these same techniques to explore the basis of children's suggestibility. In these experiments, subjects viewed a videotape, after which the experimenter read them a summary of the video which contained events that were part of the video as well as events that were not part of the video. Sometime later, subjects were given a surprise memory test; here they were read a list of events and asked to say whether they remembered seeing the event on the video, or hearing the event from the summary, or both. The youngest children (6-year-olds) were most prone to confusing actually viewed with suggested (heard) events. These findings suggest that suggestibility effects reflect young children's susceptibility to serious memory errors, namely the tendency to believe they remembered seeing details that were only suggested to them. The next two experiments take this paradigm closer to the field of children's testimony in the forensic context.

In the following experiment, Poole and Lindsay (unpublished) demonstrated how source attribution errors may occur through subtle interventions, such as parents reading a book to their child. In this study, preschoolers played with "Mr. Science" for 16 minutes in a university laboratory. During that time the child participated in four demonstrations (e.g, lifting cans with pulleys). Four months later, the parents were mailed a story book which was specially constructed for each child. It contained a biographical description of their child's visit to Mr. Science. However, not all of the information was accurate; the story described two of the experiments that the child had seen and it also described two that the child had not seen. Furthermore, each story finished with the following fabricated account of what happened when it was time to leave the laboratory, "Mr Science wiped (child's name) hands and face with a wet-wipe. The cloth got close to (child's name) mouth and tasted really yuckie."

The parents read the story to their children three times. These young children were very susceptible to source attribution errors. When later interviewed by the experimenters, the children reported that they had participated in demonstrations which had only been mentioned in the stories read to them by their parents. When asked whether Mr. Science put anything "yuckie" in their mouths, more than half of the children inaccurately replied "yes", and these children elaborated their "yes" answers. Moreover, inaccurate reports of having something "yuckie" put in their mouths increased on repeated questioning; when asked, "Did Mr. Science put something yuckie in your mouth or did your Mom just read you this in a story?", now 71% of the children said that it really happened. This study demonstrates how very subtle suggestions can influence children's inaccurate reporting of non-events which can have a sexual interpretation. The next study, conducted by Ceci and his colleagues (Ceci, Crotteau, Smith & Loftus, in press) was designed to pursue the question of whether preschoolers exhibit source misattributions when they

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are repeatedly encouraged to think about events that never occurred. Each week for 10 consecutive weeks, an interviewer asked preschoolers to think about both actual events that they had experienced in their distant past (e.g., an accident that eventuated in stitches) and fictitious events that they had never experienced (e.g., getting their hand caught in a mousetrap and having to go to the hospital to get it removed; seeing an alligator on a bus with an apple in its mouth). Each of these events and non-events was written on a separate card. The child selected a card, the interviewer would read it aloud, and then ask if the event ever happened. For example, when the child selected the card that read: "Got finger caught in a mousetrap and had to go to the hospital to get the trap off", the interviewer would ask: "Think real hard, and tell me if this ever happened to you. Can you remember going to the hospital with the mousetrap on your finger?" (This study will be henceforth referred to as "The Mousetrap Study".)

After 10 weeks of thinking about both real and fictitious events, these preschool children were interviewed by a second interviewer. Initially, the interviewer asked: "Tell me if this ever happened to you: Did you ever get your finger caught in a mousetrap and have to go to the hospital to get the trap off?" Following the child's reply, the interviewer asked for additional details (e.g., "Can you tell me more?").

When exposed to these very mild manipulations, 58% of the preschool children produced false narratives to one or more of these fictitious events; 25% produced false narratives to the majority of them. Furthermore, the children's reports did not solely contain one word responses; their narratives contained elaborated and embellished descriptions of events that never occurred. Some accounts were internally coherent, containing not only details and sequences of events that never occurred but also containing descriptions of the child's affect during these non-events (see enclosed videotape, maybe).

MAKE THIS WHOLE PARAGRAPH A FOOTNOTE: It should be noted that subsequent work with same paradigm indicates that the same quality of false report can be produced in half the time as the original experiment. Furthermore, similar patterns of results have been recently reported for adult subjects (e.g., Hyman et al., 1993; Loftus, 1993). **END OF FOOTNOTE.**

These data indicate that children can come to make false reports about non-occurring events, even ostensibly painful bodily events, when suggestions are mildly made in the course of a conversation or a story-telling activity. If children are repeatedly asked by investigators, therapists, and parents to try to remember "how someone touched you" or "if someone touched your vagina", will children eventually come to make statements that they had been sexually abused, when abuse had never taken place? Furthermore, when parents or therapists read books with abuse themes to children, do children come to believe what happened in the book actually happened to them? (For example, Dr. Susan Esquilin read *Where the Wild Things Are* to some of the Wee Care children. One of the pictures contains a monster with a fork running after a child. After reading this book, some children began reporting abuse with utensils. **ROBERT IS THIS CORRECT??**) There are no data on these important issues. However, the results of the studies that we have just reviewed provide a theoretical and empirical framework for suspecting that such activities lead to significant source misattributions.

Summary

We have presented a number of features that, when present in interviews or interactions with young children, may greatly compromise the accuracy of their reports. These factors include: biased beliefs of the interviewer, the use of repeated questions, the repetition of misleading information, the use of rewards, bribes, and threats. children's reports are at risk for being tainted if they are interviewed by an intimidating adult, such as a police officer. Other important factors

that contribute to children's unreliable reports include the use of peer pressure, the use of anatomically detailed dolls, and stereotype induction. Finally, some very recent evidence indicates that merely asking children to repeatedly think about whether an event occurred may have a profound negative effect on their subsequent memories. These features characterize many of the interviews of the Wee Care children. The following excerpted interview, along with our annotated comments, summarizes many of the points made in this section. The interviewer, an experienced social worker, is denoted I, and he is interviewing one child, denoted C. Occasionally a police detective (P) joins the interview.

I: We have gotten a lot of other kids to help us since I last saw you.

C: No. I don't have to.

I: Oh come on. Did we tell you she is in jail?

C: Yes. My mother already told me.

Comment: It is obvious that this interviewer was not neutral regarding the defendant's guilt, insinuating that because she is now in jail he need not be afraid of her, although it is not clear that this child was ever afraid. Also note the use of peer pressure.

I: Well, we can get out of here real quick if you just tell me what you told me last time.

Comment: There is no desire on the part of this interviewer to test an alternative hypothesis; rather he desires the child to reaffirm on tape what he said in an earlier interview through the use of a bribe.

C: I forgot.

I: No you didn't, I know you didn't.

C: I did, I did.

I: No, come on.

C: I forgot.

I: I thought we were friends last time.

C: I'm not your friend any more.

I: How come?

C: Because I hate you.

I: Is it because we are talking about stuff you don't want to talk about? What are you a monster now? Huh?

Comment: This interviewing borders on being coercive. There is little respect for the child's wish not to discuss this matter.

I: We talked to a few more of your buddies - we talked to everybody now. And everyone told me about the nap room, and the bathroom stuff, and the music room stuff, and the choir stuff, and the peanut butter stuff, and nothing surprises me any more.

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Comment: Again, further evidence that no alternative hypothesis is being tested. The interviewer essentially tells the child that his friends already told on the defendant, and that he, the child, should do the same.

C: I hate you.

I: No you don't... You just don't like talking about this, but you don't hate me.

C: Yes, I do hate you.

I: We can finish this real fast if you just show me real fast what you showed me last time.

C: No.

I: I will let you play my tape recorder...Come on, do you want to help us out? Do you want to help us keep her in jail, huh? ...Tell me what happened to (three other children). Tell me what happened to them. Come on.....I need your help again, buddy. Come on.

C: No.

I: You told us everything once before. Do you want to undress my dolly?

I: Let's get done with this real quick so we could go to Kings to get popsicles....Did (defendant) ever tell you she could get out of jail?

Comment: The interviewer comes close to bribing the child for a disclosure, by implying that the aversive interview can be terminated as soon as the child repeats what he said earlier. Popsicles and playing with a tape recorder are offered as rewards.

Police: She could never get out.

C: I know that.

Police: Cause I got her... She is very afraid of me. She is so scared of me.

I: She cries when she sees him (indicating the police detective) because she is so scared... What happened to (another child) with the wooden spoon? If you don't remember in words, maybe you can show me.

Comment: Note the authoritative statements of the policeman. There is no attempt to test the hypothesis that the defendant did not do what they believed she did. Instead, we see further attempts to vilify the defendant to make it more likely the child will confirm their hunch about her.

C: I forgot what happened, too.

I: You remember. You told your mommy about everything, about the music room, and the nap room. And all the stuff. You want to help her stay in jail, don't you? So she doesn't bother you any more... Your mommy told me that you had a picture of yourself in your room and there was blood on your penis. Who hurt you?

C: (child names the defendant).

I: So, your penis was bleeding, oh. Your penis was bleeding. Tell me something else: was your hiney bleeding, too?

C: No.

Comment: The child never says to this investigator that his penis was bleeding. The investigator provides this misleading information to the child.

I: Did (defendant) bleed, too?

C: No.

I: Are you sure she didn't bleed?

C: Yes.... I saw her penis, too.

I: Show me on the (anatomical) doll....you saw that? Oh.

C: See doodied on me...She peed on us.

I: And did you have to pee on her at all?

C: Yeah.

I: You did? And who peed on her, you and who else?

C: (child names a male friend)

I: Didn't his penis bleed?

C: Yes.

I: It did? What made it bleed? What was she doing?

C: She was bleeding.

I: She was bleeding in her penis? Did you have to put your penis in her penis? Yes or No?

C: Yeah...And I peed in her penis.

I: What was that like? What did it feel like?

C: Like a shot.

I: Did (friend) have to put his penis in her penis, too?

C: Yes, at the same time.

I: At the same time? How did you do that?

C: We chopped our penises off.

I: So, she was bleeding in her penis and you had your penis and your friend's inside her penis.

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