

PRACTICE The Malleability of Memory

-by Elizabeth Loftus

Editor's Note: The following article is excerpted from Witness for the Defense (1991), in which Dr. Loftus and her co-author Katherine Ketcham describe Dr. Loftus's experience as an expert witness for the defense.

Chapter Six of Witness for the Defense describes a case in which Dr. Loftus testified as a defense expert for Tony, a young man accused of sexually abusing two five-year-old girls. Tony was a college student working as a counselor at the day camp where the abuse allegedly occurred. After one of the children returned from the camp, her mother asked, "What did you do at camp today, honey?" After some casual banter, the child said, "Did you know that 'dick' is another word for 'penis'?" Shocked, the mother questioned her daughter further. That night, the mother called a friend, whose daughter also attended the camp, and asked whether her daughter had mentioned anything that might indicate impropriety. The mother said no, but agreed to question her daughter the next morning. At first, the children denied that Tony had done anything inappropriate. Over the next several weeks, however, the two parents questioned their daughters repeatedly. Eventually, one of the children said, "He put his penis on my head. Then he put it in my mouth." The police were notified, and both girls were interviewed several times by detectives. After an investigation lasting several months, criminal charges were brought against Tony.

Tony's attorney, Marc Kurzman, retained Dr. Loftus to testify for the defense as an expert on children's memory. Dr. Loftus describes her conversation with Mr. Kurzman:

.....

If Tony was indeed innocent, I could think of only one explanation for the children's accusations. The children had been pressured, presumably by their mothers and later by police officers and therapists. But why would a mother push her child to make such horrible accusations?

"Tell me about the mothers," I said to Kurzman.

Kurzman sighed. "We've got two mothers who love their children very, very deeply. And we have to ask ourselves: Is there a stronger impulse than a mother's need to protect her child? Let me tell you what I think happened. I think the kids at the camp were engaging in bathroom talk — you know, Johnny says, "Hey, I've got a penis and you don't," and then Joey says, "Hey, did you know that dick is another word for penis?"

"But talking about the word penis and then saying you were sexually abused is a big leap," I interrupted.

"That's right. And I think that space was filled in by the mothers who heard their children talking about dicks and penises; who immediately became alarmed, understandably alarmed; who asked hundreds of questions; who called each other repeatedly over the next several months; who talked to the police, took their children to the hospital, and through this whole ordeal communicated their fear and even their thoughts to their children."

Kurzman paused for a breath of air. "There is no evidence in these cases — none — of sexual molestation," he said. We have only the word of the children."

"Only the word of the children." My mind grabbed that phrase and settled on it, circling, sniffing, poking. "Believe the children" has become the rallying cry of child-abuse specialists and investigators. People who don't believe the children are considered guilty of betraying them. I forced myself to tune back into Kurzman's monologue.

"...and then there are all these conversations between the mothers. They must have talked to each other a hundred times, getting more and more worked up, trading information, convincing each other, getting hysterical. After they talked on the phone, they'd sit down with their kids and try to elicit some more information. 'Are you sure he didn't touch you? Don't be ashamed, you can tell me. If anything happened, tell Mommy.' Over and over and over again, gently but surely leading the children where they wanted them to go."

.....

"I understand that your research is mostly with memory distortion in adults," Kurzman said, abruptly switching the subject. "But you have also studied the impact of suggestive questioning on children, is that right?"

I briefly summarized my research studies with children. In one experiment conducted in the late 1970s with Phil Dale, an expert in developmental psychology, we showed preschool and kindergarten children four films, approximately one minute each. Afterward we interviewed the children and asked them questions, some of which were suggestive and elicited surprising responses. One child, when asked "Did you see a boat?" in the film later recalled "some boats in the water." Another child was asked "Didn't you see a bear?" and later recalled "I remember a bear." "Didn't you see some bees?" we asked a child who later recalled seeing "a bee in it." And a child who was asked "Did you see some candles start the fire?" later told us "The candle made the fire." There were no boats, bears, bees, or candles in any of the films.

"In other words," I explained to Kurzman, "we were able to alter the child's response, perhaps even creating a memory in the child's mind, simply by asking a suggestive question. Why were these children so suggestible? This is the hard stuff, the creative part of psychology. All we know is that we have a child saying he saw a bear when there was no bear. We have two possible explanations. Perhaps the child's original memory has faded, and it is relatively easy for us to make the child imagine that she has seen a bear. The bear literally becomes the memory. The alternative explanation is that the child doesn't really think she saw a bear but is just going along with the questioner because she thinks that she should have seen a bear. In other words, she thinks that by saying she did see a bear, she is giving the right answer."

continued on next page

Practice

—Elizabeth Loftus

continued from page 7

I hesitated for a moment, trying to decide whether to tell Kurzman about an earlier experiment I'd conducted with adult subjects who watched a film clip of an automobile accident and then were interviewed and asked suggestive questions. By using the verb "smash" instead of "hit," we were able to change not only the subjects' estimate of the speed of the cars when the accident occurred but also the probability of reporting broken glass — even though there was no broken glass in the film and we never mentioned broken glass in our interviews. This particular experiment supported the theory that the subjects experienced an actual change in the original memory.

Psychological researchers studying children's memory and the credibility of children's testimony can be divided into two basic camps. On one side are those researchers who theorize that children can be led by suggestive questioning into a different version of reality, sometimes adopting the interrogator's version of reality, even if that version is not the truth. Children, in other words, become confused as time goes on and their original memory fades.

On the other side, researchers insist that children will not deliberately lie about traumatic events. While they may be suggestible about the color of someone's eyes or the meal they ate for dinner last week, if the subject is sexual abuse, they know what happened and what didn't happen. Children, the theory goes, are not able to fantasize in graphic detail about sexual acts outside their experience, nor can they be coerced or brainwashed into making allegations against their parents, teachers, or friends. Children will not deliberately lie.

As a researcher who has spent more than two decades studying memory, perception, and the power of suggestion, I think the key word to keep in mind is not lie but *deliberately*. Changes in memory are generally unconscious, and distortions occur gradually, without our calculated interference. It's not so

much a question of a child being deceptive as being confused. Just as an adult's memory can be filled with false and contradictory information, so can a child's memory.

Even if children's memories were comparable to adults' on every level, children would still have memory problems. Getting a child to remember a bear in a film that contained no bears is not as fantastic as it sounds, when I've been able in my experiments to get adult subjects to remember seeing broken

glass in a film of an automobile accident that contained no broken glass. We are all, adults and children alike, suggestible beings.

Perhaps we could use a child's analogy and think of memory as a chunk of clay that we hold in our hands, allowing it to warm before we mold it into

different shapes. We can't change the clay into a rock or water or cotton, but we can transform it, push it, dent it, bend it, make animals and shapes, faces and forms, designs and textures. When we have finished with our manipulations, we put the molded form into the oven of our minds where it bakes until it is hard and firm. Our distortions have become a hard reality, part fact, part fiction, but in our minds an exact representation of the way things were.

I remembered a recent conversation with Stephen Ceci, a professor at Cornell University and an important contributor to the research literature on children's suggestibility. We were discussing the current national hysteria regarding child sexual abuse, and Ceci mentioned the Salem witch trials. In the year 1692, between June 10 and September 19, twenty residents of Salem, Massachusetts, were accused, tried, and convicted of witchcraft; all were swiftly put to death. What was the evidence against the so-called witches and wizards? The word of the children. Children between the ages of five and sixteen were the defendants' major accusers. Children gave the key eyewitness testimony against them, claiming that they saw the "witches" turn themselves into black cats, fly on broomsticks over the pastures at night, or talk to insects that then flew into the children's bodies and implanted nails in their stomachs. And children provided the only evidence against the defendants, experiencing apoplectic fits or total paralysis at the sight of the witches or vomiting nails and pins — thirty or more at a time — in the presence of the judges, jurors, and spectators.

"We'll never know if these child accusers deliberately lied or were truly convinced that they were telling the truth," Ceci said, "but the Salem records of the actual interviews with the children vividly illustrate the use of leading questions, suggestive statements, insinuations, and blatant attempts by parents, ministers, and judges to persuade the children that they had observed evidence of witchcraft. And then we have the recantations made many years later."

Later in Chapter Six, Dr. Loftus describes her expert testimony at Tony's trial. Defense counsel asked:

"Are you familiar with the term 'memory implant'?"

"Yes, it's a term that refers to a situation that I have studied extensively over the last ten or twelve years in my laboratory. When somebody experiences an event, they are sometimes exposed to new information after the event is over. That new information can come in the form of leading questions or in the form of allowing a witness to overhear another witness talk about the event. In many situations, the new information becomes incorporated or implanted in the witness's memory and causes a supplementation to the memory — an alteration, transformation, contamination, or distortion in the memory."

continued on next page

Changes in memory are generally unconscious, and distortions occur gradually, without our calculated interference. It's not so much a question of a child being deceptive as being confused.

Practice

—Elizabeth Loftus
continued from
previous page

"In this case," Kurzman said, "the jury has heard testimony from two children who are presently about six years old and who at the time the events occurred were five years old."

"Can you tell the jury generally about the malleability or suggestibility of the memory implantation process as it occurs with five- and six-year-old children," Kurzman asked.

"We have found that it is very easy to suggest information to people, and, under certain conditions,

Even if children's memories were comparable to adults' on every level, children would still have memory problems. . . . We are all, adults and children alike, suggestible beings.

they will succumb to these suggestions and come to believe that they actually witnessed these details. We have gotten people to tell us that they saw broken glass, if we ask a question about cars smashing into each other. We've gotten people to tell us red lights were green lights, if we ask a leading question that suggested that the light was green. We've gotten people to

tell us that an individual has curly hair when in fact he had straight hair."

"It's now been demonstrated that under certain conditions children can be even more suggestible than adults. I'm referring now to children three, four, and five years old. When you ask leading questions that suggest what the answer is to be, children will pick up that information and incorporate it into their memories, and they will then come to believe that they have actually experienced these details when, in fact, they've only been suggested to them."

Kurzman abruptly switched the subject. "As part of your teaching experience, have you taught people the proper ways to question someone in order to determine the reality of their experience and to avoid implanting ideas in their minds as you question

them?"

"Yes, I've lectured to police, state patrol, and other groups of law enforcement officers on the proper ways to question people to get the most accurate and complete answers."

"Do you have an opinion about whether a properly trained person in interviewing techniques, someone who interviewed a five-year-old child who had already been questioned for two months, would be able to determine whether the information received by the proper investigation was an accurate reflection of reality or a mix of fact and fantasy?"

"I do have an opinion." This, of course, was a crucial part of my testimony as an expert witness on memory. "Once someone's memory has been contaminated, distorted, or transformed by the processes I've been talking about, by suggestive questioning or by other kinds of postevent suggestions, it's virtually impossible to distinguish fact from fantasy because the individual witness now believes in what he or she is saying."

"And therefore," Kurzman said, "if a five- or six-year-old child was relating a story that contained contamination, fantasy, implantation, would this child be making a false accusation as the child understood it?"

"The child would not be making a false accusation," I said. "It's certainly possible that children can lie, and do lie, but we're talking here about children who honestly believe what they are saying, but they are saying it because of the suggestive influences that have been exerted either advertently or inadvertently upon them."

"Thank you," Kurzman said. "I have no further questions."

The jury found Tony not guilty.

Reference

Loftus, E. & Ketcham, K. (1991). *Witness for the Defense*. New York: St. Martin's Press.

Elizabeth Loftus, PhD, is Professor of Psychology at the University of Washington in Seattle.

before narrating the event;

2. Report everything, even partial information, regardless of perceived importance;
3. Recount the events in a variety of orders; and
4. Report the events from a variety of perspectives.

The cognitive interview has been evaluated positively in a series of studies with adult witnesses, and shown to elicit 35% to 58% more information than standard police interviews. The cognitive interview is now utilized by police officers throughout the country.

Because the cognitive interview is essentially a guided memory search, the technique uses the type of memory aids that are likely to benefit children's recall. Typically, the reports of young children are quite

continued on next page

PRACTICE

Enhancing Children's Memory with the Cognitive Interview

—by Karen J. Saywitz

The "cognitive interview" is a collection of memory enhancement techniques developed by R. Edward Geiselman to aid forensic questioning of adult crime victims. The cognitive interview technique is based on two principles of memory that are well documented in the scientific literature. First, a memory is composed of several features, and the effectiveness of a memory jogging technique is related to the extent of its feature overlap with the memory. Second, there may be several retrieval paths to a memory for an event, so that information not accessible with one memory jogging technique may be accessible with a different technique. Based on this framework, Geiselman developed four general retrieval aids:

1. Mentally reconstruct the environmental and personal context that existed at the time of the crime