INTERVIEWING CHILDREN

The Science of Conversation in Forensic Contexts

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INTRODUCTION

Some of my favorite research in developmental psychology explored children's ability to explain something to another person. In a typical study, children looked at a drawing of four geometric shapes and tried to describe it so a listener could draw it accurately. Because the shapes had different sizes, colors, and locations relative to other shapes, children had to explain many pieces of information to succeed. This usually did not happen. In one sample, third graders mentioned only six features of the drawing, on average, which simply was not enough to cue listeners to the true state of affairs. Transcripts of children explaining a game to a blindfolded listener were charming. For example, one second grader said, "This side is red and you're supposed to put it, um, go on these. This side is blue and you're supposed to go on these. You put these in your hand, um, you choose, um, which pig you want. Told ya!" (Flavell, Botkin, Fry, Wright, & Jarvis, 1975, p. 98).

We would laugh less at children if we contemplated our own inexpert (and sometimes embarrassing) directions and e-mails. The truth is that children

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do not have a monopoly on ambiguous communication. Put children and adults together and you have the question that has fascinated me for decades: Of all the possible things a conversation could have meant, what is the best explanation for what it actually did mean?

This question gripped my heart in the 1980s, when researchers around the globe read about day care abuse cases in which numerous youngsters made inconsistent and sometimes bizarre allegations. At the time, I was a directionless academic—bored with the basic research I had been trained to design and busy watching my babies grow. But after I learned what investigators were asking child witnesses and how the children responded, I found a purpose for my peculiar set of skills: I was not sure why children said what they said during criminal investigations, but I knew how to test some ideas.

That testing took a two-pronged approach. Because a developmental psychologist's home is an impromptu laboratory, for years I frequently squatted down, delivered questions to my son and daughter, and listened to the result. (Later, they trained research assistants and, eventually, produced a new generation of homegrown demonstration children.) My second strategy was to work with talented colleagues who were also interested in bringing legions of children into the laboratory. Those legions usually proved us wrong. Until recently, I never predicted the results of a study and often marveled at what drove other investigators to try their unlikely ideas. These discrepancies between what I thought children would do and what they actually did motivated this book, which is my way of sharing how evidence-based practice can reduce the ambiguities that permeate adult–child conversations in forensic contexts.

Because the science of conversation is broad, the range of topics covered in this book is also broad. Chapter 1 explains how adults usually talk to children, why this style impedes forensic goals, and the types of studies researchers conduct to look for solutions. Chapter 2 introduces the overarching characteristics of the forensic perspective, explains the differences between forensic and clinical roles, and discusses the benefits and limitations of blind versus informed interviewing. Chapters 3 to 6 translate the forensic perspective into three "C" skills: conversational habits (discussed in Chapter 3), conventional content (Chapters 4 and 5), and case-specific decisions and exploration (Chapter 6). *Conversational habits* are general skills, such as the nonverbal behaviors that put children at ease and the crafting of questions that children understand. *Conventional content* refers to the instructions and interview phases in protocols, whereas *case-specific decisions and exploration* involves the moves interviewers make to customize interviews. Dividing skills into these groups establishes general skills before introducing skills that are more difficult to master and more context dependent. Finally, Chapter 7 discusses interview protocols and the characteristics of effective training programs.

These chapters were designed for busy professionals who will put down this book and either do what they just read or analyze what someone else has done. To be useful for forensic interviewers, clinicians, attorneys, and the many other professionals who rely on children's testimony, the narrative is action oriented. Research-based practice recommendations are illustrated with example dialogue, summarized in chapter recaps, and reviewed in periodic Quick Guide sections that synthesize core ideas and skills. Each chapter also contains a Principles to Practice section, which presents a question about child interviewing and my response. Throughout, the goal is to illustrate evidence-based practice, not to imply that a single approach is best for every situation.

This focus on practice dictated a number of difficult decisions. Because some readers would not be interviewers, I violated a well-known tenet of training materials (see Chapter 7) by writing chapter subheadings that function as nouns rather than action statements (e.g., "Introducing the Topic" rather than "Introduce the Topic"). I also limited research reviews to illustrative examples, thereby omitting many classic and recent studies that deserved to be mentioned. I apologize for these omissions and refer readers to cited books and chapters for more in-depth reviews. Although I mentioned technical terms when doing so would help readers find other resources on a topic, I avoided unnecessary jargon.

It is also important to mention what is not in this book. Obviously absent is the enormous body of knowledge that professionals need to fulfill their roles as child protection workers, advocacy center interviewers, arson investigators, prosecutors, defense attorneys, judges, mental health workers, physicians, or mandated reporters in schools. And although it is true that general principles of talking to children apply across a wide variety of situations, conversational skill is only one component of the training needed for effective practice in these fields.

Also absent are topics that have not attracted enough research to support evidence-based guidelines. For example, interviewers should treat children and adolescents differently, but what this entails is still largely based on common sense rather than systematic research. Similarly, many widely distributed techniques have not been adequately studied and, for that reason, are not discussed in this book. I hope that these gaps will be filled in the years to come, which will give interviewers a wider range of techniques to choose from and a better foundation for tailoring practice to the needs of individual cases.

As guidelines continue to evolve, the primary goal of conversations with child witnesses will remain the same: to help children describe events in their lives as completely, accurately, and unambiguously as they can. The obstacles blocking this goal, and the techniques that overcome those obstacles, make up the science of conversation in forensic contexts.

1

THE SCIENCE OF INTERVIEWING CHILDREN

As Officer Matt Sonders drove to meet his students in an abandoned school, he mentally reviewed how the skills he was about to demonstrate could one day save lives.[1] After the Columbine High School massacre, U.S. law enforcement officials abandoned the practice of waiting for SWAT teams to confront active shooters and began training local police and sheriff's departments to respond in a coordinated effort. Matt's simulated munitions class included law enforcement representatives from several communities, and he had one goal: to teach them to react in ways that were radically different from how they would naturally react.

The challenges Matt faced are fascinating. It is unnatural to move toward threats, and police officers are often accustomed to planting their feet on the gun range. As a result, they may pause at "fatal funnels": structures

[1]Throughout this book, I changed the names of professionals, parents, and children who provided stories and conversation examples.

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such as doorways that look like protective barriers but actually stack responders into a line that makes them more vulnerable. Once they plow through, responders tend to collectively engage a hostile target instead of maintaining responsibility for their separate sectors of fire. During an interview that I conducted with him, Matt explained why these natural responses put them at greater risk of death, where new guidelines came from, why experienced officers sometimes resist new approaches, and the characteristics of effective training. Repeatedly, I muttered, "It is the same for us . . . this is why interviewing is so hard."

What does a task requiring unparalleled bravery have in common with interviewing? Consider how Matt's primary challenge—helping experienced professionals set aside their default ways of thinking and acting—is also a challenge in other professions. Emergency room physicians must temporarily ignore alarming injuries to resolve subtle yet life-threatening ones, trial attorneys must inhibit the urge to object when doing so would be nonstrategic, and financial experts must not overreact to short-term market fluctuations. Interviewing children also requires exceptional *effortful control*, which is the ability to suppress a dominant response and substitute another response. Professionals who excel at forensic interviewing regularly set aside how they usually speak because the conversational habits of everyday life can undermine a fact-finding process.

Just as the guidelines Matt trained were designed to address a set of problems, the conversational style we call *forensic interviewing* is a collection of techniques that mitigate problems—in this case, the problems that sometimes occur when adults talk with children. You will read more about Matt's story at the end of this book, where he shares his experiences as a trainer. This chapter explains why interviewing children is a specialized skill by reviewing how adults usually structure conversations with children—and the surprising ways some children respond.

THE CURIOUS ADULT: TELL ME WHAT I WANT TO KNOW, AND TELL ME NOW

Melissa and her 6-year-old daughter, Claire, had just participated in a research project when I asked whether I could record them talking to each other for a few minutes. After they agreed, I asked Melissa to find out what Claire had done during a recent activity. Here is the start of their conversation:

Melissa: OK, so what did you do at school Friday?

Claire: I was getting a pumpkin and playing.

Melissa: At the pumpkin patch?

Claire: And then Papa took me for a ride in a hayride.

Melissa: A hayride? What did you ride in?

Claire: Hay, I mean a trailer.

Melissa: It was a trailer? Did it have a horse pulling it, or . . .

Claire: There was a tractor pulling it.

Melissa: A tractor? How many kids were on that?

Claire: I don't quite know.

Melissa: Was there like, just a few, or . . .

Claire: There was three lanes and the teacher said, umm, only the teachers could be on the, on the middle lane.

Melissa: Oh, teachers had to be in the middle. Kids had to be on the outside?

Claire: Yeah, but, umm, kids went in the middle.

Melissa: How come?

Claire: I don't know. Because . . . they just wanted, I guess.

Melissa: Oh. So what else did you guys do? Did you guys, like, eat apples? Or anything?

Claire: We had donuts, and apples, and cider.

Melissa: You did?

Claire: Yes.

Melissa: Is that when Papa was talking?

Claire: No.

Melissa: Oh, that was afterwards?

Claire: Yes, it was before. It was after the hayride.

Melissa: Was that the first thing you did?

Claire: Umm-hmm.

Melissa: It was?

Claire: The hayride.

Melissa: Oh, cool. Was it too cold?

Claire: Well, not really.

Notice that after Melissa established the topic ("OK, so what did you do at school Friday?"), she constructed her understanding of the event piece by piece using questions that asked for specific details. Instead of inviting Claire to tell what happened on Friday, most of Melissa's conversational turns were comments such as "Did it have a horse pulling it?" and "Is that when Papa was talking?"—yes/no questions containing information Claire had not yet mentioned. Perhaps because Melissa was guessing what had happened (based on sketchy knowledge of a typical visit to this community favorite), much of the information embedded in her questions was, in fact, wrong.

What this transcript cannot convey is the pressured way Melissa spoke to Claire. Whenever Claire stopped speaking, Melissa waited less than a second before asking another question, and she often asked multiple questions without waiting for a response (i.e., "So what else did you guys do? Did you guys, like, eat apples?"). In turn, Claire usually said only a few words and then waited for Melissa to speak again.

It is not startling news that parents direct conversations with children. Most children do not produce extended narratives about the past until 3 to 5 years of age, and even then their parents provide questions and information that give children's stories their structure and content (Wang, 2013). At home, this process teaches children how to organize stories and what types of information make a good story. It is rarely a problem that parents control the storytelling process because they usually are not trying to learn from children. Instead, conversations about shared and emotionally charged experiences are vehicles for teaching children how to reminisce with others, how to cope with emotional events, and how to express emotions in culturally appropriate ways (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003).

The problem is that this directive style of conversation infiltrates professionals' behavior at work, as a well-known study by Amye Warren and her colleagues illustrated (Warren, Woodall, Hunt, & Perry, 1996). These researchers analyzed dozens of sexual abuse interviews to find out how child protective services personnel elicited information. Mirroring Melissa's behavior, the interviewers dominated conversation. For example, they talked three times as much as the children did during initial rapport building, populated interviews with questions focused on specific details, and were often the first ones to mention critical information (including names and actions). Furthermore, there were hundreds of series of multiple questions in a subset of only 20 interviews, and interviewers failed to clarify over half of the ambiguous names that children provided. Subsequent studies found that teachers and police officers also direct conversations by asking children numerous specific questions (Brubacher, Powell, Skouteris, & Guadagno, 2014; R. M. Smith, Powell, & Lum, 2009).

Of course, a directive style of conversation does not always prevent interviewers from finding out what happened. When Melissa spoke to Claire, for example, the target event was known (Claire actually went to the pumpkin patch), Claire was eager to talk about her experiences, and she readily said "I don't know" and corrected Melissa's mistakes. In this low-stress situation, Claire was a reliable witness despite Melissa's inexpert interviewing. But Melissa's techniques do not always work well in more challenging situations, such as this next example from my laboratory.

One fall, a college student named Lindsey[2] asked some children to play an "opposites" game by pointing to one dot on a card whenever two dots appeared on a computer screen and vice versa. Next she said, "I want to ask you a few questions, but we have a rule about answering questions. The rule is don't guess. If I ask a question and you don't know the answer, just say, 'I don't know.'" Lindsey then asked 10 simple questions, such as "What is your favorite color?" including five questions asking for information the children did not know. This is how Paige (4 years old) answered the tricky questions:

Lindsey: What is my favorite color?

Paige: White.

Lindsey: I like a game called Silly Seven [a nonexistent game]. Do you like Silly Seven?

Paige: No.

Lindsey: We keep games in that box. What is one of the games in that box?

Paige: Mickey Mouse.

Lindsey: How many games are in that box?

Paige: Ten.

Lindsey: This picture [a simple house with a dog in front] is from this morning. Did I draw this?

Paige: Yes.

Lindsey: What's the dog's name?

Paige: Poodle.

Paige's answers are not an anomaly. Alex (4 years old) told us there were 50 games in the box, and Sam (6 years old) said the assistant had not drawn the picture. Also, more than one child integrated information embedded in

[2]Lindsey Schiller conducted this study for her undergraduate honors thesis at Central Michigan University in 2013.

questions into their subsequent answers. For example, Maggie (4 years old) said that Silly Seven was the game in the box and ended by saying, "I'll name it [the dog] Silly Seven." Children who invented wrong answers had difficulty playing the opposites game, revealing brain systems for effortful control that were still under construction.

Jean Piaget (1928), a famous developmental psychologist, once said that a striking characteristic of young children is their "extreme assurance on all subjects" (p. 202). This tendency to answer focused questions in the absence of knowledge diminishes as children mature, but it never entirely disappears (Pratt, 1990). For instance, one research team embedded an unanswerable question in an interview about a scuffle that had occurred between a man and a woman (Poole & White, 1991). When interviewers asked, "What does the man do for a living—what is his job?" over a quarter of the 4- and 6-year-olds offered speculations during their first interview, such as "He works with my father" and "He works at the lumber yard." Fewer 8-year-olds guessed, but, remarkably, over half the adults did. Thus even older witnesses, when they believe they might know the answer, sometimes just guess.

It is well known that some forms of questions/prompts encourage speculation more often than others. (The term *prompts* refers to questions and other behaviors intended to elicit information from children, including statements that function as questions, such as "Tell me about ___.") Because there is no uniform system for categorizing interviewer prompts, Quick Guide 1.1 includes some of the terms Michael Lamb, Martine Powell, and their colleagues have used while noting alternative terms (e.g., D. A. Brown et al., 2013; Powell & Snow, 2007, Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001).[3] Facilitators (also called *minimal encouragers*) include utterances such as "OK" and "umm-hmm," along with repetition of a few words children just said, which interviewers interject to show they are listening and to encourage children to continue talking. As discussed in Chapter 3, these utterances do not explicitly ask for information but nonetheless serve an important function during interviews.

Open-ended recall prompts (also called *open prompts*, *open-ended questions*, and *invitations*) are statements that invite children to talk about a topic. These utterances include invitations such as "Tell me everything that happened" (an open-ended broad question), "What happened next?" (an open-ended breadth question), and "Tell me more about the part where [action the child mentioned]" (an open-ended depth question). These types of prompts invite

[3]In this book, I use the term *recall-detail* to label questions such as "When did that happen?" Such questions are often called *specific* questions. Martine Powell and her colleagues use *specific cued-recall* questions (e.g., C. H. Jones & Powell, 2005), and Lamb and his colleagues use *directives* (e.g., Andrews, Lamb, & Lyon, 2015).

QUICK GUIDE 1.1
Types of Prompts

Interviewing prompts include behaviors that merely encourage children to talk (facilitators), prompts that allow children to choose which details to report (open-ended recall prompts), and prompts that ask about specific details (focused prompts). Prompts that suggest information children have not yet mentioned in the current interview (suggestive prompts) are discouraged. (See Quick Guide 5.2 for terms that describe some specific functions of comments/prompts in interviews.)

Facilitators (also called minimal encouragers)

Utterances like "Okay" and "Umm hmm," and restatements of something children just said, which interviewers interject to show they are listening and to encourage children to continue talking. Silence and head nodding are nonverbal encouragers.

Open-Ended Recall Prompts (also called open prompts, open-ended questions, invitations, and free-narrative prompts)

Requests that encourage an elaborated response by allowing children to decide which details to report. These prompts include initial *invitations* to talk about a topic, such as "Tell me everything that happened" (*open-ended broad questions*); invitations to tell more about a sequence of activities, such as "Then what happened?" (*open-ended breadth questions*); and *cued invitations* that ask children to discuss something they already mentioned, such as "Tell me more about the part where [action the child mentioned]" (*open-ended depth questions*).

Focused Questions

Questions that prompt children to provide specific details of interest to interviewers.

Recall-Detail Questions (also called *Wh*-questions, directives, and specific questions)

Questions that ask children to recall a specific detail about people, objects, or events they have already mentioned. These questions typically contain the letters *W* and/or *H*, such as "When did that happen?" and "Where did he touch you?"

Option-Posing Questions (also called closed and forced-choice questions)

Questions that engage recognition memory by providing information for children to accept or reject. *Multiple-choice questions* (e.g., "Where you at your mom's house, your dad's house, or somewhere else last weekend?") and *yes/no questions* (e.g., "Did you start the fire?") are option-posing.

Suggestive Prompts

Prompts suggesting information children have not yet mentioned in the current interview (e.g., "Tell me about the computer pictures"), including *explicitly leading questions* (e.g., "You were playing with matches, weren't you?").

Note. The terms *facilitators*, *invitations*, *cued invitations*, *focused questions*, and *suggestive questions* reflect usage by Michael Lamb and his colleagues; e.g., Sternberg et al. (2001). Martine Powell and her colleagues have divided open-ended questions into broad, breadth, and depth questions; e.g., Powell and Snow (2007).

children to talk about a broad topic, say more about a sequence of activities, or elaborate on something they already mentioned, respectively (Powell & Snow, 2007). The type of memory retrieval required to answer open-ended recall prompts is called *free recall* because witnesses search memory without help from targeted memory cues.

Because free recall develops later than more primitive forms of memory retrieval (Newcombe, Lloyd, & Ratliff, 2007), young children typically recall only a few pieces of information in response to each open-ended prompt. To draw out more information, laypeople often deliver a large number of *focused prompts*, which are utterances that cue children to remember specific details of an event. One type of focused prompt is a *recall-detail question* ("Wh-"), which often contains the letters *W* and/or *H*, such as "When did that happen?" "Where did he touch you?" and "How do you think he got away with this so long?" ("Why" questions are avoided in forensic interviewing; see Chapter 5.) Recall-detail questions cue memory retrieval by focusing children's attention on some aspect of a person, object, or event. Partly because cued-recall is an easier mental task than free recall, asking these questions after children have stopped responding to open-ended prompts increases the amount of information reported.

Children engage in recognition memory when interviewers mention a detail and ask whether that detail was previously encountered. *Option-posing questions*, such as multiple-choice questions (e.g., "Did he take your picture one time or more than one time?") and yes/no questions (e.g., "Did he tell you not to tell?"), test recognition memory. Finally, *suggestive questions/prompts* include explicitly leading questions (e.g., "You were playing with matches, weren't you?") and comments containing details children have not yet mentioned in the current interview. For example, it is suggestive to say, "Tell me about the computer pictures" if the child has not reported anything about computers or pictures. (Because *leading question* means different things to attorneys and memory researchers, *suggestive question* is the more general term for questions that suggest information.)

More so than open-ended prompts, focused questions encourage children to speculate and to remember information that did not originate from the matters under investigation. There are a number of reasons why focused questions tend to reduce children's eyewitness accuracy, including the following five.

Cooperative Behavior

Many children have a deeply engrained habit to answer any question an authority figure asks. The desire to cooperate by answering questions is so

strong that children (and adults) frequently answer bizarre questions such as "Is a cup sadder than an orange?" even though they readily recognize that such questions are silly (Pratt, 1990, p. 170). We know that children sometimes realize they are speculating because they occasionally tell us so. For instance, after Lindsey asked one boy what the dog's name was, he said, "I don't know, so I'm going to guess Mr. Poodle." The challenge for forensic interviewers is that children usually fail to flag when they are uncertain. Open-ended prompts are less likely than focused questions to invite speculation because open prompts allow children to take a conversational turn by reporting only what they remember best.

Language Confusions

Many errors children make during interviews occur automatically and without awareness that answers are wrong. This is the case when children misinterpret questions because of insufficient attention or fragile language skills. For example, it is unclear whether Paige, the girl mentioned earlier, actually named the dog or thought the question was asking about the dog's breed. Misunderstandings were transparent in another study when several children responded to "What's my dog's name?" by saying, "I don't have a dog," thereby revealing confusion between "my" and "your" (Dickinson, Brubacher, & Poole, 2015). Unlike open-ended prompts, such as "Tell me what happened," focused questions more often include concepts, words, and grammatical structures that flummox children, causing them to respond to different questions than the ones interviewers asked.

Memory Intrusions

Rather than storing event memories as discrete and permanent traces, our brains construct memories by linking different aspects of experiences together through binding processes (Newcombe, Lloyd, & Balcomb, 2012; Raj & Bell, 2010). Findings from brain-imaging and other evidence suggest that a particular part of the brain, the hippocampus, plays an important role in specifying which subsets of brain cells comprise each event memory, making this structure critical for laying down new autobiographical memories and retrieving old ones. Our memories are far from static, however. Through a process called *reconsolidation*, memories can be updated each time we access them as related memories blend together and our minds fill in missing details with information from general knowledge. In other words, memory "may be less like a library and more like Wikipedia, where each entry is open to editing anytime it's pulled up" (Miller, 2012, p. 31).

Research on memory-updating processes has helped explain why focused questions are simultaneously a blessing and a curse: People remember more when memory tests provide cues that match their original experiences, but these cues can increase *intrusions*, which are false memories that are conceptually related to original experiences (Hupbach, Gomez, Hardt, & Nadel, 2007; St. Jacques & Schacter, 2013). In other words, simply directing children's recall by cuing them to recall specific details can cause their memory systems to alter recollections in ways that introduce inaccurate information.

Source-Monitoring Errors

Source monitoring is the process of knowing when, where, and how something was learned (Johnson, Hashtroudi, & Lindsay, 1993). You engage in source monitoring when you worry about whether you locked the car or only thought about locking it, whether you or your friend suggested a particular restaurant, and whether you saw a plane crash on television or only read about it in the newspaper. People remember where knowledge came from when they recall the contextual details that specify the source of that knowledge and then make good decisions about what those details mean. For example, you might think, "I remember hearing the beep, so I must have locked the car." The ability to recall event details and make accurate source decisions develops gradually during childhood as the brain regions that support source judgments, including the hippocampus and the prefrontal cortex, mature (Foley, 2014; Ghetti & Angelini, 2008).

Children arrive at interviews with knowledge from many sources, including images from television, information from books, and things they have heard others say. Interviewers want them to share what they actually experienced, but filtering out the irrelevant information is a difficult task. To understand why, consider a girl who has multiple representations of a visit to Disney World, some from her trip to Disney World and others from listening to people talk about Disney World. A number of developments must be in place before she can sort out memories of what she actually experienced, including the ability to recall sufficient details about these representations to support accurate decisions. This decision process requires a sophisticated understanding of how memory works. For example, children may not realize that detailed memories of how something looked or tasted are more likely than sketchy memories to be based on personal experience (Poole, Brubacher, & Dickinson, 2015).

Because the skills involved in source-monitoring judgments take time to develop, children do not always accurately report the source of their knowledge. In fact, young children sometimes misreport where they learned something even minutes after learning it. One research team illustrated this phenomenon by reading stories to 4- and 5-year-olds that contained novel facts (M. Taylor, Esbensen, & Bennett, 1994). Immediately afterward, they asked each child to confirm this new knowledge (e.g., "What do cats use their whiskers for?") and then asked, "OK, I want to know how long you have known that [experimenter repeats child's answer]. Have you known this for a long time or did you just learn this today?" (p. 1584). (Half the time, the order of these questions was reversed.) The children tended to say they always knew what they had just learned and that other children also knew this information (see also Drummey & Newcombe, 2002). This lack of awareness for when and how information was learned is useful in early development, when children need to rapidly acquire general information about the world (Bjorklund, 2007).

Because of source-monitoring difficulties, children sometimes describe information they acquired from sources other than the event of interest. In one study, for example, over a quarter of 7-year-olds and 9% of 8-year-olds reported during free recall that a male assistant had touched them, even though this touching had only been described in a story they had heard (Poole & Lindsay, 2001). When interviewers then asked yes/no questions about the suggested touching, about a third of the children erroneously said that touching had occurred. Furthermore, many went on to describe these fictitious events, showing remarkable memory for a few sentences of the story. Today, it is well known that young children's error rates soar during interviews when words embedded in focused questions trigger memories acquired from sources other than target events, such as conversations with parents or peers (Principe, Greenhoot, & Ceci, 2014).

Source-monitoring difficulties also come into play when children experience repeated instances of a similar event. Compared with memory narratives from children who experienced something once, the narratives of those with repeated experiences seem more inconsistent because they sometimes import details from one episode into narratives describing other episodes (H. L. Price, Connolly, & Gordon, 2015). This type of mix-up, which experts call an *internal intrusion*, occurs more often when children answer focused questions (Gomes, Sheahan, Fitzgerald, Connolly, & Price, 2015).

Confabulation

Throughout life, damage to the frontal lobe of the brain can cause a variety of memory disturbances, including an unusual behavior, *confabulation*, in which individuals make up answers to questions and tell fantastically false stories (mostly about their own lives; Borsutzky, Fujiwara, Brand, & Markowitsch, 2008). Wild tales from confabulating patients are believed to be memory based because these fictitious reports often consist of bits of true memories displaced in time and place (Nahum, Bouzerda-Wahlen, Guggisberg, Ptak, & Schnider, 2012; Schnider, 2003). Apparently, environmental cues continually activate

memories that are irrelevant to current tasks and goals, but a healthy adult brain usually keeps unwanted memories from intruding into awareness. In contrast, the brains of confabulators have malfunctioning filters (Ciaramelli, Ghetti, & Borsotti, 2009).

Perhaps due to their immature brains, young children are more likely than older children and adults to interject loosely related thoughts into conversations (Schacter, Kagan, & Leichtman, 1995). Children's stories are sometimes so preposterous that anyone would know they are "mental surfing,"[4] though some of their mind-wanderings sound credible. In one study, for example, interviewers ended each session by asking the following question while gesturing to a body diagram: "When you first came to play these games with me today, did I touch you in any of the places on this picture?" (Poole, Dickinson, Brubacher, Liberty, & Kaake, 2014, p. 104). Children who said "yes" or pointed were asked to tell what happened. Despite the fact that children and interviewers had met only minutes earlier and then sat on opposite sides of a table, some children reported that assistants had touched them. For instance, one boy said, "You touched me here so you could feel me am I burning up or not" (Poole, Dickinson, Brubacher, et al., 2014, p. 106), illustrating how general knowledge (in this case, memories of adults checking for fever) can infiltrate memory reports. Overall, children who responded less maturely on a battery of developmental tasks were most likely to confabulate.

The ability to distinguish specific event memories from self-produced information is a type of source monitoring called *reality monitoring*. Among adults, the prominence of a brain region in the prefrontal cortex predicts the ability to accurately report whether information was recently presented or self-generated in response to a cue (Buda, Fornito, Bergström, & Simons, 2011). In legal cases, accusations from young children that seem improbable (based on case features other than the quality of their reports) contain fewer of the perceptual, contextual, and other features that help witnesses distinguish event memories from self-generated information (Roberts & Lamb, 2010). Together, these findings suggest that reality monitoring can break down in laboratory settings and in real-world investigations, with some individuals being more prone to errors than others.

Because of children's desire to be cooperative during conversation, their incomplete language development, and their greater risk of retrieving inaccurate information in response to memory cues, adults' habit of asking a large number of focused questions is incompatible with the architecture of the developing brain (Poole, Dickinson, & Brubacher, 2014). Delivering more open-ended prompts is a step in the right direction, but other skills are needed to converse skillfully with children. For example, even responses to open-ended invitations can contain ambiguities and errors, so interviewers need strategies that might clarify or confirm children's reports (Ceci, Kulkofsky, Klemfuss, Sweeney, & Bruck, 2007). Also, the social and cognitive processes that produce unreliable testimony are not the only challenges interviewers face: Sometimes, the challenge is a child who does not want to talk at all.

[4] I borrowed this term from Stephen Ceci, who used it during conversations at a NATO Advanced Study Institute (*The Child Witness in Context*, May 1992, in Barga, Italy) to describe how some children go off on verbal tangents leading from one thought to the next.

THE RESERVED CHILD: NOTHING HAPPENED AND I DON'T KNOW

A subset of children are chatterboxes around unfamiliar adults, but many are frustratingly restrained. To help professionals tackle this problem, interview guidelines include strategies for overcoming reticence stemming from the following issues.

Fear of Getting Into Trouble

A young boy found crouching in the backyard after a fire destroyed his bedroom will likely avoid talking, as will a teenage girl who has just been diagnosed with a sexually transmitted disease. The dynamics of these situations illustrate how fear of getting into trouble discourages children from talking.

Remarkably, juveniles account for about half of arson arrests in the United States, with bedrooms being the most frequent place of origin for house fires started by children. In these cases, the culprits are most often boys under 6 years of age (Evarts, 2011). Many backyard fires are unintentionally set by older children, and some arsonists are teenagers who intentionally caused damage. Regardless of whether fires were unintentionally or intentionally set, children will be motivated to conceal their actions. As one investigator remarked, "At the onset the children will most likely behave in a hostile fashion" (Bouquard, 2004, p. 107). Investigators' jobs are complicated by the fact that many juvenile fire-setters have had negative experiences with adults, thereby making it difficult to engage them in interviews (Gaynor, 2002).

There are numerous reasons why children may not want to disclose sexual abuse, including fear of getting loved ones into trouble, fear of being blamed for the abuse, and fear that illegal actions, such as drinking alcohol with perpetrators, will be discovered. Many factors predict the likelihood of disclosing (London, Bruck, Wright, & Ceci, 2008), including the structure of interviews (Lyon & Ahern, 2011). Jumping in and discussing sensitive matters without spending time to gain children's trust is always a barrier to conversation, but this overly abrupt style is especially counterproductive when children are afraid.

An Inhibited Temperament

A subset of children tend to freeze in the face of novel people and situations. Compared with their peers, these inhibited children have a lower threshold for activating the physiological pathways involved in responses to unfamiliarity and challenge (Kagan, Reznick, Clarke, Snidman, & Garcia-Coll, 1984). Individual differences in behavioral inhibition are partly due to genetic differences (Dilalla, Kagan, & Reznick, 1994), although supportive parenting helps some children outgrow their extreme reactions to novel situations (Fox et al., 2005).

In my laboratory, assistants watch for signs of hesitancy and provide more time and supportive social contact before trying to separate inhibited children from their parents. Reluctance to talk—whether from fear, temperament, or other reasons—can be spotted early in interviews as well (Lamb, Hershkowitz, Orbach, & Esplin, 2008, Chapter 8). But unlike laypeople, who sometimes respond to inhibited children by becoming more animated and intrusive (thereby scaring children into silence), forensic interviewers use the strategies described in Chapters 3 and 4 of this volume to build rapport with inhibited children.

Normal Memory Lapses

There are many reasons why memories can fail. When attention is directed to one part of an event, we may fail to create memories for other parts of the event. Memories that are not reinforced may fade, and we can have a strong memory yet still not bring it to mind when needed. Because of failures to create memories, store them over time, or retrieve them when needed, interview questions sometimes fail to prompt relevant memories even among cooperative witnesses. For example, when first confronted by a question, a sizable minority of adults do not retrieve memories of personally significant events, including car accidents in which someone was injured and hospitalizations that occurred within the last year (Loftus, Garry, & Feldman, 1994).

Children are especially prone to memory-retrieval failures. To understand why, it is helpful to explain that what we call *memory* is actually a collection of systems that develop at different rates. *Implicit memory* involves learning that occurs without conscious awareness, and this type of memory functions at birth. Implicit memory includes procedural skills, such as how to brush your teeth, and responses acquired through conditioning, such as flinching when an aggressor's hand comes near. *Explicit memory* retains information about the individual autobiographical events discussed during interviews. This type of memory comes online after the first year and takes longer than implicit memory to fully develop (Newcombe et al., 2007, 2012).

Because explicit memory functions early in development but continues to improve throughout early and middle childhood, memory experts describe children's eyewitness abilities as both stunning and deficient. For example, 2-year-olds usually have something to say about injuries that sent them to the emergency room 6 months earlier, but half recall little about these events (Peterson & Rideout, 1998). With increasing age, children become better at searching for specific event memories, and the completeness of their reports improves (Peterson, 2002, 2012).

There is an interesting consequence of the fact that memory probes sometimes fail to trigger recollection: It is not unusual for children to report an event and then, just minutes later, deny that event in response to a different question. For example, assistants working for Tom Lyon and his colleagues encouraged children not to disclose that toys had broken (Lyon et al., 2014). After initial questioning by another assistant, children were asked, "Did anything bad happen with any of the toys?" (Lyon et al., 2014, p. 1760). Remarkably, many children who had already reported a broken toy said "no." Similarly, children in another study often explained how a woman named Bonnie had showed them a dog apron but then said "no" when interviewers asked, "Did Bonnie show you anything in the room?" (Poole & Dickinson, 2014, p. 196). Focused questions such as these are notorious for producing inconsistent testimony, partly because children often respond "no" to questions containing the word *anything*, but also because some words suggest meanings to children that are different from what the questions intended.[5] Because familiar question forms may not be the forms that best prompt relevant memories, forensic interview guidelines include techniques for helping children search their memories more thoroughly. (See A. G. Walker, 2013, for a discussion of language issues that contribute to inconsistent testimony.)

Insufficient Effort

Getting children to acknowledge target events is a minor victory if they refuse to fill in needed details. Interviewers inadvertently discourage children from talking when they take control of conversation at the start by asking a long series of focused questions, such as "How old are you?" "How many brothers and sisters do you have?" and "What grade are you in?" After chit-chat like this, some children decide that interviewers are going to ask many

[5] I once experienced a remarkable memory retrieval failure when listing prior surgeries on a medical history form. I had recently had a bone graft and other procedures to replace damaged teeth with implants and had worn an awkward prosthetic for months. Despite the inconvenience of this treatment, I recalled these surgeries only after I had left the doctor's office. Apparently, the word *surgery* did not trigger memories for happenings above my neck.

questions and they should respond with short answers (D. A. Brown et al., 2013; Sternberg et al., 1997). This type of questioning lessens the chance that children will volunteer information about topics other than those in interviewers' questions, which can cause investigators to miss information about corroborating evidence, unrelated child protection concerns, or other important matters.

Conditions and Histories That Reduce Informativeness

Child witnesses are more likely than other children to have conditions and personal histories associated with lackluster performance during interviews (L. Jones et al., 2012). For example, risk factors for fire setting include impulsivity and problems establishing relationships (Gaynor, 2002), and sexual offenders often select victims who are vulnerable because of troubled family lives, depression, and other characteristics that reduce the risk of disclosure (Lyon & Ahern, 2011). As a result, forensic interviewers need a toolbox of strategies for conversing with children who have difficulty staying on topic and understanding questions, as well as with those who are simply uninterested in talking. Overcoming barriers to talking in ways that are forensically sound is an important goal of child interviewing research.

HOW PRACTICE GUIDELINES EVOLVE

From the discussion thus far, it is clear that adults' usual style of conversation is not conducive to maximizing the accuracy or completeness of children's testimony. When professionals train to be child interviewers, they learn a unique style of conversation, one that is "conceptually simple, but . . . structured to make social and linguistic sense to children" (Poole & Lamb, 1998, p. 153).

Where do the guidelines for this style of speaking come from? And why do professionals sometimes disagree about which strategies are best? As in any field, our knowledge contains information gleaned from a large set of high-quality research along with information resting on more fragile foundations. Understanding the strengths and limitations of different sources of authority can help interviewers appreciate the need to modify practice as new evidence irons out disagreements and interview guidelines evolve.

The Limits of Professional Intuition

It is natural to develop intuitions about how the world works from on-the-job experiences, but it is important to realize that these intuitions are both highly useful and notoriously subject to error. People acquire useful intuitions when they have (a) repeated experiences, (b) in environments that are sufficiently regular, and (c) that provide opportunities to learn through feedback (Kahneman, 2011). For example, seasoned firefighters and anesthesiologists have amazing abilities to spot cues of impending trouble, just as some of my assistants are especially good at sensing when children are not yet ready to separate from parents. In these cases, workers have had numerous opportunities to observe whether specific cues were present or not present and the circumstances following each of these situations. As a result, they learned which cues were typically followed by negative events and how their responses to those cues affected outcomes.

But the conditions that build useful intuitions are not always part of our jobs. For example, clinicians who regularly use one form of therapy have no information about what would have happened had they taken a different course of action. If many clients improve over time, these clinicians may erroneously conclude that the therapy works. However, the therapy would actually be harming clients if more clients improve without the therapy than with it. This was the case with critical incident stress debriefing, an intervention believed to ward off symptoms of posttraumatic stress disorder among people who had recently experienced horrific events. After studies found that clients who received this intervention had similar or worse symptoms than comparison groups, this form of therapy was added to a list of treatments that were probably harmful to some people (Lilienfeld, 2007). By the same logic, interviewers who always use a particular protocol have insufficient information about how children would have performed had they used another approach.

Even when interviewers try different approaches, frontline experience is not conducive to evaluating the risks and benefits of competing techniques. One problem is that interviewers may come to favor techniques that elicit responses from children, even though the accuracy of these responses is unknown. Also, children's behavior is highly variable, and the cognitive machinery that builds accurate intuitions performs poorly when information is not sufficiently regular (Kahneman, 2011).[6] As a result, many techniques that were once popular have not survived the scrutiny of systematic

[6]An interesting phenomenon called *illusory correlation* illustrates how difficult it is to draw accurate conclusions from personal observations. In one demonstration, Chapman and Chapman (1967) asked judges to look at pairs of information about hypothetical patients, with each pair consisting of a symptom the patient had and a drawing of a person that the patient had made. Later, judges overestimated the association between symptoms and seemingly related drawing features, such as suspiciousness and peculiar eyes. Seeing relationships where none exists is one of many human judgment errors that make scientists skeptical of claims proffered without solid evidence.

research.[7] Suggestions based on frontline experiences are highly valued not because these impressions are evidence of effective strategies but because practitioners' ideas can motivate the research that tests ideas.

Phases of Intervention Testing

The fields of medicine and child interviewing seem to have little in common, but their practice standards evolve in similar ways. For example, new drug treatments are born when findings from basic research or clinical observations suggest a novel drug. In early research phases, researchers administer the drug to small samples of normal volunteers, and then small patient samples, to explore whether the drug functions as expected. If the treatment looks promising, scientists progress to later phases of research involving larger numbers of patients in diverse treatment settings (U.S. National Institutes of Health, 2007). To understand how this process of intervention testing produces evidence-based interviewing guidelines, it is helpful to review the limitations of basic research findings, how scientists collect information in preliminary field and analog studies, and how policy makers craft guidelines when definitive evidence from large-scale field trials is not yet available.

Basic Research Findings Are Just a Start

The goal of basic research is to discover the fundamental principles that govern our physical and social words—without concern for whether those principles have practical applications (although they often do). Some scientifically based interviewing guidelines rest mainly on findings from basic research. For instance, the literature on language development contains a wealth of information about the words and question forms that confuse young children, and experts unanimously advise interviewers to avoid using these words and forms. Because it is unlikely that children will suddenly understand difficult language constructions during forensic interviews, these recommendations are sound, even if no studies have documented lack of comprehension in this context.

Tasks that challenge children in their natural environments will likely challenge them during interviews, but the reverse is not necessarily true: Children who are at or above the age of acquisition of a skill will not always demonstrate that skill during interviews. For example, most 2½-year-olds use the word *my* appropriately, yet older children sometimes misinterpret questions containing this word. There are several reasons why research to establish the age when children typically master a word, concept, or skill is not a sufficient foundation for choosing interview techniques:

- Many children master individual words, concepts, and skills after the age of acquisition. Child specialists define age of acquisition as the age when most children demonstrate proficiency most of the time, but that percentage could be 50%, 75%, or some other number (depending on the author). Clearly, a skill that 25% of children have not yet mastered has no place in a forensic interview.
- Children's performance varies across contexts. Children can demonstrate a skill during simple laboratory tasks yet fail during interviews, when cognitive demands are greater.
- The cognitive prerequisites for benefitting from an interviewing technique are often unknown. For example, it used to be widely assumed that children 5 years and older could accurately report touches by pointing to a doll or body diagram because these children usually understand the representational purpose of props. However, research reviewed in Chapter 6 has challenged the assumption that props are developmentally appropriate for all children who grasp the symbolic function of a prop. (See Chapter 6's Principles to Practice for another discussion of developmental norms.)

Because of the limitations of basic research findings, interviewing strategies that seem justified by basic research should be tested in studies that embed those strategies in eyewitness contexts. Preliminary field and analog research is usually the next phase of that testing process.

Preliminary Field and Analog Research

Field research observes children and interviewers in their natural environments. Coding interview transcripts and describing children's memories for naturally occurring events are examples of this research strategy.

Typically, children studied in the field have experienced a variety of events, event details are unknown, and interviewers did not strictly adhere to scripted procedures. Because of this lack of control, research teams usually mention one or more caveats when sharing the results of field research. For example, Lindsay Malloy, Elizabeth Shulman, and Elizabeth Cauffman (2014) reported fascinating data on the interrogation practices associated with

[7] Jim Wood, Kimberley McClure, and Rebecca Birch (1996) made the interesting observation that "interviewing procedures can become informal policy . . . even though their underlying purpose has been lost or forgotten over the years" (p. 224). For example, one agency routinely included a good touch/bad touch discussion, even though no child disclosed abuse during this portion of the interview in any of the tapes Wood and his colleagues reviewed.

self-reported true and false confessions in a sample of incarcerated youths. As expected, false confessions were associated with coercive interrogation practices, including lengthy interrogations and refusing requests for breaks. Yet despite clear criteria for selecting study cases, the research team was careful to point out that some respondents may have lied when they said their confessions were false, whereas some who truthfully reported a false confession may have exaggerated the coerciveness of their interrogations. The self-report nature of this study is not troubling to researchers, however, because there is converging evidence that coercive interrogations can lead people to confess mishaps they did not commit (Kassin & Gudjonsson, 2004). Scientists say there is converging evidence when findings from different methodologies—including basic research, case studies, field studies, and a type of study called *analog research*—point to the same conclusion.

In analog studies, researchers simulate real-world situations to exert more control over factors that might influence results. In a typical study, researchers stage target events and then interview children in various ways, sometimes manipulating the information children encounter before or after those events. Analog research is an important phase of intervention research because this methodology can provide information about the mechanisms underlying interesting phenomena (Poole & Bruck, 2012).

Later Phases of Intervention Testing

The final steps of interviewing research involve studies that systematically compare the effectiveness of new and existing approaches in actual investigations. For randomized controlled field trials, researchers randomly assign participants to one of two (or more) approaches to observe how people perform in the real-world environments where the new intervention will be used. Because this degree of control can be difficult to arrange with forensic interviews, some large-scale field trials use research designs that are not fully controlled. For example, investigators might analyze testimony elicited by two protocols implemented before and after an agency shift in practice. The research team that has contributed the most evidence from large-scale field trials is directed by Michael Lamb, and their studies have provided valuable information on the benefits of the National Institute of Child Health and Human Development interviewing protocol (named for the agency where Lamb worked when early versions of the protocol were crafted; Lamb et al., 2008). As with all protocols, this one continually evolves as new findings motivate improvements (see Chapter 7).

Intervention experts emphasize that the research phases preceding field trials should not be bypassed because the information obtained from small-scale field and analog studies reduces the risk of harming participants and provides information about why techniques function the way they do

(Rogers, 2009). The national movement for evidence-based practice in interviewing thereby rests on a foundation that includes basic research on memory, development, and other issues; early field and analog studies; and large-scale field trials. When a practice question has not been subjected to all phases of the testing process, ethicists recommend basing practice on the best available evidence, which will lie somewhere along the continuum of phases (APA Presidential Task Force on Evidence-Based Practice, 2006; Stuart & Lilienfeld, 2007). For the field of child interviewing, this book is a compendium of that evidence.

RECAP

Forensic interviewing of children is a collection of guidelines for mitigating the problems that can arise when professionals talk to young witnesses. Adults' usual style of conversing with children is inappropriate in forensic contexts because this directive style increases the risk that children will speculate, misinterpret questions, and answer falsely because of memory intrusions, source-monitoring errors, and confabulations. Also, this style fails to create a supportive environment for fearful children and those who are uninformative for other reasons. Guidelines for improving the accuracy and completeness of children's testimony continually evolve as new evidence accumulates from basic research on cognition and other topics, preliminary field and analog studies, and large-scale field trials.