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19. Child Witnesses.

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CHAPTER 7

Child Witnesses

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In this chapter we provide an overview of psychological issues involving children's capacities as witnesses. First, in order to understand the most important questions for researchers, we discuss the kinds of cases in which children are usually involved. Across different courts, one most often sees children describing abuse at the hands of familiar adults. In order to assess children's reports, memory research is obviously important, but of equal importance is research examining children's willingness to disclose wrongdoing. Second, we describe the difficulties children encounter in disclosing abuse, particularly when it is perpetrated by adults close to them. These dynamics lead most children to remain silent and only the most forthright children to disclose. As a result, investigators will typically encounter children unusually willing to disclose but susceptible to pressures to deny and recant.

Third, we suggest a framework for assessing children's allegations in which child-generated and adult-generated information lie on opposite ends of a spectrum. Child-generated information is preferable because it minimizes the likelihood of adult influence. Questions can be placed along the same continuum, with recall questions optimal because the child is responsible for generating more information, whereas recognition questions rely more on information supplied by the interviewer. The primary problem with poorly trained interviewers is that they rely too much on recognition questions. At the same time, the benefits of recall questions are tempered by the need to ask more specific questions both to access children's memory and to minimize reluctance. We emphasize the utility of specific recall questions for information that is otherwise overlooked and the need to follow up recognition questions with recall questions in order to minimize error.

Fourth, we discuss suggestibility and highlight how the most prominent suggestibility studies have examined the effects of telling children that false events occurred, as opposed to asking them whether they occurred. We review research demonstrating that recognition questions are not inherently suggestive. Rather, we argue that the primary problem with recognition questions is captured by the phenomenon of formal reticence, whereby children provide minimally responsive answers to questions based on the form of the question. Children routinely answer yes/no questions with unelaborated yes or no answers, and interviews filled with recognition questions lead to a host of problems, including responses that are underinformative and ambiguous and questions that are linguistically difficult and fail to capture the child's perspective. Last, we discuss the implications of our review for interviewing children about other types of events and suggest fruitful areas for future research.

WHEN ARE CHILDREN WITNESSES?

Children may appear as witnesses in many different types of legal proceedings: criminal, dependency, family, and other courts. In criminal cases, they are most likely testifying to sexual abuse, physical abuse, or witnessing domestic violence (Goodman, Quas, Bulkley, & Shapiro, 1999). The relative frequencies largely reflect the fact that prosecutors present children as witnesses only when they feel they must. It is in these types of cases that the child's testimony is necessary in order to prove the allegations, because the child is the only eyewitness (other than the perpetrator) to the alleged crime. Furthermore, because of the difficulties young children encounter in braving testimony, very few preschoolers make it to the stand in criminal cases, with school-age children and teenagers predominating (Evans & Lyon, 2012).

Dependency court cases are non-criminal cases in which the state intervenes on behalf of a child because of alleged maltreatment by a parent or legal custodian. It is likely that one would see the same pattern as in criminal court, with children's testimony most often needed in sexual abuse cases. In physical abuse cases, for example, children's testimony is less essential than in sexual abuse, because there is more likely to be other evidence of wrongdoing (Rush, Lyon, Ahern, & Quas, 2014). This is also true in other types of maltreatment, which include exposure to domestic violence, parental drug use, filthy homes, and so forth.

Family court cases include divorce proceedings and other types of cases in which children's custody is at issue (e.g., guardianships). Typically, in these cases the state does not argue that the parents are at fault, but rather resolves differences between private parties (mother vs. father; parent vs. relatives). The allegations with respect to the children are likely to be less serious, though they will mirror criminal and dependency court claims.

The common theme across the different types of legal proceedings is that children are most often testifying about alleged victimization at the hand of familiar adults, typically parents or caretakers. Thus their ability to recount events in which they were personally involved is most often at issue, rather than their ability to identify strangers committing crimes against others. Moreover, when children accuse adults close to them of wrongdoing, motivational issues are obviously important. Therefore, it is not just memory failure that can lead to distortion of their reports.

Historically, the most recent wave of research on child witnesses was inspired by widely publicized day-care cases in which preschool children made sometimes bizarre allegations against day-care providers (Ceci & Bruck, 1995). It was natural to focus on false allegations because of the implausibility of the allegations, and because the cases were tried in criminal court, in which it is well accepted that false convictions are much worse than false acquittals. However, in most cases of alleged child abuse, the allegations are more mundane and much more likely to be heard in dependency or family courts rather than criminally prosecuted. It is important to worry about false denials, as well as false allegations.

THE DIFFICULTIES CHILDREN ENCOUNTER IN ACCUSING FAMILIAR ADULTS OF ABUSE

When children make allegations against parents or other familiar people, and there are no obvious pressures on them to allege abuse (such as in hotly contested custody cases), one should not be surprised to see initial denial, inconsistencies, and recantations, particularly if their allegations are met with suspicion from other family members (Lyon & Ahern, 2011). In order to understand the patterns of children's disclosures of abuse, it is relevant to consider observational research examining the dynamics of sexual abuse and sexual abuse disclosure, as well as experimental work examining children's deception abilities and influences on their honesty. This research highlights the ways in which adult pressures on children are not just a potential source of false allegations—a point long emphasized by divorce lawyers—but also a likely explanation for false denials and recantations.

Nationally representative surveys of adults reveal that most respondents who disclose sexual abuse to surveyors do not recall disclosing the abuse to anyone as a child, and only 10% report that their abuse was ever reported to authorities (see reviews in London, Bruck, Wright, & Ceci, 2008; Lyon, 2009). The surveys find that intrafamilial abuse is least likely to be disclosed and that the most common explanations for a failure to disclose refer to embarrassment, shame, and expectations that the disclosure recipient would blame the child or fail to believe the allegation (Lyon, 2009).

The research examining how admitted perpetrators describe their modus operandi also helps to explain nondisclosure and reluctance (see

reviews in Leclerc, Proulx, & Beauregard, 2009; Smallbone & Wortley, 2001; Lyon & Ahern, 2011). Perpetrators commonly desensitize the child to sexual touch through progressively more invasive sexual touch and talk, which tests the child's willingness to acquiesce and the likelihood that the child will disclose. If the child discloses at an early stage of the process, the perpetrator can claim that the touch was merely affectionate, accidental, or otherwise nonsexual. Once the abuse has begun, perpetrators typically make an effort to keep the abuse a secret. The perpetrator may overtly threaten the child with harm (Smith & Elstein 1993), but more often the threats concern harms to the perpetrator (whom the child wants to protect; Smallbone & Wortley, 2001) and harms to the family if the abuse is disclosed (Lang & Frenzel, 1988).

Nondisclosure can also be understood from the child's perspective. Among the youngest children, there is a lack of awareness that the abuse is wrong and difficulty in describing sexual behavior (Cederborg, Lamb, & Laurell, 2007). Children are likely to feel complicit in sexual abuse and hence will often experience self-blame (Quas, Goodman, & Jones, 2003). The more manipulative forms of abuse are likely to increase children's perceptions that they are partially responsible for the abuse. If the child fails to resist, she (or he) is more likely to believe that she consented. If she delays in reporting, she is more likely to believe that subsequent acts of abuse were consensual, or at least that her failure to disclose was responsible for their reoccurrence.

Studies examining children who ultimately disclosed their abuse support the contention that fears of negative consequences to the perpetrator, the self, and others close to the child deter immediate disclosure (Goodman-Brown et al., 2003; Hershkowitz, Lanes, & Lamb, 2007; Malloy, Brubacher, & Lamb, 2011). Moreover, delays in disclosing are greater when the perpetrator is close to the child (London et al., 2008), when the perpetrator groomed the child (Hershkowitz, 2006), and when the child anticipated that nonoffending adults would not support the disclosure (Hershkowitz et al., 2007).

Although we have focused on sexual abuse, the most common type of case in which children are called to testify, similar dynamics operate to deter children from disclosing physical abuse and domestic violence (Hershkowitz, 2006; Hershkowitz & Elul, 1999). Furthermore, developmental research helps to explain a general resistance among children to disclosing wrongdoing by adults close to them. Children are more likely to lie for a parent than a stranger (Tye, Amato, Honts, Devitt, & Peters, 1999). By 4 years of age, children recognize this distinction, and by 6 years of age, they endorse this difference as a norm (Lyon, Ahern, Malloy, & Quas, 2010). By 6 years of age, children recognize that parents are less likely to believe their children when they accuse the other parent (rather than a stranger) of wrongdoing, and by 8 years of age, children recognize that parents are less likely to contact authorities when the other parent has harmed the child

(Malloy, Quas, Lyon, & Ahern, 2014). Hence, quite early in life, children learn that when bad things happen in the family, they stay in the family.

The literature thus supports the proposition that sexual abuse is difficult to disclose. Why then do some reviewers claim that sexually abused children are forthright about their abuse (London et al., 2008)? They base their claims on officially substantiated cases of sexual abuse. Because children are not routinely screened for sexual abuse, sexual abuse cases usually come to the attention of the authorities because of a disclosure (Heger, Ticson, Velasquez, & Bernier, 2002). Because other evidence of abuse is typically lacking (e.g., medical evidence, eyewitnesses, or confessions by the perpetrator), sexual abuse cases are substantiated primarily by a disclosure (Haskett, Wayland, Hutcheson, & Tavana, 1995). Hence, if a child does not disclose abuse, he or she is unlikely to be *suspected* of being a victim and unlikely to be *substantiated* as a victim. It is therefore unsurprising that the disclosure rates of substantiated cases of sexual abuse are often close to 100%.

Protocols for interviewing children recognize that most sexual abuse victims are formally questioned only after they have disclosed. For example, the National Institute of Child Health and Human Development (NICHD) protocol begins with the statement "Tell me why you came to speak with me," which elicits disclosures in a majority of children who ultimately disclose abuse (Sternberg, Lamb, Davies, & Westcott, 2001). If the initial question does not produce a disclosure, the protocol then recommends that the interviewer refer obliquely to prior disclosures (e.g., "I heard you talked to a teacher. Tell me what you talked about") before becoming more direct.

At the same time, proponents of the NICHD protocol approach emphasize that a substantial percentage of children for whom there are strong suspicions of abuse (but no prior disclosure) fail to disclose (Hershkowitz, Lamb, & Katz, 2014). Furthermore, because of children's ambivalence about disclosing, one should not be surprised to see inconsistencies in disclosure. Indeed, if a child is under 10 years of age, accuses a parent or parent figure of sexual abuse, and has an unsupportive caretaker (e.g., a mother who says she does not believe that abuse occurred), he or she is more likely than not to recant (Malloy, Lyon, & Quas, 2007).

An important issue for research is to identify effective means of overcoming children's reluctance without increasing the risk of false allegations. Lab research has shown that children are most likely to disclose transgressions that they would otherwise keep secret if, without the interviewer providing details of the suspected event, they are asked to promise to tell the truth, reassured about disclosing negative events, and told that the suspect has already told "everything that happened" (Lyon, 2014). The research also finds that a substantial percentage of children maintain their silence and that recognition questions explicitly asking about wrongdoing elicit additional disclosures while risking false alarms. In the field, researchers have shown that providing additional emotional support can increase

disclosure rates among children known to have been abused (through corroborative evidence), at the same time that large percentages of children fail to disclose (Hershkowitz et al., 2014).

A FRAMEWORK FOR ASSESSING CHILD WITNESSES' REPORTS: CHILD-GENERATED VERSUS ADULT-GENERATED INFORMATION

When children do disclose, the key question is whether their disclosures are truthful. A useful framework for thinking about the veracity of child witnesses' reports is to distinguish between child-generated and adult-generated information. Child-generated information is generally preferable: A spontaneous complaint of abuse by a child to an impartial third party is most likely to be true and most likely to be free of external influence. At the other end of the spectrum, adult-generated information is most suspect. The distinction captures the major pressures that have been blamed for both false allegations and false denials—adult influences that either lead children to make false reports (and even form false memories) or lead children to deny or recant true allegations.

Interviews, in which the adult asks questions and the child answers them, are neither entirely adult-generated nor child-generated. Rather, the questions within the interview lie along the continuum. Distinctions between recall and recognition or open-ended and closed-ended questions are based on the extent to which the adult's questions contain information. Interview instructions recommended in interview protocols largely aim at decreasing the adult's influence and increasing the child's reliance on his or her own memory; these instructions include telling the child that it is acceptable to say "I don't know" to indicate when he or she doesn't understand a question, to correct the interviewer, and statements that the adult is ignorant about the child's experiences (American Professional Society on the Abuse of Children [APSAC], 2012).

Obviously, "leading" or "suggestive" questions are on the adult-generated end of the spectrum. However, classifying questions in this way has several difficulties. First, it implies that the primary problem with different types of questions is the extent to which they suggest specific answers to children. As we discuss, the problems with question types go well beyond suggestibility. Second, although there is universal agreement that interviewers should avoid leading or suggestive questions (Bruck & Ceci, 1995), there is disagreement over what kinds of questions are leading or suggestive (Peterson, Dowden, & Tobin, 1999). "Leading" is particularly troublesome, because it is a legal term and is defined primarily by trial judges rather than by researchers (Goodman, Bottoms, Schwartz-Kenney, & Rudy, 1991). "Suggestive" is ill defined; for example, there is disagreement among psychologists over whether yes/no questions are suggestive (Ceci & Friedman, 2000), an issue we take up later in the chapter.

Unfortunately, other terms used to classify question types (including "specific questions" and "direct questions") are also used inconsistently across studies (Peterson & Biggs, 1997; Waterman, Blades, & Spencer, 2001).

Disagreements over the classification of question types makes it difficult both to compare results across studies and to apply the results of research to actual cases. In order for the field to make real progress, terms should be clearly operationalized in order for research to be comparable and replicable. A particularly helpful step is to emphasize classic distinctions made by memory researchers.

Recall versus Recognition

A useful distinction among question types is whether they rely on recall or recognition memory. Recall includes free-recall questions (very general requests for information) and cued-recall questions (more specific requests). Cued-recall questions would include most *wh-* questions (*who, what, where, when, why,* and *how*). Recognition includes yes/no and forced-choice questions. Yes/no questions, of course, are questions that can be answered yes or no. Forced-choice questions are questions that include an "or" and ask the respondent to choose among possible answers (e.g., "Was it inside or outside?"). In the coding scheme used by the developers of the NICHD interviewing protocol, free-recall questions are often called invitations, cued-recall questions are called directives, and recognition questions are called option-posing questions (Lamb, Hershkowitz, Orbach, & Esplin, 2008).

In normal conversations, yes/no questions are ubiquitous (Stivers, 2010). They predominate when parents question their children (Salomo, Lieven, & Tomasello, 2013). Without special training, child interviewers rely on them quite heavily. Schreiber and colleagues (2006) examined child protective service interviews conducted in a western state in the 1990s and found that 60% of the questions could be answered yes or no. Yes/no questions are also the most common sort of question prosecutors ask child witnesses in court. Stolzenberg and Lyon (2014) found that 67% of attorneys' questions could be answered yes or no. With training and feedback, interviewers can learn to reduce their use of yes/no questions and increase their use of recall questions (Lamb et al., 2008).

Interviewers are routinely advised to maximize their use of recall questions because they minimize errors. However, there is more than one kind of error. Recall questions decrease commission errors but increase omission errors (recall is less complete), whereas recognition questions avoid omission errors but increase commission errors (Schneider, 2015). In other words, recall has higher specificity, and recognition has higher sensitivity. The reason is that recall questions provide fewer cues to memory and, in doing so, avoid false cues (which lead to commission errors), but they also provide fewer true cues (thus increasing omissions). This trade-off also

exists when the issue is willingness rather than memory. When children are reluctant to disclose a detail, they are more likely to omit it from recall than they are to explicitly deny it when asked recognition questions (Stolzenberg, McWilliams, & Lyon, 2017b).

Recall difficulties are magnified in children; their recall reports are less complete than adults'. This is in part due to the fact that they are less likely to generate cues on their own. Effective self-generation of cues in part relies on general knowledge about the world. Children are less knowledgeable, and their knowledge is less well integrated (so that the associations among different components of knowledge are weaker). Children are also less aware of how memory functions, which leads them to be less likely to generate cues even if it would be helpful to do so (Schneider, 2015).

A series of studies by Ornstein and his colleagues examining children's memory of pediatric examinations suggests that recognition questions can increase the completeness of reports, though the benefits decrease with age. For example, Ornstein, Gordon, and Larus (1992) interviewed 3- and 6-year-olds about a physical examination immediately afterward and again either 1 or 3 weeks later. Children were first asked "Tell me what happened during your checkup" and "Tell me what the doctor did to you." They were then asked increasingly specific yes/no questions regarding aspects of the exam they failed to mention in response to less specific questions. The children's recall reports were often quite sparse, whereas the more specific forms of questions elicited substantially more detail. Specifically, one-fourth to one-third of the 3-year-olds' correct reporting emerged in response to open-ended questions, and about one-half of the 6-year-olds' correct reporting did so. Thus the specific questions more than tripled the number of details the 3-year-olds could recall, and more than doubled the 6-year-olds' production. However, as noted above, recognition questions increase the likelihood of commission errors, and this is magnified in children. This is largely due to their greater tendency to guess and their corresponding failure to give "don't know" responses to recognition questions (Poole & Lindsay 2001; Rudy & Goodman, 1991). Furthermore, although recognition questions avoid omission errors, they can make matters worse. If children are reluctant or forgetful, recognition questions lead them to explicitly deny details that they would otherwise merely omit. If the child subsequently acknowledges the detail, his or her report appears suspicious because of the overt inconsistency.

Because of the risks and benefits of recall and recognition questions, a good approach is to start with recall questions and only move to recognition questions when recall fails and essential details are missing (Lyon, 2014). Furthermore, interviewers should not ask a string of recognition questions, but should use pairing, in which they follow up yes responses to recognition questions with recall questions (Lamb et al., 2008). Pairing can clarify yes responses that would otherwise constitute false positives (Stolzenberg et al., 2017b; e.g., asking "What happened?" if child responds yes to "Did something bad happen?").

Furthermore, the child-interviewing literature has identified questions that are likely to enhance the productivity of children's recall, called general invitations and cued invitations (Lamb et al., 2008). General invitations include the most broadly worded free-recall questions (such as "Tell me everything that happened" and "you said [*X*], what happened next?"), and cued invitations are recall questions in which a detail mentioned by the child serves as a cue for elaboration (such as "you said [detail]; what happened next?" or "you said [detail]; tell me more about that.") Memory research examining children's recall productivity has typically failed to ask followups to initial requests for free recall (Davis & Bottoms, 2002) or has relied on a relatively small number of nonspecific followups such as "Tell me what else happened" (e.g., Kulkofsky, Wang, & Ceci, 2008). Cued invitations are likely more productive than questions such as "Tell me what else happened" because they specify content, but likely less error-prone because they use the child's words and, unlike *wh-* questions, do not narrow the focus. In Ornstein and colleagues' studies of children's memories for pediatric examinations, more extensive use of recall questions might have reduced the incremental benefits of recognition questions.

What is needed is more research identifying the circumstances in which children's recall can be enhanced so as to obviate the need to ask more specific *wh-* and recognition questions. One experimental study has found that cued invitations enhance recall of a play activity without increasing error (Brown et al., 2013). Similarly, observational research has found that cued invitations produce large amounts of information in field studies examining NICHD protocol interviews of children disclosing abuse (Lamb et al., 2008). However, there is evidence that cued invitations are less effective with highly reluctant children (e.g., children suffering physical abuse at the hands of parents, Hershkowitz & Elul, 1999) and young preschoolers (3- and 4-year-olds; Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012). Moreover, researchers are finding that free-recall and cued invitations often fail to elicit certain types of details that are important in abuse investigations, such as conversations between the child and others (Malloy, Brubacher, & Lamb, 2013). We have found that specific recall questions can elicit otherwise overlooked content, including conversations (Stolzenberg & Lyon, 2014; e.g., "What did the man say to you?") and emotional reactions to abuse (Lyon, Scurich, Choi, Handmaker, & Blank, 2012; e.g., "How did you feel?"). Furthermore, with respect to deliberate nondisclosure of information, we have found that although cued invitations have some utility in increasing disclosure (Ahern, Stolzenberg, McWilliams, & Lyon, 2016), large percentages of children maintain secrets in the face of such questioning, necessitating other strategies to overcome reluctance.

Suggestibility

Much of the research relevant to children's reports has focused on suggestive questioning, which concerns how children's memory reports may be

distorted by external influences. A classic finding is that children are more suggestible than adults and that preschool children are especially vulnerable (Ceci & Bruck, 1993). There are several reasons for age differences in suggestibility. Suggestibility is greater as memory is weaker; if one has a strong memory for an event, it is easier to reject false suggestions because they conflict with one's memory. Because children's memory is generally weaker (Brainerd, Reyna, Howe, & Kevershan, 1990), this will lead to greater suggestibility. Second, children are less adept at source monitoring (Thierry, Spence, & Memon, 2001). Source monitoring is the process by which one identifies the source of one's beliefs. From a practical standpoint, this leads to confusion between what one knows because of one's experience and what one knows because of what one has been told. These difficulties are particularly profound in preschool children, who initially have limited awareness of the causal connection between perceptual access and knowledge (Gopnik & Graf, 1988). Third, children are deferential to adults' authority and knowledge (Lampinen & Smith, 1995). Note that this interacts with understanding of knowledge acquisition; if children do not understand the need for perceptual access for knowledge acquisition, they may overattribute knowledge to adults because of adults' greater status.

Researchers examining abuse interviews conducted during the high-profile day-care cases documented how young children were repeatedly interviewed with highly suggestive techniques (Bruck & Ceci, 1995; Schreiber et al, 2006). In turn, these cases inspired much of the experimental demonstrations of children's suggestibility. The suggestive techniques include exposing preschool children to adults describing false events (Principe, Kanaya, Ceci, & Singh, 2006), repeated questioning of preschool children with guided visualization of false events (Ceci, Loftus, Leichtman, & Bruck, 1994), parents' repeated narration of stories that embellish experiences with false events (Poole & Lindsay, 2001), and repeated negative stereotyping combined with exposing preschool children to evidence of wrongdoing (Leichtman & Ceci, 1995). Not surprisingly, the largest effects have been achieved by combining the various suggestive techniques (Bruck, Ceci, & Hembrooke, 2002; Leichtman & Ceci, 1995).

What makes the results of these studies particularly remarkable is that children's subsequent recall frequently included the suggested material and that the youngest children often maintained that they had personally experienced the events when asked source-monitoring questions (e.g., Leichtman & Ceci, 1995; Poole & Lindsay, 2001). Most suggestibility research reports children's responses to suggestive questioning without determining whether there were carryover effects, such that subsequent questioning would also elicit errors. When carryover effects occur, children's reports appear to be child-generated when they are in fact adult-generated, such that even a well-trained interviewer would likely elicit false reports from a child.

The research both highlights the suggestibility of children, particularly preschool children, and the types of suggestion that are necessary for

false information to be incorporated in children's subsequent reports. The most impressive demonstrations tell children that the events occurred (as opposed to asking them whether they occurred) and help children generate additional false details to embellish their reports. One of the most cited pair of suggestibility studies—the mousetrap study and the bicycle study—illustrates the distinction. In the original mousetrap study, interviewers repeatedly asked children over several weeks whether various events had occurred and, if children assented, asked for details. They told each child that they had spoken to the child's parents about things that had happened, but they added that not all of the events had occurred. Although many preschool children made false reports, the likelihood that they assented did not increase over time (Ceci, Huffman, Smith, & Loftus, 1994). In the bicycle study, interviewers told children that the queried events had in fact occurred and helped them visualize the events. Children's false reports reliably increased over time (Ceci, Loftus, et al., 1994).

The observational research documenting high rates of suggestive influences in the high-profile cases found that typical interviews suffered from more mundane problems, such as the predominance of yes/no questions mentioned previously (Schreiber et al., 2006). Hence, the most important issue in typical cases is whether suggestive influences *prior to the first formal interview* are responsible for the child's report. The child's disclosure history is particularly important; initial disclosures to friends or disinterested adults are more trustworthy, whereas initial disclosures to adults that are adverse to the suspect are obviously subject to question. One can easily imagine cases in which adults malign other adults in front of young children; divorce cases are the obvious problem. At the same time, it is also easy to imagine cases in which children's abuse disclosures are second-guessed. As a result, a fruitful area of research concerns children's abilities to recall what adults have told them, because they may give investigators insight into the pressures they have encountered (Lyon & Stolzenberg, 2014).

Are Yes/No Questions Suggestive?

Even if interviews are not highly suggestive, yes/no questions nevertheless elicit concern. It is often assumed that yes/no questions are inherently suggestive because of the implicit assumption that the correct answer is yes (Ceci & Friedman, 2000). However, there is little evidence that this is true. Among research with varied content, there is no consistent evidence for a yes-bias or no-bias among young children. For example, Peterson and Grant (2001) had 3- and 4-year-old children play with two confederates (they drew pictures and made necklaces), and 1 week later an interviewer asked yes/no questions about the actions, appearances, speech, and emotions of the confederates. The authors systematically varied whether questions with the same content were correctly answered yes or no. Children were more accurate when responding to yes/no questions when the correct answer was yes, suggesting a yes-bias (see also Peterson et al., 1999). On the

other hand, when Peterson and Biggs (1997) questioned 2- to 13-year-olds a few days after an emergency room visit using free recall, *wh*- questions, and yes/no questions, 3- to 4-year-olds' yes responses were more accurate than their no responses, suggesting a no-bias. Other research has revealed no systematic biases (Brady, Poole, Warren, & Jones, 1999). Apparent yes-biases can be an artifact of the way in which the questions are generated. For example, if children are only asked about nonoccurring events, their tendency to guess can lead to false affirmation rates of 50%. That is, an unbiased guesser will still answer yes half the time.

A classic finding cited in support of yes-biases is that a large percentage of 3-year-olds answered affirmatively when asked incomprehensible questions (such as "el camino real?"; Fay, 1975). Fritzley and colleagues systematically studied children's responses to incomprehensible questions, and although they found a yes-bias among 2-year-olds, it disappeared among 3-year-olds and actually turned into a no-bias by 4 years of age (Fritzley & Lee, 2003; Fritzley, Lindsay, & Lee, 2013).

When questions are comprehensible, what appears to be a yes-bias may actually be a plausibility bias. Plausibility is defined in terms of the child's knowledge base about the event in question. For example, in some of the aforementioned medical examination studies by Ornstein and colleagues, the children were asked yes/no questions about "absent features" of the exam, which concerned "aspects of routine physical examinations that happened not to be included in particular checkups" (e.g., "Did the doctor check your eyes?") and "extra-event" questions, which inquired about activities that were never included in an examination (e.g., "Did the doctor cut your hair?" "Did the nurse sit on top of you?"). Children were substantially more likely to falsely respond yes to the absent features. Specifically, 3-year-olds incorrectly responded yes as much as 50% of the time to the absent-feature questions, and older children (up to 7 years of age) did so as much as one-third of the time (Ornstein et al., 1992; Ornstein, Baker-Ward, Myers, Principe, & Gordon, 1995). In contrast, when asked the extra-event questions, children's accuracy was "uniformly impressive" and did not deteriorate over the 12-week delay interval (Ornstein et al., 1995, p. 356), a pattern replicated by a study finding very low rates of yes responses to questions about details not relevant to a recently experienced dental examination (Rocha, Marche, & Briere, 2013).

Whatever the source of false yes responses, they tend to exhibit substantial decreases with age. This is revealed in a number of studies that examined suggestive techniques and included yes/no questions without suggestion. Poole and Lindsay (2001) investigated children's memory for an interaction with a science teacher after delays of 3 months and 4 months. In the absence of parental coaching, the 3- to 4-year-olds incorrectly answered yes 21–24% of the time in response to yes/no questions about nonoccurring events, whereas, by age 5, no more than 5% of the children did so. Likewise, when Garven, Wood, Malpass, and Shaw (1998) questioned

3- to 6-year-old children 1 week after a brief classroom visit by "Manny Morales," asking yes/no questions without reinforcement, the 3-year-olds answered 31% of the yes/no questions about fictitious events incorrectly, but no more than 8% of the 5- and 6-year-olds did so.

These findings are comparable to Gail Goodman's studies, in which one also finds evidence of worse performance among the younger preschool children. For example, Goodman and colleagues (1991) questioned children about an inoculation 2 and 4 weeks after it took place. Children 3–4 years old falsely answered yes up to 20% of the time when asked "Did she put anything in your mouth," whereas only 4% of the 5- to 7-year-olds did so. Likewise, 3- to 4-year-olds falsely answered yes about 10% of the time when asked "Did she touch you anywhere other than on your arm or leg," whereas only 4% of the 5- to 7-year-olds did so (see Davis & Bottoms, 2002, for similar results).

If a study excludes 3-year-olds and tests for implausible content, then yes/no questions are less likely to elicit high rates of error. In a study examining the effects of stereotype induction (informing the subject that a target person does bad things), with yes/no questions as a control, Lepore and Sesco (1994) questioned 4- to 6-year-olds about a play session with an adult teaching assistant (TA) immediately afterward and 1 week later, children were nearly 100% accurate when asked three yes/no questions that might lead to suspicions of abuse: "Did the TA take off some of your clothes?", "Did the TA kiss you?", and "Did the TA ever touch other kids at the school?" (The uncertainty over terminology noted above was present here: The authors referred to the yes/no questions as "cued recall.")

A countervailing bias relevant to concerns over false abuse allegations is children's tendency to deny negative or aversive content. When the content is negative, self-incriminating, or unpleasant, no biases are likely: Children learn to "just say no." For instance, when asked yes/no questions, children begin to deny transgressions by 2 years of age, and their tendency to do so quickly increases by 4 years of age (Talwar & Crossman, 2012). Children will also deny others' transgressions (Talwar, Lee, Bala, & Lindsay, 2004) and actions in which they and another are jointly implicated (Lyon, Malloy, Quas, & Talwar, 2008). This tendency to say no has also been observed in the field; children are less likely to disclose abuse when "Tell me why you are here" is rephrased as a yes/no question, "Do you know why you are here?" (Hughes-Scholes & Powell, 2012).

Making Recognition Questions Suggestive

Recognition questions can be made suggestive by changing their form. They are more likely to elicit acquiescence if they are phrased as tag questions (e.g., "Did he touch you" is made more suggestive if changed to "He touched you, didn't he?"). As with other types of suggestion, tag questions have the largest effect on younger children, with the effects disappearing

by about 8 years of age (Cassel, Roebers, & Bjorklund, 1996). Yes/no questions can also be made suggestive when paired with other types of suggestion, such as punishing "no" responses (e.g., "You're not doing good") and positively reinforcing "yes" responses (e.g., "You're doing excellent now"; Garven, Wood, & Malpass, 2000).

Forced-choice questions present special problems. As noted above, children will not answer "I don't know" and therefore are guaranteed to make an error if neither answer is correct. Hence, a particularly suggestive question is a forced-choice question embedded within a false presupposition (e.g., "When he hurt you, was he angry or sad?"; Lyon et al., 2008). These sorts of questions are quite common in studies exhibiting the largest suggestibility effects (Leichtman & Ceci, 1995). Note that the questions essentially tell the child that the event occurred and help create additional details that the child him- or herself chooses. In forensic interviews and in trials, forced-choice questions are much less common than yes/no questions (Schreiber et al., 2006 [5% in forensic interviews]; Stolzenberg & Lyon, 2014 [2% in trials]). However, they are quite likely used when certain types of information are sought, such as clothing placement (discussed below).

Beyond Suggestibility: Formal Reticence

If yes/no questions are not inherently suggestive, and if they are helpful in eliciting details that children don't produce in free recall, then one might argue that they play an important role in forensic interviewing. However, there are good reasons for forensic interviewers to avoid yes/no questions (and other recognition questions, including forced-choice questions) whenever possible, even when suggestibility is not a concern. The reasons for these concerns can be understood in light of a response tendency among children that we have termed "formal reticence."

Formal reticence refers to children's tendency to provide answers that are minimally responsive given the form of the question. When asked yes/no questions, younger children tend to provide unelaborated yes and no responses (Stolzenberg & Lyon, 2014). When asked forced-choice questions, younger children tend to simply choose one of the responses (Peterson & Grant, 2001; Rocha et al., 2013). When asked recall questions, younger children will generate more information than in response to recognition questions (the nature of recall questions requires the person answering the question to generate information), but the information they provide tends to be the minimum amount of information required (Klemfuss, Quas, & Lyon, 2014). It seems likely that limited executive functioning, in particular immature inhibition and limited working memory, contributes to formal reticence (Evans, Stolzenberg, Lee, & Lyon, 2014). Elaborative responses require the speaker to withhold an impulsive response and to search, identify, and articulate information while maintaining the question in mind.

Formal reticence leads to some of the problems we noted above with recognition questions. Even if they do not know the answer, children will answer yes/no and forced-choice questions with a yes, no, or a choice, given the easy accessibility of those responses, and the greater demands of generating an "I don't know" response. Children's response tendencies when asked yes/no questions, including endorsing plausible details and rejecting unpleasant content, are consistent with superficial processing of the question rather than an effortful search through memory.

RECOGNITION QUESTIONS LEAD TO UNDERINFORMATIVE RESPONSES

Formal reticence leads to additional problems with recognition questions. Children's brief responses are often underinformative. For example, oftentimes the best answer to a forced-choice question is "neither" or "both," but children's failure to go beyond the form of the question in providing an answer makes such answers rare. For example, a major means of distinguishing between abusive and nonabusive touch concerns the touching with respect to the child's clothing. In both court and in the lab, however, young children will provide unelaborated responses to yes/no and forced-choice questions about clothing placement when placement is intermediate, thus failing to communicate that the clothes are partially on and partially off (Stolzenberg & Lyon, 2017; Stolzenberg, McWilliams, & Lyon, 2017a). For example, asked a question such as "Were your pants on or off?" children will typically answer "on" or "off," and only rarely elaborate with an answer such as "they were partly on." A solution is to ask a *wh-* question ("Where were your clothes?" or "What happened to your clothes?"), which more likely leads to an intermediate response.

Formal reticence increases the dangers of referential ambiguity, an overlooked problem with many questions asked of child witnesses (Lyon, 2013). Referential ambiguity occurs when a statement can have more than one meaning. There are large developmental differences in children's ability to detect referential ambiguity in their own speech and in other's statements (Matthews, Lieven, & Tomasello, 2007). The easy availability of an unelaborated response to a recognition question reduces the likelihood that a child will *detect* a referentially ambiguous question, and the lack of an explanation of an unelaborated response decreases the likelihood that an adult will *recognize* referentially ambiguous answers.

We have identified two areas in which formal reticence leads to referential ambiguity. In order to overcome children's tendency to guess, interviewers and attorneys will often ask children whether they know or remember some information rather than directly ask for the information. Adults hearing such questions (e.g., "Do you remember when it was?") understand that the question implies "If you do remember, then tell me when it was." However, we have shown that children frequently provide unelaborated responses to "Do you know?" and "Do you remember?" questions, and

that this tendency is related to age and inhibitory control (Evans et al., 2014).

When a child provides an unelaborated yes to a "Do you remember?" or "Do you know?" question with an embedded recall question, then his or her answer is merely a minor inconvenience, because the adult can easily follow up with the recall question. For example, if a child answered yes to "Do you remember when it was?" then the adult could simply ask "When was it?" But a more serious problem occurs when adults ask "Do you know?" and "Do you remember?" questions with embedded yes/no questions (e.g., "Do you remember if it was dark?"). When children answer these questions with unelaborated yes or no responses, they fail to communicate whether they are answering the explicit question (whether they remember) or the implicit question (whether it was dark).

Date of abuse is legally significant, and attorneys and interviewers often attempt to elicit approximate dates from children by asking them about when abuse occurred with respect to landmarks—dateable and significant events in the child's life, such as birthdays or holidays. However, children provide unelaborated yes/no responses to questions about the proximity of events to their birthday and unelaborated responses to forced-choice questions about whether events were before or after their birthday, thus failing to communicate which birthday they are using as a landmark (McWilliams, Lyon, & Quas, 2019). For example, asked whether a particular court visit is before or after their birthday, children will typically answer either "before" or "after," and virtually never answer "both" or ask for clarification (e.g., "which birthday?").

Formal reticence can lead to different patterns of responses to yes/no and forced-choice questions, making children seem inconsistent. This is illustrated in a recent series of studies we conducted examining children's understanding of "ask" and "tell." These words are important in sexual abuse cases, because they are used to assess whether disclosure recipients asked or told children information and whether suspects asked or told children to perform various acts (Stolzenberg, McWilliams, & Lyon, 2017c). We found evidence that children initially associate "telling" with "saying," so that they believe asking is a *type of telling*. Hence, they will affirm that a question is telling if asked a yes/no question. For example, if asked whether their mothers "told" them what happened with a suspect, they are likely to respond affirmatively even if their mothers only asked. Because of formal reticence, they will not elaborate on their answers by noting that "ask" is a more precise description of their mother's statement. If asked a forced-choice question ("Did your mother ask you or tell you?"), they are more likely to respond with "ask," because they recognize that ask is the more precise word. Because of formal reticence, however, they will not elaborate on their answer by noting that, in their view, their mother *both* asked them and told them.

Formal reticence also describes children's minimally sufficient responses to recall questions (Klemfuss et al., 2014). However, recall

questions inherently require more from the child witness, because by definition they require the respondent to generate information. Moreover, researchers have shown that children's reticence in the face of recall questions can be alleviated to some extent by different means of encouraging more elaborate responses. First, there is evidence that narrative practice, in which the interviewer asks the child a series of recall questions designed to encourage the child to provide a narrative report of recent experiences, increases the productivity of the child's subsequent recall in response to questions about the target event, without compromising accuracy (Brown et al., 2013; Lyon et al., 2014). Second, there is support for the use of cued invitations, which, as noted earlier, entail asking the child to "Tell me more about [child-generated content]" in order to elicit elaboration about a subject or to ask "You said [child-generated content]; what happened next?" in order to establish a sequence of events (Brown et al., 2013). Importantly, however, cued invitations need to be tied to specific content; unelaborated requests to "Tell me more" or recall questions such as "What else happened?" are relatively ineffective (Evans, Roberts, Price, & Stefek, 2010), probably due to children's limited working memory (they must recall the information they previously uttered) and their limited understanding of what information is important or interesting to the questioner.

RECOGNITION QUESTIONS MEAN THAT THE INTERVIEWER SAYS MORE THAN THE CHILD

Still more problems with recognition questions become apparent when one reflects upon the implication that children will provide unelaborated responses to recognition questions: The questioner will necessarily do most of the talking.

MISSING THE CHILD'S PERSPECTIVE

In adult–adult conversations, closed-ended questions are productive because respondents elaborate on their responses. For example, if a coworker asks, "Did you have a good trip?," it would be uncooperative to simply answer yes or no. Rather, one interprets the question as, "Tell me about your trip." The elaboration on one's response generates content that in turn enables the questioner to ask further questions. In contrast, a child's yes response to a question such as "Did you have a good trip?" does not generate any information beyond the content conveyed by the question. In order to keep the conversation going, the questioner must generate additional content on his or her own.

If the questioner is generating all the content, then the narrative that emerges reflects the questioner's perspective more than the child's perspective. For example, if one is asking a child about sexual abuse and asking predominantly yes/no questions, then one will ask about aspects of an abusive event with which one is familiar. If something unusual occurred,

it is unlikely to be discovered. Moreover, the child's perspective is likely to be overlooked. This will make it more difficult to determine whether the child's report is credible, because the report that emerges will look similar to a report that an adult may have suggested to the child.

DIFFICULT LANGUAGE

Another problem when the interviewer does most of the talking is that this maximizes the likelihood that the child's limited language abilities will undermine the reliability of the child's report. The child may answer yes or no to a question because the child misunderstands some part of the question. Of course, children often misspeak, and therefore their narratives will contain errors as well. However, when a child spontaneously uses a word incorrectly or says something ungrammatical, one is more likely to detect a problem, because the statement will often appear nonsensical and the child can be asked to elaborate.

Of course, one ought to avoid asking children questions that they may not understand. This is easier said than done. Young children often have limited understanding of terms that are ubiquitous in conversation and extremely important in abuse investigations, such as prepositions (e.g., *on, off, in,* and *under*; Stolzenberg et al., 2017b). Interviewers are sometimes offered age guides, but these impose huge working memory requirements on interviewers who should already be attending closely to the wording of their questions and the information provided by the child. Even if one could keep in mind the age at which children tend to understand various words, this provides a poor guide to how any individual child will respond, given variance in children's language development and variance among children in the age at which they first acquire different words.

Another possible solution is to test individual children's understanding of words before using them. For example, interviewers sometimes attempt to test children's understanding of different prepositions by asking them to place various objects in or under other objects, but, in addition to taking up precious time, there is little evidence that children's understanding of prepositions in that context does a good job of predicting their understanding in other contexts (e.g., "under a box" may be perceived differently than "under one's clothing," because one is perceived vertically and the other proximally; Stolzenberg et al., 2017b). Asking a child if he or she knows what a word means is going to exaggerate comprehension, because children will answer yes if the word sounds like a word with which they are familiar (Saywitz, Jaenicke, & Camparo, 1990). Asking a child to define a word is going to understate comprehension, because children understand far more than they can explain (Flavell et al., 1987).

We can attest to the difficulty of developing tasks that accurately assess comprehension. We have spent considerable time developing tasks for assessing children's understanding of the words *truth* and *lie* because of

courts' insistence that their understanding be tested (Lyon, 2011). Despite our best efforts, however, our tasks are still insensitive to some understanding: Children who fail our truth/lie understanding tasks are nevertheless more likely to be honest when asked to promise to tell the truth (Lyon et al., 2008).

Yet another possible solution is to instruct the child to signal incomprehension. Interview protocols generally recommend that interviewers give children instructions about the propriety of answering "I don't understand" and "I don't know," and there is some evidence supporting these instructions (Brubacher, Poole, & Dickinson, 2015). However, the instructions cannot work unless children are aware of their incomprehension or their ignorance and unless they bring that awareness to the fore in answering questions. Given the ease with which children can generate answers to recognition questions, and given the likelihood that children will think they can make some sense of most questions, instructions will have limited utility. This is particularly true of younger children, who have limited awareness of when they lack knowledge (Schneider, 2015) or comprehension (Lyons & Ghetti, 2011). The best solution is to minimize the number of recognition questions and maximize the number of recall questions, because the interviewer will say less, the child will say more, and children are more likely to recognize and acknowledge their ignorance when recall questions are asked (Waterman et al., 2001).

CONCLUSION

We have provided an overview of research on child witnesses that emphasizes the importance of recognizing the types of cases in which children are most likely to be involved: accusations of wrongdoing (typically sexual abuse) against familiar adults. These cases raise memory issues, to be sure, but also raise concerns about motivational issues and deliberate distortion of reports, creating risks of both false allegations and false denials attributable to adult pressures. In addition to memory research, it is helpful to consider both field and lab research on the dynamics of disclosure. This research highlights barriers to disclosure, particularly when children are accusing adults close to them. Future research should continue to develop nonsuggestive means of overcoming reluctance, as well as to identify topics that may require more specific questioning in order to elicit details that child victims fail to recall or deliberately omit. Moreover, the importance of addressing adult influences opens up new opportunities for memory research, specifically children's ability to recall conversations.

At the same time that we have emphasized how the typical child witness is asked about his or her interactions with a familiar adult, and thus unlike the eyewitness asked to identify a stranger, much of what we have said applies to concerns about the reliability of child witnesses generally.

Untrained interviewers are likely to rely on recognition rather than recall questions, no matter the topic. In turn, children's formal reticence, which describes their minimal responsiveness, and the numerous problems encountered when interviewers rely on recognition questions are issues for all child interviews. Furthermore, although we have implicitly assumed that the motivational difficulties facing children victimized by familiar adults are unique, an important question is the role that reluctance plays in eyewitness identification of strangers, for children as well as adults. It may be that child victims are not that different after all.

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