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Child witnesses and imagination:
Lying, hypothetical reasoning, and referential ambiguity
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To appear in M. Taylor (Ed.), *The Oxford handbook of the development of
imagination*

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Child witnesses and imagination: Lying, hypothetical reasoning, and referential ambiguity

Although imagination is a sign of creativity, it is often frowned upon in the law. When witnesses lie, they are imagining an alternative reality. Because the law seeks the truth, it insists that witnesses swear to tell the truth, and expects that witnesses understand the distinction between truth and lies. When witnesses reason hypothetically, they set reality aside. Because lay witnesses are expected to relay the facts (and keep opinions to a minimum), and because of the guesswork involved in counterfactual reasoning, lawyers will often object that hypothetical questions “call for speculation.” When witnesses interpret ambiguous questions, they choose among possible intended meanings. Because opponents often deliberately phrase questions so as to conceal their true intentions from witnesses, and witnesses’ answers may be misunderstood, lawyers will often object on the grounds of “vagueness” (Mueller & Kirkpatrick, 2009).

Lying, speculating, and interpreting are all types of imaginative thought. Children’s potentially limited imaginative abilities present challenges for the law. Child witnesses are frequently asked about their understanding of the meaning and morality of the truth and lies as a means of assessing their appreciation of the importance of telling the truth. However, many of the questions force children to imagine the consequences of lying. Because of children’s disinclination to reason about negative premises, they often appear less competent than they really are. Research on hypothetical reasoning in children generally (see chapter by Beck and Riggs, this volume), and children’s reasoning about truth-telling specifically, suggests alternative approaches that do not underestimate children’s understanding.

A close look at questions asked of children about truth and lies also reveals problems that are almost surely true of children’s testimony more generally. Children often provide answers that appear inconsistent at best (and simply wrong at worst). Examination of the questions reveals that many are referentially ambiguous, a problem of longstanding interest to developmental psychologists. Lawyers will recognize questions that are unnecessarily speculative or vague for an adult witness, but are unlikely to hear the questions from the perspective of a child. Most lawyers know little or nothing about child psychology, and legal training (with all its jargon and arcane turns of phrase) likely impairs the average lawyer’s ability to speak to children. Examination of child witnesses’ performance in court is thus a promising means of revealing the differences in how children and adults communicate. Conversely, developmental psychology should have recommendations for how lawyers can better question children.

In this chapter I’ll first discuss the difficulties children have in testifying about the truth and lies, and how many of the questions implicate children’s resistant to counterfactual reasoning with undesirable premises (namely, the premise that they would lie on the stand). I’ll quote from a case study in which a precocious 4-year-old child appeared incompetent to the courts because of her clear aversion to lying. The case study will reveal other difficulties, however, that suggest that the child was just as stymied by the unintentional ambiguity of the questions she was asked. I’ll discuss how attorneys

and others who question children about significant events can avoid “calling for speculation” and unnecessary ambiguity or vagueness.

Speculating about the truth and lies

In virtually all jurisdictions in the United States, and in many other countries, witnesses are expected to affirm in some manner that they will tell the truth, typically by taking the oath (Lyon, 2011). A common concern is that child witnesses may be too young to meaningfully understand what they are asked to do, and for that reason child witnesses may be asked questions about their understanding of the meaning and morality of truth-telling. This understanding can be referred to as truth-lie competency. Questions about truth-lie competency are very common in the United States (Evans & Lyon, in press), and many states explicitly require that children exhibit an understanding of the meaning and morality of lying before testifying (National Center for the Prosecution of Child Abuse, 2009).

In many other countries, courtroom questioning about truth-lie competency has been eliminated as a prerequisite to testimony (Lyon, 2011). There are good reasons to do so. For one, the younger the child, the less likely the child is *capable* of lying (Ahern, Lyon, & Quas, 2011). Therefore, children most likely to fail truth-lie competency tests are probably the least likely to lie. Second, as we shall see, the competency questions are likely to be insensitive to understanding, and therefore keep many children off the stand who are nevertheless competent.

Nevertheless, even in countries that have eliminated formal truth-lie competency requirements, pre-trial interviewers are advised to ask such questions (Home Office, 2001; Richards, Morris, & Richards, 2008), and competency questions are common in investigative interviews (United States: Huffman, Warren, and Larson 1999; Sternberg, Lamb, Orbach, Esplin, & Mitchell, 2001; Walker & Hunt, 1998; England and Wales: Westcott & Kynan 2006; New Zealand: Davies & Seymour, 1998; Scotland: La Rooy, Lamb, & Memon, 2011). Moreover, despite the elimination of competency prerequisites, defense attorneys are permitted to ask competency questions in cross-examination, on the grounds that it allows for assessment of the child’s credibility (Bala, Evans, & Bala, 2010).

Under ideal circumstances, the truth-lie competency questions can be simplified so that most children will exhibit good understanding between 3 ½ and 4 years of age. It is at this age that most children acquire the understanding that true statements are “the truth” and “good” and that false statements are “bad” (Lyon, Carrick, & Quas, under review). Still younger children can qualify to testify in jurisdictions that allow unsworn testimony; by two years of age children will accept true statements and reject false statements, thus exhibiting an understanding of the concepts of truth and falsity and the norm of truthfulness (Hummer, Wimmer, & Antes, 1993; Lyon, et al., under review; Pea, 1982). Children this young do not know the meaning of “truth” (and thus could not meaningfully make a promise to “tell the truth”), but are capable of and inclined to respond honestly. Of course, very young children are notoriously suggestible (Bruck &

Melnyk, 2004), but the courts construe testimonial capacity as whether one is *capable* of accuracy, and anticipate that direct and cross-examination will test that accuracy.

Various difficulties are likely to undermine children's apparent understanding of the truth and lies when they are questioned in court. Likely because of the negative connotations of lying, young children often appear to know less about lying. Young children are sometimes more adept at determining whether statements are the "truth" rather than whether they are "lies," (Lyon & Saywitz, 1999; Lyon, Carrick, & Quas, 2010; under review), and are more likely to deny knowing the meaning of "lie" than "truth" (Lyon & Saywitz, 1999). Children up to eleven years of age tend to deny that they have ever told a lie (Peterson, Peterson, & Seeto, 1993).

Children may be particularly resistant to thinking hypothetically about the consequences they would experience should they lie in court. A common finding is that preschool children will perform poorly when asked to reason with premises that they find unacceptable. Reilly (1986) found that up to 4 years of age, children asked "what if" questions would simply reject implausible or undesirable premises, treating such questions as suggestions rather than hypotheticals. Hawkins, Pea, Glick, and Scribner (1984) found that 4- to 5-year-olds' ability to reason deductively was impaired when the premises contradicted their practical knowledge. Indeed, some researchers have found that children have difficulty reasoning with counterfactual premises until 12 years of age (Inhelder & Piaget, 1958; Markovits & Vachon, 1989).

On the other hand, other research has found precocious abilities to reason counterfactually among children as young as 2 (for a review of developmental change in counterfactual reasoning see chapter by Beck & Riggs, this volume). By 2 years of age, children demonstrate an ability to reason hypothetically about situations contrary to reality when they use words such as "almost" and "wish," (Au, 1992; Bowerman, 1986) and are capable of reasoning about pretend transformations (Harris & Kavanaugh, 1993; Leslie, 1994). Young children's hypothetical reasoning performance in response to adult prompts improves when adults encourage them to pretend or when reasoning with fantasy content (Dias & Harris, 1988, 1990; Hawkins et al., 1984; Kuczaj, 1981; Reilly, 1986; Richards & Sanderson, 1999). Leivers and Harris (1999) found that 4-year-olds performed extremely well if they were instructed to "think about what things would be like if all the things in the stories were true" and were quizzed to ensure that they had the false premise in mind when they were given a reasoning problem.

Harris and Leivers (2000) argue that the "reasoning context of the traditional experimental setting is pragmatically anomalous, with the experimenter stating untruths but with little indication of how these untruths should be handled." When directly asked to assess the mental state of a speaker who uses the word "if," children as old as 6 years of age are poor at inferring that the speaker is uncertain about (or does not believe) the premises (Wing & Scholnick, 1981). Hence, children may be inclined to correct the questioner's premises rather than treat the task as calling for counterfactual reasoning. Specifically, children may misinterpret "what if you told a lie" as a challenge rather than as a hypothetical question.

In the context of asking children to demonstrate their understanding of the negative consequences of lying, it is impractical to suggest that children be questioned about lying in a fantasy or imaginary context, and it may be difficult to convince children to imagine themselves lying on the stand. Ironically, children who are particularly averse to lying are likely to most strenuously reject the premises of hypothetical questions about lying. We suspected that children averse to imagining themselves lying might demonstrate better understanding if they were asked hypothetical questions about another child (Lyon, Saywitz, Kaplan, & Dorado, 2001). We asked 5- and 6-year-old children who had been removed from their parents' custody because of substantiated maltreatment to describe the consequences to children who lied to different professionals (a judge, a social worker, and a doctor). Children in the "self" condition were asked about themselves, whereas children in the "other" condition were asked what would happen to a story child. Children were more responsive when asked about a story child; they were less likely to refuse to answer or answer "I don't know." In subsequent tasks we have developed for use by lawyers and other professionals who question children, the child witness is asked questions about a story child's true and false statements (Lyon, 2011; Myers, 2005).

In order to determine if competency questions do in fact create difficulties for child witnesses, we recently completed the first systematic exploration of competency questions asked in court. We reviewed the testimony of 164 child witnesses in Los Angeles County over a five year period and 154 child witnesses quoted in appellate cases throughout the United States over a 35 year period, consisting of over 2,700 questions asked of children 3 to 15 years of age. Several findings supported the notion that children find it difficult to discuss lying. We anticipated that children would be better at evaluating lies (e.g., as good or bad) than reasoning about consequences, which is likely more aversive and cognitively demanding. Indeed, children erred twice as often when discussing consequences. We also anticipated that, consistent with our lab findings (Lyon et al., 2001), children would perform better when asked about others rather than themselves. Children erred only 1% of the time when asked about others, and 20% of the time when asked about themselves. However, we could not test the difference statistically, because children were asked about themselves over 90% of the time. Furthermore, consistent with previous research, a substantial minority (41%) of children denied ever having told a lie.

Case study of a truth-lie competency inquiry

A case study illustrates these and other difficulties children encounter in qualifying as testimonially competent. In *Commonwealth v. Corbett* (1989), the defendant was charged with indecent assault and battery on a child under fourteen. The alleged victim, who was four years of age when she testified, was the only percipient witness. The case never made it to trial, however, because the judge found that the child was incompetent to testify. The judge first "asked the child numerous questions about her age, family members, friends, nursery school, and play and other activities" (*Commonwealth v. Corbett*, 1989, p. 208), which assessed what is known as basic

competency: the child's ability to observe, remember, and communicate (Lyon, 2011). The child answered virtually all of these questions with "understanding and awareness" (Commonwealth v. Corbett, 1989, p. 208).

The child ran into difficulties, however, when the judge turned to the child's ability to tell the truth. What follows is an excerpt of the competency questioning by the judge, as quoted by the appellate court:

Q. Do you know what it means...when someone says you have to say the truth?

A. Yes.

Q. Did your mother tell you you have to say the truth?

A. Yes, you have to tell the truth.

Q. When did your mother tell you that? Did she tell you that today?

A. When I was going to tell her.

Q. Did your mother ever tell you that you have to tell the truth?

A. Just one time.

Q. Did she tell you what to say today?

A. (Witness shakes head.)

Q. Do you know what the truth is?

A. Yes.

Q. What is the truth?

A. A lie isn't the truth.

Q. And what happens to you if you do not tell the truth?

A. Then no one can't get in trouble.

Q. If you tell the truth, will you get in trouble?

A. No.

Q. If you tell a lie, will you get into trouble?

A. No.

Q. You won't get into trouble?

A. But I am not going to tell a lie.

Q. Have you ever told a lie?

A. No.

Q. If you don't tell the truth, do you know what will happen to you?

A. What?

Q. You have to tell me.

A. Okay.

Q. Can you?

A. Yes.

Q. What would happen to you?

A. Well, I can tell you just what happened.

Q. What happened?

A. He just looked down my privates and touched me down there.

Q. That's the truth. Are there other kinds of truth?

A. No, there is no more.

Q. No more?

A. (Witness shakes head.)...

Q. Have you ever in your life told a lie?

A. No.

Q. Do you tell the truth to your friends?

A. No, not tell it to my friends.

Q. Do you ever lie to your friends?

A. Do I ever lie to my friends?

Q. Yes.

A. No.

Q. You always tell them the truth?

A. Well, I don't talk about that to them, to my friends.

Q. You don't talk to them about what, the truth?

A. Yes.

Q. Have you ever lied to your friends though?

A. No-yes.

Q. In what way have you lied to your friends?

A. I don't know.

Q. You don't know. Do you know if it is wrong to tell the truth in a court like where we are in this courtroom now?

A. No.

Q. Do you know whether or not you have told any lies today?

A. No.

Q. You have told the truth?

A. Yes.

Q. Did your father or mother or anyone else tell you what to say today in court?

A. Yes-no, no, no.

Q. What did they say?

A. No, no. I said no, no.

Q. You said, no, no. So they didn't tell you what to say in court...

Q. If you don't tell the truth, what will happen to you?

A. Nothing. No one can't get punished or nothing.

Q. So nothing would happen to you if you don't tell the truth?

A. No.

Q. And what would happen to you if you lie?

A. Then they couldn't punish anybody.

Q. They couldn't punish anybody?

A. No.

Q. Would your mother punish you if you tell the truth?

A. No.

Q. Would she punish you if you tell a lie?

A. Yes, she might.

Q. How would she punish you?

A. She just doesn't punish me.

Q. Has your mother ever given you a licking for telling a lie?

A. No...

Q. [Asking child about an object] Is that green or is it blue?

A. Green.

Q. And what if I said it was blue?

A. It is not the truth.

Q. And what would happen to me?

A. Nothing.

Q. You mean I won't get punished?

A. No.

Q. Why?

A. You are the Judge to them.

Q. I see. Because I am the Judge. And if you said it were blue, what would happen to you?

A. Well, then I will say it is a different color.

Q. What if you said it were blue, what would happen to you?

A. Nothing.

Q. Nothing would happen to you if you told a lie?

A. No, if I tell a lie once it happened to me.

Q. Would you tell a lie only if it happened to you?

A. No-yes.

In many ways, the child exhibited difficulties that have been observed in the lab, which relate to a reluctance to discuss negative events. At several points the child refused to reason about the hypothetical consequences of lying. When the judge asked “if you tell a lie, will you get in trouble,” the child explained her negative response by protesting “I am not going to tell a lie.” She thus rejected the premise of an undesirable hypothetical. She appeared ready to accept the negative premise when the judge asked her if her mother would punish her if she told a lie (“she might”), but then when asked how her mother would punish her, she responded “she just doesn’t punish me.” Similarly, the child appeared resistant to contemplate labeling a color incorrectly, because she responded “well, then I will say it is a different color.” Several times the child was also reluctant to acknowledge that she had ever told a lie. Ironically, because of the child’s adversity to lying, her understanding of lying was doubted by the court.

Referential ambiguity in the competency inquiry and elsewhere

Although young children’s adversity to discussion of lies explains some of the child’s difficulties in Corbett, other difficulties relate to larger questions about the developmental adequacy of questions asked of child witnesses. Researchers have long been interested in young children’s frequent failure to recognize referential ambiguity in their own and others’ statements (e.g., Cosgrove & Patterson, 1977; Glucksberg, Krauss, & Weisberg, 1966; Matthews, Lieven, & Tomasello, 2007). At several points in the questioning, several interpretations of the judge’s words were possible. These problems were likely accentuated by the child’s limited understanding of the role of the courtroom players. In court, the attorneys and the judge have the unique privilege of asking questions, and it is the witness’ job to answer them. A child witness must satisfy the competency rules, and thus answer abstract questions about the truth and lies, *before* testifying about abuse.

There are several sources of ambiguity in the questions the judge asked the child. There are at least two possible definitions of “the truth”: the “truth” as a general matter and the “truth” of what occurred (the alleged abuse). Part of the difficulty may be that the child didn’t understand that she had to demonstrate an abstract understanding of the meaning of truth before she would be allowed to testify to what occurred. Hence, the child sometimes appeared to interpret “the truth” as the truth of what occurred. When the judge asked “what happens to you if you do not tell the truth,” the child responded, “then no one can’t get in trouble.” The judge returned to this topic, and the child reiterated her position that if she didn’t tell the truth “no one can’t get punished or nothing.” The child might have meant that if she failed to disclose, then the defendant would not get in trouble. Similarly when the judge asked “are there other kinds of truth” after the child recited that the defendant “looked down my privates and touched me down there” the child said “no, there is no more.” Finally, when the judge asked whether the child always told her friends the truth, she responded “I don’t talk about that to them.” The possibility that the child intended “the truth” to signify the alleged abuse helps make her responses understandable.

On appeal the state recognized the possibility that the child might have been using “truth” as referring to the occurrence rather than truth generally. The appellate court responded that the prosecutor could have suggested questions to clarify the issue, although it is unclear whether the prosecutor recognized the problem or knew what to do about it, since the prosecutor told the trial court that he had no competency questions to ask the child and left the matter to the judge’s discretion. As for its own evaluation, the appellate court deferred to the trial court, emphasizing that the judge was able to observe the child’s “manner and appearance” when testifying (*Commonwealth v. Corbett*, 1999, p. 210).

A similar ambiguity occurred with respect to the meaning of “what to say.” The judge asked the child if her mother had told her to tell the truth, and the child answered affirmatively, but stated that she had only done so “when I was going to tell her.” The judge apparently hoped that the child would also testify that her mother told her to tell the truth in court (and perhaps told her why she should do so). But when the judge asked the child whether her mother had told her “what to say today,” she responded “no,” and later, when the judge asked her if anyone had told her “what to say today in court,” she answered “Yes-no, no, no.” Here, the ambiguity concerns how to interpret the phrase “what to say.” Does “what to say” refer to the truth generally speaking, or the specifics of the allegation? (Further compounding the problem is the ambiguity of “today”: did it refer to the timing of the adult’s statements or the child’s testimony?)

Ironically, if the child acknowledged that her mother had told her “what to say” she would have been subject to defense attacks on her credibility. Questions about what the child had been told to say are used by defense attorneys to undermine the credibility of child witnesses, because a yes response can imply coaching or rehearsal of the child’s responses (Brennan, 1994).

A third ambiguity revolved around the judge's use of indirect speech acts, which include questions prefaced with "do you know." Linguists call these questions indirect speech acts because the question directly asks if the respondent is knowledgeable or capable, and only indirectly asks the respondent to report what she knows (Clark, 1979). The child's initial responses appeared uncooperative, because she answered the direct question but not the indirect question (e.g., she gave an unelaborated "yes" to the question "do you know what the truth is" requiring the judge to follow up with "what is the truth?"). These questions posed little lasting difficulty, because the judge could clarify that he desired an answer to the indirect question as well as the direct question. However, referential ambiguity loomed larger with respect to questions for which the direct and indirect questions could be answered yes or no. For example, when the judge asked "Do you know if it is wrong to tell the truth in a court like where we are in this courtroom now?" the child's "no" response could mean "no, I don't know" or "no, it is not wrong to tell the truth." A failure to follow-up left the answer ambiguous. Fortunately, the judge did follow up the question "Do you know whether or not you have told any lies today?" because the child's "no" could have been interpreted as "no, I don't know," rather than "no, I did not lie." The child's subsequent answer suggested that she was responding to the indirect question.

The use of indirect speech acts combined with other difficulties continued to plague the court's questions about the consequences of lying. Following his initial inquiries into the potential consequences of lying, the judge then asked questions prefaced with "Do you know" and "Can you?" First, when the judge asked "if you don't tell the truth, do you know what will happen to you," the child responded "what?" The judge was implicitly asking "if you know the answer, please tell me," whereas the child may have interpreted the words "do you know what" as a rhetorical device for introducing information (cf. "know what?" Shatz, Wellman, & Silber, 1978). In part, it was necessary for the child to understand that the witnesses' job is to answer questions rather than ask them. The judge then again resorted to an indirect speech act, when he asked "Can you?", elliptically asking "Can you tell me what would happen if you don't tell the truth?" The child simply answered "yes." Again, the judge was implying "if you can tell me, please do so," whereas the child only answered the direct question.

At this point, the judge then attempted to re-ask the question, "what would happen to you if you told a lie," but asked it elliptically: "what would happen to you?" In order to understand the elliptical reference, the child had to recall three questions previous. When the child responded "I can tell you just what happened" she may have misunderstood the judge's reference—equating "what would happen" with "what happened"—and naturally assumed that her role was to describe the abuse, rather than demonstrate an understanding of the concepts of truth and lying. (Ironically, to the extent that the child did have some understanding of the roles of the court players, it led her astray. After struggling with the child's refusal to contemplate herself lying, the judge asked "what would happen to *me*." The child responded that he wouldn't be punished because "You are the judge to them.")

Research on children's responses to indirect speech acts has tended to find that even young children perform well, and appear to recognize the implicit request, but the

emphasis has been on indirect requests for action, rather than information (e.g., Ackerman, 1978; Shatz, 1978). I am not aware of any systematic examination of how children respond to “do you know” questions, including under what conditions they answer the direct or the indirect questions (or both), and whether and how the use of such questions affects their accuracy. A hint to difficulties can be found in our examination of competency questions in court (Evans & Lyon, in press). As we predicted, children erred more often when asked about the meaning of truth and lies than when asked to identify true and false statements as the truth or lies. However, this was not attributable to the use of open-ended questions about the meaning of truth and lies (e.g., “what does the truth mean?”), which lab studies have shown are more difficult than forced-choice identification questions (e.g. “this boy says the x is a y; is that the truth?”) (Lyon & Saywitz, 1999; Pipe & Wilson, 1994). Rather, over 90% of children’s errors in response to meaning questions were “no” responses to “do you know” questions, such as “do you know what it means to tell the truth” or “do you know what a lie is?” Because even an informal review of court transcripts reveals frequent use of indirect speech acts (including “do you remember” as well as “do you know” questions), it seems certain that these sorts of questions create difficulties for child witnesses in areas other than competency (Walker, 1993).

At the extreme, children’s difficulty can keep them off the stand altogether. In the Corbett case, the appellate court upheld the trial judge’s finding of incompetency. However, the appellate court held that the case should have been dismissed “without prejudice,” so that the child might later qualify to testify. Nevertheless, the case was never refiled (Lyon, 2000). Other appellate courts have also held that children who failed questions about the consequences of lying should be found incompetent (Commonwealth v. R.P.S., 1998; Pace v. State, 1981; People v. Smith, 1984).

A more probable result is that children who fail competency questions will be allowed to testify, but their credibility with the jury will suffer. Our systematic review of court cases suggested that findings of incompetency are actually quite rare in the United States (Evans & Lyon, in press). Moreover, as noted above, many other countries have eliminated the competency prerequisite to testifying. Instead, when children are asked questions about their understanding, the jury is likely to hear those questions, and is free to use those questions to evaluate the truthfulness of the child’s report. Only a few American jurisdictions require that preliminary competency questions be asked outside the presence of the jury, and this is only at the insistence of the defense (Myers, 2005). At any rate, attorneys often repeat competency questions during the child’s testimony. We found that the jury was present during competency questioning for over 85% of the questions (Evans & Lyon, in preparation). There is some evidence that the inclusion of a competency inquiry in which children answer questions correctly increases jurors’ ratings of child witnesses’ credibility (Connolly, Gagnon, & Lavoie, 2008), making it reasonable to infer that errors decrease credibility.

Conclusion

Children's difficulty with answering questions about truth-lie competency exemplifies how the law fails to accommodate child witnesses. The example is particularly compelling because truth-lie competency questions are specifically designed to assess children's capabilities. Moreover, it is children's aversion to lying which makes them appear incompetent, and yet the whole point of competency inquiries is to weed out children who have no comprehension of lying, and thus, presumably, have no compunction against lying. This latter assumption—that children who don't understand the meaning of truth and lies are more likely to lie--has itself been challenged by research finding little or no relation between children's performance on competency tasks and their honesty (Goodman, Aman, & Hirshman, 1987; London & Nunez, 2002; Pipe & Wilson, 1994; Talwar, Lee, Bala, & Lindsay, 2002). Indeed, because young children have greater difficulty in telling lies (Ahern, Lyon, & Quas, 2011), there is likely to be an inverse relation between understanding of the truth and lies and honesty. Furthermore, even though competency tests may exclude children who are less likely to understand a promise to tell the truth and are therefore less likely to be influenced by the promise, the tests are over-inclusive, eliminating children who are influenced by the promise but fail to demonstrate their understanding of the words "truth" and "lie" (Lyon, Malloy, Quas, & Talwar, 2008). Jurisdictions that have eliminated competency inquiries have in part been influenced by the research questioning their utility (Bala, Evans, & Bala, 2010). Another rationale is that the best test of a child's competency is to allow the child to testify about the alleged events. This seems sensible, particularly when children have difficulty in answering competency questions because they misunderstand them as referring to the event about which they expect to testify, as was illustrated in the Corbett case.

In jurisdictions that have retained competency questioning, such as most states in the United States, developmentally sensitive approaches have been recommended (Lyon, 2011). Of course, lawyers opposing a competency finding can strategically ask questions that children will find more difficult, and there is evidence that some do (Evans & Lyon, in press). In those cases, lawyers who understand a little about children's difficulties can use the "calls for speculation" and "vague" objections, and may need to file pre-trial motions to teach judges why these objections have special applicability when children testify. Legislatures can enact special provisions requiring that questions asked of child witnesses be age-appropriate, such as that adopted by the State of California (Cal. Evidence Code Section 765(b)).

This chapter has also illustrated more far-reaching issues with child witnesses. Children's difficulties are surely not limited to truth-lie competency problems. Indeed, researchers have documented that questions asked of children in court are unnecessarily complex, both semantically and syntactically (Brennan & Brennan, 1998; Zajac, Gross, & Hayne, 2003), and have shown in the lab that children will both attempt to answer such questions and fail to ask for clarification (Carter, Bottoms, & Levine, 1996; Perry, McAuliff, Tan, & Claycomb, 1995; Saywitz, Snyder, & Nathanson, 1999). This is not surprising, given the classic finding that children (and even adults) will attempt to answer facially nonsensical questions (Hughes & Grieve, 1980; Pratt, 1990). On the positive side, researchers have had some success in training children that it is permissible to ask

for clarification of confusing questions, particularly if they are given practice in doing so (Peters & Nunez, 1998; Saywitz et al., 1999).

However, the research on courtroom questioning is of limited value, because it has tended to lump together different problems, including difficult vocabulary, complex syntax, use of negatives, compound questions, grammatical errors, and ambiguity. Future research should focus on specific problems, and referential ambiguity deserves special attention. Problems will vary in the extent to which they can be detected by children or adults. Children may be capable of recognizing words with which they are unfamiliar, or spotting complex syntax (particularly when it has the effect of lengthening the question; Saywitz et al., 1999), but are likely to be unaware of many types of referential ambiguity, because of the ease with which they can identify a plausible interpretation of ambiguous questions. Hence, it is likely to be much more difficult to train children to seek clarification of questions that are referentially ambiguous than questions that use unfamiliar words or complex syntax. Similarly, if some problems are difficult for adults to detect, this affects the efficacy of attorney training and the extent to which jurors will blame incomprehensible answers on the child or the questioner. Second, some problems may be aggravated by attorney's attempts to simplify their language in order to accommodate children. Anaphora and ellipsis have the effect of shortening and thus simplifying questions, but increase the probability of ambiguity.

More attention should be paid to the interaction between question difficulties and question-type. With respect to question-type, child witness researchers have emphasized the need to move from yes-no and other closed-ended questions toward open-ended questions as a means of reducing suggestibility and increasing productivity (Lamb et al., 2008). An additional benefit of open-ended questions is that they may reduce some of the problems children face when asked incomprehensible or ambiguous questions. Most of the questions asked in the studies examining difficult courtroom language are yes/no (Carter et al., 1996; Perry et al., 1995; Saywitz et al., 1999). Similarly, the problem with indirect speech acts (in which the interviewer prefaces a question with "do you know" or "do you remember") is that children treat such questions as yes-no questions. Because the most common answer to such questions is a simple "yes" or "no," it is particularly easy for the child to respond despite difficulties in interpreting the question, and particularly difficult for the adult to recognize when misinterpretation occurs. Children are less likely to answer non-sensical questions if they are wh- questions than if they are yes-no questions (Waterman, Blades, & Spencer, 2000). Future research should document the extent to which open-ended questions either avoid ambiguity or make children's misinterpretations more apparent.

On the other hand, greater use of open-ended questions may lead to other problems. For example, researchers recommend that one way in which interviewers may avoid closed-ended questions is through the frequent use of cued invitations, in which the interviewer asks the child to "tell me more" about previously mentioned details (Lamb et al., 2008). Requests to "tell me more about that," however, raise a specific type of referential ambiguity: to what does the demonstrative pronoun "that" refer? The greatest difficulty probably lies in the discourse-deictic use of "that," in which the word refers to a

prior proposition (e.g., “what did you think about that” in which “that” referred to an event). Beyond anecdotal reports of child witnesses’ difficulties with “that” (Walker, 1993), however, little has been written about how children at different ages respond to different uses of demonstrative pronouns.

Laypeople are likely to worry that children’s vivid imagination is the source of false testimony. However, it may be children’s difficulty with imaginative thought that most often undermines their testimony. Child witnesses’ problems often start with the competency examination, in which they are asked unnecessarily difficult questions about the nature of truth and lies. However, they do not end there, because the same difficulties recur throughout children’s testimony. Resistance to counterfactual reasoning about undesirable premises and difficulty in flexibly interpreting ambiguous questions impairs children’s performance. Because proper questioning is likely to solve many problems, however, it is not the child’s competency that is being tested. Future work can find means of maximizing children’s performance on the stand.

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