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The Effects of Question Repetition on Responses When Prosecutors and Defense Attorneys Question Children Alleging Sexual Abuse in Court

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This study examined the effects of repeated questions ($n = 12,169$) on 6- to 12-year-olds' testimony in child sexual abuse cases. We examined transcripts of direct- and cross-examinations of 120 children, categorizing how attorneys asked repeated questions in-court and how children responded. Defense attorneys repeated more questions (33.6% of total questions asked) than prosecutors (17.8%) and repeated questions using more suggestive prompts (38% of their repeated questions) than prosecutors (15%). In response, children typically repeated or elaborated on their answers and seldom contradicted themselves. Self-contradictions were most often elicited by suggestive and option-posing prompts posed by either type of attorney. Child age did not affect the numbers of questions repeated, the types of prompts used by attorneys to repeat questions, or how children responded to repetition. Most (61.5%) repeated questions were repeated more than once and, as repetition frequency increased, so did the number of self-contradictions. "Asked-and-answered" objections were rarely raised ($n = 45$) and were more likely to be overruled than sustained by judges. Findings suggest that attorneys frequently ask children "risky" repeated questions. Both attorneys and the judiciary need more training in identifying and restricting the unnecessary repetition of questions.

Keywords: repeated questions, children, sexual abuse, defense cross-examination, prosecution direct-examination

Attorneys, particularly defense attorneys, often question children using closed-ended, suggestive, and challenging questions (e.g., Andrews, Lamb, & Lyon, 2015). The repetition of closed-ended and suggestive questions and those intended to challenge children's prior answers may lead children to change their responses, with children in experimental settings frequently changing both initially incorrect and initially correct answers when questions are repeated (e.g., Howie, Sheehan, Mojarrad, & Wrzesinska, 2004). Because jurors often place a strong emphasis on report consistency when assessing the accuracy and veracity of oral testimony (Bruer & Pozzulo, 2014; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Semmler & Brewer, 2002), many have raised concerns about the adverse effects that inappropriate question repetition may have on children's testimony in court. However, there has been no systematic assessment of the extent to which questions are actually repeated in court and of

the effects, if any, on children's testimony. In the present study, we explored repeated questioning in children's direct- and cross-examinations. Specifically, we examined the effects of children's age, attorney role, and question type on children's responses, the effect of immediate versus delayed repetition on children's responses, the extent and effect of multiple repetitions, and the frequency with which opposing attorneys objected to repeated questions on the grounds that they had already been "asked-and-answered."

Repeated questions do not necessarily degrade the accuracy of children's accounts (see Lyon, 2002). In experimental studies, children provide additional accurate information that was not reported earlier when asked repeated open-ended prompts (Memon & Vartoukian, 1996; Poole & White, 1991). Repeated open-ended questioning enhances memory retrieval through practice and reintegration (Baddeley, 2007), so successive accounts of the same incident often contain new information, a phenomenon known as reminiscence (Erdelyi, 1996). Furthermore, in forensic settings questions may need to be repeated to make the requests clear, to clarify details previously mentioned by the children (e.g., ambiguous or unclear responses), or to encourage children who are anxious or reluctant (Andrews & Lamb, 2014; La Rooy & Lamb, 2011). However, formal forensic interview guidelines often fail to provide detailed guidance concerning the appropriate use of repeated questions (e.g., Anderson et al., 2010; Lamb, Hershkowitz, Orbach, & Esplin, 2008) and even though some protocols explicitly discourage the repetition of closed-ended questions and encourage interviewers to explain why some questions were repeated (e.g., Home Office, 2011), questions appear to be inappropriately

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repeated in many forensic interviews (Andrews & Lamb, 2014; La Rooy & Lamb, 2011).

Guidance concerning the appropriate use of repeated questions by attorneys in court is much sparser and the issue is more complex than in forensic interviews. Section 765 of the California Evidence Code (2014) states: (a) "The court shall exercise reasonable control over the mode of interrogation of a witness so as to make interrogation as rapid, as distinct, and as effective for the ascertainment of the truth," and (b) "With a witness under the age of 14 . . . the court shall take special care . . . to restrict the unnecessary repetition of questions." Under this section attorneys are encouraged to utilize the "asked-and-answered" objection, which enables the court to prevent excessive repetition that is designed to harass the witness (Mueller & Kirkpatrick, 2012). However, what constitutes unnecessary repetition is vague, open to interpretation, and not empirically informed. Indeed, there has been no systematic assessment of question repetition in courtroom transcripts. Research has been lacking in this area despite the belief and long-held concerns that defense attorneys frequently repeat questions to undermine witness consistency (e.g., Ceci & Bruck, 1995; Spencer & Lamb, 2012). Furthermore, attorneys are permitted to ask children suggestive questions when they appear reluctant to respond, and suggestive questions are routinely allowed in cross-examinations (Mueller & Kirkpatrick, 2012). Studies analyzing transcripts of children's evidence in court confirm that attorneys often question children using closed-ended, suggestive, and challenging questions, although defense attorneys do so at a much higher rate than prosecutors (Andrews et al., 2015; Hanna, Davies, Crothers, & Henderson, 2012; Klemfuss, Quas, & Lyon, 2014; Stolzenberg & Lyon, 2014; Zajac & Cannan, 2009; Zajac, Gross, & Hayne, 2003). The effects of such risky (i.e., error inducing) questions are likely to be exacerbated when they are repeated (e.g., Andrews & Lamb, 2014; Howie, Nash, Kurukulasuriya, & Bowman, 2012; La Rooy & Lamb, 2011).

Indeed, some experimental studies indicate that children are more likely to contradict their answers when closed-ended questions are repeated than when open-ended questions are repeated (e.g., Poole & White, 1991; Quas, Davis, Goodman, & Myers, 2007). Children may change details in their accounts and thus respond inconsistently (Lamb & Fauchier, 2001; Zajac et al., 2003), perhaps believing that the questioners were unsatisfied with their initial answers or that their initial answers were incorrect (Howie, Kurukulasuriya, Nash, & Marsh, 2009; Howie et al., 2012; Melinder, Scullin, Gravvold, & Iversen, 2007; see Endres, Poggenpohl, & Erben, 1999; Scullin & Ceci, 2001). The responses of younger children are more likely to be compromised by suggestive techniques than those of older children (e.g., Eisen, Qin, Goodman, & Davis, 2002; Poole & Lindsay, 1998; White, Leichtman, & Ceci, 1997; for reviews see Bruck & Ceci, 1999; Bruck, Ceci, & Principe, 2006; London & Kulkofsky, 2010), and younger children are more vulnerable to the effects of repeated questioning than older children (e.g., Howie et al., 2012; Krähenbühl, Blades, & Eiser, 2009; Warren, Hulse-Trotter, & Tubbs, 1991). Krähenbühl and her colleagues (2006, 2009) examined the effects of repeated answerable and unanswerable questions; answerable questions inquired into details that children had witnessed, and unanswerable inquired into details that they had not witnessed. With respect to answerable questions, Krähenbühl and Blades (2006) found that accuracy of responses to repeated open-ended

and closed-ended questions did not change, whereas Krähenbühl et al. (2009), who only asked open-ended questions, found that accuracy decreased the first time questions were repeated, but then increased with further repetition. The differences were small, with accuracies ranging from 52%–58% across four repetitions. It is important to note, however, when the researchers asked children "unanswerable" questions, to which children could not know the answer, repetition increased the children's tendency to guess, and all guesses were classified as inaccurate. Children were most likely to change their answers when questions were first repeated. Krähenbühl et al. (2009) found that delay (the interval between repetitions) had no effect on the accuracy of children's responses to answerable questions, but decreased accuracy in response to unanswerable questions.

However, the repeated questions posed in laboratory experiments often concern neutral events that children may not consider important or memorable and may well conclude, when the same questions are repeated, that the initial answers were unsatisfactory. Indeed, Lyon, Malloy, Quas, and Talwar (2008) reported few inconsistencies in responses to repeated yes/no prompts when children were questioned immediately after an event about central details (as opposed to repetition concerning ambiguous details; see Poole & White, 1991). Little is known about the effects of question repetition in forensic contexts when children are questioned about personally significant and emotionally salient events and where there is a strong emphasis on telling the truth.

Very few field studies have been conducted examining repeated questions in forensic interviews and the few extant studies have defined question repetition differently. Krähenbühl, Blades, and Westcott (2010) coded questions as repeated even when the children's initial responses were nonsubstantive (e.g., silence). It is not surprising that the authors found that interviewers most often repeated questions after silent "responses," when interviewers had little choice but to repeat the question, and reported that children most often changed their responses (either by providing more information or contradicting themselves) 75% of the time. Coding repeated questions in this way might lead researchers to misestimate the number of times questions were repeated and misunderstand the effects of repetition on children's responses. For example, when questions were repeated because children did not answer, children had opportunities to repeat their answers by remaining silent, or to answer. However, they could not contradict themselves because there were no initial answers to contradict, but they inevitably provided more information than they had initially. In the present study, repeated questions were defined as questions that, when asked again, provided children with opportunities to change their previous (substantive) responses.

Only two field studies have addressed these issues and defined repetition in this way. La Rooy and Lamb (2011) found that 37 alleged victims of abuse contradicted their answers only 7% of the time, even though 62% of the repeated questions were repeated to challenge the children's previous responses. They found no correlation between age and the numbers of repeated questions asked. However, La Rooy and Lamb did not distinguish between open-ended and closed-ended prompts, which is an essential consideration when interpreting inconsistencies in children's responses. In the second field study, Andrews and Lamb (2014) did distinguish between open-ended and closed-ended prompts when examining interviews of 115 alleged victims of abuse aged between 3 and 12

years. They found that questions repeated using suggestive prompts were more likely to elicit contradictions than other types of questions. Interviewers most often repeated questions for clarification (53.1%), but questions were also repeated frequently to challenge children's previous responses (23.7%), and for no apparent reason (20.1%). In response, children typically repeated (54.1%) or elaborated on (31.5%) their previous answers; they contradicted themselves less often (10.8%). Option-posing questions elicited 64% of the self-contradictions, suggestive questions 19%, and directives and invitations elicited only 14% and 3% of the self-contradictions, respectively. Unlike La Rooy and Lamb, Andrews and Lamb found that the frequency with which questions were repeated declined as age increased, perhaps because younger children's briefer and less well-articulated responses prompted interviewers to repeat questions more often. It is important to note that, unexpectedly, they found no significant relationship between age and the ways children responded to repeated questions, a result which is inconsistent with previous experimental studies. Together, these findings support those from laboratory based research suggesting that when questioned about experienced events, some closed-ended question repetition can adversely affect the consistency of children's responses whereas open-ended question repetition can enhance children's reports. However, question repetition may not affect the consistency of children's responses as much in the field as in the experimental laboratory, perhaps because the repetition of questions about emotionally salient events does not have the same effects as question repetition about less personally significant events.

There has been no systematic assessment of question repetition in courtroom transcripts. The present study was the first to investigate the repeated questioning of children by prosecutors and defense attorneys. Specifically, we first investigated the effects of children's age, attorney role, and repeated question type on children's responses. Based on the literature reviewed above, we predicted that (a) defense attorneys would repeat more questions and (b) ask more closed-ended and suggestive questions than prosecutors; (c) children would respond with more self-contradictions when questioned by defense attorneys than when questioned by prosecutors; and (d) younger children would respond with more self-contradictions than older children. Second, we explored the effects of immediate versus delayed repetition on children's responses. Third, we explored the extent and effects of multiple repetitions, because Andrews and Lamb (2014) noted that many questions were repeated more than once. Lastly, we explored the frequency of and judicial decisions in response to "asked-and-answered" objections. In the absence of prior field research, we made no predictions about the effects of immediate versus delayed repetition on responses, multiple repetitions, and asked-and-answered objections.

Method

Sample

The study included transcripts of 106 trials involving a total of 120 alleged victims of child sexual abuse. These were selected from a larger sample of 223 trials (309 children) involving felony charges of child sexual abuse that went to trial in Los Angeles County between 1997 and 2001. The children were selected for the present study if they (a) were victims of abuse (as opposed to

nonvictim witnesses), (b) were aged 12 and under at the time of trial, (c) did not have the assistance of a translator while testifying, and (d) did not fully recant the alleged abuse while testifying. The trials involved 68 different prosecutors and 88 different defense attorneys.

Children reported single ($n = 43$) or multiple ($n = 77$) sexually abusive experiences involving penetration ($n = 53$), touching under clothes ($n = 37$), touching over clothes ($n = 21$) and indecent exposure ($n = 9$). The final sample included 98 girls and 22 boys who were categorized on the basis of age at the time of trial into two groups: 6- to 9-year-olds ($n = 54$) and 10- to 12-year-olds ($n = 66$; $M = 9.6$ years). No information was available concerning the children's socioeconomic and ethnic backgrounds.

All defendants were male. In 90% ($n = 108$) of the cases, the alleged abusers were known to the children. The suspects were biological parents ($n = 10$), step-fathers/mothers' boyfriends ($n = 23$), other family members ($n = 24$), family friends ($n = 23$), acquaintances ($n = 28$) and strangers ($n = 12$). Most defendants were either convicted ($n = 89$) or acquitted ($n = 25$). The remaining 6 cases resulted in mistrials.

Coding of Transcripts

Identifying repeated questions. The transcripts contained direct and often redirect examinations, in which the prosecution questioned the children, as well as cross and often recross examinations by defense attorneys. Only substantive repeated questions were coded. Substantive utterances were defined as those designed to elicit information about what happened during the alleged incidents, what immediately preceded the alleged incidents, within-incident interventions (e.g., unexpected interruptions exposing the abuse), and other features of the abuse (e.g., how long the incidents lasted, where they happened). Children's substantive responses contained incident-related information (including "don't know" responses). Nonsubstantive repeated prompts that aimed to inform child witnesses about the purpose of the court proceedings, provide details about the examination procedure, and build rapport were not included. By definition, children's nonsubstantive responses did not contain incident-related information and were also not included.

Repeated questions were defined as questions that, when asked again, provided children with opportunities to change their previous (substantive) responses. Repeated questions could be repeated verbatim or could be reworded. Questions were not classified as repeated when the attorneys were clearly seeking information different from that sought in their initial prompt (e.g., Attorney: "How did he [the accused] touch you?" Child: "He didn't touch me that time, my friend did." Attorney: "How did he [the friend] touch you?"), were probing for more specific information about a topic (e.g., Attorney: "Did he touch you?" Child: "Yes." Attorney: "How did he touch you?" Attorney: "How did he hurt J.?" Child: "I don't know." Attorney: "Did you see him hurt J.?" Child: "No." Attorney: "How do you think he hurt J.?"), or repeated a question because the child interpreted the initial question too literally (e.g., Attorney: "Can you tell me how it came out of his jeans?" Child: "Yes." Attorney: "How did it come out of his jeans?"). Questions were also not coded as repeated when the child did not answer the initial prompt, because such instances do not provide children with the opportunity to change their first response. Questions could be

repeated immediately after the initial responses or repeated later in the proceedings.

Attorneys' questions. After repeated questions had been identified, the types of attorney utterances used to refocus the children were categorized. Attorneys' questions were categorized into one of the four main categories (invitations, directive prompts, option-posing prompts, and suggestive prompts) that are commonly used to differentiate between interviewer utterances in forensic interviews (e.g., Lamb et al., 2008). Definitions and examples of each type are provided in Table 1.

Children's responses. Andrews and Lamb's (2014) coding scheme was used to identify how children responded to repeated questions (elaboration, repetition, contradiction, digression, no answer, and question). Definitions and examples are provided in Table 2. When a question was repeated more than once, children's responses were coded in relation to their preceding, rather than initial, answers.

Multiple repetitions and asked-and-answered objections. The number of times each individual question had been repeated was also recorded. Asked-and-answered objections were coded when either prosecutors or defense attorneys raised the objection. Judge's responses to asked-and-answered objections were also coded as either overruled or sustained.

Interrater Reliability

Another rater independently coded 20% of the transcripts that were randomly selected. Reliability in the identification of repeated questions and the classification of question types was high, $K = .74$ ($SE = .02$), 95% confidence interval (CI) [.71, .77], $K = .91$ ($SE = .01$), 95% CI [.89, .93], respectively, as was agreement when coding children's responses, $K = .78$ ($SE = .02$), 95% CI [.75, .81]. We conducted reliability assessments throughout the

duration of coding and all disagreements were resolved by discussion.

Results

Preliminary Results

We conducted a discriminant function analysis to determine whether there were any associations between children's gender and the proportional frequency of repeated questions, question types, and children's responses. The test revealed no significant differences between males and females on all measures, Wilks' $\lambda = .97$, $\chi^2(11) = 3.67$, $p = .97$. Therefore, gender was not included in any of the analyses below.

We conducted a second discriminant function analysis to determine whether there were any associations between cases that resulted in convictions versus acquittals and the proportional frequency of repeated questions, question types, and children's responses. The test revealed no significant differences between case verdict on all measures, Wilks' $\lambda = .94$, $\chi^2(10) = 6.52$, $p = .77$. Therefore, case verdict was also not included in any of the analyses below.

All variables entered into parametric analyses were normally distributed and alpha levels were adjusted by default in all tests to control for multiple comparisons. All parametric tests, unless otherwise stated, were conducted with child as the unit of analysis. Statistical information for all inferential tests is reported in Table 3.

Frequency of Repetition

On average, 406.97 ($SD = 338.92$) substantive attorney prompts were identified in each transcript, with 221.23 ($SD = 193.29$) in

Table 1
Types of Attorney Utterances

Code	Definition	Examples
Invitation	Open-ended, input-free utterances used to elicit free-recall responses from children. Such questions, statements, imperatives, or contextual cues do not restrict the child's focus except in a general sense. Invitations can also follow-up on information just mentioned, or cue for additional free-recall elaboration about details previously mentioned.	"Tell me everything that happened from the beginning to the end." "Then what happened?" "Earlier you mentioned [person/object/action]. Tell me more about that." "Tell me everything that happened before/after you went to the park." [when "I went to the park" was previously mentioned by the child]
Directive	Open-ended questions that refocus the child on aspects or details of the allegation that they have previously mentioned, mostly using <i>WH-</i> utterances to request further information.	"Where were you when that happened?" "Who did that to you?" [when "that" was previously mentioned by the child]
Option-posing	Closed-ended questions that refocus the child's attention on details of the allegation that they have not previously mentioned, although without implying an expected response. They can be formulated as "yes/no" or "choice" questions.	"Did you see his penis?" "Was he wearing underwear?" "Did she do that one time or more than one time?" "Was this Thursday or Saturday evening?"
Suggestive	Closed-ended statements or questions formulated in a way that communicates the expected response. They may introduce information not mentioned by the child but assumed by the attorney or query the truthfulness of the child's response.	"He forced you to do that, didn't he?" "Your dad told me that B. touched your private part. Did B. touch your private part?" Child: "He touched me." Attorney: "Did he touch your pee-pee over or under your clothes?" [when the child had not previously mentioned genital touching] "Did that really happen?"

Table 2
Children's Responses to Repeated Questions

Code	Definition	Examples
Elaboration	The child expanded on a previous response by providing additional forensically relevant information.	Attorney: "Where did she touch you?" Child: "She touched me on the outside of my clothes." Attorney: "Okay, but what part of your body did she touch?" Child: "She touched me on my behind on the outside."
Repetition	The child responded by reporting the same information.	Attorney: "What day did M. pick up S. from the store?" Child: "Tuesday." Later in the proceedings, Attorney: "What day did S. get picked up from the store by M.?" Child: "I already told you it was Tuesday."
Contradiction	The child negated what she or he had previously reported or provided conflicting information.	Attorney: "Did he touch you one time or more than one time?" Child: "He touched me seven times." Attorney: "But I thought he only touched you one time. Did he only touch you one time?" Child: "He touched me one time." Attorney: "Did dad touch your privates at P.'s house?" Child: "Yes." Later in the proceedings, Attorney: "So did dad touch your private when you were at P.'s house?" Child: "No. I didn't say that. He didn't touch me."
Digression	The child responded but was off task, resistant, or provided an irrelevant response.	Attorney: "How did your private feel after the man left?" Child: "The man left really fast in his car because some big kids heard me shout but I don't want to talk about my private." Attorney: "I know it's really hard and you're doing a great job but I really need to know if your private felt the same or different after the man left." Child: "Let's play I spy."
No answer	The child was not responsive.	Attorney: "Did this happen over or under your clothes?" Child: "Under." Attorney: "Are you sure it happened under your clothes?" Child: [no response].
Question	The child responded by asking the attorney a question and the attorney changed the subsequent line of questioning.	Attorney: "Did they see him do that?" Child: "My mom, B., and T." Attorney: "Did they see him do that?" Child: "Do you mean if they saw with their eyes?" Attorney: "Where were you when he tried to pull your pants down?"

direct-examinations and 184.73 ($SD = 179.51$) in cross-examinations. Repeated questions totaled 12,169, with an average of 39.41 (range = 0–301) or 17.8% of all prosecutor utterances repeated in direct-examinations, and 62.00 (range = 0–395) or 33.6% of all defense attorney utterances repeated in cross-examinations. Attorneys repeated questions in 118 (98.3%) transcripts. Prosecutors repeated their own questions 36.8% ($n = 4,474$) of the time and repeated defense attorneys' questions 12.1% ($n = 1,469$) of the time. Defense attorneys repeated their own questions 49.5% ($n = 6,023$) of the time and repeated prosecutors' questions 1.7% ($n = 203$) of the time.

Children's Age

For the following analysis, to create normally distributed data, we calculated proportional scores by dividing the total number of repeated questions each child was asked by the total number of substantive questions they were asked. A simple linear regression revealed that children's age (in years) was not significantly associated with the proportional frequency with which questions were repeated (see Table 3).

We conducted a repeated-measures analysis of variance (ANOVA) was conducted to assess whether different types of questions were more or less likely to be repeated (within-subjects: proportions of repeated directives, option-posing, and suggestive prompts) depending on the age of the children (between-subjects: 6- to 9- and 10- to 12-year-olds). Again, we calculated proportional scores by dividing the totals for each question type each child was asked by the total number of repeated questions each child was asked. Further, one question type (invitations ($n = 58$), for which numbers were very small, was removed from the analysis, reducing the total number of repeated questions analyzed to 12,111. The analyses revealed significant main effects for the different types of questions. Pairwise comparisons revealed significant differences

between all question types (directive, $M = .13$, $SD = .09$; option-posing, $M = .58$, $SD = .15$; suggestive, $M = .29$, $SD = .15$). There was no significant interaction between children's age and question type (see Table 3).

We conducted a repeated-measures ANOVA to assess whether different types of responses were more or less likely to be elicited by repeated questions (within-subjects: proportions of elaborations, repetitions, and self-contradictions) depending on the age of the children (between-subjects: 6- to 9- and 10- to 12-year-olds). We calculated proportional scores by dividing the totals for each response type each child was asked by the total number of repeated questions each child was asked. Further, we removed three response types from the analyses—questions ($n = 290$), no responses ($n = 143$), and digressions ($n = 48$)—for which numbers were very small, reducing the total number of repeated questions analyzed to 11,688. The analyses revealed significant main effects for the different types of responses. Pairwise comparisons revealed that children repeated themselves ($M = .74$, $SD = .11$) significantly more often than elaborating ($M = .14$, $SD = .09$) and self-contradicting ($M = .11$, $SD = .08$). There was no significant difference between the proportion of elaborations and self-contradictions elicited. There was no significant interaction between children's age and response type (see Table 3).

Due to the null findings, age was not included in subsequent analyses.

Effects of Attorney Role and Question Type on Responses

For the following analysis, to create normally distributed data, we calculated proportional scores by dividing the totals for each Question type \times Response type for each child by the total number of repeated questions asked by each attorney type for that child. Further, we removed one question type (invitations; $n = 58$) and three response types (questions [$n = 290$], no responses [$n = 143$],

Table 3
 Statistical Information for Inferential Tests

		Analyses						
Title	Type	Variables	df	Test value	p	Effect size	95% CI	
Children's age × Repetition frequency			1, 117	$F = .95$ $\beta = -.09$	$= .33$	$R^2 = .01$	[-5.9, 2.05]	
Children's age × Question type	Main effect	Question type	1.5, 178.1	$F = 234.41$	$< .001$	$d = 2.85$	[1.95, 4.54]	
	Interaction	Question type × Age	1.5, 178.1	$F = 1.28$	$= .27$	$d = .20$	[0.05, 0.40]	
	Follow-up	Directive × Option-posing	117	$t = 24.35$	$< .001^a$	$d = 4.50$	[0.41, 0.48]	
	Follow-up	Directive × Suggestive	117	$t = 1.76$	$< .001^a$	$d = 1.76$	[0.13, 0.19]	
	Follow-up	Option-posing × Suggestive	117	$t = 2.01$	$< .001^a$	$d = 2.01$	[0.23, 0.33]	
Children's age × Response type	Main effect	Response type	1.7, 197.4	$F = 1,050.89$	$< .001$	$d = 6.00$	[4.28, 9.37]	
	Interaction	Response type × Age	1.7, 197.4	$F = 2.72$	$= .08$	$d = .29$	[0.11, 0.55]	
	Follow-up	Elaboration × Repetition	117	$t = 34.49$	$< .001^a$	$d = 6.38$	[0.57, 0.63]	
	Follow-up	Elaboration × Self-contradiction	117	$t = 2.39$	$= .02^a$	$d = .44$	[0.01, 0.05]	
	Follow-up	Repetition × Self-contradiction	117	$t = 38.19$	$< .001^a$	$d = 7.06$	[0.59, 0.66]	
Attorney role × Question type × Response type	Main effect	Question type	1.6, 183.3	$F = 273.48$	$< .001$	$d = 3.06$	[2.11, 4.84]	
	Main effect	Response type	1.7, 192.5	$F = 1,097.15$	$< .001$	$d = 6.36$	[4.55, 9.92]	
	Interaction	Attorney role × Question type	1.6, 183.1	$F = 83.59$	$< .001$	$d = 1.70$	[1.11, 2.74]	
	Follow-up	Attorney role × Directive	1, 345	$F = 32.39$	$< .001^a$	$d = .63$	[0.34, 1.09]	
	Follow-up	Attorney role × Option-posing	1, 345	$F = 51.94$	$< .001^a$	$d = .77$	[0.43, 1.31]	
	Follow-up	Attorney role × Suggestive	1, 345	$F = 166.52$	$< .001^a$	$d = 1.40$	[0.89, 2.29]	
	Interaction	Attorney role × Response type	1.8, 201.7	$F = 21.29$	$< .001$	$d = .87$	[0.51, 1.46]	
	Follow-up	Attorney role × Elaboration	1, 345	$F = 42.46$	$< .001^a$	$d = .70$	[0.38, 1.19]	
	Follow-up	Attorney role × Repetition	1, 345	$F = 11.74$	$< .001^a$	$d = .35$	[0.14, 0.65]	
	Follow-up	Attorney role × Self-contradiction	1, 345	$F = 9.29$	$= .002^a$	$d = .35$	[0.14, 0.65]	
	Interaction	Question type × Response type	1.9, 216.3	$F = 249.48$	$< .001$	$d = 2.92$	[2.01, 4.62]	
	Follow-up	Question type × Elaboration	2, 350	$F = 3.45$	$= .03^a$	$d = .36$	[0.23, 0.52]	
	Follow-up	Question type × Repetition	2, 350	$F = 939.27$	$< .001^a$	$d = 4.58$	[3.23, 7.18]	
	Follow-up	Question type × Self-contradiction	2, 350	$F = 18.84$	$< .001^a$	$d = .67$	[0.37, 1.15]	
	Interaction	Attorney role × Question type × Response type	2, 234.6	$F = 36.30$	$< .001$	$d = 1.12$	[0.69, 1.85]	
Prosecutors × Question type × Response type	Main effect	Question type	1.7, 194.4	$F = 276.07$	$< .001$	$d = 4.42$	[3.34, 6.22]	
	Main effect	Response type	1.7, 194.9	$F = 565.99$	$< .001$	$d = 3.08$	[2.29, 4.37]	
Defense attorneys × Question type × Response type	Interaction	Question type × Response type	2.3, 266.3	$F = 242.31$	$< .001$	$d = 2.92$	[2.25, 3.93]	
	Main effect	Question type	1.2, 137.1	$F = 138.77$	$< .001$	$d = 5.42$	[3.93, 8.21]	
Attorney role × Question type × Response type	Main effect	Response type	1.6, 189.4	$F = 880.66$	$< .001$	$d = 2.21$	[1.60, 3.18]	
	Interaction	Question type × Response type	1.6, 186.5	$F = 112.14$	$< .001$	$d = 1.96$	[1.41, 2.84]	
	Follow-up	Attorney role × Directive × Elaboration	115	$t = 6.73$	$< .001^b$	$d = .79$	[0.04, 0.08]	
	Follow-up	Attorney role × Option-posing × Elaboration	115	$t = 3.18$	$= .002^b$	$d = .40$	[0.01, 0.04]	
	Follow-up	Attorney role × Suggestive × Elaboration	115	$t = 1.57$	$= .12^b$	$d = .29$	[0.00, 0.02]	
	Follow-up	Attorney role × Directive × Repetition	115	$t = 4.02$	$< .001^b$	$d = .43$	[0.02, 0.05]	
	Follow-up	Attorney role × Option-posing × Repetition	115	$t = 4.95$	$< .001^b$	$d = .52$	[0.06, 0.14]	
	Follow-up	Attorney role × Suggestive × Repetition	115	$t = 12.13$	$< .001^b$	$d = 1.38$	[0.15, 0.21]	
	Follow-up	Attorney role × Directive × Self-contradiction	115	$t = 1.54$	$= .13^b$	$d = .29$	[0.01, 0.00]	
	Follow-up	Attorney role × Option-posing × Self-contradiction	115	$t = .37$	$= .71^b$	$d = .07$	[0.01, 0.02]	
Follow-up	Attorney role × Suggestive × Self-contradiction	115	$t = 6.13$	$< .001^b$	$d = .75$	[0.03, 0.06]		
Immediate vs. Delayed repetition frequency			12,168	$t = 323.18$	$< .001$	$d = 5.86$	[1.45, 1.47]	
Immediate/Delayed repetition × Response type			2	$\chi^2 = 257.63$	$< .001$	$V = .15$	[0.14, 0.17]	

Note. CI = confidence interval.

^aAdjusted p values = .017. ^bAdjusted p values = .005.

and digressions [$n = 48$]) from the analyses, for which numbers were very small. These steps reduced the total number of repeated questions analyzed to 11,633.

We conducted a repeated-measures ANOVA to assess whether different types of questions were more or less likely to be repeated (within-subjects: proportions of repeated directives, option-posing, and suggestive prompts), what types of responses they elicited from the children (within-subjects: proportions of elaborations, repetitions, and contradictions), and whether this differed depending on the attorneys' role (within-subjects: prosecution and defense). The analyses revealed significant main effects for the different types of questions and the different types of responses (see Table 3).

There was a two-way interaction between the types of questions prosecutors or defense attorneys asked repeatedly. Proportionally, more of the prosecutors' repeated questions were directives and option-posing prompts, whereas proportionally more of the defense attorneys' repeated questions were suggestive prompts (see Table 3 and 4).

There was also a two-way interaction between the types of responses prosecutors or defense attorneys elicited. Prosecutors were significantly more likely to elicit elaborations than defense attorneys, whereas defense attorneys were significantly more likely to elicit repetitions and self-contradictions than prosecutors (see Table 3 and 5).

Finally, there was a two-way interaction between the types of questions asked and the types of responses elicited. There were significant differences in the question types that elicited repetitions and in the question types that elicited self-contradictions, but no such effect in relation to elaborations. Examination of the means suggested that repeated option-posing questions were more likely to elicit repetitions ($M = .48, SD = .01$), than directive questions ($M = .06, SD = .01$) and suggestive questions ($M = .20, SD = .01$). Repeated option-posing questions ($M = .05, SD = .01$) and suggestive questions ($M = .06, SD = .01$) were more likely to elicit self-contradictions than directive questions ($M = .01, SD = .01$; see Table 3 and 6).

The two-way interactions were qualified by a three-way interaction among attorneys' role, question type, and response type (see Table 3). The three-way interaction is presented in Figure 1.

To follow-up the three-way interaction, we examined the Question type \times Response type interactions (within-subjects) sepa-

Table 4
Attorney Role \times Question Type Interaction

Attorney	Question					
	Directive		Option-posing		Suggestive	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosecution	.19*	.01	.67*	.01	.15	.01
Defense	.08	.02	.54	.02	.38*	.02

Note. Proportions were calculated by cross-tabulating frequencies of Question type \times Attorney role for each child and then dividing those frequencies by the total number of repeated questions posed by prosecutors and defense attorneys for each child. The proportions reported here were calculated using data at the utterance level for the whole sample, whereas they were calculated for Figure 1 by computing proportions for each child, and then averaging those proportions.

* $p < .001$.

Table 5
Attorney Role \times Response Type Interaction

Attorney	Response					
	Elaboration		Repetition		Self-contradiction	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosecution	.19*	.01	.73	.01	.09	.01
Defense	.11	.01	.77*	.01	.13**	.01

Note. Proportions were calculated by cross-tabulating frequencies of Response type \times Attorney role for each child and then dividing those frequencies by the total number of repeated questions posed by prosecutors and defense attorneys for each child.

* $p < .001$. ** $p = .002$.

rately for prosecutors and defense attorneys by conducting two separate repeated-measures ANOVAs. For prosecutors there were significant main effects for question type and response type, as well as an interaction between question type and response type. For defense attorneys, there were also significant main effects for question type and response type, as well as an interaction between question type and response type. These interactions were further followed-up by computing nine paired-samples t tests. For prosecutors, directives ($M = .09, SD = .11$) and option-posing ($M = .08, SD = .06$) questions resulted in more elaborations than for defense attorneys (directives: $M = .02, SD = .03$; option-posing: $M = .05, SD = .07$). For prosecutors, directives ($M = .09, SD = .09$) and option-posing ($M = .54, SD = .19$) questions also resulted in more repetitions than for defense attorneys (directives: $M = .05, SD = .06$; option-posing: $M = .44, SD = .20$). For defense attorneys, suggestive questions resulted in more repetitions ($M = .28, SD = .16$) and self-contradictions ($M = .07, SD = .08$) than for prosecutors (repetitions: $M = .09, SD = .09$; self-contradictions: $M = .03, SD = .04$). No other question types resulted in different response types by attorney type (See Table 3). Overall, these results imply that suggestive questions were more problematic when posed by defense attorneys than by prosecutors, whereas nonsuggestive question types resulted in more beneficial responses (in terms of consistency) when posed by prosecutors than by defense attorneys.

Table 6
Question Type \times Response Type Interaction

Question	Response					
	Elaboration		Repetition		Self-contradiction	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Directive	.05	.01	.06	.01	.01	.01
Option-posing	.06	.01	.48	.01	.05	.01
Suggestive	.04	.01	.20	.01	.06	.01

Note. Proportions were calculated by cross-tabulating frequencies of Question type \times Response type for each child and then dividing those frequencies by the total number of repeated questions posed to each child.

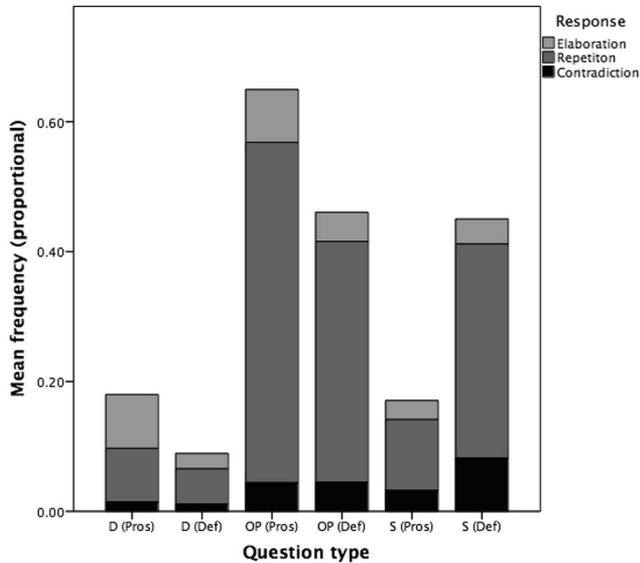


Figure 1. A three-way interaction among attorney role, question type, and children's responses. Pros = prosecution; Def = defense; D = directive; OP = option-posing; S = suggestive.

The Effect of Immediate Versus Delayed Repetition on Children's Responses

A one-sample *t* test revealed that repeated questions were asked immediately after preceding prompts ($n = 6,568$, 54%) significantly more often than after delays ($n = 5,601$, 46%; see Table 3).

A chi-square test was conducted to determine whether immediate and/or delayed repetition affected the likelihood of eliciting different responses from children (frequencies of elaborations, repetitions, and self-contradictions). This analysis was conducted at the question level, not at the level of the child. We removed the small number of questions ($n = 290$), no responses ($n = 143$), and digressions ($n = 48$) from the analyses. This reduced the total number of repeated questions analyzed to 11,688. The chi-square test revealed a significant difference (see Table 3), with questions repeated immediately more likely to elicit elaborations (72.3%, $z = 10.0$). On the other hand, questions repeated after delays were more likely to elicit repetitions (50.8%, $z = -4.3$). There were no other significant differences. When compared with elaborations and repetitions, self-contradictions were as common when questions were repeated immediately (53.8% of the time, $z = -.2$), than when they were repeated after delays (46.2% of the time, $z = .2$).

Effects of Multiple Repetitions

Of all repeated questions ($n = 12,169$), 38.5% ($n = 4,687$) were repeated only once and 61.5% ($n = 7,482$) were repeated more than once. A total of 7,032 specific repeated questions were themselves repeated. Table 7 shows the frequency of repetition in relation to the specific repeated questions. On average, questions were repeated 1.73 ($SD = 1.74$) times. All question types were more likely to be repeated using the same question type than a more open or less open question type, although questions were more likely to be repeated using a more closed question type than a more open question.

Table 7
Frequency of Specific Repeated Question Repetition

Number of repetitions	Frequency
1	4,687
2	1,287
3	516
4	201
5	124
6	76
7	38
8	21
9	20
10	19
11	9
12	6
13	5
14	3
15	5
16	2
17	3
18	2
19	2
23	2
24	1
27	1
29	1
40	1
Total	7,032

Effect of multiple repetitions on self-contradictions. To ensure independence, we coded repetition frequency in relation to specific questions ($n = 7,032$) for the following analyses. Figure 2 shows that, as the frequency of repetition increased, so too did the likelihood of self-contradiction. A bivariate correlation conducted to assess the relationship between repetition frequency and the

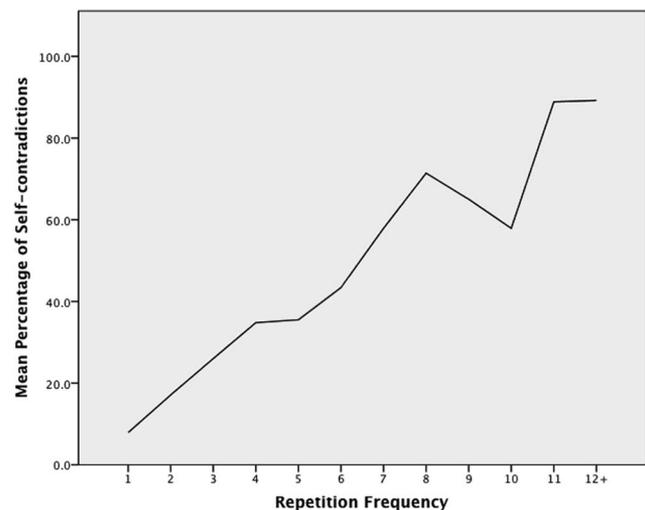


Figure 2. Multiple repetitions frequency and self-contradictions. For this analysis, self-contradictions were coded using a binary variable. For example, if two self-contradictions occurred when the same question was repeated five times, the variable was coded as 1 (regardless of the child's last response). If a self-contradiction did not occur, the variable was coded as 0.

number of self-contradictions revealed a strong positive correlation ($r = .51, p < .001, 95\% \text{ CI } [.49, .53]$).

Asked-and-Answered Objections

Of the 118 transcripts that contained repeated questions, 28 contained at least 1 asked-and-answered objection (see Table 8). In total, 45 asked-and-answered objections were identified (range per transcript = 0 – 6), most often in response to questions that had been repeated by the opposing attorney once ($n = 27$). Objections were raised in response to questions from the opposing attorney that had been repeated 1 to 10 times ($M = 2.02, SD = 1.92$). Judges more often overruled ($n = 27$) than sustained the objections ($n = 17$). In the other case, a judge did not sustain the objection although the question had been repeated 10 times.

Discussion

This was the first study to investigate the effects of children's age, attorney role and question type on children's responses to repeated questions in direct- and cross-examinations. This was also the first field study to examine the effects of immediate as opposed to delayed repetition on children's responses, the effects of multiple repetitions on the rate of children's self-contradictions, and the frequency and result of "asked-and-answered" objections.

Key Findings

As in previous experimental and field research, we examined the number of repeated questions and the effects of age and question type on children's responses. We found that questions were repeated at a considerably higher rate in court (17.8% of total questions asked by prosecutors and 33.6% of total questions asked by defense attorneys) than in forensic interviews (4.3% of interviewer prompts; Andrews & Lamb, 2014) and that, as in forensic interviews, repeated questions most often elicited repetition and elaboration, which may have enhanced the informativeness of the children's testimony (Andrews & Lamb, 2014; La Rooy & Lamb, 2011). Repeated questions also elicited self-contradictions on occasion. Although we were unable to assess the accuracy of children's responses and the rate of self-contradiction was low, the risks of confusion and inaccuracy they foster may be substantial and the consequences may be serious. Furthermore, although self-contradictions were infrequent overall the rate increased dramatically as repetition frequency increased. This is of particular con-

cern because over half (61.5%) of the repeated questions were repeated more than once.

Unlike Andrews and Lamb's (2014) study of forensic interviews, we found that age was not associated with the frequency of question repetition in the courtroom. This discrepancy is likely attributable to the underpowered sample of repeated questions ($n = 333$) analyzed by Andrews and Lamb. However, we found that, consistent with Andrews and Lamb, the effects of question repetition were no more detrimental for younger children than for older children. This finding is inconsistent with experimental findings (e.g., Howie et al., 2012; Krähenbühl et al., 2009; Warren et al., 1991). Nevertheless, as Andrews and Lamb (2014) note, some research suggests that, even though younger children may produce shorter and less detailed accounts of abuse (Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012; Lamb et al., 2003), their reports may be no less accurate than older children's (Oates & Shrimpton, 1991).

Furthermore, we found that defense attorneys repeated more questions than prosecutors, and, although the effect size was small, were more likely to elicit self-contradictions from children than prosecutors. Most notably, suggestive questions were more problematic in terms of children's consistency when posed by defense attorneys than by prosecutors, whereas nonsuggestive question types resulted in more repetitions and elaborations when posed by prosecutors than by defense attorneys. These findings suggest that question repetition is a technique that is frequently utilized to undermine witness consistency during cross-examination, although children of all ages are resistant to the implicit coercion. As noted above, however, the risks may be substantial, particularly when questions are repeated multiple times.

It is surprising that although repeated questions were very common, attorneys rarely objected that the questions had already been asked-and-answered. On 61 occasions, questions were repeated more than 9 times and no objections were raised. One child had the same question repeated 29 times and another child had the same question repeated 40 times. The attorneys' failures to object may have been motivated by their expectations of the judges' responses: When attorneys objected, their objections tended to be overruled.

Implications

These findings raise troubling questions about the courtroom questioning of child witnesses. As noted earlier, the California Evidence Code (2014) states that: "With a witness under the age of 14 . . . the court shall take special care . . . to restrict the unnecessary repetition of questions" by both prosecutors and defense attorneys. Because "unnecessary repetition" is vague and open to interpretation, there is a clear need for laboratory and field research to clarify what repetitions should be deemed unnecessary. Of course, questions may sometimes need to be repeated and their repetition may lead children to change previously incorrect answers, but the sheer amount of question repetition found in the present study is alarming. The findings suggest that not enough is being done to restrict the unnecessary repetition of questions when attorneys question children in court.

As shown in the present study, question repetition sometimes leads to self-contradictions. In a recent study examining the same transcripts, Andrews et al. (2015) identified a total of 2,093 self-

Table 8
Asked-and-Answered Objections: Repetition Frequency and Judicial Decisions

Decision	Number of times question repeated before objection raised						Total
	1	2	3	4	5	9	
Overruled	16	6	3	2	0	0	27
Sustained	11	1	3	0	1	1	17
Total	27	7	6	2	1	1	44

Note. One asked-and-answered objection was not included in the table. The judge did not respond to the objection and the question had been repeated 10 times.

contradictions so the 1,402 described in the present study represent 67% of all self-contradictions by these children, suggesting that question repetition was a major cause of inconsistent responding. Whether these self-contradictions were desirable (i.e., corrections of previously incorrect information) or undesirable (i.e., contradictions of previously correct information) cannot be ascertained. However, the finding that repeated closed-ended and suggestive questions were most likely to elicit self-contradictions is consistent with laboratory research demonstrating that closed-ended and suggestive questions are most likely to elicit erroneous answers, including self-contradictions of accurate information (e.g., Endres et al., 1999; Poole & White, 1991; Quas et al., 2007), whereas the self-contradictions elicited using open-ended repeated questions tend to correct previously incorrect information (e.g., Poole & White, 1991). Memon and Vartoukian (1996) found no effects of question type on accuracy, whereas repeated questioning led to self-contradictions but no declines in accuracy, suggesting that children were changing answers whether or not their initial answers were correct or incorrect.

In sum, it is disconcerting that attorneys raised so few asked-and-answered objections, even though most questions were repeated more than once (61.5%) and some questions were repeated many, many more times using closed-ended and suggestive questions. It is further concerning that judges overruled the majority of the objections. From a training perspective, attorneys and judicial officials should be made aware of the potential harm associated with unnecessary question repetition and of how these effects may be reduced (e.g., by explaining to the child why the question is being repeated and repeating the question using less closed-ended and suggestive prompts). Training could encourage attorneys to utilize the asked-and-answered objection, because multiple repetitions in the present study was associated not just with an increased likelihood that children would self-contradict, but also increases in the number of self-contradictions. Similarly training could encourage judges to sustain objections when warranted so that children's developmental capabilities are respected.

Limitations and Future Research

In addition to our inability to assess the veracity of the allegations or of the children's specific responses, three other limitations should be noted.

First, the confidence intervals for some of the inferential statistical tests reported above are relatively large (e.g., for response type's main effect in the Children's age \times Response type repeated-measures ANOVA). Wider confidence intervals indicate the test statistics and/or effect sizes are less precise; thus, caution is warranted in the interpretation of results for these instances.

Second, all of the cases were tried in a single county 12–17 years ago. Attorneys' questioning techniques may vary by jurisdiction and change over time. However, Los Angeles County is the most populous county in the United States, as well as highly diverse, socioeconomically and ethnically. Furthermore, there is little evidence that attorneys' questioning techniques have improved over time. Hanna et al. (2012), who found that both prosecutors and defense attorneys in New Zealand asked predominantly closed-ended questions, noted that their results, utilizing transcripts from 2008, were similar to those reported by Davies and Seymour (1998), who examined transcripts from cases tried in

1994. Nevertheless, it would be fruitful for future research to examine a more recent sample of cases from Los Angeles County to determine whether questioning practices have changed over the years. Future research should also seek to examine trials conducted in other parts of the United States to help determine generalizability.

We did not measure the complexity of the questions, an issue that has been emphasized in prior research examining children's difficulties with cross-examination (Hanna et al., 2012; Zajac et al., 2009; Zajac & Hayne, 2003). Complexity may interact with children's age, attorney role, and question type in affecting children's responsiveness and self-contradictions. However, Evans, Lee, and Lyon (2009) did not find any age or attorney differences in either wordiness or the syntactic complexity of the questions when they examined 46 4- to 15-year-olds' testimony in cases from Los Angeles. Similarly, although Zajac et al. (2009) found that adults were asked more complex questions than children, Zajac and Hayne (2003) found no relationship between age and complexity in a study of 5- to 13-year-olds. Furthermore, Zajac et al. (2009) found that 31% of the defense attorneys' questions were complex on one dimension, but so were 25% of the prosecutors' questions, a surprisingly small difference. Indeed, Hanna et al. (2012) found that there were differences in the complexity of the questions asked by prosecutors and defense attorneys only in relation to one of the five types examined. Hence, we think it unlikely that differences in the complexity of the questions asked may have accounted for the findings reported here. Nevertheless, it would be interesting for future research to analyze question complexity and examine whether it varies depending on the witnesses' ages and how this might affect their responses to repeated questions.

In addition, it might be fruitful to examine whether and how question repetition is affected by children's gender and case verdict. The preliminary analyses in the present study did not find any significant differences associated with gender or verdict with respect to repetition frequency, the prompt types used to repeat questions, or children's response types. However, the present study was not designed to investigate these questions and consequently our sample included many more girls than boys and many more cases that resulted in convictions than acquittals or mistrials. A better-matched sample designed to investigate these research questions may yield different results.

Conclusion

These limitations notwithstanding, this study provides compelling evidence that questions asked of young witnesses in court are often repeated. Whatever the motivation of the attorneys involved, it is noteworthy that this practice most often leads children to restate what they said earlier, although the repetition, especially of closed-ended and suggestive questions, occasionally led children of all ages to change their responses. We do not know whether the last answers were more or less accurate than those provided initially, although some laboratory studies suggest that the repetition of such "risky" types of questions may lead children to change accurate answers into inaccurate ones. Clearly, further research is needed to further assess the benefits and costs, in terms of accurate reporting, associated with repeated questioning in the courtroom.

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