

Running head: CHILDREN'S UNCERTAIN RESPONSES IN COURT

Children's Uncertain Responses When Testifying about Alleged Sexual Abuse in Scottish
Courts

This study examined the uncertain responses of 56 5- to 17-year-old alleged sexual abuse victims testifying in Scottish criminal court trials. Don't know/remember ground rules were explained to 38% of the children and each child reported uncertainty in response to 15% of the questions on average. Uncertain responding was associated with expressions of resistance and confusion, questioning context (proportionally more regarding substantive than non-substantive issues), question content (least to disclosure-focused questions), utterance type (more to directives, particularly those posed by defense lawyers; more to recall-based than recognition prompts), and age (children in mid-adolescence were less likely to respond uncertainly than those who were either older or younger). There were no associations between expressions of uncertainty and ground rule administration, or with whether or not the question focused on central rather than peripheral details about the alleged crimes. Findings highlight concerns surrounding preparatory procedures to help witnesses, especially adolescents, indicate uncertainty when testifying.

Keywords: uncertainty, child testimony, ground rules, direct-examination, cross-examination

Courts

In criminal court, the reliability and completeness of children's accounts is critical, especially in cases addressing child sexual abuse because witness testimony is often the primary source of evidence, and children's evidence can have a large impact on legal outcomes. It is important to examine the frequency and conditions under which children express uncertainty in court, since allowing children to express uncertainty increases the likelihood that the information elicited from them is truthful and accurate (Koriat, Goldsmith, Schneider, & Nakash-Dura, 2001; Roebbers & Schneider, 2005).

Furthermore, courtroom questioning can be unusual and difficult for children, who are accustomed to being tested by knowledgeable adults (Lyon, 2010), and often feel pressured to answer adults' questions (Earhart, La Rooy, Brubacher, & Lamb, 2014). Lawyers may also question children using complicated prompts about events that occurred long ago (Andrews, Lamb, & Lyon, 2015; Hanna, Davies, Crothers, & Henderson, 2012; Spencer & Lamb, 2012), making it critical to prepare children for their unique roles as witnesses by instructing them not to guess and to express uncertainty when they do not know the answers to questions (i.e., the "don't know" ground rule).

Comparing children's propensity to express uncertainty in response to prosecutors and defense lawyers may be particularly important because lawyers are motivated to undermine the opponents' witnesses and question alleged victims of child sex abuse accordingly, by asking easier or more difficult questions, respectively (Andrews et al., 2015). Remarkably, however, very little field research has been conducted on children's uncertain responses, and there has been no prior research on children's uncertain responses in criminal court proceedings.

What Aspects of Courtroom Questioning Might Increase the Likelihood that Children Will Express Uncertainty?

The likelihood that child witnesses might experience uncertainty in court relative to other forensic contexts is greater because courtroom questioning is often insensitive and cognitively unsupportive. This may be because lawyers are trained to elicit specific responses from children, with defense lawyers -- in particular -- trained to discredit witnesses (which they do by asking difficult-to-answer questions). For example, a host of studies (see Lamb, Malloy, Hershkowitz, & La Rooy, 2015; Walker, Kenniston, & Inada, 2013) have revealed that many questions put to witnesses are linguistically complicated, include advanced vocabulary, and/or may require witnesses to report on information outside the scope of their competency (e.g., recall event dates and frequencies). Moreover, lawyers often ask child witnesses about events that occurred long ago (often years ago) and may ask children to recollect aspects of the past event that may be especially difficult to recall (e.g., peripheral details about what clothing was worn on a certain day).

Further, although forensic interviewers are routinely advised to tell children that they should say "I don't know" and "I don't understand" when appropriate (Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007), it is unclear whether similar advice is offered in court, where it might be especially important because of the intimidating setting and the complexity of the questions asked, often by lawyers who are not trained to question children. In court, children also promise to tell the truth, making it especially important that they are encouraged to admit uncertainty when appropriate.

Because lawyers ask many suggestive and closed-ended option-posing questions in court (Andrews et al., 2015) which pull for specific answers, the pressure to respond may be further increased (Warren, Hulse-Trotter, & Tubbs, 1991). For example, the extent to which questions offer options from which children can select (e.g., "yes/no") may make guessing easier than expressing uncertainty. The closed-ended and leading nature of lawyers' questions also makes it unlikely that children are routinely given the opportunity to explain why they are uncertain.

In sum, a number of factors may affect the propensity for children to express uncertainty more often in court than in other forensic contexts, including lawyer role (prosecutors vs. defense lawyers), whether or not the questions focused on central details about the alleged crime, the content of the questions posed (e.g., questions about actions during the alleged event vs. questions about the exact time of the incident), and the leading and closed-ended questions that lawyers routinely use when questioning children.

Experimental Research on Children's Uncertain Responses

The conditions under which children accurately express uncertainty in response to adults' questions have been widely researched in experimental and analogue studies. Such studies have found that children often feel obligated to answer adults' questions, and that children attempt to answer nonsensical or unanswerable questions, rather than express uncertainty, even when they lack the required information or the questions do not make sense (Hughes & Grieve, 1980; Pratt, 1990; Waterman, Blades, & Spencer, 2000, 2001).

Waterman et al. (2000) found that 92-96% of the children who answered nonsensical questions knew that the questions were 'silly' and unanswerable, but guessed anyway. Furthermore, children attempted to answer rather than express uncertainty more often when the nonsensical or unanswerable questions were closed-ended yes/no recognition prompts than when they were more recall-based (Gee, Gregory, & Pipe, 1999; Waterman et al., 2000; Waterman, Blades, & Spencer, 2004). Waterman and colleagues (2004) found that 8-year-olds were more likely to provide correct responses than 6-year-olds, and were thus more likely to express uncertainty when appropriate. Worryingly, when forced to guess in response to misleading questions, both adults and children tended to aver the incorrect information in subsequent interviews (Gombos, Pezdek, & Haymond, 2012; Stolzenberg & Pezdek, 2013).

However, experimental studies have also shown that pre-interview instructions encouraging children to say "I don't know" when they did not know, lead them to say "I don't know" appropriately more often but the instruction did not affect responses to non-misleading questions (Mulder & Vrij, 1996; Waterman & Blades, 2011). This was

particularly true when children practiced using the “don't know” ground rule prior to substantive questioning (Danby, Brubacher, Sharman, & Powell, 2015). Such findings have informed recommendations that forensic interviewers should explicitly encourage children to say ‘I don't know/remember’ when appropriate (Lamb et al., 2007).

Field Research on Children's Uncertain Responses

Unlike experimental settings, forensic contexts often involve children being questioned about personally significant and emotionally salient events. As a result, children may express uncertainty, not because they genuinely do not know or remember the answer, but more often because they are reluctant to respond to the question, either because they find the subject matter difficult to talk about, or because they want to omit details. This possibility has affected the way that uncertainty has been coded in previous field research.

Most studies examining reluctance in child investigative interviews have measured children's reluctance by calculating how often children (whose abuse had been verified independently) denied abuse, resisted answering questions, or omitted information (e.g., Ahern, Hershkowitz, Lamb, Blasbalg, & Winstanley, 2014; Hershkowitz, 2013; Hershkowitz, Lamb, Katz, & Malloy, 2015; Hershkowitz, Orbach, Lamb, Sternberg, & Horowitz, 2006; Hershkowitz, Orbach, Sternberg, Pipe, Lamb, & Horowitz, 2007). In all such studies omissions were the most common type of reluctant utterances; these included various uncertain responses (e.g., don't know/don't remember, non-responses/silence).

In a study looking at the effects of enhanced rapport-building in forensic interviews with 4- to 13-year-olds alleging sexual abuse, omissions constituted a substantial minority of responses, including 18% of all responses in the rapport-building and 12% in the substantive (abuse-related) contexts of the interviews (Hershkowitz et al., 2015). Children who did not disclose abuse that had been independently corroborated expressed more reluctance (including omissions) than children who did disclose (Hershkowitz et al., 2006, 2007). Furthermore, enhanced interviewer supportiveness and rapport-building resulted in markedly lower levels of reluctance, particularly omissions (Ahern et al., 2014; Hershkowitz et al.,

2015). These studies suggested that it may sometimes be reasonable to view uncertain responses as indices of reluctance on the part of children motivated not to disclose their experiences.

Unlike Hershkowitz and colleagues, who were concerned primarily with the dynamics of interviews with children who were reluctant to disclose abuse (Ahern et al., 2014; Hershkowitz, 2013; Hershkowitz et al., 2006, 2007, 2015), other researchers have evaluated children's "don't know" responses differently in investigative interviews. Earhart et al. (2014) examined 76 forensic interviews with allegedly abused 4- to 13- year-olds and found that, even though the "don't know" ground rule was presented in 94% of the interviews, an average of only 7 "don't know" responses were identified in each interview, constituting only 6% of children's substantive responses – half the proportion reported by Hershkowitz et al. (2015). This discrepancy may be attributable to differences in interview procedure as well as the inclusion of non-responses along with don't know/remember responses in the 'omissions' category (Hershkowitz et al., 2015).

As in experimental studies (Gee et al., 1999; Waterman et al., 2000, 2004), Earhart and colleagues found that directives were more likely than option-posing prompts to elicit don't know responses. Earhart et al. (2014) found no association between age and the frequency of don't know responses, how uncertainty was elicited (by the child, by the interviewer, or due to question type), and the effect of the ground rule on children's propensity to express uncertainty. However, children aged 7 to 13 years were more likely than children aged 3 to 6 years to elaborate on their uncertain response and explain why they were uncertain.

Lastly, Earhart et al. (2014) also attempted to ascertain whether some don't know responses might reflect reluctance by measuring the number of details children provided during their interviews. They found no evidence that children who said "I don't know" more often were any less informative overall. The inconsistent findings suggest that it may not be appropriate in field research, where baseline accuracy cannot be established, to view

uncertain responses as necessary indicators of reluctance, and highlight the need for further investigation into the extent to which children respond with uncertainty, why they do so, and how such responses are elicited. As noted earlier, there has been no previous research on expressions of uncertainty in the courtroom.

Present Study

It is crucial to study children's uncertain responses in the course of trials, during which they are questioned by prosecutors who are motivated to enhance the credibility of their testimony, and by defense lawyers who are motivated to undermine it. Because children's courtroom testimony is kept confidential by British courts and is not routinely transcribed, the current research builds upon a carefully negotiated and unprecedented collaboration with the Scottish judiciary, which has recently expressed considerable concern about the risks associated with the quality and testing of children's testimony (e.g., Evidence and Procedure Review Report, Scottish Court Service, March, 2015).

The present study was the first to investigate children's uncertain responses in court by examining a sample of Scottish criminal trial transcripts involving 56 children aged between 5 and 17 years testifying about sexual abuse. Due to the absence of previous relevant research, the present study was largely descriptive in nature. We identified the presence or absence of the "don't know" ground rule and assessed the effect it had on the frequency with which children expressed uncertainty in a variety of ways. We also investigated associations between uncertain responses and children's age, which of the lawyers was involved, question type, question content, the centrality of the details sought, and reluctance (as indexed by children's verbal productivity and overt expressions of emotion or confusion). We further differentiated among different types of uncertain responses and coded the reasons offered by children to explain their responses.

We predicted that: 1) children would express more uncertainty when questioned using recall-based questions rather than recognition and suggestive prompts, 2) children would express more uncertainty when questioned by prosecutors than defense lawyers, due to

differences in their motivations and questioning techniques, and 3) children would express more uncertainty in response to questions about peripheral information than central information, because peripheral details are harder for children to remember (e.g., Peterson & Whalen, 2001). We did not make any predictions regarding age because previous research has yielded inconsistent findings.

Method

Sample

With the approval and support of the Lord President, the Court Service Team of the Scottish Court Service identified cases conducted in six major court houses in Scotland between 2009 and 2014 in which alleged child victims of sexual abuse had testified. Recordings of the cases were then located, and the portions of the trials in which the children testified were transcribed. Transcripts of 36 trials involving a total of 56 alleged victims of child sexual abuse were included in the study. Nine cases (11 children) were from Aberdeen, 9 cases (19 children) from Edinburgh, 12 cases (16 children) from Glasgow, 1 case (1 child) from Inverness, 3 cases (5 children) from Livingston, and 2 cases (4 children) from Perth. The trials included involved at least 25 different prosecutors, 24 defense attorneys, and 22 judges. Identifying information was unavailable for nine transcripts.

Children reported single ($n = 18$) or multiple ($n = 38$) sexually abusive experiences involving penetration ($n = 38$), touching under clothes ($n = 10$), touching over clothes ($n = 3$) and indecent exposure ($n = 5$). The final sample included 40 girls and 16 boys who were 5 to 17 years of age ($M = 13.99$, $SD = 2.69$). Age could not be entered into parametric tests as a continuous variable because the distribution was not normal, $D(55) = .20$, $p < .001$.

Therefore, children were categorized into three age groups at the time of trial: 12-year-olds and under ($n = 15$, $M = 10.25$, $SD = 2.13$), 13- to 15-year-olds ($n = 26$, $M = 14.62$, $SD = .83$), and 16- and 17-year-olds ($n = 15$, $M = 16.57$, $SD = .52$). These age categories were chosen because they accord with the Sexual Offences (Scotland) Act (2009); 16 years is the age of sexual consent, but a person aged 16 or over can claim to be innocent of committing a sexual

offence with a child aged between 13 and 16 years if that person 'reasonably believed' that the child was over the age of 16. However, this reasonable belief provision does not apply if the offence involved a child under the age of 13. The children's socioeconomic and ethnic backgrounds were unknown.

All defendants were male. In 95% ($n = 53$) of the cases, the children knew the alleged abusers. The suspects were biological parents ($n = 8$), step-fathers/mothers' boyfriends ($n = 3$), other family members ($n = 20$), family friends ($n = 5$), friends/acquaintances ($n = 17$) and strangers ($n = 3$). Defendants were either convicted ($n = 42$) or acquitted ($n = 10$). The remaining 4 defendants were convicted but not for all alleged sexual offences.

In accordance with the Victims and Witnesses [Scotland] Act (2014), many of the children had special measures in place. All courts were closed to the public. Four children received no other special measures. Other children gave evidence in court with a screen and a support person present ($n = 15$), or just a support person present ($n = 5$). The remaining children gave evidence via a live TV link with a support person present ($n = 21$) or without a support person present ($n = 3$), or their evidence was taken on commission¹ ($n = 8$).

Coding of Transcripts

The transcripts contained direct- and often redirect-examinations, in which the prosecution questioned the children, and cross-examinations, in which the defense questioned the children. No transcripts contained recross-examinations. Both the substantive and non-substantive questions and responses were coded.

Context: Non-substantive. Lawyers' statements or questions that were not focused on the incident under investigation were coded as non-substantive. These included 1) procedural prompts, defined as comments, statements, or questions concerning procedural aspects of the direct/cross examinations, including introductory information and instructions,

¹ Taking evidence by a commissioner is considered only for the most vulnerable witnesses. In these instances, delays in testifying may increase distress and trauma, significantly hindering the witness's ability to give evidence. Evidence can therefore be taken before a commissioner appointed by the court. The evidence is taken in full (direct-, cross-, and re-direct-examination) from the witness, proceedings are video recorded, and later received at the subsequent trial (see Vulnerable Witnesses [Scotland] Act, 2004).

taking the oath, communication rules, introduction of evidence, and labelling or defining

body parts, 2) anchoring prompts, defined as utterances providing children with external (not incident related) references (e.g., a holiday or a birthday, description of the location) in order to aid in the relative dating, timing, location, etc., of the investigated incident, and 3) rapport-building prompts, defined as utterances designed to enhance the children's trust and cooperation, and provide emotional support (e.g., by asking about the children's family, friends, school, general knowledge, or neutral experienced events).

Context: Substantive. Substantive utterances were defined as those designed to elicit information about what happened during the alleged incidents, what immediately preceded or followed the alleged incidents, within-incident events (e.g., unexpected interruptions exposing the abuse), witness details (e.g., witness intervention), other features of the abuse (e.g., how long the incidents lasted, where they happened), disclosure, and prior substantive formal questioning (e.g., what the child reported in forensic interview/s).

Ground rule. The "don't know/remember" ground rule (e.g., "If you don't know it's okay to say I don't know") and any practice or reiteration of the ground rule were coded.

Uncertainty response type. Uncertain responses were exhaustively categorized into one of five main types: don't know (including "not sure"), don't remember, digressions (i.e., the child responded but was off task, resistant, or provided an irrelevant response to the target question), requests for clarification (e.g., "I didn't understand. Can you repeat that?"), and non-responses. Each uncertain response was further classified in relation to how it was elicited: spontaneous, lawyer elicited, and in-answer. Definitions and examples of the three elicitation types are provided in Table 1.

Reasoning. Reason offered by the children to explain why they were uncertain were categorized as: poor memory (e.g., "I can't remember because it was so long ago"), being emotional/confused at the time of the incident (e.g., "I was really upset when it happened, so I just don't know"), or being emotional/confused at the time of trial questioning (e.g., "This is really, really stressful for me, so I'm finding it hard to think back").

Question type. Lawyers' substantive utterances were categorized into one of four question type classes commonly used to differentiate between interviewer utterances in forensic interviews (e.g., Lamb, Hershkowitz, Orbach, & Esplin, 2008): invitations, directives, option-posing, and suggestive prompts (see Table 1).

Question centrality. Questions that elicited uncertain responses were categorized with respect to whether the focus was on central or peripheral aspects of the incident under examination (see Table 1).

Question content. The content of the questions that elicited uncertain responses was classified into one of six categories: suspect, victim, witness, contextual, disclosure, and prior formal questioning (see Table 1).

[Insert Table 1 here]

Productivity. The number of new details conveyed by the child in each substantive response was tabulated using a procedure described by Lamb, Hershkowitz, Sternberg, Esplin, Hovav, Manor, and Yudilevitch (1996). Details were defined as the smallest units of information pertaining to the alleged incidents provided by the children. Details involved the naming, identification, or description of individuals, objects, events, places, actions, emotions, thoughts, and sensations relevant to alleged incidents, as well as any of their features (e.g., appearances, locations, times, durations, temporal orders, sounds, smells, and textures). Repeated words or details between and within utterances were counted only once unless the repetition appeared intentional (e.g., for emphasis). Details were only counted when they added to the understanding of the target incident(s), therefore false starts (e.g., "I – they went..."; "Um, well..."), statements that expressed the child's present mental or emotional state (e.g., "I am scared"), phrases that suggested the level of confidence of the interviewee during the examination (e.g. "I know"; "I think"; "Maybe"), and claims of lack of knowledge/ignorance (e.g., "I don't know"; "I don't remember") were *not* counted as substantive details.

Overt emotion or confusion. Overt expressions of emotion or confusion that might also convey reluctance (e.g., “NO! I don’t want to go on”; “Why are you asking me this?”; [unintelligible shouting]), confusion (e.g., “I have no idea what you’re going on about.”; “Er...[no response]”), and distress (e.g., crying/shouting) were identified. Overt emotion or confusion was not necessarily coded at the question level because emotions and confusion could be evident during a number of turns. Each ‘episode’ was coded as one instance of overt emotion or confusion.

Inter-rater Reliability

Two raters independently coded 20% of the transcripts that were randomly selected. One-hundred percent reliability was achieved for the classification of non/substantive prompts, don’t know/remember ground rules, and children’s reasoning. Inter-rater reliability for the classification of uncertainty response type (both main and elicitation type) was high, $K = .96$ ($SE = .01$), 95% CI [.94, .98], as was the agreement when coding question types, $K = .94$ ($SE = .02$), 95% CI [.90, .98], question centrality, $K = .89$ ($SE = .02$), 95% CI [.85, .93], question content, $K = .84$ ($SE = .03$), 95% CI [.78, .90], productivity, $K = .83$ ($SE = .06$), 95% CI [.71, .95], and overt emotion or confusion, $K = .74$ ($SE = .05$), 95% CI [.64, .84]. Reliability was assessed throughout the coding process and all disagreements were resolved by discussion.

Results

Preliminary Analyses

Discriminant function analyses revealed no significant effects due to gender or case verdicts on the proportion of uncertain response of each type, question types, question centrality, and question content. Therefore, gender and case verdicts were not included in any of the analyses reported below. Further discriminant functions analyses revealed no significant effects due to the different types of uncertain responses on the proportion of question types, rates of question centrality, and question content. The different types of uncertain responses were subsequently collapsed for inferential analyses.

Using proportional values controls for the number of questions asked by each lawyer and the number of responses per child and aids in the normalization of data distributions. Proportions were calculated by dividing the cell count of interest (e.g., the frequency of uncertain responses when prompted by defense lawyers' substantive questions) by the appropriate grouping total (e.g., the total number of substantive questions asked by defense lawyers). All variables entered into parametric tests were normally distributed and alpha levels were adjusted to control for multiple comparisons. All parametric tests were conducted with child as the unit of analysis and power analyses confirmed that all inferential tests reported had enough power (set at 0.8) to detect at least medium-sized effects. Every analysis reported involved proportional values unless otherwise stated, with significant interactions followed-up using pairwise comparisons with Bonferroni corrections.

Ground Rule

Of the 56 children, 21 (37.50%) were told the don't know/remember ground rule during questioning. Twelve of the 21 were told by prosecutors, 6 by defense lawyers, and 3 by judges. In only 5 of the 21 cases was the ground rule reiterated later during testimony: twice by prosecutors and three times by the defense. All reiterations occurred after a break in proceedings. The don't know/don't remember ground rule was never practiced.

Descriptively, children who were told the ground rule expressed more uncertainty in total ($M = 94.05$, $SD = 86.32$) and proportionally ($M = .15$, $SD = .09$) than children who were not told the ground rule ($M = 65.97$, $SD = 67.51$; $M = .12$, $SD = .08$, respectively). However, t-tests revealed that these differences were not significant, $t(54) = 1.36$, $p = .18$ and $t(54) = 1.37$, $p = .17$, respectively.

Uncertain Response Frequency

On average, 509.25 ($SD = 320.79$) questions were identified in each transcript, including 416.52 ($SD = 250.86$) substantive prompts, and 92.73 ($SD = 95.36$) non-substantive prompts. In total, 4,284 uncertain responses were identified. All children responded uncertainly, some very often ($M = 76.50$, $SD = 75.60$, range 9 – 375). Children responded

with uncertainty 15.02% of the time: 14.60% of the time ($M = 61.41$, $SD = 55.11$) in response to substantive questions, and 7.50% of the time in response to non-substantive questions ($M = 15.09$, $SD = 31.16$). Due to their low frequency, uncertain responses to judges' questions ($n = 119$) were not considered further.

Uncertain Response Types

Of all uncertain responses, "don't know" ($n = 1,386$, 32.35%) and "don't remember" ($n = 1,409$, 32.89%) responses were most common. Non-responses ($n = 704$, 16.43%), digressions ($n = 281$, 6.56%), and requests for clarification ($n = 504$, 11.76%) were less common. Most uncertain responses were identified as spontaneous ($n = 2,585$, 60.34%), although lawyer-elicited "don't know/remember" responses were also common ($n = 993$, 23.18%). Children responded with in-answer uncertainty 16.48% of the time ($n = 706$).

Reasoning

Only 21 (37.50%) children explained why they were uncertain, providing only 64 instances of reasoning. Children reasoned that they were unsure due to poor memory (70.31%; 16 children), being emotional/confused at the time of the incident (17.18%; 3 children), and being emotional/confused at the time of questioning (12.50%; 6 children). Inspection of the descriptive frequencies revealed comparable rates of reasoning on the part of children in each age group (12 years old and under $n = 6$, 13 to 15 years old $n = 8$, 16 to 17 years old $n = 7$). However, children in the middle and oldest age groups explained why they were uncertain most often (5- to 12- year olds $n = 10$, 13- to 15- year olds $n = 28$, 16- to 17- year olds $n = 26$).

Lawyer Role

A Repeated-Measures Analysis of Variance (RM-ANOVA) was conducted to investigate age differences (between-subjects factor: 12 years old and under, 13 to 15 years, 16 to 17 years) in the proportions of uncertain responses elicited by prosecutors and defense lawyers (within-subjects repeated-measures) in each context (within-subjects repeated-measures: non-substantive, substantive). There was a main effect for context, $F(1, 53) =$

37.75, $p < .001$, $\eta_p^2 = .42$. Children were proportionally more likely to respond with uncertainty in the substantive contexts ($M = .15$, $SD = .01$) than in the non-substantive contexts ($M = .07$, $SD = .01$). There were no other significant effects.

Question Type

For the remaining analyses, only the 3,416 substantive questions and responses were analysed. A RM-ANOVA was conducted to investigate whether there were any effects of question type (within-subjects repeated-measures: invitations, directives, option-posing, and suggestive questions), lawyer role (within-subjects repeated-measures: prosecutors and defense lawyers), and children's age (between-subjects factor: 12 years old and under, 13 to 15 years, 16 to 17 years). Mauchly's test of sphericity was violated, thus Greenhouse-Geisser corrections were applied ($\epsilon = .71$ and $.73$). The results revealed a main effect for question type, $F(2.13, 113.04) = 11.53$, $p < .001$, $\eta_p^2 = .18$. Proportionally, uncertain responses were more likely to be elicited by directive questions ($M = .21$, $SD = .02$) than invitations ($M = .13$, $SD = .02$). Directive questions were also more likely to elicit uncertain responses than option-posing ($M = .09$, $SD = .01$) and suggestive questions ($M = .16$, $SD = .02$). Option-posing questions were less likely to elicit uncertain responses than suggestive questions. The RM-ANOVA also revealed an interaction between question type and lawyer role, $F(2.19, 115.96) = 7.95$, $p < .001$, $\eta_p^2 = .13$. Prosecutors were more likely than defense lawyers to elicit uncertain responses when prompting children with invitations, whereas defense lawyers were more likely than prosecutors to elicit uncertain responses when prompting children with directives. There were no differences between lawyer role and the frequency of uncertain response elicited in response to option-posing prompts and suggestive prompts (see Table 2). Third, an interaction between question type and children's age, $F(4.27, 113.04) = 2.34$, $p = .05$, $\eta_p^2 = .08$, emerged. Post-hoc simple effects analyses revealed that 13- to 15-year-old children were less likely than 16- to 17-year-olds to respond with uncertainty when answering invitations, option-posing, and suggestive prompts. When responding to invitations, children aged 13 to 15 years were also less likely to respond with uncertainty than

children aged 12 years and under. Children aged 12 years and under responded with uncertainty significantly less than 16 to 17 year olds in response to directive questions, and significantly more than 13 to 15 year olds in response to suggestive questions (see Table 3). There were no other significant differences.

[Insert Tables 2 and 3 here]

Question Centrality

A RM-ANOVA was conducted to investigate effects of the centrality of question content (within-subjects repeated-measures: central, peripheral), lawyer role (within-subjects repeated-measures: prosecutors and defence lawyers), and children's age (between-subjects factor: 12 years old and under, 13 to 15 years, 16 to 17 years). There were no significant main effects or interactions.

Question Content

A separate RM-ANOVA was conducted to investigate effects of question content (within-subjects repeated-measures: suspect, victim, witness, contextual, disclosure, prior formal questioning), lawyer role (within-subjects repeated-measures: prosecutors and defense lawyers), and children's age (between-subjects factor: 12 years old and under, 13 to 15 years, 16 to 17 years). Mauchly's test of sphericity was violated, thus Greenhouse-Geisser corrections were applied ($\epsilon = .67$). There was a main effect for question content, $F(3.32, 176.15) = 8.13, p < .001, \eta_p^2 = .13$. Children answered with uncertainty less often in response to questions about disclosure than to questions about any other content (see Table 4). There was also an interaction between lawyer role and children's age, $F(2, 53) = 3.34, p = .04, \eta_p^2 = .11$. Prosecutors elicited significantly less uncertainty when prompting children aged 13 to 15 than children of any other age (see Table 5). There were no other main or interaction effects.

[Insert Tables 4 and 5 here]

Reluctance

To investigate whether uncertainty was related to reluctance, the relationship among indications of uncertainty, children's productivity, and expressions of overt emotion or

confusion was examined. A bivariate correlation, controlling for transcript length, revealed no significant relationship between the average number of new details elicited per child and the proportion of all responses which expressed uncertainty, $r(56) = .19, p = .17$.

However, partial correlations, controlling for transcript length, revealed a significant relationship between uncertain response frequency and the number of overt expressions of resistance, $r(53) = .62, p < .001$, and confusion, $r(53) = .34, p = .006$. There was no significant relationship between the numbers of uncertain responses and of overt expressions of distress, $r(53) = .20, p = .15$.

Discussion

Many aspects of courtroom testimony are difficult for child witnesses. Children are often asked to recount complicated events that may have happened years ago in response to complex questions posed by opposing lawyers. Witnesses also experience immense pressure while under oath in a high-stakes environment. Because children's testimony is often the most important piece of evidence in sexual abuse cases, the reliability of their accounts is of paramount importance and it is thus critical for child witnesses to indicate their uncertainty when appropriate in the courtroom. The present study was the first to investigate children's expressions of uncertainty when questioned by prosecutors and defense lawyers in court.

Ground Rules

The don't know/remember ground rule was administered to 38% of the children in the present study and was sometimes reiterated when questioning resumed after a break. However, lawyers never practiced the use of the ground rule with the children, and so, as in Earhart et al.'s (2014) study, the presentation of the don't know/remember ground rule was not associated with a significant increase in the frequency with which children expressed uncertainty. Further, children rarely explained why they were uncertain, perhaps because they were not prompted to do so. Since practice using the don't know/remember ground rule prior to substantive questioning increases children's propensity to express uncertainty when appropriate in experimental settings (Cordón, Saetermoe, & Goodman, 2005; Endres,

Poggenpohl, & Erben, 1999; Gee et al., 1999; Mulder & Vrij, 1996; Nesbitt & Markham, 1999; Saywitz & Moan-Hardie, 1994; Waterman & Blades, 2011; see Brubacher, Poole, & Dickinson, 2015, for a review), more research is needed to investigate how preparatory procedures to help witnesses indicate uncertainty can be made more effective in the field. Moreover, in cases of adolescents and teenagers, the use of ground rules may be enhanced if there is a reassurance that normalizing the issue that lack of memory or knowledge may well be commonplace when one is asked about past events. This might help set adolescents and teenagers who fear appearing incompetent by saying "I don't know" at greater ease and also alert the jury to the challenge of memory retrieval prior to substantive questioning.

Overall Rate of Uncertainty

Uncertain responses constituted a substantial minority of all responses (15%). Because many courtroom questions put to children were focused, complex, and about events often experienced long ago – it may be surprising that children expressed uncertainty as little as they did. Further, children expressed more uncertainty in response to substantive than to non-substantive prompts, and, contrary to prediction, overall there was no difference in the propensity to express uncertainty in response to prosecutors and defense lawyers. The greater-than-expected extent to which children expressed uncertainty in the courtroom may be explained by the context.

Children testifying in court find themselves in a formal, high-pressure, high-stakes environment; the final stage of the investigative procedure in which they are under oath to tell the truth and a verdict with soon be reached. Furthermore, it is likely that child witnesses are brought to court because they are cooperative and have previously disclosed abuse. It thus follows that children might express uncertainty more in court (i.e., 15%) than in forensic interviews (between 6%, Earhart et al., 2014, and 12%, Hershkowitz et al., 2015) because questions in court are more likely to be option-posing or suggestive (Andrews et al., 2015), and to be linguistically complex or include legal jargon (e.g., Hanna et al., 2012). Furthermore, contrary to research examining child forensic interviews (Hershkowitz et al.,

2015), more expressions of uncertainty were elicited by substantive than non-substantive questions, perhaps because the children were under greater pressure to respond accurately about issues of substance in court.

It is unclear why, overall, children did not express more uncertainty in response to prosecutors than to defense lawyers, and further research is needed to elucidate this finding. However, it is possible that children are aware that defense lawyers are aiming to challenge the veracity of their testimony and/or may have been advised to express uncertainty when appropriate, particularly in response to defense questions. This, along with the high rates of closed-ended and suggestive questions asked by both prosecutors and defense lawyers (Andrews et al., 2015), and pressure to tell the truth, may partly explain the absence of differences related to the lawyers' roles.

Question Type

We expected that the tendency to express uncertainty would vary depending on the question type. In line with our predictions, directives (e.g., "Where did you go?") elicited more uncertain responses than other question types (e.g., "Did you go to the park or to school?"). These findings support experimental research suggesting that it is easier to guess in response to forced-choice/option-posing questions (which offer a possible response) than to recall-based questions (Gee et al., 1999; Waterman et al., 2000, 2004). More nuanced linguistic research is needed to understand why children responded to prosecution invitations with more uncertainty than defense invitations and to defense directive questions with more uncertainty than prosecutors' directive questions.

Since the extant literature was inconsistent, we made no predictions regarding age and children's propensity to express uncertainty. However, age effects did emerge in the current study. Interestingly, overall, children aged 13 to 15 years old expressed less uncertainty than older and younger children, particularly when answering invitations and suggestive questions. It may be the case that adolescents are particularly defensive when responding to suggestive questions, and so are more likely than their counterparts to respond to suggestive

questions, even when they do not know the answer. Further, it might be the case that adolescents are more concerned than younger children about being perceived by jurors as credible witnesses (by appearing confident and mature), but may not understand the importance of expressing uncertainty when necessary. Such a tendency, combined with the lawyers' likely tendency to overestimate the children's cognitive and linguistic abilities (Hanna et al., 2012), may have increased the tendencies of these youths not to indicate uncertainty when they should. Such findings highlight the need for more research to substantiate these speculations, as well as more research on older children in both experimental and field settings, where most researchers have focused on 3- to 13-year-olds (Earhart et al., 2014; Waterman et al., 2004).

Lastly, it is notable that children of all ages were equally likely not to express uncertainty in response to recognition-based and other types of questions. Although the current field study was unable to consider the accuracy of responses, a plethora of research suggests that recognition-based closed-ended questions elicit less reliable and accurate responses from children than more recall-based open-ended questions do (see Lamb et al., 2008, 2015). This finding therefore raises serious concerns as to whether enough is being done to provide children with the opportunity to give their best evidence in court.

Question Centrality and Content

It was expected that peripheral details would be harder for children to remember (e.g., Peterson & Whalen, 2001), and that children would thus express more uncertainty when answering these questions. Contrary to prediction, children were no more likely to express uncertainty in response to questions prompting peripheral information than questions prompting central information. Perhaps when answering peripheral questions about emotionally salient and significant events in court, children do not find such details harder to remember than central details. However, it may also be the case that children felt pressure to respond to questions about peripheral content, perhaps because of the types of questions

being asked or the broader questioning context, and so children expressed less uncertainty than was otherwise appropriate.

As predicted, children were more likely to express uncertainty when questioned by defense lawyers than by prosecutors. In particular, though contrary to prediction, children were more likely to express uncertainty in response to defense lawyers' questions about central content, perhaps because the defense lawyers sought to discredit the witnesses' accounts by challenging key aspects of their testimony. It was also interesting that uncertain responding occurred much less when children were asked about disclosure than about any other content. This may be because children's disclosure processes were particularly emotionally salient and the children were thus more certain about what happened. More research is needed to elucidate why these patterns of responding might occur.

Reluctance Measures

As in other research (Earhart et al., 2014), there was no significant relationship between the rates at which children expressed uncertainty and their productivity, suggesting that uncertainty was not related to children's reluctance. This finding is further supported by the lack of relationship between uncertainty rates and overt expressions of distress. However, the present study found that the rates at which children expressed uncertainty were positively associated with overt expressions of resistance and confusion. Taken together, these findings suggest that there is likely a relationship between expressions of uncertainty and children's reluctance, but that this relationship is much more nuanced than has previously been assumed.

Since only a subset of reluctance measures were associated with uncertainty, uncertainty expressed in court may only sometimes reflect witness discomfort rather than a genuine lack of knowledge – and thus should not necessarily be deemed to reflect “reluctance”. This ambiguity calls for further examination of the circumstances in which uncertainty might reflect lack of knowledge or reluctance (e. g., via laboratory research). Erroneously attributing uncertainty to reluctance may encourage questioners to push for

answers and increase the likelihood that children will both provide inaccurate responses and feel discomfort. Similarly, the ability to identify uncertain responses that reflect reluctance may allow questioners to offer appropriate support and avoid persistent questioning that may foster inaccurate responding and frustration.

Conclusions and Implications

There is currently very limited guidance on how lawyers should question children in court. The guidance that does exist is neither well embraced nor well informed (Spencer & Lamb, 2012). In the United Kingdom, it is now widely accepted that gathering evidence from young and vulnerable witnesses requires special care, and that subjecting them to traditional adversarial forms of examination and cross-examination is no longer acceptable (Evidence and Procedure Review Report [Section 2.1], Scottish Court Service, March, 2015; Spencer & Lamb, 2012). Evidence-based “Toolkits” (see Advocacy Training Council (ATC), 2011) have been introduced to provide continuing education and thus improve practice in England and Wales. Such toolkits should include empirically based recommendations to ensure that children understand the questions they are asked in court and feel comfortable expressing uncertainty.

In particular, the findings of the current study found that most children were not told on the record that they could express uncertainty when they did not know the answer to the questions asked, and it is not clear whether such instruction would have affected their willingness to respond in this way. Importantly, most expressions of uncertainty seemed to be offered when the children were unable to answer easily (i.e., recall-based prompts rather than recognition-based prompts), underlining the risks associated with the use of option-posing questions that make it easy for children to respond even when unsure of the correct answer. Furthermore, 13- to 15-year-olds were less likely overall than younger or older children to express uncertainty, perhaps because they were especially motivated to appear competent. It is therefore recommended that children and adolescents of all ages should be told the don't know/remember ground rule on record prior to substantive questioning. Lawyers should

practice the use of the don't know/remember ground rule to check children's understanding,

and the ground rule should be reiterated throughout proceedings.

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Table 1

Coding Definitions and Examples

	Code	Definition	Example
Elicitation type	Spontaneous	The child spontaneously responded with uncertainty.	Lawyer: "What did he touch you with?" Child: "I can't remember"
	Lawyer elicitation	The question contains reference to an expression of uncertainty, usually at the beginning or end of the question.	Lawyer: "How did that feel?" Child: "Not sure" Lawyer: "Do you remember what he touched you with?" Child: "No"
	In-answer	Either spontaneous or lawyer elicited, but as well as expressing uncertainty, the child provides some substantive information.	Lawyer: "How did that feel? Do you know?" Child: "Not sure" Lawyer: "Do you remember what he touched you with?" Child: "He touched my penis but I'm not sure what with."
Question type	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.	<p>“Where were you when that happened?”</p> <p>“Who did that to you?” [when “that” was previously mentioned by the child]</p>
	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.	<p>“Did you see his penis?”</p> <p>“Was he wearing underwear?”</p> <p>“Did she do that one time or more than one time?”</p> <p>“Was this Thursday or Saturday evening?”</p>
	Suggestive	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 lawyer or query the truthfulness of the child’s response.	<p>“He forced you to do that, didn’t he?”</p> <p>“Your dad told me that B. touched your private part. Did B. touch your private part?”</p> <p>Child: “He touched me.” Lawyer: “Did he touch your pee-pee over or under your clothes?” [when the child had not previously mentioned genital touching]</p> <p>“Did that really happen?”</p>
Centrality	Central	Questions that are plot-relevant, such as the	“Who touched you?”

		identification of main characters, the location and time of the incident, abusive actions. Changing any such central detail will change the plot of the incident described.	“How did he take your clothes off?”
	Peripheral	Questions that are related to the incident, yet are not plot-relevant. Changing such details will not change the plot of the incident described. Examples include descriptions of people, descriptions of places, descriptions of time, emotions, thoughts.	“Were you positioned on the bed when he did this?” “How were you feeling when he did that?” “Can you describe how your bedroom was laid out at the time?” “Alan did this. Okay. Does Alan have a beard?”
Content	Suspect	Focusing on the lawyer utterance, the specific content or information sought by the question is coded as suspect if it includes details regarding the suspect, suspect's actions, suspect's body parts, suspect's verbal statements, suspect's emotions or thoughts, or suspect's sensory perceptions. As with all content codes, the information provided in response by the child may or may not be the information sought.	“Who did that to you?” “Tell me about the man holding your arms.” “Tell me what you mean by his ‘wee-wee.’” “What did he say when he touched you?”
	Victim	The specific content or information sought by the question is coded as victim if it includes details regarding the victim, victim's actions, victim's body parts, victim's verbal statements, victim's emotions or thoughts, or victim's sensory perceptions.	“You ran out of the room?” “Where did he touch you?” “Did you yell?” “Tell me how you were feeling.”

Witness	The specific content or information sought by the question is coded as witness if it includes details regarding the witness, witness's actions, witness's body parts, witness's verbal statements, witness's emotions or thoughts, or witness's sensory perceptions.	<p>“Did you see anything?”</p> <p>“Who was in the same room?”</p> <p>“Your brother was watching, wasn't he?”</p> <p>“Tell me about what your brother said to the man.”</p> <p>“What did your brother see?”</p>
Contextual	The specific content or information sought by the question is coded as contextual if it includes details regarding locations, time, and objects.	<p>“Where did the man sit?”</p> <p>“Tell me about the shelter where K. took you.”</p> <p>“What time of year was it?”</p> <p>“Did that happen one time or more than one time?”</p> <p>“Where did the Vaseline come from?”</p>
Disclosure	The specific content or information sought by the question is coded as disclosure if it includes details regarding who the child disclosed to, the content of what was said during disclosure, when/where the disclosure occurred, the circumstances with which the disclosure occurred, the disclosure recipient's reactions, and	<p>“Who did you tell?”</p> <p>“Did your mum get angry after you told?”</p> <p>“How did you feel when you told?”</p> <p>“What did you tell your mum?”</p>

Prior formal questioning	subsequent actions. The specific content or information sought by the question is coded as prior formal questioning if it includes details regarding what the child said to police officers/social workers/medical professionals at the scene, off-records, and during forensic interviews, as well as what the child said earlier in testimony.	“Is that the same as what you said in your interview?” “Why is what is written in the interview transcript different from what you’re saying in court today?” “Officer D. told me that as you were leaving the room you turned to him and said you were making it up. Is that true?”
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Table 2

Proportions of Uncertain Responses by Question Type and Lawyer Role

Lawyer Role	Question Type							
	Invitation		Directive		Option-posing		Suggestive	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosecutor	.19	.03	.17	.01	.09	.01	.16	.02
Defence	.08	.03	.26	.03	.10	.01	.17	.02

Table 3

Proportions of Uncertain Responses by Question Type and Children's Age

Children's Age	Question Type							
	Invitation		Directive		Option-posing		Suggestive	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
12 and under	.19	.05	.18	.03	.09	.02	.20	.03
13 to 15	.05	.04	.21	.03	.07	.01	.12	.02
16 to 17	.17	.05	.25	.03	.13	.02	.17	.03

Table 4

Proportions of Uncertain Responses by Question Content

Question Content	<i>N</i>	Average <i>n</i> (<i>SD</i>)	<i>M</i>	<i>SD</i>
Suspect	56	67.64 (45.19)	.16	.02
Victim	56	89.68 (85.07)	.14	.02
Witness	56	63.89 (40.86)	.11	.01
Contextual	56	123.41 (87.71)	.14	.01
Disclosure	50	13.34 (13.47)	.06	.02
Prior formal questioning	53	30.68 (32.56)	.16	.02

Table 5

Proportions of Uncertain Responses by Lawyer Role and Children's Age

Children's Age	Lawyer Role			
	Prosecution		Defense	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
12 and under	.14	.02	.13	.03
13 to 15	.07	.02	.14	.03
16 to 17	.14	.02	.15	.03