

Child Witnesses in Scottish Criminal Courts

Samantha J. Andrews

Sidney Sussex College, University of Cambridge

May, 2017

This Dissertation is Submitted for the Degree of Doctor of
Philosophy

Preface

- This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text.
- It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text.
- It does not exceed the prescribed word limit for the relevant Degree Committee.

Reading Guidance

This PhD thesis is written in ‘paper’ format. There are 5 core research Chapters, each either published or under review in research journals. The 5 core research Chapters are sandwiched between an Introduction and Discussion that together form a 6th Chapter that has been accepted for publication in the legal journal, Criminal Law Review. The 6th Chapter was written as an invited special issue piece to summarize this program of research for a legal-practitioner audience.

Contents

Introduction.....	pg.004
Chapter 1 – Question Type.....	pg.011
Chapter 2 – Linguistic Complexity.....	pg.069
Chapter 3 – Question Repetition.....	pg.108
Chapter 4 – Question Content.....	pg.139
Chapter 5 – Expressions of Uncertainty.....	pg.177
Discussion.....	pg.215

Introduction

At least half of all cases tried in British criminal courts concern alleged sexual offences (Jory & Jones, 2016; Truss, 2017), and a large proportion of cases involving children as complainers relate to domestic abuse or sexual offences (Evidence and Procedure Review Report (EPRR), Scottish Court Service, 2015). Regardless of age, the witnesses in such cases are vulnerable since the accused will often represent (if the allegations are true) a source of fear for the witness, and the recounted events may be particularly traumatic, threatening, or harmful (EPRR [Section 2.2], 2015). It is now widely accepted that gathering evidence from young and vulnerable witnesses requires special care, and that subjecting them to the traditional adversarial form of examination and cross-examination – often characterized by overly leading, complex, and confusing questioning (Henderson, 2015) - is no longer acceptable (EPRR [Section 2.1], 2015; Spencer & Lamb, 2012).

Recently, the availability of special measures to support victims and witnesses giving evidence in court in Scotland (e.g., via a live TV link, section 271J; use of screens, section 271K; presence of a supporter, section 271L, Victims and Witnesses [Scotland] Act, 2014) has increased dramatically (Standards of Service for Victims and Witnesses, 2017), after calls for a more systematic approach to gathering evidence from children was made by the Lord President (Carloway, 2013). Furthermore, the fundamental proposition explored in the EPRR (2015) is that substantial improvements can be made to the administration of justice with the widespread use of pre-recorded evidence in place of testimony in court. The premise is that properly conducted witness interviews before trial are far more likely than belated appearances at court to elicit comprehensive, credible, and reliable accounts, as well as to improve case management (EPRR [Section 1.24], 2015; Westera, Kebbell, & Milne, 2013). The EPRR (2015) led to the development of two

working groups; one seeking to improve and extend the use of Joint Investigative Interviews (JIIs; i.e., forensic interviews conducted by police officers and social workers) as evidence-in-chief and the second focused on expanding the use of existing procedures for taking evidence by commissioner¹. A High Court of Justiciary Practice Note on Taking Evidence by a Commissioner was launched in March 2017, and is regarded as the next step in improving the way in which children and vulnerable witnesses are treated in Scotland (Dorrian, 2017). Similar procedures (that bring into force Section 28 of the Youth Justice and Criminal Evidence Act, 1999) have already been successfully piloted in England and Wales (Baverstock, 2016) and are due for national roll-out.

There is no doubt that such monumental changes proposed to the law, administrative infrastructure, and practical arrangements, represents a significant attitudinal shift in the criminal justice system. However, procedural changes alone are not enough to ensure that trials and verdicts are just and fair. Informed by decades of research investigating the best ways in which alleged victims of child abuse can be questioned by police and social service agencies to uncover both truth and deceit (see Granhag, Vrij, & Verschuere, 2014; Lamb, La Rooy, Malloy, & Katz, 2011), there has been recognition from practitioners (e.g., Dorrian, 2017; Henderson, 2015; Plotnikoff & Woolfson, 2015) and researchers (e.g., Andrews, Lamb, & Lyon, 2015; Zajac & Hayne, 2003) that the form and substance of traditional adversarial methods of questioning do not elicit best (i.e., full and accurate) evidence, especially from vulnerable witnesses. Although still disputed by some advocates, research and best-evidence practices have made clear that, if examination

¹Taking evidence by commissioner is currently considered only for the most vulnerable witnesses. In these instances, delays in testifying are deemed likely to 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).

and cross-examination are to be engines for discovering the *truth*, the nature of the questioning itself must be improved (Dorrian, 2017; Spencer & Lamb, 2012).

The judiciary in England and Wales have made considerable strides in this direction. For example, the use of registered intermediaries, who are neutral specialists (often speech and language therapists) bought in to facilitate the communication between particularly vulnerable witnesses and forensic practitioners during testimony, is becoming more accepted and widespread (Plotnikoff & Woolfson, 2009). “Toolkits” are also free resources provided by the Advocates Gateway, hosted by the Inns of Court College of Advocacy, for practitioners preparing to question vulnerable witnesses. Further, alongside the roll-out of pre-recorded evidence in place of testimony in court, England and Wales will implement Ground Rules Hearings (GRHs) at which judges can review and revise the questions to be asked of witnesses (Baverstock, 2016). Whilst the Scottish judiciary have not implemented these measures nor any mandatory training for practitioners, concerns have been raised that examination practices need to be more informed by our established knowledge of children’s developing capacities and limitations (Carloway, 2013; Dorrian, 2017).

Despite these changes to procedure and practice, and concern expressed by the judiciary (e.g., Carloway, 2013; Dorrian, 2017; Spencer & Lamb, 2012) about the risks associated with inappropriate procedures in relation to children’s testimony, no prior systematic quantitative research has been conducted investigating the nature of the direct- and cross-examinations of children in Scotland. Such research is necessary to provide a baseline against which the effectiveness of changes to procedure and practice can be measured, and to inform the necessity and extent of further changes. The present program of research was therefore designed to investigate four parameters of prosecutors and defense lawyers’ questions: question type [Chapter 1; Andrews, S. J. & Lamb, M.

E. (2016). How do lawyers examine and cross-examine children in Scotland? *Applied Cognitive Psychology*, 30(6), 953–971. doi: 10.1002/acp.3286], linguistic complexity [Chapter 2; Andrews, S. J. & Lamb, M. E. (2017). The structural linguistic complexity of lawyers' questions and children's responses in Scottish criminal courts. *Child Abuse & Neglect*, 65, 182-193. doi: 10.1016/j.chiabu.2017.01.022], question repetition [Chapter 3; Andrews, S. J. & Lamb, M. E. (2017, *in press*). Lawyers' question repetition and children's responses in Scottish criminal courts. *Journal of Interpersonal Violence, Advanced Online Publication*. doi: 10.1177/0886260517725739], and question content [Chapter 4; Andrews, S. J. & Lamb, M. E. (*under review*). Lawyers' question content and children's responses in Scottish criminal courts. *Psychology, Crime, & Law*.], how these parameters affected children's responses (including an in-depth analysis of the questions that affected children's propensity to express uncertainty [Chapter 5; Andrews, S. J., Ahern, E. C., & Lamb, M. E. (2017). Children's uncertain responses when testifying about alleged sexual abuse in Scottish courts. *Behavioral Sciences & the Law*, 35, 204-224. doi: 10.1002/bsl.2286]), and whether the children's ages affected how they were questioned or how they responded.

Permission for the research was sought and granted by the head of the Scottish judiciary: the Lord President and Lord Justice General at the time, Lord Gill. In order to attain the sample, the Court Service Team of the Scottish Court Service identified all cases conducted in six major criminal court-houses in Scotland between 2009 and 2014 in which alleged victims of child abuse aged 5 to 17 years old had testified. Forty-three trials involving a total of 74 children were identified. Recordings of the cases were located, and the portions of the trials in which the children testified were transcribed, coded, and analyzed. Cases involving children who needed the assistance of translators, retracted their sexual abuse allegations, or had many sections of inaudible or missing audio were

excluded from detailed coding and statistical analysis. The remaining 36 trials involved a total of 56 alleged victims of child sexual abuse.

For each of the Chapters, I was the lead author and conducted all of the sample collection, primary data coding, statistical analysis, primary interpretations, write-ups, and revisions. My supervisor and co-authors advised throughout this process and commented on drafts of each of the Chapters after they were written-up.

References

- Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology, 28*, 253-261.
doi: 10.1002/acp.3103
- Baverstock, J. (2016). Process evaluation of pre-recorded cross-examination pilot (Section 28). *Ministry of Justice Analytical Series*. Retrieved from:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/553335/process-evaluation-doc.pdf
- Carloway, C. S. (2013). *Scots criminal evidence and procedure – meeting the challenges and expectation of modern society and legal thinking*. Speech addressed to the Criminal Law Conference at Murrayfield. Retrieved from:
<http://www.scotlandjudiciary.org.uk/Upload/Documents/CriminalLawConferenceMurrayfield9May2013.pdf>
- Dorrian, L. (2017). *Speech for the Launch of Practice Note No 1. of 2017 - High Court of Justiciary Practice Note on Taking Evidence by a Commissioner*. Retrieved from:
<http://www.scotland-judiciary.org.uk/Upload/Documents/PNNo1of2017speechLJC28March2017.pdf>
- Evidence and Procedure Review Report, Scottish Court Service (2015). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/aboutscs/reports-and-data/reports-data/evidence-and-procedure-full-report---publication-version-pdf.pdf?sfvrsn=2>
- Granhag, P. A., Vrij, A., & Verschuere, B. (2014). *Detecting deception: Current challenges and cognitive approaches*. John Wiley & Sons, Ltd, Chichester, UK.

Henderson, E. (2015). Communicative competence? Judges, advocates and intermediaries discuss issues in the cross examination of vulnerable witnesses. *Criminal Law Review*, 659, 664-667.

High Court of Justiciary Practice Note on Taking Evidence by a Commissioner (2017). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/rules-and-practice/practice-notes/criminal-courts/criminal-courts---practice-note---number-1-of-2017.pdf?sfvrsn=4>

Jory, R. & Jones, S. (2016). The aged accused. *Counsel Magazine*. Retrieved from: <https://www.counselmagazine.co.uk/articles/the-aged-accused>

Lamb, M. E., La Rooy, D. J., Malloy, L. C., & Katz, C. (Eds.). (2011). *Children's testimony: A handbook of psychological research and forensic practice*. Chichester, UK: Wiley-Blackwell.

Plotnikoff, J. & Woolfson, R. (2015). *Intermediaries in the criminal justice system*. Bristol: Policy Press.

Plotnikoff, J. & Woolfson, R. (2009). Measuring up?. *Evaluating implementation of Government commitments to young witnesses in criminal proceedings*. Retrieved from: <https://nspcc.co.uk/globalassets/documents/research-reports/measuring-up-report.pdf>

Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to change the rules?* Oxford and Portland, Oregon: Hart Publishing.

Standards of Service for Victims and Witnesses (2017). *Open Government License*.

Retrieved from:

<http://www.copfs.gov.uk/images/Documents/Publications/Standards%20of%20Service/Standards%20of%20Service%202017-18%20FINAL%202.pdf>

Truss, L. (2017). BBC Question Time. 02/03/2017.

Victims and Witnesses [Scotland] Act, 2014. Retrieved from:

<http://www.legislation.gov.uk/asp/2014/1>

Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from:

<http://www.legislation.gov.uk/asp/2004/3>

Westera, N., Kebbell, M., & Milne, R. (2013). Losing two thirds of the story: A comparison of the video recorded police interview and live evidence of rape complainants. *Criminal Law Review*, 4, 290-308.

Youth Justice and Criminal Evidence [UK] Act 1999. Retrieved from:

<http://www.legislation.gov.uk/ukpga/1999/23>

Zajac, R. & Hayne, H. (2003). I don't think that's what really happened: the effect of cross-examination on the accuracy of children's reports. *Journal of Experimental Psychology: Applied*, 9, 187-195. doi: 10.1037/1076-898X.9.3.187

Chapter 1

How do lawyers examine and cross-examine children in Scotland?

Published in: Applied Cognitive Psychology

Samantha J. Andrews and Michael E. Lamb

University of Cambridge

Author Note

The authors are extremely thankful to the Court Service Team of the Scottish Court Service and the Typing and Secretarial Team of the Supreme Courts for their assistance with accessing cases and files, their hospitality throughout the transcription process, and their continued support. The authors are also greatly indebted to Katie Vernon, Rosie Barber, Zsófia Szojka, Guy Skinner, Elizabeth Ahern, Misun Yi, and Hayden Henderson for their assistance with data preparation and reliability coding.

QUESTIONING CHILDREN IN SCOTTISH COURTS

Abstract

In the first study to systematically assess lawyers' questioning of children in Scotland, we examined 56 trial transcripts of 5- to 17-year-old children testifying as alleged victims of sexual abuse, focusing on differences between prosecutors and defense lawyers with respect to the types of questions asked and effects on witnesses' responses. Prosecutors used more invitations, directives, and option-posing prompts than defense lawyers, who used more suggestive prompts than prosecutors. Children were more unresponsive and less informative when answering defense lawyers than prosecutors. All children contradicted themselves at least once, with defense lawyers eliciting more self-contradictions than prosecutors. Suggestive questions were most likely to elicit self-contradictions, with suggestive confrontational and introductory questions eliciting significantly more self-contradictions than suggestive suppositions. Children also acquiesced more in response to tagged suggestions than untagged suggestions. Overall, lawyers altered their behavior little in response to variations in children's ages.

QUESTIONING CHILDREN IN SCOTTISH COURTS

How do lawyers examine and cross-examine children in Scotland?

In adversarial jurisdictions, such as the United Kingdom, the United States, and New Zealand, cross-examination plays a critical role, since defendants have the right to challenge the evidence against them. However, recent experimental and field research, conducted primarily in the United States and New Zealand, has highlighted problems in the ways that prosecutors and defense lawyers question children in court, generating international interest, concern, and debate regarding the ways in which children's evidence should be presented and challenged. Remarkably, however, there has been no prior systematic quantitative research on the cross-examination of children in the United Kingdom, because proceedings are not routinely transcribed and are kept confidential by the courts. In England, Wales, and Northern Ireland, common-law principles prevail, whereas in Scotland there is a pluralistic system based on shared common-law principles combined with some unique civil-law principles. In particular, Scottish law requires that all evidence (including identification evidence) must be corroborated, and as a result children are called upon to testify more often and regarding a much wider range of crimes, than in the rest of the United Kingdom. Furthermore, precognition is a unique feature of Scottish law which requires that all witnesses must state their evidence before trial, so that advocates know in advance what evidence witnesses are likely to give and can thus better prepare their cross-examinations than can barristers in the rest of the United Kingdom. Further, forensic interviews are conducted in accordance with Joint Investigative Interview guidelines (Scottish Government, 2011) as opposed to Achieving Best Evidence guidelines (Home Office, 2011). All of these factors underline the importance of research examining cross-examination practices in a variety of common law jurisdictions, where differences like those enumerated above may profoundly affect what happens in court. Accordingly, the current research builds upon an unprecedented collaboration with the

QUESTIONING CHILDREN IN SCOTTISH COURTS

Scottish judiciary, which has publicly and privately expressed considerable concern recently about the risks associated with inappropriate procedures in relation to children's testimony. The study was designed to assess comprehensively how Scottish prosecutors and defense lawyers question children.

The cross-examination of witnesses is often deemed essential to protect the accused's right to a fair trial (e.g., Article 6 (3d), of the European Convention on Human Rights; Sixth Amendment to the U.S. Constitution). Courts have a duty to allow witnesses to give their best evidence (Home Office, 2011, section 5.8) but in adversarial jurisdictions, lawyers aim to undermine the opponents' witnesses, and they question child witnesses accordingly. In particular, lawyers may challenge witness credibility and persuade children to change details in their accounts, often by exploiting their developmental limitations. Such questioning techniques violate guidelines, based on an extensive body of experimental and field research, outlining the best ways to elicit truthful testimony (see Rush, Quas, & McAuliff, 2012; Spencer & Lamb, 2012) and raise serious questions about the extent to which courts ensure both that guilty suspects are convicted and that innocent suspects are not wrongly convicted.

Question Types and Children's Responses: Lessons from Psychological Research

The question types used to elicit accounts of children's experiences affect both the quantity and quality of the information obtained (see Lamb, La Rooy, Malloy, & Katz, 2011; Lamb, Malloy, Hershkowitz, & La Rooy, 2015; Saywitz, Lyon, & Goodman, 2011 for reviews). On the one hand, when questioned with open-ended free-recall prompts (e.g., "Tell me what happened."), children provide accounts that may be brief but are more likely to be accurate. Additional open-ended prompts can be used to follow-up and thus elicit elaborations or further details (e.g., "You mentioned X. Tell me more about that."). Even though younger children may produce shorter and less detailed accounts in response

QUESTIONING CHILDREN IN SCOTTISH COURTS

to open-ended questions than older children and adults (e.g., Eisen, Goodman, Qin, Davis, & Crayton, 2007; Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012; Lamb, Sternberg, Orbach, Esplin, Stewart, & Mitchell, 2003), their reports are no less accurate (e.g., Jack, Leov, & Zajac, 2014; Sutherland & Hayne, 2001) but the probability that responses will be erroneous increases considerably when children are questioned using closed-ended recognition prompts (e.g., “Did he touch you with his fingers?”), due to the false recognition of details and response biases (e.g., Jones & Pipe, 2002; Lamb, Orbach, Hershkowitz, Horowitz, & Abbott, 2007). Younger children are more likely than older children and adults to provide erroneous details in response to closed-ended questions (e.g., Waterman, Blades, & Spencer, 2001, 2004; see Melnyk, Crossman, & Scullin, 2007, for a review).

Suggestive prompts are most problematic because children, especially young children, may change details in their accounts and thus respond inconsistently, either by incorporating suggested information or acquiescing to perceived interviewer coercion (e.g., Bruck & Ceci, 1999; Bruck, Ceci, & Principe, 2006; Eisen, Qin, Goodman, & Davis, 2002; Lamb & Fauchier, 2001; London & Kulkofsky, 2010; Orbach & Lamb, 2001). Suggestive tag questions (e.g., “You’re lying, aren’t you?”) are especially detrimental (Lamb & Fauchier, 2001; Orbach & Lamb, 2001; Walker, Kenniston, & Inada, 2013). Recent research distinguishing between different types of suggestive prompts – confrontational, suppositional, and introductory - in forensic interviews (Orbach, Lamb, Hershkowitz, & Abbott, in press, see Table 1) found that children were twice as likely to acquiesce than resist interviewers’ suggestions. Contradictions were most likely to be elicited in response to suggestive introductory prompts, closely followed by suggestive confrontational prompts, although the latter elicited almost a third of all contradictory responses, despite accounting for only 5% of the total number of suggestive prompts.

QUESTIONING CHILDREN IN SCOTTISH COURTS

Younger children were asked fewer suggestive questions than older children, but were more likely to acquiesce in response to suggestive confrontational prompts, and were as likely to acquiesce in response to suggestive suppositional and introductory prompts.

To minimize the risk of eliciting erroneous information, therefore, best-practice guidelines for forensic interviewers encourage maximal reliance on free-recall prompts, advise against the use of closed-ended ‘yes/no’ questions, and strongly discourage suggestive utterances (American Professional Society on the Abuse of Children, 2012; Home Office, 2011, section 3.44; Lamb et al., 2015). However, defense lawyers are permitted to ask children misleading questions when testing their evidence in cross-examinations, even though this increases the chances that children will answer incorrectly (Henderson, 2002) and thus does not give children the opportunity to “give their best evidence”.

Types of Questions Asked by Lawyers in Court

Several recent studies have examined lawyer-child interactions using court transcripts from New Zealand (Hanna, Davies, Crothers, & Henderson, 2012 [18 cases]; Zajac & Cannan, 2009 [15 cases]; Zajac, Gross, & Hayne, 2003 [21 cases]) and the United States (Andrews, Ahern, Stolzenberg, & Lyon, in press [120 cases]; Andrews, Lamb, & Lyon, 2015a, 2015b [120 cases]; Klemfuss, Quas, & Lyon, 2014 [42 cases]; Stolzenberg and Lyon, 2014 [72 cases]). In New Zealand and throughout the United Kingdom, children’s direct testimony is provided to the court by way of pre-recorded forensic interviews, sometimes supplemented by direct examination by prosecutors at the time of trial. In the United States, by contrast, direct testimony is provided at the time of trial, without the use of pre-recorded testimony. In all of these jurisdictions, cross-examination takes place during the trial.

Although researchers have generally found that prosecutors ask more open-ended

QUESTIONING CHILDREN IN SCOTTISH COURTS

questions than defense lawyers, and that defense lawyers ask more suggestive questions than prosecutors (e.g., Zajac et al., 2003), both prosecutors and defense lawyers predominantly ask questions that could be answered “yes” or “no” (Hanna et al., 2012; Klemfuss et al., 2014; Stolzenberg & Lyon, 2014; Zajac & Cannan, 2009). In the most comprehensive study to date, Andrews et al. (2015a) examined a total of 48,716 question-response pairs, and found that lawyers used more closed-ended than open-ended prompts. Specifically, prosecutors used more invitations, directives, and option-posing prompts than defense lawyers, who used more suggestive prompts than prosecutors.

Because younger children are more suggestible and may produce less detailed answers than older children, it seems likely that lawyers may ask children of different ages different types of questions. However, the results of previous studies have again been somewhat inconsistent, likely because of methodological differences and the small numbers of cases included in most studies. Klemfuss et al. (2014) found that, with age, there was a significant decrease in the use of option-posing questions and an increase in the use of suggestive questions whereas Stolzenberg and Lyon (2014) found that lawyers were slightly more likely to ask younger children yes-no questions. However, both Zajac et al. (2003) and Andrews et al. (2015a) found no significant associations between children’s ages and the types of questions used by both prosecutors and defense lawyers.

Children’s Responsiveness and Productivity in Court

In forensic interviews, children who make allegations of abuse are responsive (acknowledge and attempt to engage with the question posed) to almost all the questions addressed to them (e.g., Lamb, Hershkowitz, Sternberg, Esplin, Hovav, Manor, & Yudilevitch, 1996; Sternberg, Lamb, Davies, & Westcott, 2001). Children’s productivity (in terms of the number of details reported) increases with age, especially in response to invitations (Lamb, Sternberg, & Esplin, 2000; Lamb et al., 2003), although very young

QUESTIONING CHILDREN IN SCOTTISH COURTS

children are most productive in response to open-ended directive questions (Hershkowitz et al., 2012). Children are also responsive in the courtroom. Both Andrews et al. (2015a) and Klemfuss et al. (2014) found that child witnesses were more often responsive than unresponsive, although Andrews et al. (2015a, in press) also reported that children were more responsive to prosecutors than defense lawyers and that productivity increased with age, with children more productive in response to open-ended prompts than closed-ended prompts. Similarly, Klemfuss et al. (2014) found that, with increasing age, children elaborated more (i.e., provided more information than was requested) in response to prosecutors' rather than defense lawyers' questions. Older children elaborated more in response to open-ended directive and closed-ended option-posing questions than did younger children, but there were no such differences with respect to suggestive questions. Unfortunately, the actual age range was unspecified, although the children averaged 12 years of age.

Children's Self-contradictions in Court

In adversarial jurisdictions, jurors often place a strong emphasis on report consistency when assessing testimony (e.g., Bruer & Pozzulo, 2014; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Semmler & Brewer, 2002). Although inconsistencies are reported by judges to have a small effect on trial outcomes (Connolly, Price, & Gordon, 2009), self-contradictory responses may reduce children's testimonial credibility (Home Office, 2011, section 2.214) and there is considerable interest in the extent to which testifying children might contradict themselves in court (e.g., Fisher, Brewer, & Mitchell, 2009).

Many laboratory analogue studies have shown that children are more likely to change their correct responses when cross-examined suggestively (e.g., Jack & Zajac, 2014; Fogliati & Bussey, 2014). For example, Fogliati and Bussey (2014) interviewed 120

QUESTIONING CHILDREN IN SCOTTISH COURTS

5- and 7-year-old children twice about a staged transgression. All children first underwent a direct-examination and then either a second direct- or cross-examination immediately afterwards. Children interviewed in the direct/direct condition were equally accurate in the two interviews, whereas children in the direct/cross condition were significantly less accurate when cross-examined. Although some researchers have shown that these effects are stronger for younger than for older children (e.g., Bettenay, Ridley, Henry, & Crane, 2014; Zajac & Hayne, 2006), Fogliati and Bussey (2014) reported no age differences in the number of errors elicited in cross-examinations, perhaps because the age difference between the groups was so small.

Much less is known about age differences in children's responses to direct- and cross-examination questions in real court cases. In New Zealand, Zajac et al. (2003) found that, regardless of age, children were more resistant and acquiescent in response to leading questions asked by defense lawyers rather than prosecutors. Children made no changes to their earlier statements in response to questions from prosecutors but 76% made changes under cross-examination, with 95% of these changes made in response to leading or credibility-challenging prompts. Moreover, Zajac and Cannan (2009) reported that both child and adult complainants were more likely to change their statements in response to questions from the defense than the prosecution. All of the adults and 93% of the children changed at least one response during cross-examination. Zajac and Cannan (2009) did not report how often prosecutors elicited self-contradictions and because the study was conducted in New Zealand where pre-recorded forensic interviews comprise the bulk of children's direct testimonies the researchers could not compare in-court testimony with the contents of the forensic interviews. In the United States, Andrews et al. (2015a) identified self-contradictions in 95% of the cases studied. Defense lawyers elicited more self-contradictions than prosecutors, but nearly all prosecutors (86%) elicited at least one self-

QUESTIONING CHILDREN IN SCOTTISH COURTS

contradiction. Suggestive questions elicited more self-contradictions than any other prompt type, regardless of age.

Current Study

There has been no previous research on cross examinations in the United Kingdom. The current study assessed the direct- and cross-examination of children in Scottish courts in a sample of transcripts involving 56 5- to 17-year-old children questioned in trials held between 2009 and 2014. Specifically, child age and lawyer role (prosecution/defense) were examined in relation to the types of questions asked. Child age, lawyer role, question types, and/or suggestive question subtypes were then further analyzed in relation to children's responsiveness, the frequency of self-contradictions, children's acquiescence and resistance to lawyers' suggestive questions, and children's productivity. To provide a comprehensive picture, and a foundation for further research, we further sought to explore the frequency with which substantive and non-substantive questions were asked, and whether this differed in relation to lawyer role and children's age. Judges' input was also described.

In light of previous findings, first, we predicted that lawyers would ask more closed-ended than open-ended questions, and that defense lawyers would be more likely than prosecutors to use suggestive prompts. Second, we predicted that defense lawyers would be more likely than prosecutors to elicit self-contradictions (because they used more suggestive questions). Third, we predicted that suggestive prompts would be most likely to elicit self-contradictions, and that children would be more acquiescent in response to defense lawyers' than prosecutors' suggestive questions. Finally, we predicted that the effects of closed-ended and suggestive questions would be more detrimental (i.e., lower responsiveness, more self-contradictions, and lower productivity) for younger than for older children, but, in light of previous findings (Andrews et al., 2015a, in press), that

QUESTIONING CHILDREN IN SCOTTISH COURTS

there would be no age differences in lawyers' use of question types and suggestive question subtypes.

Method

Sample

The Court Service Team of the Scottish Court Service identified all cases conducted in six major court-houses in Scotland between 2009 and 2014 in which alleged victims of child abuse had testified. Forty-three trials were identified. Recordings of the cases were located, and the portions of the trials in which the children testified were transcribed. Cases involving children who needed the assistance of translators or retracted their sexual abuse allegations or had many sections of inaudible or missing audio were excluded. Transcripts of 36 trials involving a total of 56 alleged victims of child sexual abuse were eligible for use in the current 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 in the present study involved at least 25 different prosecutors, 24 different defense lawyers, and 22 different judges. There were 9 transcripts for which this information could not be determined.

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 of between 5 and 17 years of age ($M = 13.99$, $SD = 2.69$). Due to the negative skew, children were categorized on the basis of age at the time of trial into 3 groups: 12-year-olds and under ($n = 15$), 13- to 15-year-olds ($n = 26$), and 16- and 17-year-olds ($n = 15$). These categories were chosen because they accord with the Sexual Offences Act (2003): 16 years is the age of sexual consent, but children under 13 years old can never legally give

QUESTIONING CHILDREN IN SCOTTISH COURTS

sexual consent. No information was available concerning the children's socioeconomic and ethnic backgrounds.

All defendants were male. In 95% ($n = 53$) of the cases, 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 were accorded 'special measures' when they testified. All courts were closed to the public. Four children received no other special measures. Other children gave evidence in court with screen and a supporter present ($n = 15$), or just a supporter present ($n = 5$). The remaining children gave evidence via a live TV link either with a supporter present ($n = 21$) or without a supporter 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 and judges' questions and input were coded.

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).

QUESTIONING CHILDREN IN SCOTTISH COURTS

Non-substantive. Lawyers' statements or questions that were not focused on the incident under investigation were coded as non-substantive. Inaudible prompts were also coded as non-substantive. Non-substantive prompts were classified into one of four categories: procedural, anchor, rapport, and inaudible (see Table 1 for definitions and examples).

Substantive. Substantive utterances or responses were defined as those designed to elicit or provide information about what happened during the alleged incidents, what immediately preceded or followed the alleged incidents, within-incident interventions (e.g., unexpected interruptions exposing the abuse) and 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 said happened in the forensic interview).

Question types. Lawyers' substantive utterances were categorized into one of fifteen subtypes (see Table 1). To increase statistical power for some analyses, prompt type was also collapsed into the five categories commonly used to differentiate among interviewer utterances in forensic interviews (e.g., Lamb, Hershkowitz, Orbach, & Esplin, 2008): facilitators, invitations, directive, option-posing, and suggestive prompts (see Table 1).

Suggestive question subtypes. Suggestive questions were further categorized into one of twelve subtypes (using a coding system designed by Orbach et al., in press). Definitions and examples of each type are provided in Table 1. To increase statistical power for some analyses, suggestive question subtype was also collapsed into 3 categories: suggestive confrontation, suggestive supposition, and suggestive introduction. All suggested prompts were also coded for whether they were tagged or untagged (see Table 1).

QUESTIONING CHILDREN IN SCOTTISH COURTS

Children's responses.

Responsiveness. Children's responsiveness was categorized exhaustively into one of two categories: responsive and unresponsive. Definitions and examples of each category are provided in Table 1.

Self-contradictions. Self-contradictions were defined as responses that negated what the children had previously disclosed during the proceedings or provided conflicting information (see Table 1).

Acquiescence and resistance to suggestive questions. Children's responses to suggestive prompts were categorized as either acquiescent or resistant in relation to the suggestive confrontation, supposition, or input (see Table 1).

Productivity. The number of new details conveyed by the child in each substantive response was tabulated using a procedure described by Lamb et al. (1996). Details were the smallest unit for analyzing information provided by children pertaining to the alleged incidents. 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 interview (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.

Inter-rater Reliability

QUESTIONING CHILDREN IN SCOTTISH COURTS

Another rater independently coded 20% of the transcripts that were randomly selected. The identification and classification of substantive and non-substantive prompts, non-substantive prompt classification, acquiescent versus resistant responses, and suggestive tag coding achieved 100% reliability. Inter-rater reliability in the classification of question subtypes was high, $K = .89$ ($SE = .02$), 95% CI [.85, .93], as was the agreement when coding suggestive question subtypes, $K = .83$ ($SE = .04$), 95% CI [.75, .91], children's responsiveness, $K = .96$ ($SE = .01$), 95% CI [.94, .98], self-contradictions, $K = .85$ ($SE = .05$), 95% CI [.75, .95], and productivity, $K = .83$ ($SE = .06$), 95% CI [.71, .95]. Reliability assessments were performed throughout the duration of coding and all disagreements were resolved by discussion.

Results

Analytical Plan

A series of preliminary discriminant function analyses were first conducted to determine whether gender, case verdicts, and the number of children testifying in each case should be considered further. Research questions were addressed using descriptive and repeated-measures analyses of variance (RM-ANOVAs), with children's age entered as the between-subjects variable (12 years old and under, 13 to 15 years old, 16 and 17 years old), and all other variables entered as within-subjects repeated-measures factors: lawyer role (prosecutor, defense), substantive question types (facilitators, invitations, directives, option-posing, suggestive prompts), suggestive question subtypes (suggestive confrontation, suggestive supposition, suggestive introduction), responsiveness (responsive), tag questions (tagged), self-contradictions (contradictions), children's acquiescence/resistance (resistance), and children's productivity. The within-subjects repeated measure scores (apart from children's productivity) were converted into proportional values by dividing the cell count of interest (e.g., number of suggestive

QUESTIONING CHILDREN IN SCOTTISH COURTS

questions asked by defense lawyers) by the appropriate grouping total (e.g., the total number of substantive questions asked by defense lawyers). Using proportional values controls for the number of questions asked by each lawyer and the number of responses per child, and also helps normalize data distributions. All variables entered into parametric tests were normally distributed. When Mauchly's test of sphericity was violated, Greenhouse-Geisser corrections were applied. 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 effect sizes. Simple effects analyses (with Bonferonni corrections) were used to follow-up significant three-way interactions, and pairwise comparisons (with Bonferonni corrections) were used to follow-up significant two-way interactions. Exploratory analyses of non-substantive prompts (within-subjects repeated-measure: procedural prompts, anchors, rapport-building) and judge's questioning are also reported.

Preliminary Analyses

Discriminant function analyses revealed no significant effects for gender, case verdicts, and the number of children testifying in each case with respect to the proportional frequency of lawyers' questions, question types, and children's responses and thus these factors were not included in any of the analyses reported below.

Questioning Frequency

In total, an average of 509.25 ($SD = 320.79$, $n = 28,518$) questions were identified in each transcript. Of these, an average of 92.73 ($SD = 95.36$, $n = 5,193$) were non-substantive prompts and 416.52 ($SD = 250.86$, $n = 23,325$) were substantive prompts. Prosecutors asked children an average of 307.77 ($SD = 235.20$, $n = 17,235$) questions; 55.30 ($SD = 73.71$, $n = 3,097$) non-substantive prompts, and 252.46 ($SD = 181.98$, $n = 14,138$) substantive prompts. Defense lawyers asked children an average of 201.48 ($SD =$

QUESTIONING CHILDREN IN SCOTTISH COURTS

142.84, $n = 11,283$) questions; 37.43 ($SD = 35.73$, $n = 2,096$) non-substantive prompts, and 164.05 ($SD = 116.05$, $n = 9,187$) substantive prompts.

An RM-ANOVA conducted to identify associations between children's age and the proportion of non-substantive and substantive questions asked by prosecutors and defense lawyers revealed a significant main effect for examination phase, $F(1, 53) = 506.04$, $p < .001$, $\eta_p^2 = .91$. There were significantly more substantive ($M = .80$, $SD = .02$) than non-substantive ($M = .18$, $SD = .02$) questions posed. Results also revealed a significant interaction between phase and children's age, $F(2, 53) = 6.97$, $p = .002$, $\eta_p^2 = .21$. Children 12 years old and under were asked significantly more non-substantive ($M = .24$, $SD = .03$) and fewer substantive questions ($M = .73$, $SD = .03$) than children aged 13 to 14 years old ($M = .13$, $SD = .02$; $M = .86$, $SD = .02$) and 16 and 17 years old, ($M = .16$, $SD = .03$; $M = .80$, $SD = .03$), respectively. This two-way interaction was further qualified by a three-way interaction between lawyer role, examination phase, and children's age, $F(2, 53) = 3.72$, $p = .03$, $\eta_p^2 = .12$. Children aged 12 years and under were significantly more likely than 13- to 15-year-olds and 16- and 17-year-olds to be asked more non-substantive and fewer substantive prompts by prosecutors. On the other hand, 16- and 17-year-olds and children aged 12 years and under were significantly more likely than 13- to 15-year-olds to be asked more non-substantive and fewer substantive prompts by defense lawyers (see Table 2). There were no other significant main or interaction effects.

Substantive Questions

Totals, average frequencies, and average proportions of substantive prompt type subcategories by lawyer role are presented in Table 3. Unclassified questions were excluded from the following analyses. An RM-ANOVA conducted to identify associations between children's age and the proportion of substantive question types asked by prosecutors and defense lawyers revealed a significant main effect for question type,

QUESTIONING CHILDREN IN SCOTTISH COURTS

$F(2.20, 116.43) = 309.21, p < .001, \eta_p^2 = .85$. Children were prompted significantly less often using facilitators ($M = .02, SD = .01$) than directive ($M = .17, SD = .01$), option-posing ($M = .42, SD = .01$), or suggestive ($M = .32, SD = .01$) prompts, and prompted significantly less with invitations ($M = .02, SD = .002$) than with directive, option-posing, and suggestive prompts. Further, children were prompted significantly less with directive than with option-posing and suggestive prompts, and were prompted significantly less with suggestive than option-posing prompts. There was also a question type by lawyer role interaction, $F(2.19, 116.52) = 114.23, p < .001, \eta_p^2 = .68$. Prosecutors prompted children with significantly more invitations, directive, and option-posing prompts than did defense lawyers, whereas the latter prompted children with significantly more suggestive prompts than did prosecutors (see Table 3). The two-way interaction was further qualified by a three-way interaction between question type, lawyer role, and children's age, $F(4.39, 116.52) = 5.55, p < .001, \eta_p^2 = .17$. Children aged 12 years and under were asked significantly fewer option-posing questions than 13- to 15- and 16- and 17-year-olds by prosecutors. When questioned by defense lawyers, children aged 12 years and under were prompted with significantly more facilitators, directives, and option-posing questions than 13- to 15- and 16- and 17-year-olds. More suggestive prompts were offered to children aged 13 to 15 years than children aged 12 years and under and 16- and 17-year-olds by defense lawyers (see Table 4). There were no other significant effects.

Suggestive Question Subtypes

An age x suggestive question subtype x lawyer role RM-ANOVA revealed a main effect for suggestive question subtype, $F(1.76, 87.90) = 151.81, p < .001, \eta_p^2 = .75$. Suggestive introductory questions ($M = .64, SD = .02$) were asked more than suggestive confrontational ($M = .19, SD = .02$) and suggestive suppositional ($M = .18, SD = .01$) questions (see Table 5). There was also an interaction between suggestive question

QUESTIONING CHILDREN IN SCOTTISH COURTS

subtype and children's age, $F(3.52, 87.90) = 3.16, p = .02, \eta_p^2 = .11$. Children aged 12 years and under were asked more suggestive confrontational ($M = .25, SD = .03$) and suggestive suppositional ($M = .22, SD = .03$) questions, and fewer suggestive introductory questions ($M = .55, SD = .04$), than 13- to 15-year-olds ($M = .16, SD = .02; M = .18, SD = .02; M = .67, SD = .03$) and 16- and 17-year-olds ($M = .18, SD = .03; M = .16, SD = .03; M = .66, SD = .04$), respectively. There was also an interaction between lawyer role and suggestive question subtype, $F(1.80, 90.18) = 14.16, p < .001, \eta_p^2 = .22$. Defense lawyers asked more confrontational questions than prosecutors, whereas prosecutors made more suggestive suppositions than defense lawyers. Prosecutors and defense lawyers were equally likely to pose suggestive introductory questions (see Table 5). There were no other significant effects.

A separate RM-ANOVA conducted to investigate associations between children's age and the proportion of suggestive tag questions asked by prosecutors and defense lawyers revealed a significant main effect for lawyer role, $F(1, 53) = 17.76, p < .001, \eta_p^2 = .25$. Defense lawyers asked proportionally more tag questions ($M = .18, SD = .03$) than prosecutors ($M = .05, SD = .02$). Importantly, there was no significant interaction between children's age and the proportion of suggestive tag questions asked by prosecutors and defense lawyers.

Children's Responses

Children responded to 4,506 of the 5,193 non-substantive prompts with non-substantive responses, 207 with substantive responses, 89 responses were inaudible, and 391 were unclassified. They responded to 21,908 of the 23,325 substantive prompts with substantive responses, 1,079 with non-substantive responses, 260 responses were inaudible, and 78 were unclassified. The remaining analyses focus on substantive question and answer pairs only ($n = 21,908$).

QUESTIONING CHILDREN IN SCOTTISH COURTS

Children's Responsiveness

Children were almost always responsive ($M = .96$, $SD = .004$). To ensure adequate statistical power, three separate tests were conducted to investigate children's responsiveness. Facilitators were excluded from the following analyses. The first RM-ANOVA was conducted to identify associations between children's age and children's responsiveness when prompted with different question types by prosecutors and defense lawyers. The test revealed a significant main effect for question type, $F(2.11, 110.19) = 16.24$, $p < .001$, $\eta_p^2 = .24$. Children were significantly more responsive to invitations ($M = .99$, $SD = .01$) than any other question type. Children were less responsive when answering directive questions ($M = .93$, $SD = .01$) than when answering option-posing questions ($M = .96$, $SD = .004$) or suggestive questions ($M = .96$, $SD = .01$). Furthermore, there was a significant two-way interaction with question type and children's age, $F(4.24, 110.19) = 2.81$, $p = .03$, $\eta_p^2 = .10$. Children aged 12 years and under were less responsive to directives ($M = .90$, $SD = .02$) than children aged 13 to 15 years old ($M = .95$, $SD = .01$) and 16- and 17-year-olds ($M = .95$, $SD = .02$). There were no other significant main or interaction effects.

Second, a RM-ANOVA was conducted to investigate differences in children's responsiveness and suggestive question subtype. There was no significant main effect, $F(1.32, 72.33) = 3.09$, $p = .07$, $\eta_p^2 = .05$. However, children were significantly less responsive to suggestive confrontational questions ($M = .92$, $SD = .02$) than suggestive introductory questions ($M = .96$, $SD = .004$) and suggestive suppositional questions, $M = .95$, $SD = .01$).

A paired-samples t-test showed that children were significantly less responsive to tagged questions ($M = .86$, $SD = .31$) than untagged questions ($M = .95$, $SD = .04$), $t(55) = 2.18$, $p = .03$, $d = .41$, 95% CI [.01, .18].

QUESTIONING CHILDREN IN SCOTTISH COURTS

Self-contradictions

In total, 973 contradictions were identified, constituting 4.4% of all children's responses. All children contradicted themselves at least once. Table 6 provides descriptive statistics for children's self-contradictions by question type and lawyer role. To ensure adequate statistical power, three separate tests were conducted to investigate children's self-contradictions. An RM-ANOVA conducted to investigate associations between children's age and children's self-contradictions when prompted using different question types by prosecutors and defense lawyers revealed a significant main effect for question type, $F(2.21, 117.37) = 57.02, p < .001, \eta_p^2 = .52$. Invitations ($M = .004, SD = .002$) elicited significantly fewer self-contradictions than option-posing questions ($M = .02, SD = .003$). Suggestive questions ($M = .10, SD = .01$) elicited significantly more self-contradictions than any other question types (directives, $M = .02, SD = .01$; facilitators, $M = .01, SD = .01$). There was also a significant interaction between question type and children's age, $F(4.43, 117.37) = 2.53, p = .04, \eta_p^2 = .09$. More self-contradictions were elicited from children aged 12 years and under ($M = .13, SD = .02$) and 16- and 17-year-olds ($M = .10, SD = .02$) than from 13- to 15-year-olds ($M = .07, SD = .01$) when they were suggestively prompted. A significant interaction between lawyer role and children's age, $F(2, 53) = 4.10, p = .02, \eta_p^2 = .13$ showed that prosecutors elicited significantly more self-contradictions from 16- and 17-year-olds ($M = .04, SD = .01$) than 13- to 15-year-olds ($M = .02, SD = .01$). There was no difference between children aged 12 years and under ($M = .03, SD = .01$) and those in the other age groups when questioned by prosecutors. However, defense lawyers were significantly more likely to elicit self-contradictions from children aged 12 years and under ($M = .04, SD = .01$) than from 13- to 15-year-olds ($M = .03, SD = .004$) and 16- and 17-year-olds ($M = .02, SD = .01$). There were no other significant main or interaction effects.

QUESTIONING CHILDREN IN SCOTTISH COURTS

An RM-ANOVA conducted to investigate associations between the proportion of self-contradictions and suggestive question subtype revealed a significant main effect for suggestive question subtype, $F(1.67, 92.05) = 6.42, p = .004, \eta_p^2 = .11$. Suggestive suppositional questions ($M = .02, SD = .003$) elicited significantly fewer self-contradictions than suggestive confrontational ($M = .04, SD = .01$) and suggestive introductory ($M = .04, SD = .004$) questions. A paired-samples t-test showed no significant difference between the proportion of self-contradictions in response to suggestive tagged and untagged questions, $t(55) = 1.77, p = .08$.

Children's Acquiescence/Resistance to Suggestive Questions

Of the 6,361 suggestive question-response pairs, children acquiesced to the suggestion 68.46% of the time ($n = 4,355$), and resisted the suggestion 28.86% of the time ($n = 1,836$). In 170 (2.57%) instances, the children's responses were unclassified as their acquiescence or resistance was not clear. Unclassified responses were excluded from the following analyses. An RM-ANOVA conducted to investigate associations between children's age and the proportion of suggestive question subtypes asked by prosecutors and defense lawyers that were resisted revealed a significant main effect for lawyer role, $F(1, 53) = 18.61, p < .001, \eta_p^2 = .26$. Children resisted defense lawyers' suggestive questions ($M = .37, SD = .03$) significantly more than prosecutors' ($M = .23, SD = .03$). There was also a significant main effect for suggestive question subtype, $F(1.54, 81.58) = 46.42, p < .001, \eta_p^2 = .47$. Children resisted suggestive confrontational questions ($M = .49, SD = .04$) significantly more than suggestive suppositional ($M = .26, SD = .03$) and suggestive introductory ($M = .14, SD = .01$) questions. Children resisted suggestive suppositional questions significantly more than suggestive introductory questions. Lastly, there was a significant interaction between lawyer role and suggestive question subtype, $F(1.37, 72.42) = 4.45, p = .03, \eta_p^2 = .07$. Children resisted significantly more in response

QUESTIONING CHILDREN IN SCOTTISH COURTS

to confrontational questions when prompted by defense lawyers ($M = .61, SD = .04$) than when prompted by prosecutors ($M = .36, SD = .06$). Similarly, children resisted significantly more in response to suggestive suppositional questions when prompted by defense lawyers ($M = .33, SD = .04$) than when prompted by prosecutors ($M = .19, SD = .03$), and significantly more in response to suggestive introductory questions when prompted by defense lawyers ($M = .16, SD = .02$) than when prompted by prosecutors ($M = .12, SD = .02$). There were no other significant main or interaction effects. A paired-samples t-test showed that children were significantly less resistant in response to tagged ($M = .15, SD = .19$) than untagged questions ($M = .28, SD = .13$), $t(55) = 4.50, p < .001, d = .79, 95\% CI [.07, .18]$.

Children's Productivity

Descriptive statistics for children's productivity by substantive question subtype and lawyer role are presented in Table 7. Unclassified questions were excluded from the following analyses. An RM-ANOVA conducted to investigate associations between the productivity of children of different ages when answering different question types asked by prosecutors and defense lawyers revealed a significant main effect for lawyer role, $F(1, 53) = 57.26, p < .001, \eta_p^2 = .52$. Children were more productive in response to prosecutors ($M = 2.08, SD = .18$) than defense lawyers ($M = .86, SD = .07$). There was also a significant two-way interaction between lawyer role and children's age, $F(2, 53) = 7.24, p = .002, \eta_p^2 = .22$. Children aged 12 years and under were less productive in response to prosecutors ($M = 1.39, SD = .33$) than were 13- to 15-year-olds ($M = 2.74, SD = .25$) and 16- and 17-year-olds ($M = 2.13, SD = .33$). Further, there was a significant main effect for question type, $F(1.86, 98.41) = 9.75, p < .001, \eta_p^2 = .16$. Children were significantly more productive in response to invitations ($M = 2.19, SD = .33$) than to option-posing prompts ($M = 1.04, SD = .06$), suggestive prompts ($M = 1.05, SD = .05$), and facilitators ($M = 1.20,$

QUESTIONING CHILDREN IN SCOTTISH COURTS

$SD = .19$). Children were also significantly more productive in response to directives ($M = 1.88$, $SD = .13$) than option-posing prompts, suggestive prompts, and facilitators. Lastly, there was a significant interaction between lawyer role and question type, $F(1.67, 88.51) = 19.41$, $p < .001$, $\eta_p^2 = .27$. Children were significantly more productive in response to all question types when prompted by prosecutors than when prompted by defense lawyers (see Table 7). There were no other significant main or interaction effects.

An RM-ANOVA conducted to investigate mean productivity associations between children of different ages when answering different suggestive question subtypes asked by prosecutors and defense lawyers revealed a significant main effect for suggestive question subtype, $F(1.86, 98.70) = 34.74$, $p < .001$, $\eta_p^2 = .40$. Suggestive confrontational questions ($M = .52$, $SD = .08$) were significantly less productive than suggestive suppositional ($M = 1.22$, $SD = .09$) and suggestive introductory ($M = 1.04$, $SD = .05$) questions. Further, there was a significant interaction between lawyer role and suggestive question subtype, $F(1.65, 87.63) = 9.31$, $p = .001$, $\eta_p^2 = .15$. Children were more productive in response to prosecutors' ($M = 1.56$, $SD = .14$) than defense lawyers' suggestive suppositions ($M = .88$, $SD = .12$). Lastly, there was a significant interaction between lawyer role and children's age, $F(2, 53) = 8.56$, $p = .001$, $\eta_p^2 = .24$. Children aged 12 years and under were less productive in response to prosecutors and more productive in response to defense lawyers ($M = .66$, $SD = .14$; $M = 1.04$, $SD = .12$) than children aged 13 to 15 years old ($M = 1.19$, $SD = .10$; $M = .75$, $SD = .09$) and 16- and 17-year-olds ($M = 1.20$, $SD = .14$; $M = .71$, $SD = .12$), respectively. There were no other significant main or interaction effects. A paired-samples t-test showed that children were significantly less productive in response to tagged questions ($M = .83$, $SD = .55$) than untagged questions ($M = 1.04$, $SD = .32$), $t(55) = 2.65$, $p = .01$, $d = .47$, 95% CI [.05, .37].

Non-substantive Questions

QUESTIONING CHILDREN IN SCOTTISH COURTS

Totals, average frequencies, and average proportions of non-substantive prompt types by lawyer role are presented in Table 8. Due to small frequencies, inaudible prompts were excluded from the following analyses. An RM-ANOVA conducted to identify associations between children's age and the proportion of non-substantive prompt types asked by prosecutors and defense lawyers revealed a significant main effect for non-substantive prompt type, $F(1.83, 93.46) = 38.26, p < .001, \eta_p^2 = .43$. Children were significantly more likely to be questioned using procedural prompts ($M = .51, SD = .03$) than any other non-substantive prompt type. Children were prompted with anchors ($M = .30, SD = .03$) significantly more than rapport-building prompts ($M = .15, SD = .02$). There was also a two-way interaction between non-substantive question type and age, $F(3.67, 93.46) = 3.46, p = .13, \eta_p^2 = .12$. Children aged 12 years and under received significantly more rapport-building prompts ($M = .28, SD = .04$) than 13- to 15-year-olds ($M = .11, SD = .03$) and 16- and 17-year-olds ($M = .07, SD = .04$). Children aged 13 to 15 years old received more procedural prompts ($M = .57, SD = .04$) than children aged 12 years and under ($M = .46, SD = .05$), and 16- and 17-year-olds ($M = .50, SD = .05$). Lastly, 16- and 17-year-olds received more anchors ($M = .36, SD = .03$), than children aged 12 years and under ($M = .25, SD = .05$) and 13- to 15-year-olds ($M = .30, SD = .04$). There were no other significant main or interaction effects.

Judge's Questioning

Judges asked children 1,682 questions. Of these, 1,469 (87.33%) were non-substantive and 213 (12.66%) were substantive (see Table 9). Judges asked no suggestive tag questions. In response to substantive questions, children answered substantively 91.55% ($n = 195$) of the time. Of the substantive responses, children were responsive to questions 87.18% ($n = 170$) of the time, and unresponsive 12.82% ($n = 25$) of the time. In response to suggestive questions, children acquiesced 57.45% ($n = 27$) of the time and

QUESTIONING CHILDREN IN SCOTTISH COURTS

resisted 42.55% ($n = 20$) of the time. In total, judges elicited 9 self-contradictions from children.

Discussion

This first examination of lawyer-child witness interactions in Scottish courts yielded a number of findings that can assist in the evaluation and implementation of currently proposed changes to practices adopted in courts throughout the United Kingdom and other common law jurisdictions. Additionally, documenting the Scottish experience is important since Scotland is distinct from other common law jurisdictions such as England and Wales and New Zealand because all evidence must be corroborated, ‘precognition’ requires pre-trial disclosure of all evidence, and forensic interviews are conducted in accordance with Joint Investigative Interview guidelines, which differ from those employed in other parts of the United Kingdom.

As predicted, prosecutors were significantly more likely than defense lawyers to use invitations, directives, and option-posing prompts, whereas defense lawyers were significantly more likely than prosecutors to use suggestive prompts. Previous studies had shown that prosecutors used more open-ended prompts whereas defense lawyers used more suggestive prompts (Andrews et al., 2015a; Klemfuss et al., 2014; Stolzenberg & Lyon, 2014) but the present findings also made clear that the difficulties children face in court are not solely attributable to cross-examination by defense lawyers. Prosecutors, too, used more closed-ended than open-ended prompts, were most likely to use option-posing prompts, and virtually never asked invitations. Indeed, the same was true of judges, too, although the majority of the questions they asked were non-substantive. These results appear inconsistent with findings that prosecutors in New Zealand predominantly asked open-ended questions (Zajac et al., 2003), but are consistent with subsequent research in New Zealand showing that prosecutors predominantly used closed-ended questions

QUESTIONING CHILDREN IN SCOTTISH COURTS

(Hanna et al., 2012; Zajac & Cannan, 2009). Moreover, they highlight the value of distinguishing between invitations, which elicit rich and detailed responses from children and are almost never asked in court, and directives, which elicit shorter responses (Lamb et al., 2008). In comparison to lawyers in the United States (Andrews et al., 2015a), prosecutors in Scotland used similar types of questions, but the Scottish defense lawyers used fewer directives (.08 vs. .13), fewer option-posing prompts (.37 vs. .46), and more suggestive questions (.49 vs. .42) than Californian defense lawyers.

As further predicted, both prosecutors and defense lawyers elicited a substantial number of inconsistencies. Although self-contradictions were proportionally rare, all children contradicted themselves at least once. Self-contradictions constituted 2.7% of all children's responses to prosecutors' questions and 6.5% of all responses to defense lawyers' questions. Interestingly, these findings are very similar to those found in Andrews et al.'s (2015) study of Californian cases (2.5% and 6.4%, respectively). Other researchers have similarly shown that most children provide some inconsistent responses when questioned in court and that more inconsistencies are elicited by defense lawyers than by prosecutors (Zajac & Cannan, 2009; Zajac et al., 2003), but self-contradictions in response to prosecutors' questions were much more common in this study and in Andrews et al.'s (2015a) study. Zajac et al. (2003) reported no self-contradictions in response to prosecutors and a range of 1 to 16 self-contradictions ($M = 3.56$) in response to defense lawyers. Zajac and Cannan (2009) reported an average of 1.03 and 5.03 self-contradictions in the direct- and cross-examinations, respectively, with an absolute range of 0-20. They noted that defense lawyers elicited self-contradictions in 93% of the cases, but did not report the percentage of cases in which prosecutors did so. As previously noted by Andrews et al. (2015a), these discrepancies can be explained by differences in the length of the transcripts examined. Both direct- and cross-examinations in the present study and

QUESTIONING CHILDREN IN SCOTTISH COURTS

in Andrews et al.'s (2015a) study were much longer on average than those analyzed by Zajac and Cannan (2009) and Zajac et al (2003). Direct-examinations in particular were longer, probably because the New Zealand prosecutors relied to a large extent on children's pre-recorded statements. Since Zajac and her colleagues did not have access to those videotapes, they could not determine the extent to which children's in-court testimony contradicted their videotaped testimony.

Suggestive questioning places pressure on children to reconsider and change their previous responses; both experimental (e.g., Jack & Zajac, 2014; Fogliati & Bussey, 2014; Zajac & Hayne, 2003) and field (Zajac et al., 2003; this study) research has shown that children are most likely to change their answers when questioned using closed-ended suggestive prompts. In the present study, suggestive questions were more likely to elicit self-contradictions than closed-ended option-posing prompts, open-ended directives, and invitations, while option-posing questions were more likely to elicit self-contradictions than invitations. A novel examination of different types of suggestive questions showed that suggestive introductory questions were asked more often than suggestive suppositional and confrontational questions. Prosecutors posed more suggestive suppositional questions than defense lawyers, whereas, unsurprisingly, defense lawyers posed more suggestive confrontational questions than prosecutors, and children acquiesced more in response to defense lawyers' suggestions than prosecutors'. As in Orbach et al.'s (in press) study of forensic interviews, both suggestive confrontational and suggestive introductory questions elicited significantly more self-contradictions from children than suggestive suppositions. Suggestive confrontational questions are relatively easy to spot, and thus can be monitored by the court and possibly restricted when necessary. However, suggestive suppositional and introductory questions, as illustrated in Table 1, are less easy to identify, and involve lawyers assuming and introducing

QUESTIONING CHILDREN IN SCOTTISH COURTS

information not previously mentioned by the children. The present findings are thus concerning because children acquiesced to suggestive questions almost 70% of the time, particularly when they were formulated as suggestive introductory questions.

It is widely acknowledged that tagged questions are highly suggestive and persuasive (see Plotnikoff & Wolfson, 2007; Spencer & Lamb, 2012), and, given their complexity (Walker et al., 2013), there have been calls for judges to restrict the use of tag questions, particularly when directed to the youngest children (Judicial College [fairness in courts and tribunals], 2010; R v Barker, 2010). However, 6% of all prosecutors' and 25% of all defense lawyers' suggestive questions in the present study were tagged. Children were less responsive and more acquiescent in response to tagged questions than untagged questions, and lawyers did not alter their use of tagged questions depending on the children's ages. Such findings raise serious concerns about the extent to which suggestive questions, particularly tagged questions, are avoided or proscribed in court and highlight the value of differentiating between different types of suggestive questions and the need to engage practitioners in further training.

Unlike previous studies, the present study included children of diverse ages (i.e., 5- to 17-year-olds). We expected there to be no age differences, in line with previous research indicating that lawyers do not appear to adjust their questioning style to accommodate younger children (e.g., Andrews et al., 2015a), and that this pattern would also be evident in relation to the broader age range examined in the current study. No other study has examined both substantive and non-substantive questions and we found that prosecutors asked more non-substantive and fewer substantive questions of the youngest children, whereas defense lawyers asked more non-substantive and fewer substantive questions of the oldest children. The non-substantive prompt types varied depending on the children's ages and there was no interaction with lawyer role. In

QUESTIONING CHILDREN IN SCOTTISH COURTS

particular, there were more attempts at rapport building with children aged 12 years and under than with older children, suggesting that both prosecutors and defense lawyers were more supportive of the youngest children. However, the overall rates of rapport-building were low for all children.

With respect to substantive questions, there was a three-way interaction between question type, lawyer role, and children's age, suggesting that lawyers changed their behavior somewhat depending on the children's ages. In particular, prosecutors were least likely to ask option-posing questions of the youngest children, whereas defense lawyers asked more directive questions and facilitators of the youngest children. Children in the middle age group were asked fewer suggestive casting doubt questions than children in the oldest age group. Defense lawyers directed more option-posing questions to the youngest children, and asked more suggestive questions of those in the middle age group whereas prosecutors did not alter their behavior similarly. Additionally, the youngest children were asked more suggestive confrontational and suppositional questions (but fewer suggestive introductory questions) by both prosecutors and defense lawyers, although there were no age differences in the lawyers' use of suggestive tag questions. Overall, in line with previous research and our predictions, both prosecutors and defense lawyers were not sensitive to differences in the children's ages.

There were few age differences in children's responsiveness, although, as in previous research (Andrews et al., 2015a), children were almost always responsive to lawyers' questions and more responsive to prosecutors than defense lawyers. Interestingly, although children were generally more productive in response to prosecutors than defense lawyers, and children were more productive in response to open-ended than closed-ended prompts, the youngest children were least productive in response to prosecutors' questions. Furthermore, the youngest children were least productive in response to prosecutors'

QUESTIONING CHILDREN IN SCOTTISH COURTS

suggestions and more productive in response to defense lawyers' suggestions, perhaps because the younger children did not understand why they were being asked suggestive questions by the prosecutors. By contrast, Andrews et al. (in press) and Klemfuss et al. (2014) reported that Californian children were more productive with increasing age. Unlike previous studies, we found that prosecutors elicited more self-contradictions from the oldest children than from children in the middle age group, whereas defense lawyers elicited fewest contradictions from the youngest children, but there were no age differences in acquiescence to suggestion. In response to suggestive questions, more self-contradictions were elicited from children aged 13 to 15 years than from the youngest and oldest children. These findings highlight children's ability to resist some suggestions by both prosecutors and defense lawyers, but also make clear that suggestive questions can have diverse effects on children depending on their age and the context.

Limitations and Further Research

As in most field studies, we were unable to determine the veracity of the allegations or of the children's specific responses. However, self-contradictions of necessity constitute false responding, since the contradictory answers cannot both be correct, and our finding that suggestive questions were most likely to elicit self-contradictions is consistent with laboratory research demonstrating that suggestive questions are most likely to elicit erroneous answers. It was, however, impossible to know which questions were misleading and which answers were accurate. Indeed, contradiction-eliciting questions during cross-examination may increase testimonial accuracy if the initial reports were untrue.

Second, we did not measure the complexity of the questions, although complexity may interact with children's age, lawyer role, and question type in affecting children's responsiveness, productivity, and consistency (Hanna et al., 2012; Zajac et al., 2009; Zajac

QUESTIONING CHILDREN IN SCOTTISH COURTS

& Hayne, 2003). However, Evans, Lee, and Lyon (2009) did not find any age or lawyer role differences in either wordiness or the syntactic complexity of the questions asked 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 lawyers' questions were complex on one dimension, but so were 25% of the prosecutors' questions, a surprisingly small difference. Indeed, Hanna et al. (2012) found differences in the complexity of the questions asked by prosecutors and defense lawyers only in relation to one of the five types examined. Hence, it seems unlikely that differences in the complexity of the questions asked may have accounted for the findings reported here. Nevertheless, it would be interesting to analyze question complexity in relation to witness age and complexity more finely and extensively, using a multi-method approach.

Third, it is clear that researchers should consider more than question type when studying cross-examinations. For example, peripheral details relating to the alleged victim's thoughts and feelings may be more emotionally salient and susceptible to suggestion than central details relating to the sexually abusive actions. Furthermore, when interpreting self-contradictions, acquiescence to suggestion may be driven as much by the content of the question as by the type of question. Future research should examine specific problems with question content, and link those findings to laboratory research on question content and children's accuracy.

Lastly, it might be fruitful to examine whether and how question type and children's responses in court are associated with children's gender and the case verdicts, although preliminary analyses revealed no significant associations in the present study,

QUESTIONING CHILDREN IN SCOTTISH COURTS

perhaps because there were many more girls than boys and many more cases that resulted in convictions than acquittals. A better-matched sample designed to investigate these research questions may yield different results.

Implications

In Scotland, as in most other western jurisdictions, defendants have the right to challenge the evidence against them. It is well established that closed-ended questions, particularly suggestive utterances, are more likely to elicit erroneous information (e.g., APSAC, 2012; Home Office, 2011, section 3.44; Lamb et al., 2015) but of course cross-examination questions are designed not to elicit evidence but to test it (Zajac, O'Neill, & Hayne, 2012) and it remains unclear how to protect children from distress and developmentally inappropriate, misleading and confusing questions, whilst also protecting the defendants' rights to challenge their accusers. Best-practice guidelines for the questioning of child witnesses in court must allow the veracity of children's testimony to be evaluated in ways that do not exploit their developmental capacities and limitations.

There are currently very limited guidelines about how lawyers should question children in court. The guidance that does exist is neither well embraced nor well informed (Spencer & Lamb, 2012). However, it is now widely accepted in Scotland 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). The extent to which protective measures (e.g., a live TV link, section 271J; a screen, section 271K; a supporter, section 271L, Victims and Witnesses [Scotland] Act, 2014) are used, however, varies considerably within and between jurisdictions. Calls for a more systematic approach to gathering evidence from children was made recently in a speech to the Criminal Law Conference at Murrayfield by

QUESTIONING CHILDREN IN SCOTTISH COURTS

the [then] Lord Justice Clerk (Lord Carloway, May, 2013). In England and Wales, further changes are on the horizon, too. In particular, the fundamental proposition explored in the Evidence and Procedure Review Report (Scottish Court Service, March, 2015) is that substantial improvements can be made to the administration of justice with the widespread use of pre-recorded statements in place of testimony in court and the implementation of Ground Rules Hearings, at which judges stipulate what types of questions can be asked. These procedures (bringing into force Section 28 of the Youth Justice and Criminal Evidence Act, 1999) are currently being piloted in England and Wales under the premise that a properly conducted witness interview before trial may be far more informative and appropriate than a belated appearance in court during the trial (Evidence and Procedure Review Report [Section 1.24], Scottish Court Service, March, 2015; Westera, Kebbell, & Milne, 2013). Furthermore, evidence-based “Toolkits” (see Advocacy Training Council (ATC), 2011) have been introduced to provide continuing education and thus improve practice in England and Wales, in recognition of the fact that many lawyers and judges need guidance on how best to question children appropriately. These Toolkits were endorsed in the Lord Chief Justice’s Criminal Practice Directions (2013), but the use and effectiveness of these opinions and resources have not been systematically assessed. It is likely that systematic training of judges and lawyers, perhaps alongside the greater use of well-trained intermediaries, may be necessary to ensure that practice changes in the intended direction.

References

Advocacy Training Council (2011). Retrieved from:

<http://www.advocacytrainingcouncil.org>

American Professional Society on the Abuse of Children, APSAC. (2012). *Practice guidelines: Investigative interviewing in cases of alleged child abuse*. Retrieved from: <http://www.apsac.org/>

Andrews, S. J., Ahern, E., Stolzenberg, S. N., & Lyon, T. D. (in press). The productivity of wh- prompts when children testify. *Applied Cognitive Psychology*.

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015a). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology*, 28, 253-261. doi: 10.1002/acp.3103

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015b). The effects of question repetition on responses in direct- and cross-examinations of children alleging sexual abuse in court. *Law and Human Behavior*, 39, 559-570. doi: 10.1037/lhb0000152

Bettenay, C., Ridley, A. M., Henry, L. A., & Crane, L. (2014). Cross-examination: the testimony of children with and without intellectual disabilities. *Applied Cognitive Psychology*, 28, 204-214. doi: 10.1002/acp.2979

Bruck, M. & Ceci, S. J. (1999). The suggestibility of children's memory. *Annual Review of Psychology*, 50, 419-439. doi: 10.1146/annurev.psych.50.1.419

Bruck, M., Ceci, S. J., & Principe, G. F. (2006). The child and the law. In K. A. Renninger, I. E. Sigel, W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology*, 6th ed, Vol. 4 (pp. 776-816). New York, NY: John Wiley & Sons, Ltd.

Bruer, K. & Pozzulo, J. D. (2014). Influence of eyewitness age and recall error on mock

QUESTIONING CHILDREN IN SCOTTISH COURTS

- juror decision-making. *Legal and Criminological Psychology*, *19*, 332-348. doi: 10.1111/lcrp.12001
- Connolly, D. A., Price, H. L., & Gordon, H. M. (2009). Judging the credibility of historic child sexual abuse complainants: How judges describe their decisions. *Psychology, Public Policy, and Law*, *15*, 102-123. doi: 10.1037/a0015339
- Eisen, M. L., Goodman, G. S., Qin, J., Davis, S. L., & Crayton, J. (2007). Maltreated children's memory: Accuracy, suggestibility, and psychopathology. *Developmental Psychology*, *43*, 1275-1294. doi:10.1037/0012-1649.43.6.1275
- Eisen, M. L., Qin, J., Goodman, G. S., & Davis, S. L. (2002). Memory and suggestibility in maltreated children: Age, stress arousal, dissociation, and psychopathology. *Journal of Experimental Child Psychology*, *83*, 167-212. doi: 10.1016/S0022-0965(02)00126-1
- European Convention on Human Rights, Art 6(d). Retrieved from: http://www.echr.coe.int/Documents/Convention_ENG.pdf
- Evans, A. D., Lee, K., & Lyon, T. D. (2009). Complex questions asked by defense attorneys but not prosecutors predicts convictions in child abuse trials. *Law and Human Behavior*, *33*, 258-264. doi: 10.1007/s10979-008-9148-6
- Evidence and Procedure Review Report, Scottish Court Service (March, 2015). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/aboutscs/reports-and-data/reports-data/evidence-and-procedure-full-report---publication-version-pdf.pdf?sfvrsn=2>
- Fisher, R. P., Brewer, N., & Mitchell, G. (2009). The relation between consistency and accuracy of eyewitness testimony: Legal versus cognitive explanations. In R. Bull, T. Valentine, & T. Williamson (Eds.), *Handbook of psychology of investigative interviewing: Current developments and future directions*. Oxford, UK: Wiley-

QUESTIONING CHILDREN IN SCOTTISH COURTS

Blackwell. doi: 10.1002/9780470747599.ch8

Fogliati, R. & Bussey, K. (2014). The effects of cross-examination on children's reports of neutral and transgressive events. *Legal and Criminological Psychology, 19*, 296-

315. doi: 10.1111/lcrp.12010

Hanna, K., Davies, E., Crothers, C., & Henderson, E. (2012). Questioning child witnesses in New Zealand's criminal justice system: Is cross-examination fair? *Psychiatry, Psychology and Law, 19*, 530-546. doi:10.1080/13218719.2011.615813

Hershkowitz, I., Fisher, S., Lamb, M. E., & Horowitz, D. (2007). Improving credibility assessment in child sexual abuse allegations: The role of the NICHD Investigative

Interview Protocol. *Child Abuse and Neglect, 31*, 99-110. doi:

10.1016/j.chiabu.2006.09.005

Hershkowitz, I., Lamb, M. E., Orbach, Y., Katz, C., & Horowitz, D. (2012). The

development of communicative and narrative skills among preschoolers: lessons from forensic interviews about child abuse. *Child Development, 83*, 611-622. doi:

10.1111/j.1467-8624.2011.01704.x

Home Office. (2011). *Achieving the best evidence in criminal proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures.*

Retrieved from:

[http://www.cps.gov.uk/publications/docs/best_evidence_in_criminal_proceedings.](http://www.cps.gov.uk/publications/docs/best_evidence_in_criminal_proceedings.pdf)

pdf

Jack, F., Leov, J., & Zajac, R. (2014). Age-related differences in the free-recall accounts of child, adolescent, and adult witnesses. *Applied Cognitive Psychology, 28*, 30-38.

doi: 10.1002/acp.2951

Jack, F. & Zajac, R. (2014). The effect of age and reminders on witnesses' responses to cross-examination-style questioning. *Journal of Applied Research in Memory and*

QUESTIONING CHILDREN IN SCOTTISH COURTS

Cognition, 3, 1-6. doi: 10.1016/j.jarmac.2013.12.001

Jones, C. H. & Pipe, M. E. (2002). How quickly do children forget events? A systematic study of children's event reports as a function of delay. *Applied Cognitive Psychology*, 16(7), 755-768. doi: 10.1002/acp.826

Psychology, 16(7), 755-768. doi: 10.1002/acp.826

Judicial College (2010). Fairness in courts and tribunals.

Klemfluss, J. Z., Quas, J. A., & Lyon, T. D. (2014). Attorney's questions and children's productivity in child sexual abuse criminal trials. *Applied Cognitive Psychology*, 28, 780-788. Doi: 10.1002/acp.3048

Lamb, M. E., & Fauchier, A. (2001). The effects of question type on self-contradictions by children in the course of forensic interviews. *Applied Cognitive Psychology*, 15, 483-491. doi:10.1002/acp.726

Lamb, M. E., Hershkowitz, I., Sternberg, K. J., Esplin, P. W., Hovav, M., Manor, T., & Yudilevitch, L. (1996). Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development*, 19, 627-637. doi: 10.1177/016502549601900310

Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses*. Chichester, UK: Wiley.

Lamb, M. E., La Rooy, D. J., Malloy, L. C., & Katz, C. (Eds.). (2011). *Children's testimony: A handbook of psychological research and forensic practice*. Chichester, UK: Wiley-Blackwell.

Lamb, M. E., Malloy, L. C., Hershkowitz, I., & La Rooy, D. (2015). Children and the law. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of child psychology and developmental science (7th ed.)*, Volume 3, *Social, emotional and personality development*. Hoboken, NJ: Wiley.

QUESTIONING CHILDREN IN SCOTTISH COURTS

- Lamb, M. E., Orbach, Y., Hershkowitz, I., Horowitz, D., & Abbott, C. B. (2007). Does the type of prompt affect the accuracy of information provided by alleged victims of abuse in forensic interviews? *Applied Cognitive Psychology, 21*, 1117-1130. doi: 10.1002/acp.1318
- Lamb, M. E., Sternberg, K. J., & Esplin, P. W. (2000). Effects of age and delay on the amount of information provided by alleged sex abuse victims in investigative interviews. *Child Development, 71*, 1586–1596. doi:10.1111/1467-8624.00250
- Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., Stewart, H., & Mitchell, S. (2003). Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology, 71*, 926–934. doi:10.1037/0022-006X.71.5.926
- London, K. & Kulkofsky, S. (2010). Factors affecting the reliability of children's reports. In G. M. Davies & D. B Wright (Eds.), *New Frontiers in Applied Memory* (pp. 119-141). New York, NY: Psychology Press.
- Lord Carloway (May, 2013). *Scots criminal evidence and procedure – meeting the challenges and expectation of modern society and legal thinking*. Speech addressed to the Criminal Law Conference at Murrayfield. Retrieved from: <http://www.scotland-judiciary.org.uk/Upload/Documents/CriminalLawConferenceMurrayfield9May2013.pdf>
- Lord Chief Justice's Criminal Practice Directions (2013). Retrieved from: <https://www.judiciary.gov.uk/wpcontent/uploads/JCO/Documents/Practice+Directions/Consolidated-criminal/criminal-practice-directions-2013.pdf>
- Melnyk, L., Crossman, A. M., & Scullin, M. H. (2007). The suggestibility of children's memory. In M. P. Toglia, J. D. Read, D. F. Ross & R. C. L. Lindsay (Eds.),

QUESTIONING CHILDREN IN SCOTTISH COURTS

- Handbook of eyewitness psychology, Vol 1: Memory for events* (pp. 401-427).
Mahwah, NJ: Lawrence Erlbaum.
- Myers, J. E., Redlich, A. D., Goodman, G. S., Prizmich, L. P., & Imwinkelried, E. (1999).
Jurors' perceptions of hearsay in child sexual abuse cases. *Psychology, Public
Policy, and Law*, 5, 388-419. doi: 10.1037/1076-8971.5.2.388
- Orbach, Y. & Lamb, M. E. (2001). The relationship between within-interview
contradictions and eliciting interviewer utterances. *Child Abuse & Neglect*, 25,
323-333. doi: 10.1016/S0145-2134(00)00254-4
- Orbach, Y., Lamb, M. E., Hershkowitz, I., & Abbott, C. B. (in press). Allegedly abused
children's responses to suggestion in the course of forensic interviews.
- Plotnikoff, J. & Woolfson, R. (2007). *The "go-between": evaluation of intermediary
pathfinder projects. Research Summary No. 1*. London: Ministry of Justice.
Retrieved from: [http://embed.policyreview.tv/media/documents/11.%20
gillian%20harrison%20summary.pdf](http://embed.policyreview.tv/media/documents/11.%20gillian%20harrison%20summary.pdf)
- R v Barker [2010] EWCA Crim 4.
- Rush, E., Quas, J. A., & McAuliff, B. D. (2012). Child witnesses' experiences of distress
in criminal courts: sources, consequences and solutions. In M. K. Miller & B. H.
Bornstein (Eds.), *Stress, trauma, and well-being in the legal system* (pp. 89-121).
New York, NY: Oxford University Press.
- Saywitz, K. J., Lyon, T. D., & Goodman, G. S. (2011). Interviewing children. In J. E. B.
Myers (Ed.), *The APSAC handbook on child maltreatment (3rd ed.)* (pp. 337-360).
Newbury Park, CA: Sage.
- Scottish Government (2011). *Guidance on joint investigative interviewing of child
witnesses in Scotland*. <http://www.gov.scot/Resource/Doc/365398/0124263.pdf>
- Semmler, C. & Brewer, N. (2002). Effects of mood and emotion on juror processing and

QUESTIONING CHILDREN IN SCOTTISH COURTS

- judgments. *Behavioral Sciences & the Law*, 20, 423-436. doi:10.1002/bsl.502
- Sexual Offences Act (2003). Retrieved from:
<http://www.legislation.gov.uk/ukpga/2003/42/part/1/crossheading/child-sex-offences>
- Sixth Amendment to the US Constitution: Rights of Accused in Criminal Prosecutions (pg. 1399). Retrieved from: <http://www.gpo.gov/fdsys/pkg/GPO-CONAN-1992/pdf/GPO-CONAN-1992-10-7.pdf>
- Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to change the rules?* Oxford and Portland, Oregon: Hart Publishing.
- Sternberg, K. J., Lamb, M. E., Davies, G. A., & Westcott, H. L. (2001). The Memorandum of Good Practice: theory versus application. *Child Abuse & Neglect*, 25, 669-681. doi: 10.1016/S0145-2134(01)00232-0
- Stolzenberg, S. & Lyon, T.D. (2014). How attorneys question children about the dynamics of sexual abuse and disclosure in criminal trials. *Psychology, Public Policy, & Law*, 20, 19-30. doi:10.1037/a0035000
- Sutherland, R. & Hayne, H. (2001). Age-related changes in the misinformation effect. *Journal of Experimental Child Psychology*, 79, 388-404. doi:10.1006/jecp.2000.2610
- Victims and Witnesses [Scotland] Act, 2014. Retrieved from:
<http://www.legislation.gov.uk/asp/2014/1>
- Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from:
<http://www.legislation.gov.uk/asp/2004/3>
- Walker, A. G., Kenniston, J., & Inada, S. S. (2013) (Eds.). *Handbook on questioning children: A linguistic perspective (3rd ed.)*. Washington D. C.: American Bar Association.

QUESTIONING CHILDREN IN SCOTTISH COURTS

- Waterman, A. H., Blades, M., & Spencer, C. P. (2001). Interviewing children and adults: The effect of question format on the tendency to speculate. *Applied Cognitive Psychology, 15*, 521-531. doi: 10.1002/acp.741
- Waterman, A. H., Blades, M., & Spencer, C. P. (2004). Indicating when you do not know the answer: the effect of question format and interviewer knowledge on children's 'don't know' responses. *British Journal of Developmental Psychology, 22*(3), 335-348. doi: 10.1348/0261510041552710
- Westera, N., Kebbell, M., & Milne, R. (2013). Losing two thirds of the story: A comparison of the video recorded police interview and live evidence of rape complainants. *Criminal Law Review, 4*, 290-308.
- Youth Justice and Criminal Evidence [UK] Act 1999. Retrieved from:
<http://www.legislation.gov.uk/ukpga/1999/23>
- Zajac, R. & Cannan, P. (2009). Cross-examination of sexual assault complainants: A developmental comparison. *Psychiatry, Psychology and Law, 16*, 36-54. doi: 10.1080/13218710802620448
- Zajac, R., Gross, J., & Hayne, H. (2003). Asked and answered: Questioning children in the courtroom. *Psychiatry, Psychology and Law, 10*, 199-209. doi: 10.1375/pplt.2003.10.1.199
- Zajac, R. & Hayne, H. (2003). I don't think that's what really happened: the effect of cross-examination on the accuracy of children's reports. *Journal of Experimental Psychology: Applied, 9*, 187-195. doi: 10.1037/1076-898X.9.3.187
- Zajac, R. & Hayne, H. (2006). The negative effect of cross-examination style questioning on children's accuracy: older children are not immune. *Applied Cognitive Psychology, 20*, 3-16. doi: 10.1002/acp.1169
- Zajac, R., O'Neill, S., & Hayne, H. (2012). Disorder in the courtroom? Child witnesses

QUESTIONING CHILDREN IN SCOTTISH COURTS

under cross-examination. *Developmental Review*, 32, 181-204. doi:

<http://dx.doi.org/10.1016/j.dr.2012.06.006>

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 1.

Coding Definitions and Examples.

Code	Definition	Example
Non-substantive prompts	Statements or questions that were not focused on the incident under investigation.	
Procedural	Comments, statements, or questions, concerning procedural aspects of the direct/cross examinations, including introductory information and instructions, taking the oath, communication rules, introduction of evidence, and labelling or defining body parts.	<p>“Do you understand the difference between the truth and a lie?”</p> <p>“Tell me in words, because the tape doesn’t record what you do with your head.”</p> <p>“In your forensic interview you said...(reading from the Crown Production). Do you see that?”</p> <p>“Do you know the difference between your front bottom and your back bottom?”</p>
Anchor	Utterances providing children with external (not incident related) stimulus (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. Anchoring questions do not address details of the alleged incident directly. They are usually followed by an option-posing question, aiming to extract substantive information in the context of the anchoring stimulus.	<p>Lawyer: “Do you remember Christmas day?” [anchor]</p> <p>Child: “Yes.”</p> <p>Lawyer: “Did it happen before or after Christmas?” [option-posing]</p> <p>Lawyer: “On this map you can see the park and then a path leading down to the river?” [anchor]</p> <p>Yes: “Yes.”</p> <p>Lawyer: “Is that the path where it happened?” [option-posing]</p>
Rapport	Utterances designed enhance the children’s trust and cooperation, and provide emotional support. Such questions may focus on the children’s family, friends, school, general knowledge, or experienced	<p>“Tell me about what you like doing in your spare time.”</p> <p>“Do you like school? What’s your favorite subject?”</p> <p>“What did you do last Christmas? Did you get anything nice?”</p>

QUESTIONING CHILDREN IN SCOTTISH COURTS

Inaudible	neutral events not based on memory of the incident. Utterances that could not be transcribed due to poor sound quality. Partially inaudible utterances were also coded as inaudible if too much of the prompt was missing for it to be accurately classified.	Lawyer: “So he (inaudible)?” Child: “Yes.” Lawyer: “(inaudible)?”
Substantive prompts	Utterances designed to elicit information about what happened during the alleged incidents, what immediately preceded or followed the alleged incidents, within-incident interventions (e.g., unexpected interruptions exposing the abuse) and 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 said happened in their forensic interview).	
Question types		
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.	
General invitation	Utterances asking about a whole incident, or about one of multiple incidents disclosed.	“Tell me everything that happened from the beginning to the end.” (following a disclosure) “Tell me everything about the first time/last time/time you best remember.”

QUESTIONING CHILDREN IN SCOTTISH COURTS

Follow-up invitation	Utterances asking about the last content mentioned by the child, or about the content of events occurring after the last point in time mentioned by the child.	“Tell me more about that.” “Then what happened?”
Refocusing invitation	Utterances that refocus on previous content and request elaboration.	“Think back to the last time (or any other disclosed content), and tell me everything about that.” (following a disclosure that it happened more than one time)
Closing invitation	A closing question. Closing invitations are regarded as a substantive only when they elicit substantive details. When a prompt is formulated as “What else happened?” and the child has not given an earlier indication that additional things happened, the question is coded as suggestive (see below) because of the lawyer’s implied assumption that something else did happen.	“Is there anything else you want to tell me?”
Cued invitation	Utterances that refocus the child’s attention on previously mentioned details and use them as contextual cues in open-ended invitations to elicit free-recall responses. Refocusing may relate to content cues (e.g., events, objects, people, actions) mentioned by the child.	“You mentioned (content mentioned by the child), tell me about that.” “Tell me about/what happened with (content mentioned by the child).”
Segment of time invitation	A type of cued invitation. The lawyer uses one or two actions/occurrences mentioned by the child as “anchors” (i.e., a time reference) for invitations to tell about what happened before, after, or during a segment of time based on those temporal references.	“You said (occurrence/action mentioned by the child), and then what happened?” “What was the very first thing that happened before (an occurrence/action mentioned by the child)?” “Tell me everything that happened from (an occurrence/action mentioned by the child) until (another occurrence/action mentioned by the child).”

QUESTIONING CHILDREN IN SCOTTISH COURTS

Directive	Open-ended questions that refocus the child on aspects or details of the allegation that they have previously mentioned, mostly using ‘WH’ utterances to request further information.	
Directive clarification	Utterances asking for clarification about what the child mentioned. This type of clarification only refers to the wording of the child, not to the facts or content of the child’s statement.	“You said (child’s words). What do you mean?”
Directive open	A request for information about an intrinsic feature of disclosed content, using a wh-question (who, what, when, where, how, why), allowing a multi-word response.	“Where/when/how did it happen?” “Why did you do that?”
Directive narrow	A request for information about a specific attribute of disclosed content.	“What color was his t-shirt?” (when the child mentioned earlier that he was wearing a t-shirt). “Where did he touch you?” (when the child mentioned earlier that a male touched her).
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.	
Option-posing yes/no	Utterances that prompt yes/no responses.	“Did he touch your skin?” (when the child had mentioned earlier that he touched her). “Did it hurt?” “Were your clothes on when this happened?” “Was there any other time/perpetrator?”

QUESTIONING CHILDREN IN SCOTTISH COURTS

Option-posing forced choice	Utterances that request the selection of undisclosed forced-choice options.	“Did he touch you over your clothes or under your clothes?”
Option-posing open choice	Utterances that request the selection of undisclosed open-choice options, including “which” questions without explicitly stating options.	“Was his shirt red or brown or something else?” “Was that photo he showed you from a photo album or a magazine or...?” “Which hand?”
Suggestive	Statements or questions formulated in a way that communicates the expected response.	
Facilitator	Non-suggestive encouragement to continue with an ongoing response immediately following the child's response, or verbatim restatements or echoing of the last few words of the child's previous utterance.	“Okay”, “Yes”, “Go ahead”, “And...”
Uncategorized	Clearly substantive questions that were inaudible, partially inaudible, unfinished, or interrupted before they could be accurately coded.	Lawyer: “I suggest he didn’t touch you. What do you say to that?” Child: “He did.” Lawyer: “But wh-” [uncategorized] Child: “He did.”
Suggestive question subtypes		
Suggestive confrontation		
Doubt (3 rd time)	Raising the possibility for the third time that reported information is not true.	“Is what you’re telling me true?” (when asked for the 3 rd time) “Did that really happen?” (when asked for the 3 rd time) “Are you sure?” (when asked for the 3 rd time)
Option-posing (3 rd time)	An option-posing or suggestive question asked for the third time on the same issue.	Lawyer: “Did it happen once or more than once?” Child: “More than once.” Lawyer: “So, it did happen more than once?” Child: “Yes.” Lawyer: “This is a serious matter. I’ll ask you again. Did it happen once or more than once?” [option-posing 3 rd time]

QUESTIONING CHILDREN IN SCOTTISH COURTS

Coercive confrontation internal	The lawyer refers to information disclosed by the child earlier in the direct-/cross-examination and uses it to confront the child by questioning, doubting, or contradicting his or her current statement.	Lawyer: "What happened to your trousers?" Child: "They stayed on." Lawyer: "How did he touch your privates if your trousers were on?" [coercive confrontation internal]
Coercive confrontation external	The lawyer refers to knowledge of undisclosed information about the investigated incident and confronts the child by using it to contradict information s/he disclosed.	Lawyer: "Earlier you said (XXX), but now you are saying that (seemingly contradicting information)." "The police detective told me that you (undisclosed information) and you said (cites the child). What do you say to that?" "You said (XXX), but your brother, who testified earlier, said that (contradicting info)."
Suggestive supposition		
Implicit assumption	The lawyer asks a question built on an implicit assumption that an undisclosed peripheral action had happened.	Child: "Then I went to meet X." Lawyer: "You met X. What did she tell you?" (when the child did not mention that X told anything) Child: "He then walked away." Lawyer: "Okay. Where did he go when he walked out the house?" (when the child did not mention him walking out of the house)
Suggestive implicit assumption	The lawyer asks a question built on a potentially contaminating assumption that something central to the allegation had happened.	"What else happened?" (when the child did not indicate that something else had happened) "What else did X do?" (when the child did not mention that X did anything else) "What did X do to you?" (when child did not mention that X did anything to her/him)
Suggestive explicit supposition	The lawyer asks a question built on an explicit undisclosed assumption (premise) that something had happened.	"Did it hurt when he touched you?" (when the child did not mention that s/he was touched).

QUESTIONING CHILDREN IN SCOTTISH COURTS

Contradictory supposition	The lawyer questions the child, ignoring an earlier contradicting response that rules out the question.	<p>“Was your mother there when he touched you?” (when the child did not mention that s/he was touched).</p> <p>“Did it hurt when he touched you?” (When child said s/he was not touched)</p>
Suggestive introduction		
Suggestive input	The lawyer introduces undisclosed information (e.g., the suspect’s name, the location of the incident).	<p>“Tell me what happened with/at (a person/place not mentioned by child).”</p> <p>“So, X touched you?” (when the child did not say that s/he was touched)</p>
Suggestive summary/conclusion	The lawyer summarizes or quotes the child incorrectly; modifies, incorrectly concludes (with or without using a statement which is appended or preceded by a ‘tag’), incorrectly interprets, verbalizes the child’s action response beyond what the response indicates, or chooses one of two contradictory responses.	<p>Child: “I went to the park...”</p> <p>Lawyer: “You said you went to skate park.”</p> <p>Child: “X kissed me.”</p> <p>Lawyer: “Y kissed you?”</p> <p>Child: “It happened on Monday or Tuesday.”</p> <p>Lawyer: “So it happened on Monday?”</p>
Non-exhaustive options	The lawyer provides restrictive, non-exhaustive options, in a forced-choice question.	<p>“You saw a gun, didn’t you?”, “Didn’t you see a gun?”</p> <p>“Was he lying on you or were you lying on him?” (when child only mentioned that they were lying in bed)</p> <p>“Did he touch you in the bedroom or in the living room?” (when child only mentioned that the suspect touched him/her at home)</p>
External source	The lawyer refers to knowledge he has, from a specified or an unspecified external source, of undisclosed information about the investigated incident.	<p>“Your mom told me (undisclosed information).”</p> <p>“I heard from the policeman that (undisclosed information).”</p>

QUESTIONING CHILDREN IN SCOTTISH COURTS

Tag questions

Short questions that are tagged onto the end of statements implying an expected response.

“You’re lying, aren’t you?”
“He touched you, didn’t he?”
“It happened three times, right?”

Children’s responses

Responsive

Verbal and action responses related to the lawyer’s previous utterance. Utterances were assigned this category even if they did not contain new informative details, or when their meaning was unclear.

Lawyer: “Did he take your trousers off?”
Child: “Yes.” [responsive]
Lawyer: “What did he do with your trousers?”
Child: “I don’t know.” [responsive]

Unresponsive

Responses that do not relate to the question asked in the previous lawyer utterance, but provide incident-related information. These include instances when children misunderstood the lawyers’ questions.

Lawyer: “What did he say?”
Child: “I was – I said “STOP” and I tried to push him away from me, but he kept holding on to my waist.” [unresponsive]
Lawyer: “Well that can’t be right, can it? Try again. Was he standing or sitting?”
Child: “He licked my private, too”. [unresponsive]

Self-contradiction

Responses that negated what the children had previously disclosed during the proceedings or provided self- conflicting information.

Lawyer: “He licked you one time?”
Child: “Yes.”
(later in the proceedings)
Lawyer: “How many times did he lick you?”
Child: “I don’t know - like 5 times.” [self-contradiction]

Lawyer: “Did he touch your privates when you were in the car?”
Child: “No.”
Lawyer: “But I thought he did touch you in the car. Did he touch your privates in the car?”
Child: “No. I never - in the car he touched my privates.” [self-contradiction]

QUESTIONING CHILDREN IN SCOTTISH COURTS

Acquiescence

Children's responses that acquiesce to the suggested confrontation, supposition, or input.

Lawyer: "You're lying, aren't you?"

Child: "Yes."

Lawyer: "Did it hurt when he touched you?" (when the child did not mention that s/he was touched).

Child: "Yes."

Resistance

Children's responses that resist the suggested confrontation, supposition, or input.

Lawyer: "You're lying, aren't you?"

Child: "No."

Lawyer: "Did it hurt when he touched you?" (when the child did not mention that s/he was touched).

Child: "He didn't touch me."

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 2.

Mean Proportions of Questions by Lawyer Role, Examination Phase, and Children's Age.

		Age (in years)					
		13 and under		14 and 15		16 and 17	
Lawyer	Phase	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pros	NS	.26	.03	.11	.02	.12	.03
	S	.67	.04	.89	.03	.88	.04
Def	NS	.22	.04	.17	.03	.21	.04
	S	.78	.05	.83	.04	.73	.05

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 3.

Totals, Average Frequencies, and Average Proportions of Substantive Prompt Types by Lawyer Role

Question type	Lawyer role									
	Pros					Def				
	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>
Uncategorized total	138	2.38	3.84	.010	.022	191	3.38	6.71	.017	.036
Facilitator total	322	5.75	9.32	.022	.035	208	3.71	5.92	.023	.042
General invitation	33	0.59	0.87	.002	.006	5	0.09	0.29	.000	.002
Follow-up invitation	138	2.46	4.42	.008	.009	23	0.41	1.63	.003	.011
Refocusing invitation	1	0.20	0.13	.000	.001	1	0.02	0.13	.000	.000
Closing invitation	1	0.20	0.13	.000	.000	0	0.00	0.00	.000	.000
Cued invitation	231	4.13	5.87	.015	.018	15	0.27	0.75	.001	.003
Segment of time invitation	62	1.11	2.06	.005	.013	9	0.16	0.57	.001	.006
Invitation total	466	8.32	9.26	.032	.028	53	0.95	2.51	.006	.015
Directive clarification	141	2.52	3.69	.009	.012	16	0.29	0.73	.002	.005
Directive open	1,433	25.59	20.78	.100	.048	309	5.52	7.58	.031	.029
Directive narrow	2,188	39.07	26.30	.164	.072	427	7.63	8.00	.045	.041
Directive total	3,762	67.18	45.82	.280	.094	752	13.43	14.66	.081	.057
Option-posing yes/no	6,752	120.57	103.60	.443	.104	3,121	55.73	39.78	.341	.135
Option-posing forced choice	426	7.61	8.09	.027	.023	107	1.91	2.82	.011	.015
Option-posing open choice	181	3.23	3.27	.015	.017	37	0.66	1.24	.005	.008
Option-posing total	7,359	131.41	109.95	.494	.090	3,265	58.30	41.82	.369	.127
Suggestive total	2,091	37.34	27.23	.159	.087	4,718	84.25	74.25	.486	.187

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 4.

Age Differences in Mean Proportions of Question Types by Lawyer Role

Lawyer	Question type	Age (in years)					
		13 and under		14 and 15		16 and 17	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pros	Facilitator	.03	.01	.02	.01	.02	.01
	Invitation	.04	.01	.04	.01	.02	.01
	Directive	.26	.03	.29	.02	.26	.03
	Option-posing	.43	.03	.50	.02	.52	.03
	Suggestive	.17	.02	.15	.02	.17	.02
Def	Facilitator	.05	.01	.01	.01	.02	.01
	Invitation	.01	.00	.00	.00	.00	.00
	Directive	.13	.01	.06	.01	.06	.01
	Option-posing	.42	.04	.35	.03	.31	.04
	Suggestive	.39	.05	.56	.03	.46	.05

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 5.

Totals, Average Frequencies, and Average Proportions of Suggestive Subtypes by Lawyer Role

Suggestive subtype	Lawyer role									
	Pros					Def				
	<i>n</i>	<i>M</i> (raw)	<i>SD</i> (raw)	<i>M</i> (prop)	<i>SD</i> (prop)	<i>n</i>	<i>M</i> (raw)	<i>SD</i> (raw)	<i>M</i> (prop)	<i>SD</i> (prop)
Doubt (3 rd time)	114	2.04	4.04	.065	.148	556	9.93	10.64	.134	.098
Option-posing (3 rd time)	76	1.36	3.42	.029	.076	134	2.39	5.39	.023	.047
Coercive confrontation internal	43	0.77	1.41	.015	.027	481	8.59	12.33	.078	.074
Coercive confrontation external	24	0.43	1.23	.008	.020	212	3.79	6.82	.031	.044
Suggestive confrontation total	257	4.59	7.66	.119	.183	1,373	24.70	29.49	.275	.135
Implicit assumption	302	5.39	4.50	.162	.131	132	2.36	2.93	.032	.044
Suggestive implicit assumption	25	0.45	0.87	.014	.029	25	0.45	1.37	.008	.033
Suggestive explicit supposition	42	0.75	1.65	.024	.048	18	0.32	0.99	.005	.012
Contradictory supposition	119	2.13	3.20	.056	.080	293	5.23	6.43	.064	.090
Suggestive supposition total	488	8.71	6.51	.260	.172	468	8.36	8.36	.113	.107
Suggestive input	697	12.45	11.49	.347	.206	1,482	26.46	24.28	.309	.170
Suggestive summary/conclusion	497	8.88	9.21	.207	.142	1,154	20.61	19.55	.238	.128
Non-exhaustive options	48	0.86	1.38	.023	.033	22	0.39	0.71	.006	.013
External source	108	1.93	4.09	.043	.060	252	4.46	8.78	.056	.101
Suggestive introduction total	1,346	24.11	19.40	.631	.216	2,877	51.96	44.05	.631	.158
Tag questions	120	2.14	5.54	.051	.120	1,191	21.27	30.70	.196	.120

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 6.

Totals, Average Frequencies, and Average Proportions of Self-contradictions by Question Type and Lawyer Role.

Question type	Lawyer role									
	Pros					Def				
	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>
Invitation	5	0.09	0.35	.118	.022	0	0.00	0.00	.000	.000
Directive	47	0.84	1.52	.034	.036	18	0.32	0.83	.086	.044
Option-posing	122	2.18	2.85	.026	.023	93	1.66	2.58	.045	.032
Suggestive	198	3.54	4.92	.110	.086	477	8.52	9.15	.121	.079
Facilitator	7	0.13	0.51	.225	.199	6	0.11	0.41	.116	.028

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 7.

Individual Differences in Productivity: Totals, Average Frequencies, and Average Proportions by Question Subtype and Lawyer Role.

Question type	Lawyer role					
	Pros			Def		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Uncategorized total	52	2.14	3.15	61	0.95	1.88
Facilitator total	322	1.75	0.34	208	0.69	0.16
General invitation	30	5.43	6.83	3	2.00	3.46
Follow-up invitation	126	4.05	4.23	20	0.90	1.52
Refocusing invitation	1	3.00	-	1	0.00	-
Closing invitation	1	3.00	-	0	0.00	0.00
Cued invitation	200	5.07	7.13	13	2.77	3.22
Segment of time invitation	55	6.76	9.65	8	0.75	0.89
Invitation total	413	4.64	0.67	45	0.21	0.12
Directive clarification	128	2.99	3.18	14	0.86	2.66
Directive open	1,327	2.84	3.64	281	2.20	3.14
Directive narrow	2,090	1.63	2.11	393	1.41	2.08
Directive total	3,545	2.25	0.13	688	1.64	0.17
Option-posing yes/no	6,482	1.10	1.92	2,992	0.83	1.37
Option-posing forced choice	417	1.40	1.70	106	1.12	1.43
Option-posing open choice	179	1.61	2.11	37	1.41	1.72
Option-posing total	7,078	1.27	0.10	3,135	0.81	0.05
Suggestive total	1,985	1.75	0.34	4,376	0.88	0.06

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 8.

Totals, Average Frequencies, and Average Proportions of Non-substantive Prompt Types by Lawyer Role.

NS prompt type	Lawyer role									
	Pros					Def				
	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>	<i>n</i>	<i>M(raw)</i>	<i>SD(raw)</i>	<i>M(prop)</i>	<i>SD(prop)</i>
Inaudible	56	1.00	2.58	.026	.061	65	1.16	4.00	.036	.123
Procedural	1,347	24.05	33.99	.536	.224	913	16.30	16.31	.525	.256
Anchor	1,088	19.43	29.71	.283	.219	792	14.14	18.07	.311	.230
Rapport building	606	10.82	32.14	.156	.175	326	5.82	15.07	.128	.202

QUESTIONING CHILDREN IN SCOTTISH COURTS

Table 9.

Frequency of Judge's Questions by Non-substantive, Substantive, and Suggestive Question Subtypes.

Question type	<i>n</i>
Inaudible	0
Procedural	1,399
Anchor	25
Rapport building	45
Uncategorized	0
Facilitator	3
Invitation	6
Directive total	38
Option-posing	119
Suggestive	47
Suggestive confrontation	6
Suggestive supposition	8
Suggestive introduction	33

Chapter 2

The structural linguistic complexity of lawyers' questions and children's responses in Scottish criminal courts

Published in: Child Abuse and Neglect

Samantha J. Andrews and Michael E. Lamb

University of Cambridge

Author Note

The authors are extremely thankful to the Court Service Team of the Scottish Court Service and the Typing and Secretarial Team of the Supreme Courts for their assistance with accessing cases and files, their hospitality throughout the transcription process, and their continued support. The authors are also greatly indebted to Katie Vernon, Rosie Barber, Zsófia Szojka, Guy Skinner, Elizabeth Ahern, Misun Yi, and Hayden Henderson for their assistance with data preparation and reliability coding.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Abstract

In the first study to systematically assess the structural linguistic complexity of lawyers' questions of children in Scotland, we examined 56 trial transcripts of 5- to 17-year-old children testifying as alleged victims of sexual abuse. Complexity was assessed using 8 quantitative measures of each utterance's components (number of questions, phrases, clauses, sentences, false starts, average word count, word length, and sentence length) and a composite measure was used in the analyses. Lawyers did not alter the complexity of questions when prompting children of different ages. Defense lawyers asked more structurally complex questions than prosecutors. Directive questions were the least structurally complex questions, followed by option-posing questions. Suggestive questions, followed by invitations, were the most structurally complex questions. Option-posing and suggestive questions were more complex when asked by defense lawyers than prosecutors. Of suggestive questions, confrontation and tagged questions were more complex than any other question type. Increased structural complexity led to more unresponsiveness, more expressions of uncertainty, and more self-contradictions regardless of which lawyer asked, the question type, or the children's ages. These findings highlight the additional risks associated with asking some types of questions in structurally complex ways and highlight the need for further innovations (e.g., the use of intermediaries) to facilitate the questioning of vulnerable witnesses in Scottish criminal courts.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

The structural linguistic complexity of lawyers' questions and children's responses in
Scottish criminal courts

In adversarial jurisdictions, such as the United Kingdom, United States, and New Zealand, the cross-examination of witnesses is often deemed an essential factor in protecting the accused's right to a fair trial (e.g., Article 6 (3d), of the European Convention on Human Rights; Sixth Amendment to the U.S. Constitution). Courts have a duty to allow witnesses to give their best evidence (Home Office, 2011, section 5.8) but in adversarial jurisdictions, lawyers aim to undermine the opponents' witnesses, and they question child witnesses accordingly (Andrews, Lamb, & Lyon, 2015a; Szojka, Andrews, Lamb, Stolzenberg, & Lyon, 2017). One major concern is that many of the questions that lawyers ask are linguistically complex, and that children may not possess the linguistic capacity and psychological competence necessary to effectively comprehend and respond to courtroom questioning (Hanna, Davies, Henderson, Crothers, & Rotherham, 2010; Zajac, O'Neill, & Hayne, 2012). Indeed, children seldom request clarification of grammatically complex and/or nonsensical questions (Carter, Bottoms, & Levine, 1996; Zajac, Gross, & Hayne, 2003), perhaps because they have difficulty detecting whether or not they have understood the requests. Such questioning techniques violate guidelines, based on an extensive body of experimental and field research, outlining the best ways to elicit testimony (see Rush, Quas, & McAuliff, 2012; Spencer & Lamb, 2012) and raise serious questions about the extent to which courts ensure both that guilty suspects are convicted and that innocent suspects are not wrongly convicted.

Remarkably, however, there has been no prior systematic research on the linguistic complexity of lawyers' questions and how this affects children's responses in the United Kingdom, because proceedings are not routinely transcribed and are kept confidential by the courts. The current research builds upon an unprecedented collaboration with the

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Scottish judiciary (a pluralistic system within the UK based on shared common-law principles combined with some unique civil-law principles), which has publicly and privately expressed considerable concern recently about the risks associated with inappropriate procedures in relation to children's testimony, and thus comprises the first study to assess how structurally complex Scottish prosecutors' and defense lawyers' questions are and how children respond.

Operationalizing linguistic complexity is a complex issue in itself. By definition, the complexity of questions is enhanced whenever any lexical, syntactic, semantic, or pragmatic aspect of the question increases processing time (Walker, Kenniston, & Inada, 2013). The majority of previous studies have focused on lexical and syntactical measures of complexity, showing that much of the questioning conducted by lawyers during legal trials exceeds the communicative capacities of children and even adults (Brennan & Brennan, 1988; Perry, McAuliff, Tam, Claycomb, Dostal, & Flanagan, 1995). For example, many children are unfamiliar with or misunderstand terms commonly used in the courtroom (e.g., Flin, Stevenson, & Davies, 1989; Saywitz, Jeanicke, & Camparao, 1990) and this limits their ability to answer accurately (Evans, Lee, & Lyon, 2009; Perry et al., 1995). Other researchers have suggested that children are unable to comprehend many aspects of syntax that are commonly used in legal settings (e.g., Brennan & Brennan, 1988; Carter et al., 1996; Saywitz & Snyder, 1993), and that increased structural and syntactical complexity reduces the accuracy of children's reports (Cashmore & DeHaas, 1992; Zajac & Cannan, 2009; Zajac et al., 2003). Since adding length and additional structural components to questions is likely to greatly increase processing time, the current paper concerns itself with the structural complexity of lawyers' questions and the effects of complexity on children's responses. Specifically, structural complexity was assessed using 8 quantitative measures of each utterance's components (number of questions,

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

phrases, clauses, sentences, false starts, average word count, word length, and sentence length).

Perhaps surprisingly, there is no consistent evidence regarding either the differential complexity of questions asked by prosecutors and defense lawyers or the effects of age on these lawyers' behavior. On the one hand, researchers have reported that defense lawyers tend to be less supportive and ask more complex and developmentally inappropriate questions than prosecutors (Cashmore & DeHaas, 1992; Davies & Seymour, 1998; Flin, Bull, Boon, & Knox, 1993; Goodman, Taub, Jones, England, Port, Rudy et al., 1992; Perry et al., 1995). For example, in a study conducted in New Zealand, Davies and Seymour (1998) found that defense lawyers asked 5- to 17-year-old children more questions involving complex language than prosecutors. Specifically, in comparison with prosecutors, defense lawyers asked more negative rhetorical questions, more multifaceted questions, more questions that lacked grammatical or semantic connections, more tagged questions, and more questions framed in the passive voice. There were no differences in relation to the children's ages, however, suggesting that lawyers did not alter their questioning when prompting children of different ages. Similarly, although Zajac and Cannan (2009) found that adults were asked more complex questions (coded using measures of both structural [i.e., classification and count of linguistic components] and syntactical [i.e., arrangement of linguistic components] complexity) than children, Zajac et al. (2003) found no relationship between age and complexity (both structural and syntactical) in a study of 5- to 13-year-olds. Evans et al. (2009) reported neither age nor attorney type differences in either wordiness or the syntactic complexity of the questions posed while examining 46 4- to 15-year-olds in cases from Los Angeles. Zajac and Cannan (2009) found that 31% of the defense attorneys' questions were complex, but so too were 25% of the prosecutors' questions, a surprisingly small difference. Indeed,

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Hanna, Davies, Crothers, and Henderson (2012) found that there were differences in the complexity of the questions asked by prosecutors and defense attorneys only in relation to three of the five types of questions examined. Specifically, prosecutors used more passives than defense lawyers, whereas defense lawyers used more double negatives and questions containing two or more subordinate clauses. There were no differences in the lawyers' use of complex vocabulary and difficult concepts.

It is unclear whether the inconsistent findings regarding the complexity of prosecutors' and defense lawyers' questions reflect secular changes in practices, differences between jurisdictions, or methodological differences. In addition, with the exception of Evans et al.'s (2009), all existing studies have involved very small samples, so further research using larger samples and more comprehensive measures of complexity may add clarity to a rather confusing picture.

It is also likely that the linguistic complexity of questions differs depending on the type of question involved. Some question types may be more likely than others to become convoluted (e.g., suggestive questions), as a result of which they could contain components that increase both complexity and the likelihood that children will be unresponsive, inconsistent, or become confused/uncertain. In particular, suggestive tag questions are thought to be especially complex (Gibbons & Turell, 2008; *R v W and M* [2010] EWCA Crim 1926 para 30), requiring the respondent to carry out at least seven cognitive operations to fully comprehend and respond to the question correctly (Walker et al., 2013). As Walker et al. (2013) suggested, "if the question is a long one, being able to hold in memory all the propositions in the questions and check each one for truth before responding to a tag like "isn't that true?" is probably beyond the capability of any preteen." Indeed, the use of tag questions may not show up in the speech of some children until the early teens (Reich, 1986). No systematic field study has yet addressed how

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

linguistic complexity varies depending on the question type and how the type and linguistic complexity of the question together influence the ways in which children respond.

In forensic interviews, children are typically responsive to almost all the questions addressed to them (e.g., Lamb, Hershkowitz, Sternberg, Esplin, Hovav, Manor, & Yudilevitch, 1996; Sternberg, Lamb, Davies, & Westcott, 2001), but laboratory analogue studies show that their answers to open-ended free-recall invitations (e.g., "Tell me what happened."), children are more likely to be accurate than their answers to closed-ended recognition prompts (e.g., "Did he touch you with his fingers?") for a number of reasons (e.g., Jones & Pipe, 2002; Lamb, Orbach, Hershkowitz, Horowitz, & Abbott, 2007). Younger children produce shorter and less detailed accounts in response to open-ended questions than older children and adults (e.g., Eisen, Goodman, Qin, Davis, & Crayton, 2007; Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012; Lamb, Sternberg, Orbach, Esplin, Stewart, & Mitchell, 2003), but their reports are no less accurate (e.g., Jack, Leov, & Zajac, 2014; Sutherland & Hayne, 2001). On the other hand, younger children are more likely than older children and adults to provide erroneous details in response to closed-ended questions (e.g., Waterman, Blades, & Spencer, 2004; see Melnyk, Crossman, & Scullin, 2007, for a review), perhaps in part because they are less willing to say "I don't know" in response to closed as opposed to open questions (Earhart, La Rooy, Brubacher, & Lamb, 2014).

Although defense lawyers are permitted to ask children misleading and suggestive questions in cross-examination, we know that such types of questions are less likely to elicit accurate information from children (Henderson, 2002). Suggestive prompts are most problematic because children, especially young children, may change details in their accounts and thus respond inconsistently, either by incorporating suggested information or

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

acquiescing to perceived interviewer coercion (e.g., Bruck & Ceci, 1999; Bruck, Ceci, & Principe, 2006; Eisen, Qin, Goodman, & Davis, 2002; Lamb & Fauchier, 2001; London & Kulkofsky, 2010; Orbach & Lamb, 2001). Suggestive tag questions (e.g., “You’re lying, aren’t you?”) are often considered especially detrimental (Lamb & Fauchier, 2001; Orbach & Lamb, 2001; Walker et al., 2013). Recent research distinguishing between different types of suggestive prompts – confrontational, suppositional, and introductory - in forensic interviews (Orbach, Lamb, Hershkowitz, & Abbott, in press, see Table 1) found that children were twice as likely to acquiesce than resist interviewers’ suggestions. Contradictions were most likely to be elicited in response to suggestive introductory prompts, closely followed by suggestive confrontational prompts, although the latter elicited almost a third of all contradictory responses, despite accounting for only 5% of the total number of suggestive prompts. Younger children were asked fewer suggestive questions than older children, but were more likely to acquiesce in response to suggestive confrontational prompts, and were as likely to acquiesce in response to suggestive suppositional and introductory prompts.

Complementing the above-referenced studies of forensic interviews, researchers have also examined children’s responses to different types of questions in court using transcripts from New Zealand (Zajac & Cannan, 2009; Zajac et al., 2003), the United States (Andrews, Ahern, Stolzenberg, & Lyon, in press; Andrews et al., 2015a, 2015b; Klemfuss, Quas, & Lyon, 2014; Stolzenberg & Lyon, 2014), and Scotland (Chapter 1). As in forensic interviews, child witnesses in court were more often responsive than unresponsive (Andrews et al., 2015a; Klemfuss et al., 2014), although Chapter 1 and Andrews et al. (2015a, in press) reported that children were more responsive to prosecutors than defense lawyers. Furthermore, in Scottish courts, as in the forensic interviews studied by Earhart et al. (2014), children responded with more uncertainty in

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

response to directive questions, particularly those posed by defense lawyers (Chapter 5). In relation to report consistency, studies measuring children's self-contradictions have found that defense lawyers elicited more inconsistencies than prosecutors (Chapter 1; Andrews et al., 2015a; Zajac et al., 2003; Zajac & Cannan, 2009), and that suggestive questions elicited more self-contradictions than any other prompt type, regardless of age (Andrews et al., 2015a; Zajac et al., 2003). As in Orbach et al.'s (in press) study of forensic interviews, Chapter 1 found that both suggestive confrontational and suggestive introductory questions in court elicited significantly more self-contradictions from children than suggestive suppositions. Suggestive confrontational questions are relatively easy to spot, and thus can be monitored by the court and possibly restricted when necessary. However, suggestive suppositional and introductory questions involve lawyers assuming and introducing information not previously mentioned by the children (see Table 1) and are less easy to identify. One goal of the present study was thus to determine whether the different types of questions varied with respect to their linguistic complexity.

The current study was designed to explore how the linguistic complexity of questions (assessed at the utterance level on 8 dimensions: number of questions, phrases, clauses, sentences, false starts, average word count, word length, and sentence length) may affect children's responses at different ages, and how linguistic complexity may vary depending on who is asking (prosecutors or defense lawyers) and how the question is framed (question type). There has been no previous research on the linguistic complexity of lawyers' questions in the United Kingdom. The current study assessed the direct- and cross-examination of children in Scottish courts in a sample of transcripts involving 56 5- to 17-year-old children questioned in trials held between 2009 and 2014. We sought to create a more comprehensive measure of complexity than in previous studies by combining 8 items measuring lexical and syntactical complexity.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Based on the literature reviewed above, we predicted that lawyers would not alter the linguistic complexity of questions depending on the children's ages, and that defense lawyers would ask more linguistically complex questions than prosecutors. In relation to question types, we predicted that suggestive prompts would be more complex than option-posing prompts, and that both would be more complex than directive prompts and invitations, with suggestive tag questions being most linguistically complex. We further predicted that increased linguistic complexity would lead to more unresponsiveness, more expressions of uncertainty, and more self-contradictions, regardless of how old the children were.

Methods

Sample

The Court Service Team of the Scottish Court Service identified all cases conducted in six major criminal court-houses in Scotland between 2009 and 2014 in which alleged victims of child abuse had testified. Forty-three trials were identified and 36 of these were then selected for detailed study. Recordings of the cases were located, and the portions of the trials in which the children testified were transcribed. Cases involving children who needed the assistance of translators or retracted their sexual abuse allegations or had many sections of inaudible or missing audio were excluded. The 36 trials involved a total of 56 alleged victims of child sexual abuse. 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 in the present study involved at least 25 different prosecutors, 24 different defense lawyers, and 22 different judges. There were 9 transcripts for which this information could not be determined.

Children reported single ($n = 18$) or multiple ($n = 38$) sexually abusive experiences

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

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 of between 5 and 17 years of age ($M = 13.99$, $SD = 2.69$).

Age could not be entered into parametric tests as a continuous variable, because a Kolmogorov-Smirnov test indicated strong deviations from normality, $D(55) = .20$, $p < .001$. Therefore, children were categorized into three age groups at the time of trial: 12-year-olds and under ($n = 15$), 13- to 15-year-olds ($n = 26$), and 16- and 17-year-olds ($n = 15$). These 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 the charge of committing sexual offences 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. No information was available concerning the children's socioeconomic and ethnic backgrounds.

All defendants were male. In 95% ($n = 53$) of the cases, 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 were accorded 'special measures' when they testified. All courts were closed to the public. Four children received no other special measures. Other children gave evidence in court with screen and a supporter present ($n = 15$), or just a supporter present ($n = 5$). The remaining children gave evidence via a live TV link either with a supporter present (n

= 21) or without a supporter 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. Lawyers' substantive questions and children's corresponding responses were coded. Substantive utterances were defined as those designed to elicit or provide information about what happened during the alleged incidents, what immediately preceded or followed the alleged incidents, within-incident interventions (e.g., unexpected interruptions exposing the abuse) and witness details (e.g., witness interventions), 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 said happened in the forensic interview). All inaudible and partially inaudible prompts were excluded for the purposes of this study.

Lawyers' substantive questions were coded for 8 different aspects of structural linguistic complexity (definitions and examples of all codes listed below are provided in Table 1), the types of questions lawyers asked were coded (see Table 1), and children's responses were coded (see Table 1).

Linguistic complexity.

For each lawyer utterance, a coder tabulated the number of questions, phrases, clauses, sentences, and false starts. Each utterance was also entered into an automated

¹ Evidence is taken by a commissioner only when the witness is considered especially vulnerable. In these instances, delays in testifying may increase distress and trauma, significantly hindering the witness's ability to give evidence. Evidence is therefore 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).

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

linguistics program – the ATOS analyzer for text (see

<http://www1.renaissance.com/Products/Accelerated-Reader/ATOS/ATOS-Analyzer-for-Text/lang/english>) -- which calculated three further variables to measure structural

complexity: word count, average word length (number of letters), and average sentence

length (number of words). In order to create an overall measure of structural linguistic

complexity, z-scores were generated at the utterance level for the 8 measures of

complexity. Z-scores were used to ensure that each item was weighted equally within the

composite by controlling for the ranges of scores for each item. The internal consistency

of the composite score was high, $\alpha = .81$. The 8 z-score measures were then averaged to

create the linguistic complexity composite used as the dependent variable in all tests

reported below. The mean score for structural question complexity was .00 ($SD = .65$,

range -1.97 to 8.16).

It is important to note that analysing the averaged z-scores as a composite measure is useful for determining where differences occur. However, interpretation of the composite scores beyond identifying differences should be done only when contextualised alongside the raw complexity item scores to retain a sense of how complex questions actually were (e.g., negative z-scores [below the mean of .00] indicate lower complexity relative to the comparison(s) within the sample, yet these may still be regarded as very complex questions for children to monitor and answer when the raw item scores are considered). Table 2 provides descriptive statistics to aid such interpretation.

Lawyers' question types.

Question types. Lawyers' substantive utterances were categorized into one of the four categories commonly used to differentiate among interviewer utterances in forensic interviews (e.g., Lamb, Hershkowitz, Orbach, & Esplin, 2008): invitations, directive, option-posing, and suggestive prompts.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Suggestive question subtypes. Suggestive questions were further categorized into one of 3 categories (using a coding system designed by Orbach et al., in press): suggestive confrontation, suggestive supposition, and suggestive introduction. All suggestive prompts were also coded for whether they were tagged or untagged.

Children's responses.

Responsiveness. Children's responsiveness was categorized exhaustively into one of two categories: responsive and unresponsive.

Uncertainty. Uncertainty was coded when children indicated that they did not know/remember/were unsure about the answer, when they digressed, requested clarification, or did not answer.

Self-contradictions. Self-contradictions were defined as responses that negated what the children had previously disclosed during the proceedings or provided conflicting information.

Inter-rater Reliability

Another rater independently coded 20% of the transcripts that were randomly selected. Inter-rater reliability in the identification of linguistic codes, and the identification and classification of all question and response codes were consistently high, Kappas > .83. Reliability assessments were performed throughout the duration of coding and all disagreements were resolved by discussion.

Results

Analytical plan

The reliability and internal consistency of the composite measure of complexity were first assessed. A series of preliminary discriminant function analyses were then conducted to determine whether gender, case verdicts, the number of children testifying in each case, and the use of special measures were associated with complexity. Research

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

questions were addressed using repeated-measures analyses of variance (RM-ANOVAs), with the linguistic complexity composite measure entered as the dependent variable, children's age entered as the between-subjects independent variable (12 years old and under, 13 to 15 years old, 16 and 17 years old), and all other variables entered as within-subjects repeated-measures factors: lawyer role (prosecutor, defense), question types (invitations, directives, option-posing, suggestive prompts), suggestive question subtypes (confrontation, supposition, introduction), tag questions (tagged, untagged), responsiveness (responsive, unresponsive), uncertainty (uncertainty present, uncertainty not present), and self-contradictions (contradiction present, contradiction not present). When Mauchly's test of sphericity was violated, Greenhouse-Geisser corrections were applied. 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. When investigating statistical interactions involving measures of the children's responses, question type and lawyer role were analyzed in separate RM-ANOVAs to ensure adequate statistical power. Pairwise comparisons (with Bonferonni corrections) were used to follow-up significant two-way interactions. The structural linguistic complexity composite measure was aggregated to the child level by averaging it across the repeated-measures (e.g., when investigating whether linguistic complexity differed with question type, lawyer role, and children's age, the mean linguistic complexity score was cross-tabulated for each child by question type and lawyer role).

Preliminary analyses

Discriminant function analyses revealed no significant effects for gender, case verdicts, the number of children testifying in each case, and type of special measures

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

afforded with respect to the overall mean z-scores for linguistic complexity, thus these factors were not included in any of the analyses reported below.

Factors associated with variations in the complexity of lawyers' questions

A one-way ANOVA was conducted to investigate whether the linguistic complexity of lawyers' questions differed depending on the age of the children being questioned. Importantly, there was no significant difference, $F(2, 55) = .08, p = .92, \eta_p^2 = .003$.

Question types. A question type X lawyer role X children's age RM-ANOVA with Greenhouse-Geisser corrections applied ($\epsilon = .69$ and $.81$) revealed a significant main effect for lawyer role, $F(1, 53) = 4.04, p = .05, \eta_p^2 = .07$. Defense lawyers ($M = .08, SD = .04$) asked more complex questions than prosecutors ($M = -.05, SD = .05$). There was also a significant main effect for question type, $F(2.09, 110.97) = 15.96, p < .001, \eta_p^2 = .23$: Directive questions ($M = -.12, SD = .03$) were less complex than option-posing ($M = -.03, SD = .02$), invitations ($M = .03, SD = .03$), and suggestive ($M = .05, SD = .02$) questions, and option-posing questions were less complex than suggestive questions. There was also a significant interaction between question type and lawyer role, $F(2.42, 128.31) = 4.81, p = .006, \eta_p^2 = .08$. Pairwise comparisons revealed that, when prompting children with option-posing and suggestive prompts, defense lawyers' questions were more linguistically complex ($M = .03, SD = .03; M = .11, SD = .03$) than prosecutors' questions ($M = -.09, SD = .03; M = -.01, SD = .03$, respectively). There were no other significant differences.

Suggestive question types. A suggestive question subtype X lawyer role X age RM-ANOVA with Greenhouse-Geisser corrections applied ($\epsilon = .83$) revealed a main effect for lawyer role, $F(1, 53) = 5.34, p = .03, \eta_p^2 = .09$. As noted above, defense lawyers' suggestive questions ($M = .11, SD = .03$) were more linguistically complex than

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

prosecutors' ($M = -.01, SD = .03$) and there was also a main effect for suggestive question subtype, $F(1.66, 87.89) = 7.59, p = .002, \eta_p^2 = .13$. Pairwise comparisons showed that suggestive suppositions ($M = -.05, SD = .04$) were less complex than suggestive confrontation ($M = .12, SD = .05$) and suggestive introduction ($M = .06, SD = .03$) questions. There were no other significant differences.

Tag questions. A tagged/untagged X lawyer role X age RM-ANOVA again revealed the main effect for lawyer role, $F(1, 53) = 10.19, p = .002, \eta_p^2 = .16$ (see above for descriptive statistics) as well as a main effect for tagged/untagged suggestive questions, $F(1, 53) = 19.86, p < .001, \eta_p^2 = .27$. Tagged suggestive questions ($M = .14, SD = .03$) were more linguistically complex than untagged suggestive questions ($M = -.02, SD = .02$). There were no other significant differences.

How were children's responses affected by question complexity?

Responsiveness. A responsiveness x lawyer role X age RM-ANOVA again showed the main effect for lawyer role, $F(1, 53) = 10.85, p = .002, \eta_p^2 = .17$ (see above for descriptive statistics) as well as a main effect for responsiveness, $F(1, 53) = 4.11, p = .05, \eta_p^2 = .07$: Children's unresponsive answers were elicited by more complex questions ($M = .04, SD = .03$) than responsive answers ($M = -.01, SD = .02$). There were no other significant differences.

A responsiveness X question type X age RM-ANOVA with Greenhouse-Geisser corrections applied ($\epsilon = .86$ and $\epsilon = .83$) again showed the main effect for responsiveness, $F(1, 53) = 11.09, p = .002, \eta_p^2 = .17$, and a main effect for question type, $F(2.60, 138.02) = 11.23, p < .001, \eta_p^2 = .18$ (see above for descriptive statistics) but no significant interactions.

Uncertainty. An uncertainty X lawyer role X age RM-ANOVA showed the main effect for lawyer role, $F(1, 53) = 10.11, p = .002, \eta_p^2 = .16$ (see above for descriptive

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

statistics) and a main effect for uncertainty, $F(1, 53) = 15.93, p < .001, \eta_p^2 = .23$.

Children's expressions of uncertainty were elicited by more complex questions ($M = .08, SD = .03$) than responses that did not express uncertainty ($M = -.02, SD = .02$). There were no other significant effects.

An uncertainty X question type X age RM-ANOVA with Greenhouse-Geisser corrections applied ($\varepsilon = .84$ and $\varepsilon = .64$) again showed the main effect for uncertainty, $F(1, 53) = 18.33, p < .001, \eta_p^2 = .26$, and also a main effect for question type, $F(2.55, 134.91) = 17.95, p < .001, \eta_p^2 = .25$ (see above for descriptive statistics), but no significant interactions.

Self-contradictions. A contradictions X lawyer role X age RM-ANOVA revealed the significant main effect for lawyer role, $F(1, 53) = 4.69, p = .04, \eta_p^2 = .08$ (see above for descriptive statistics) and no other significant effects, although there was a non-significant trend, $F(1, 53) = 3.16, p = .08, \eta_p^2 = .06$, indicating that children's contradictory responses tended to occur more often in response to more linguistically complex questions ($M = .09, SD = .06$) than non-contradictory responses ($M = -.01, SD = .02$).

A contradictions X question type X age RM-ANOVA with Greenhouse-Geisser corrections applied ($\varepsilon = .76$ and $\varepsilon = .71$) showed the main effect for question type, $F(2.29, 125.68) = 6.60, p = .001, \eta_p^2 = .11$, and the non-significant trend for contradictions, $F(1, 53) = 3.54, p = .06, \eta_p^2 = .06$ (see above for descriptive statistics). However, there were no interactions.

Discussion

Although, as predicted, defense lawyers tended to ask more complex questions of children in the courtroom than prosecutors did, this study revealed considerable variability. Many of the lawyers' questions were quite simple in structure, whereas others

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

were more complex. Importantly, and as expected, both prosecutors and defense lawyers asked similarly complex questions of children regardless of their age. As expected, suggestive questions were the most complex. Variations in the complexity of questions had an impact on the quality of children's responses. Children were less likely to respond, more likely to express uncertainty, and, as a trend, more likely to contradict themselves when questions were more complex.

At first glance, the average structural complexity of the questions asked may seem relatively low (see Table 2). The average utterance contained one question, formed by 14 relatively short words within one sentence, with few false starts. However, the average number of phrases per utterance was 4, and the average number of clauses per utterance was 2.5, suggesting that the average utterance contained multiple clauses. Such questions are notoriously difficult for children, particularly those aged 12 years and under, to monitor and answer accurately (see Walker, 1993; Walker et al., 2013). Furthermore, the high standard deviations and wide ranges are noteworthy. Some lawyer utterances contained 8 questions, some involved as many as 10 sentences, some included up to 184 words, and some contained words that averaged as many as 15 letters in length! Such questions would likely be extremely difficult for adults to monitor and answer, let alone children responding in extremely stressful and upsetting circumstances and after long delays between the event(s) in question and the courtroom testimony.

These issues are further exacerbated by the lawyers' manifest insensitivity to the children's ages. In line with our prediction, lawyers did not alter the structural complexity of the questions they posed depending on the children's ages, suggesting insensitivity to children's developmental capacities and limitations. Put another way, both prosecutors and defense lawyers used similarly complex questions to address 5- to 12-year-olds and 16- to 17-year-olds. Although further research utilizing larger samples is needed to assess the

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

robustness of this finding, studies conducted in New Zealand (Davies & Seymour, 1998; Zajac et al., 2003) and California (Evans et al., 2009) similarly showed lawyers' inattention to children's ages, implying that this problem is not unique to Scotland, but may be a common characteristic of adversarial legal systems. Taken together, these findings suggest that learning why and how to alter questioning practices in line with children's ages should be a significant focus of training, not only for defense lawyers, but also for prosecutors and judges.

However, unlike Evans et al. (2009), and to a greater extent than Zajac and Cannan (2009) and Hanna et al. (2012), we found that, as predicted, defense lawyers asked more structurally complex questions than prosecutors. Similarly, Cashmore and DeHaas (1992), Davies and Seymour (1998), Flin et al. (1993), Goodman et al. (1992), and Perry et al. (1995) also found that defense lawyers asked more linguistically complex questions than prosecutors. The inconsistency between these findings and those reported by Evans et al. (2009) may be due to methodological differences, since Evans et al. focused mainly on the syntactic complexity of the questions asked. Further research is needed to elucidate whether different results are obtained when researchers focus on different aspects of complexity.

In general, our findings supported our predictions with respect to question types. Open-ended directive questions were less linguistically complex than closed-ended option-posing questions, open-ended invitations, and suggestive questions. Suggestive utterances were the most linguistically complex questions, particularly when asked by defense lawyers. Additionally, suggestive confrontational questions and tagged questions were the most linguistically complex forms of suggestive questions. Not only do such questions pose risks to the veracity of children's responses because of their suggestiveness (Orbach et al., in press; Spencer & Lamb, 2012; Walker et al., 2013), but such risks are

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

exacerbated due to the high degree of linguistic competence they demand (Walker et al., 2013). The current findings thus support recent calls for courts to restrict the use of the suggestive questions (Lord Carloway, 2013; Lord Chief Justice's Criminal Practice Directions, 2013; Spencer & Lamb, 2012), particularly suggestive confrontational and tagged questions, that dominate cross-examinations (Chapter 1; Andrews et al., 2015a).

Invitations may have been more linguistically complex than directive and option-posing questions because the majority of invitations were formulated as cued-invitations (e.g., "You mentioned [person/object/action]. Tell me more about that" as opposed to general invitations (e.g., "Tell me what happened") (Chapter 1). By definition, cued-invitations refocus the child's attention on previously mentioned details and uses them as contextual cues, thus increasing the structural complexity of the question.

Lastly, and as predicted, increased linguistic complexity led to more unresponsiveness, more expressions of uncertainty, and (non-significantly) more self-contradictions. Our findings are consistent with those of studies showing that increased complexity reduces the accuracy of children's reports (Cashmore & DeHaas, 1992; Zajac et al., 2003; Zajac & Cannan, 2009). Increases in such responding may have deleterious effects on the evaluation of children's testimony (Bruer & Pozzulo, 2014; Goodman, Golding, & Haith, 1984; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Semmler & Brewer, 2002), and the consequences may be serious. In the present study, children's responses were largely influenced only by the linguistic complexity of questions, regardless of who asked them and how the questions were formulated, suggesting that linguistic complexity is a powerful determinant of children's responses. It is possible that interactions with lawyer role and question type would be present in a larger sample that had enough power to detect very small effects but such differences would be of less practical significance than the larger effects found in the present study.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

In line with previous research (Chapter 1; Andrews et al., 2015a) we found no age differences in the children's responses, suggesting that young witnesses of all ages are remarkably responsive and consistent in the face of challenging courtroom questioning. By contrast, the experimental literature shows linear developmental trends in children's ability to respond effectively to demanding questions (see Andrews et al., 2015a). However, since the accuracy of children's responses cannot be assessed in field research, it is possible that children simply acquiesce to the large number of suggestions and option-posing questions asked of them in court (Chapter 1; Andrews et al., 2015a). Indeed, because option-posing and suggestive questions are more likely to be linguistically complex, it is possible that many children are responsive to questions they do not fully understand, and thus our results underestimate the deleterious effects of question complexity on children's responses. Further experimental research, in which the accuracy of children's response can be monitored, is needed to investigate these issues.

Furthermore, whilst long words and sentences are often more difficult to comprehend than shorter ones (Walker et al., 2013), longer words can be more familiar than shorter words (e.g., feign versus pretend) while longer sentences can be easier to understand than shorter ones because comprehensibility can be affected by factors such as word order, negation, voice (active vs. passive), and the familiarity of the words used (Perera, 1980; Scott & Koonce, 2013). Further research is needed on how often, why, and to what extent sentences with identical numbers of clauses, phrases, and words are differentially comprehensible.

Although the cross-examination of witnesses is often deemed essential to protect the accused's right to a fair trial (e.g., Article 6 (3d), of the European Convention on Human Rights; Sixth Amendment to the U.S. Constitution), courts have a duty to allow witnesses to give their best evidence (Home Office, 2011, section 5.8). The findings

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

obtained in the present study, supported by research conducted over the past 30 years in a variety of jurisdictions, suggest that lawyers, particularly defense lawyers, in adversarial systems ask questions of children that sometimes exploit their developmental limitations. Such questioning techniques violate guidelines, based on an extensive body of experimental and field research, outlining the best ways to elicit truthful testimony (see Rush et al., 2012; Spencer & Lamb, 2012) and raise serious questions about the extent to which courts ensure both that guilty suspects are convicted and that innocent suspects are not wrongly convicted.

Since it is now widely accepted in Scotland 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; Lord Carloway, May, 2013; Spencer & Lamb, 2012), the findings described above should be particularly worrisome. It is clear that major reforms are warranted. In particular, the fundamental proposition explored in the Evidence and Procedure Review Report (Scottish Court Service, March, 2015) is that substantial improvements can be made to the administration of justice. Such improvements might involve the widespread use of pre-recorded statements in place of testimony in court and the implementation of Ground Rules Hearings, at which judges stipulate what types of questions can be asked. These procedures (bringing into force Section 28 of the Youth Justice and Criminal Evidence Act, 1999) are currently being implemented in England and Wales under the premise that a properly conducted witness interview before trial may be far more informative and appropriate than a belated appearance in court during the trial (Evidence and Procedure Review Report [Section 1.24], Scottish Court Service, March, 2015; Westera, Kebbell, & Milne, 2013). Furthermore, evidence-based “Toolkits” (see Advocacy Training Council

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

(ATC), 2011) have been introduced in England and Wales to provide continuing education and thus improve practice, in recognition of the fact that many lawyers and judges need guidance on how best to question children appropriately. These Toolkits were endorsed in the Lord Chief Justice's Criminal Practice Directions (2013). Furthermore, intermediaries (i.e., trained professionals who are present at trial to facilitate communication between vulnerable witnesses and lawyers) have had their roles greatly expanded in recent years across England and Wales, and are increasingly used by judges in Crown courts to assist the court by highlighting complex questions and mediating miscommunications (Plotnikoff & Woolfson, 2015). This potentially valuable special measure is presently not available in Scotland. Although the use and effectiveness of special measures have not been systematically assessed, it is likely that systematic training of judges and lawyers, perhaps alongside the greater use of well-trained intermediaries, may be necessary to ensure that practice in Scotland changes in the intended direction.

References

Advocacy Training Council (2011). Retrieved from:

<http://www.advocacytrainingcouncil.org>

Andrews, S. J., Ahern, E. C., Stolzenberg, S. N., & Lyon, T. D. (in press). The productivity of wh- prompts when children testify. *Applied Cognitive Psychology*.

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015a). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology*, 28, 253-261. doi: 10.1002/acp.3103

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015b). The effects of question repetition on responses in direct- and cross-examinations of children alleging sexual abuse in court. *Law and Human Behavior*, 39, 559-570. doi: 10.1037/lhb0000152

Brennan, M. & Brennan, R. (1988). *Strange language: Child victims under cross-examination*. Riverina NSW: Riverina Institute of Higher Education.

Bruck, M. & Ceci, S. J. (1999). The suggestibility of children's memory. *Annual Review of Psychology*, 50, 419-439. doi: 10.1146/annurev.psych.50.1.419

Bruck, M., Ceci, S. J., & Principe, G. F. (2006). The child and the law. In K. A. Renninger, I. E. Sigel, W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology*, 6th ed, Vol. 4 (pp. 776-816). New York, NY: John Wiley & Sons, Ltd.

Bruer, K. & Pozzulo, J. D. (2014). Influence of eyewitness age and recall error on mock juror decision-making. *Legal and Criminological Psychology*, 19, 332-348. doi: 10.1111/lcrp.12001

Burton, M. (2012). *Grammar for sentence combining: Underpinning knowledge for adult literacy practitioners*. UK: National Institute of Adult Continuing Education.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

- Carloway, Lord C. S. (May, 2013). *Scots criminal evidence and procedure – meeting the challenges and expectation of modern society and legal thinking*. Speech addressed to the Criminal Law Conference at Murrayfield. Retrieved from: <http://www.scotland-judiciary.org.uk/Upload/Documents/CriminalLawConferenceMurrayfield9May2013.pdf>
- Carter, C., Bottoms, B., & Levine, M. (1996). Linguistic and socioemotional influences on the accuracy of children's reports. *Law and Human Behavior, 20*, 335-358. doi: 10.1007/BF01499027
- Cashmore, J., & DeHaas, N. (1992). The use of closed-circuit television for child witnesses in the act. *Australian Law Reform Commission Research Paper No. 1*.
- Davies, E. & Seymour, F. (1998). Questioning child complainants of sexual abuse: Analysis of criminal court transcripts in New Zealand. *Psychiatry, Psychology and Law, 5*, 47–61. doi: 10.1080/13218719809524919
- Earhart B., La Rooy D. J., Brubacher S. P., & Lamb M. E. (2014). An examination of “don't know” responses in forensic interviews with children. *Behavioral Sciences & the Law, 32*, 746–761. doi: 10.1002/bsl.2141
- Eisen, M. L., Goodman, G. S., Qin, J., Davis, S. L., & Crayton, J. (2007). Maltreated children's memory: Accuracy, suggestibility, and psychopathology. *Developmental Psychology, 43*, 1275-1294. doi:10.1037/0012-1649.43.6.1275
- Eisen, M. L., Qin, J., Goodman, G. S., & Davis, S. L. (2002). Memory and suggestibility in maltreated children: Age, stress arousal, dissociation, and psychopathology. *Journal of Experimental Child Psychology, 83*, 167-212. doi: 10.1016/S0022-0965(02)00126-1
- European Convention on Human Rights, Art 6(d). Retrieved from: <http://www.echr>.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

- coe.int/Documents/Convention_ENG.pdf
- Evans, A. D., Lee, K., & Lyon, T. D. (2009). Complex questions asked by defense attorneys but not prosecutors predicts convictions in child abuse trials. *Law and Human Behavior, 33*, 258-264. doi: 10.1007/s10979-008-9148-6
- Evidence and Procedure Review Report, Scottish Court Service (March, 2015). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/aboutscs/reports-and-data/reports-data/evidence-and-procedure-full-report---publication-version-pdf.pdf?sfvrsn=2>
- Flin, R., Bull, R., Boon, J., & Knox, A. (1992). Children in the witness-box. In H. Dent & R. Flin (Eds.), *Children as witnesses*. Wiley series in the psychology of crime, policing and law (pp. 167–179). Oxford, England: John Wiley and Sons.
- Flin, R. H., Stevenson, Y., & Davies, G. M. (1989). Children's knowledge of court proceedings. *British Journal of Psychology, 80*, 285-297. doi: 10.1111/j.2044-8295.1989.tb02321.x
- Gibbons, J. & Turrell M. (Eds.) (2008). *Dimensions of Forensic Linguistics*. Amsterdam, The Netherlands: John Benjamins Publishing Company.
- Goodman, G. S., Golding, J. M., & Haith, M. M. (1984). Jurors' reactions to child witnesses. *Journal of Social Issues, 40*, 139-156. doi: 10.1111/j.15404560.1984.tb01098.x
- Goodman, G.S., Taub, E.P., Jones, D.P., England, P., Port, L.K., Rudy, L., et al. (1992). Testifying in criminal court: Emotional effects on child sexual assault victims. *Monographs of the Society for Research in Child Development, 57*, v-142. doi: 10.2307/1166127
- Hanna, K., Davies, E., Crothers, C., & Henderson, E. (2012). Questioning child witnesses in New Zealand's criminal justice system: Is cross-examination fair? *Psychiatry,*

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

- Psychology and Law*, 19, 530-546. doi:10.1080/13218719.2011.615813
- Hanna, K., Davies, E., Henderson, E., Crothers, C. & Rotherham, C. (2010). *Child witnesses in the New Zealand criminal courts: A review of practice and implications for policy*. Auckland: Institute of Public Policy, AUT University.
- Henderson, E. (2002). Persuading and Controlling: The Theory of Cross-examination in Relation to Children. In H. Westcott, G. Davies & R. Bull, *Children's testimony a handbook of psychological research and forensic practice* (1st ed., pp. 279-293). New York: J. Wiley.
- Hershkowitz, I., Lamb, M. E., Orbach, Y., Katz, C., & Horowitz, D. (2012). The development of communicative and narrative skills among preschoolers: lessons from forensic interviews about child abuse. *Child Development*, 83, 611-622. doi: 10.1111/j.1467-8624.2011.01704.x
- Home Office. (2011). *Achieving the best evidence in criminal proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures*. Retrieved from: http://www.cps.gov.uk/publications/docs/best_evidence_in_criminal_proceedings.pdf
- Jack, F., Leov, J., & Zajac, R. (2014). Age-related differences in the free-recall accounts of child, adolescent, and adult witnesses. *Applied Cognitive Psychology*, 28, 30-38. doi: 10.1002/acp.2951
- Jones, C. H. & Pipe, M. E. (2002). How quickly do children forget events? A systematic study of children's event reports as a function of delay. *Applied Cognitive Psychology*, 16, 755-768. doi: 10.1002/acp.826
- Klemfluss, J. Z., Quas, J. A., & Lyon, T. D. (2014). Attorney's questions and children's productivity in child sexual abuse criminal trials. *Applied Cognitive Psychology*,

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

28, 780-788. Doi: 10.1002/acp.3048

2. Koriat, A., Goldsmith, M., Schneider, W., & Nakash-Dura, M. (2001). The credibility of children's testimony: can children control the accuracy of their memory reports? *Journal of Experimental Child Psychology*, *79*, 405-437.

doi:10.1006/jecp.2000.2612

Lamb, M. E., & Fauchier, A. (2001). The effects of question type on self-contradictions by children in the course of forensic interviews. *Applied Cognitive Psychology*, *15*, 483-491. doi:10.1002/acp.726

Lamb, M. E., Hershkowitz, I., Sternberg, K. J., Esplin, P. W., Hovav, M., Manor, T., & Yudilevitch, L. (1996). Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development*, *19*, 627-637. doi: 10.1177/016502549601900310

Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses*. Chichester, UK: Wiley.

Lamb, M. E., Orbach, Y., Hershkowitz, I., Horowitz, D., & Abbott, C. B. (2007). Does the type of prompt affect the accuracy of information provided by alleged victims of abuse in forensic interviews? *Applied Cognitive Psychology*, *21*, 1117-1130. doi: 10.1002/acp.1318

Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., Stewart, H., & Mitchell, S. (2003). Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology*, *71*, 926-934. doi:10.1037/0022-006X.71.5.926

London, K. & Kulkofsky, S. (2010). Factors affecting the reliability of children's reports. In G. M. Davies & D. B. Wright (Eds.), *New Frontiers in Applied Memory* (pp.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

119-141). New York, NY: Psychology Press.

Lord Chief Justice's Criminal Practice Directions (2013). Retrieved from:

<https://www.judiciary.gov.uk/wpcontent/uploads/JCO/Documents/Practice+Directions/Consolidated-criminal/criminal-practice-directions-2013.pdf>

Melnyk, L., Crossman, A. M., & Scullin, M. H. (2007). The suggestibility of children's memory. In M. P. Toglia, J. D. Read, D. F. Ross & R. C. L. Lindsay (Eds.), *Handbook of eyewitness psychology, Vol 1: Memory for events* (pp. 401-427). Mahwah, NJ: Lawrence Erlbaum.

Myers, J. E., Redlich, A. D., Goodman, G. S., Prizmich, L. P., & Imwinkelried, E. (1999). Jurors' perceptions of hearsay in child sexual abuse cases. *Psychology, Public Policy, and Law*, 5, 388-419. doi: 10.1037/1076-8971.5.2.388

Orbach, Y. & Lamb, M. E. (2001). The relationship between within-interview contradictions and eliciting interviewer utterances. *Child Abuse & Neglect*, 25, 323-333. doi: 10.1016/S0145-2134(00)00254-4

Orbach, Y., Lamb, M. E., Hershkowitz, I., & Abbott, C. B. (in press). Allegedly abused children's responses to suggestion in the course of forensic interviews.

Perera, K. (1980). The assessment of linguistic difficulty in reading material. *Educational Review*, 32, 151- 161.

Perry, N. W., McAuliff, B. D., Tam, P., Claycomb, L., Dostal, C., & Flanagan, C. (1995). When lawyers question children: Is justice served? *Law and Human Behavior*, 19(6), 609. doi: 10.1007/BF01499377

Plotnikoff, J. & Woolfson, R. (2015). *Intermediaries in the criminal justice system*. Bristol: Policy Press.

R v W and M [2010] EWCA Crim 1926.

Reich, P. (1986). *Language development*. Englewood Cliffs, NJ: Prentice-Hall.

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

- Roebbers, C. M. & Schneider, W. (2005). Individual differences in young children's suggestibility: Relations to event memory, language abilities, working memory, and executive functioning. *Cognitive Development, 20*, 427-447. doi: 10.1016/j.cogdev.2005.05.006
- Rush, E., Quas, J. A., & McAuliff, B. D. (2012). Child witnesses' experiences of distress in criminal courts: sources, consequences and solutions. In M. K. Miller & B. H. Bornstein (Eds.), *Stress, trauma, and well-being in the legal system* (pp. 89-121). New York, NY: Oxford University Press.
- Saywitz, K. J., Jaenicke, C. & Camparo, L. (1990). Children's knowledge of legal terminology. *Law and Human Behavior, 14*, 523-535. doi:10.1007/BF01044879
- Saywitz, K. J. & Snyder, L. (1993). Improving children's testimony with preparation. In G. Goodman, & B. Bottoms (Eds.), *Child victims, child witnesses: Understanding and improving testimony*, pp. 117-146. New York: The Guilford Press.
- Scott, C. M. & Koonce, N. M. (2013). Syntactic contributions to literacy learning. In C. A. Stone, E. R. Silliman, B. J. Ehren, & G. P. Wallach (Eds.), *Handbook of language and literacy, 2nd ed*, pp. 283- 301. New York: The Guilford Press.
- Semmler, C. & Brewer, N. (2002). Effects of mood and emotion on juror processing and judgments. *Behavioral Sciences & the Law, 20*, 423-436. doi:10.1002/bsl.502
- Sexual Offences Act (2003). Retrieved from:
<http://www.legislation.gov.uk/ukpga/2003/42/part/1/crossheading/child-sex-offences>
- Sixth Amendment to the US Constitution: Rights of Accused in Criminal Prosecutions (pg. 1399). Retrieved from: <http://www.gpo.gov/fdsys/pkg/GPO-CONAN-1992/pdf/GPO-CONAN-1992-10-7.pdf>
- Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to*

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

- change the rules?* Oxford and Portland, Oregon: Hart Publishing.
- Sternberg, K. J., Lamb, M. E., Davies, G. A., & Westcott, H. L. (2001). The Memorandum of Good Practice: theory versus application. *Child Abuse & Neglect*, *25*, 669-681. doi: 10.1016/S0145-2134(01)00232-0
- Stolzenberg, S. & Lyon, T.D. (2014). How attorneys question children about the dynamics of sexual abuse and disclosure in criminal trials. *Psychology, Public Policy, & Law*, *20*, 19-30. doi:10.1037/a0035000
- Sutherland, R. & Hayne, H. (2001). Age-related changes in the misinformation effect. *Journal of Experimental Child Psychology*, *79*, 388-404. doi:10.1006/jecp.2000.2610
- Szojka, Z., Andrews, S. J., Lamb, M. E., Stolzenberg, S. N., & Lyon, T. D. (2017). Challenging the credibility of alleged victims of child sexual abuse in Scottish courts. *Psychology, Public Policy, & Law*, *23*, 200-210. doi: 10.1037/law0000117
- Victims and Witnesses [Scotland] Act, 2014. Retrieved from: <http://www.legislation.gov.uk/asp/2014/1>
- Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from: <http://www.legislation.gov.uk/asp/2004/3>
- Walker, A. (1993). Questioning young children in court: A linguistic case study. *Law and Human Behavior*, *17*, 59-81. doi: 10.1007/BF01044537
- Walker, A. G., Kenniston, J., & Inada, S. S. (2013) (Eds.). *Handbook on questioning children: A linguistic perspective (3rd ed.)*. Washington D. C.: American Bar Association.
- Waterman, A. H., Blades, M., & Spencer, C. P. (2004). Indicating when you do not know the answer: the effect of question format and interviewer knowledge on children's

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

'don't know' responses. *British Journal of Developmental Psychology*, 22, 335-348. doi: 10.1348/0261510041552710

Westera, N., Keibell, M., & Milne, R. (2013). Losing two thirds of the story: A comparison of the video recorded police interview and live evidence of rape complainants. *Criminal Law Review*, 4, 290-308.

Youth Justice and Criminal Evidence [UK] Act 1999. Retrieved from:

<http://www.legislation.gov.uk/ukpga/1999/23>

Zajac, R. & Cannan, P. (2009). Cross-examination of sexual assault complainants: A developmental comparison. *Psychiatry, Psychology and Law*, 16, 36-54. doi: 10.1080/13218710802620448

Zajac, R., Gross, J., & Hayne, H. (2003). Asked and answered: Questioning children in the courtroom. *Psychiatry, Psychology and Law*, 10, 199-209. doi: 10.1375/pplt.2003.10.1.199

Zajac, R., O'Neill, S., & Hayne, H. (2012). Disorder in the courtroom? Child witnesses under cross-examination. *Developmental Review*, 32, 181-204. doi: <http://dx.doi.org/10.1016/j.dr.2012.06.006>

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Table 1.

Coding Definitions and Examples.

Code	Definition	Example
Linguistic complexity items		
Number of questions	A count of the number of questions in each utterance, including imperatives and statements phrased as questions.	“How did he do it? What did he do? Did he touch you?” = 3 MQs
Number of phrases	A string of words which form a grammatical unit; smaller than a clause and need not contain a verb (Burton, 2012).	“The big man?” = 1 phrase “[He] [ran out] [of the house]?” = 3 phrases
Number of clauses	A count of the number of clauses in each utterance. A clause is a larger word group that includes a little more information. It consists of at least two phrases - one is a noun phrase known as the subject, and the other is a verb phrase.	“The big man shouted?” = 1 clause “The big man shouted and ran out of the house?” = 2 clauses
Number of sentences	A count of the number of sentences in each utterance. Sentences often contain a subject and predicate, and consist of a main clause and sometimes one or more subordinate clauses.	“The big man shouted and ran out of the house?” = 1 sentence
False starts	A count of the number of false starts (i.e., stumbles) within an utterance. False starts can	“He – she never said anything – she she never – hold on, she never said anything to you at the hotel about

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

	occur within sentences as well as at the beginning.	this, did she? The first time you heard about it was on Tuesday – Wednesday, right?" = 4 false starts
Word count	A count of the number of complete words in each utterance.	
Average word length	The average length (in letters) of words within each utterance.	
Average sentence length	The average length (in words) of sentences within each utterance.	
Question types		
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.	<p>"Tell me everything about the first time/last time/time you best remember."</p> <p>"Tell me more about that."</p> <p>"Tell me about/what happened with (content mentioned by the child)."</p> <p>"What was the very first thing that happened before (an occurrence/action mentioned by the child)?"</p>
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/when/how did it happen?"</p> <p>"Why did you do that?"</p> <p>"What color was his t-shirt?" (when the child mentioned earlier that he was wearing a t-shirt).</p>

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

		“Where did he touch you?” (when the child mentioned earlier that a male touched her).
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 he touch your skin?” (when the child had mentioned earlier that he touched her). “Were your clothes on when this happened?” “Did he touch you over your clothes or under your clothes?” “Was that photo he showed you from a photo album or a magazine or...?”
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.	
Suggestive question subtypes		
Suggestive confrontation	Suggestive questions that 1) raise the possibility for the third time that reported information is not true, 2) are option-posing or suggestive questions asked for the third time on the same issue, 3) are instances where the lawyer refers to information disclosed by the child earlier in the direct-/cross-examination and uses it to confront the child by questioning, doubting, or	“Are you sure?” (when asked for the 3 rd time) Lawyer: “Did it happen once or more than once?” Child: “More than once.” Lawyer: “So, it did happen more than once?” Child: “Yes.”

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

	contradicting his or her current statement, or 4) are instances where the lawyer refers to knowledge of undisclosed information about the investigated incident and confronts the child by using it to contradict information s/he disclosed.	Lawyer: "This is a serious matter. I'll ask you again. Did it happen once or more than once?" [option-posing 3 rd time] Lawyer: "What happened to your trousers?" Child: "They stayed on." Lawyer: "How did he touch your privates if your trousers were on?" [coercive confrontation internal] "You said (XXX), but your brother, who testified earlier, said that (contradicting info)."
Suggestive supposition	Suggestive questions where 1) the lawyer asks a question built on an implicit assumption that an undisclosed peripheral action had happened, 2) the lawyer asks a question built on a potentially contaminating assumption that something central to the allegation had happened, 3) the lawyer asks a question built on an explicit undisclosed assumption (premise) that something had happened, or 4) the lawyer questions the child, ignoring an earlier contradicting response that rules out the question.	Child: "Then I went to meet X." Lawyer: "You met X. What did she tell you?" (when the child did not mention that X told anything) "What else did X do?" (when the child did not mention that X did anything else) "Was your mother there when he touched you?" (when the child did not mention that s/he was touched). "Did it hurt when he touched you?" (When child said s/he was not touched)
Suggestive introduction	Suggestive questions where 1) the lawyer introduces undisclosed information (e.g., the suspect's name, the location of the incident), 2) the lawyer summarizes or quotes the child incorrectly; modifies, incorrectly concludes (with or without using a statement which is	"Tell me what happened with/at (a person/place not mentioned by child)." Child: "I went to the park..." Lawyer: "You said you went to skate park."

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

	appended or preceded by a 'tag'), incorrectly interprets, verbalizes the child's action response beyond what the response indicates, or chooses one of two contradictory responses, 3) the lawyer provides restrictive, non-exhaustive options, in a forced-choice question, or 4) the lawyer refers to knowledge he has, from a specified or an unspecified external source, of undisclosed information about the investigated incident.	"Did he touch you in the bedroom or in the living room?" (when child only mentioned that the suspect touched him/her at home) "Your mom told me (undisclosed information)." "I heard from the policeman that (undisclosed information)."
Tag question	Short questions that are tagged onto the end of statements implying an expected response.	"You're lying, aren't you?" "He touched you, didn't he?" "It happened three times, right?"
Children's responses		
Responsive	Verbal and action responses related to the lawyer's previous utterance. Utterances were assigned this category even if they did not contain new informative details, or when their meaning was unclear.	Lawyer: "Did he take your trousers off?" Child: "Yes." [responsive] Lawyer: "What did he do with your trousers?" Child: "I don't know." [responsive]
Unresponsive	Responses that 1) do not relate to the question asked in the previous lawyer utterance, but provide incident-related information. These include instances when children misunderstood the lawyers' questions. As well as, 2) non-substantive responses such as digressions and non-responses.	Lawyer: "What did he say?" Child: "I was – I said "STOP" and I tried to push him away from me, but he kept holding on to my waist." [unresponsive] Lawyer: "Well that can't be right, can it? Try again. Was he standing or sitting?"

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Child: "He licked my private, too". [unresponsive]

Uncertainty

Uncertain responses included 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, and non-responses.

Lawyer: "So it happened at around dinnertime?"

Child: "I'm not certain".

"I didn't understand. Can you repeat that?"

Lawyer: "How did it happen?"

Child: (no response).

Self-contradiction

Responses that negated what the children had previously disclosed during the proceedings or provided self- conflicting information.

Lawyer: "He licked you one time?"

Child: "Yes."

(later in the proceedings)

Lawyer: "How many times did he lick you?"

Child: "I don't know - like 5 times." [self-contradiction]

Lawyer: "Did he touch your privates when you were in the car?" Child: "No."

Lawyer: "But I thought he did touch you in the car. Did he touch your privates in the car?"

Child: "No. I never - in the car he touched my privates." [self-contradiction]

STRUCTURAL COMPLEXITY AND CHILDREN'S RESPONSES

Table 2.

Descriptive statistics for measures of Linguistic Complexity

Item	Raw score			Z-score by item score within the lowest quartile			
	<i>M</i>	<i>SD</i>	range	0%	6.25%	12.5%	25%
Number of questions	1.06	.30	0-8	-3.65	-1.93	-.28	3.21
Number of phrases	4.26	3.16	1-57	-1.35	-.24	.87	3.08
Number of clauses	2.46	1.79	0-28	-1.37	-.39	.58	2.52
Number of sentences	1.20	.55	0-10	-2.19	-.82	.99	2.37
Number of false starts	.11	.43	0-9	-.25	1.49	2.66	5.55
Word count	14.50	11.58	1-184	-1.17	.26	.73	2.72
Average word length	3.77	.81	2-15	-4.21	-1.88	2.12	8.93
Average sentence length	10.89	7.47	2-87	-1.46	-.72	.01	1.49

Chapter 3

Lawyers' question repetition and children's responses in Scottish criminal courts

Published in: Journal of Interpersonal Violence

Samantha J. Andrews and Michael E. Lamb

University of Cambridge

Author Note

The authors are extremely thankful to the Court Service Team of the Scottish Court Service and the Typing and Secretarial Team of the Supreme Courts for their assistance with accessing cases and files, their hospitality throughout the transcription process, and their continued support. The authors are also greatly indebted to Katie Vernon, Rosie Barber, Zsófia Szojka, Guy Skinner, Elizabeth Ahern, Misun Yi, and Hayden Henderson for their assistance with data preparation and reliability coding.

QUESTION REPETITION IN SCOTTISH COURTS

Abstract

This study examined the effects of repeated questions ($n = 7,968$) on 5- to 17-year-olds' testimony in child sexual abuse cases in Scottish criminal courts. We examined transcripts of direct- and cross-examinations of 56 children, categorizing how lawyers asked repeated questions in court and how children responded. Defense lawyers repeated more questions (39.6% of all questions asked) than prosecutors (30.6%) and repeated questions using more suggestive prompts (52% of their repeated questions) than prosecutors (18%) did. In response, children typically repeated or elaborated on their answers and seldom contradicted themselves. Self-contradictions were most often elicited by repeated suggestive prompts posed by defense lawyers. Younger children were asked more repeated questions than older children, but child age was not associated with the types of questions repeated or how children responded to repetition. Questions repeated after delays elicited more self-contradictions than questions repeated immediately. Most repeated questions (69.2%) were repeated more than once, yet no 'asked-and-answered' objections were ever raised. Overall, findings suggest that lawyers frequently ask children 'risky' repeated questions. Official judicial guidance and training needs to be put in place to help identify and restrict the inappropriate repetition of questions.

QUESTION REPETITION IN SCOTTISH COURTS

Lawyers' question repetition and children's responses in Scottish criminal courts

Repeated questions provide interviewees with opportunities to change their initially correct or incorrect responses. Since triers of fact often place emphasis on report consistency when assessing the credibility of oral testimony (Bruer & Pozzulo, 2014; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Semmler & Brewer, 2002), the adverse effects that inappropriate question repetition may have on children's testimony is concerning. To date, existing research on the effects of question repetition has focused exclusively on children aged 12-years-old and under, and only one systematic field study, conducted in California (Andrews, Lamb, & Lyon, 2015a), has investigated how lawyers' repetition of questions affected children's responses. The current study sought to replicate and extend previous research by exploring repeated questioning in 5- to 17-year-old's direct- and cross-examinations in Scottish criminal courts. Specifically, we examined the effects of children's age, lawyer role, and question type on children's responses, the effect of immediate versus delayed repetition on children's responses, the extent of multiple repetition, and the frequency with which opposing lawyers 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). 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, experimental studies indicate that children are more likely to contradict their answers when closed-ended questions are repeated than when open-ended questions are

QUESTION REPETITION IN SCOTTISH COURTS

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, Gross, & Hayne, 2003), perhaps believing that the questioners were unsatisfied with their initial answers or that their initial answers were incorrect (e.g., Howie, Kurukulasuriya, Nash, & Marsh, 2009; Howie, Nash, Kurukulasuriya, & Bowman, 2012; Melinder, Scullin, Gravvold, & Iversen, 2007). 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).

Existing resources for British practitioners have acknowledged that repeated questions are sometimes necessary, but to avoid children, particularly younger children, feeling pressured to change their answers when questions are repeated by authority figures, questioners should explain to the children why questions are being repeated (The Advocates Gateway Toolkits; Toolkit 2, section 4.5 and Toolkit 6, section 5.6 and 6.7). Research has further advised that when questions need to be repeated, they should be prompted using only open-ended questions (Andrews & Lamb, 2014; Andrews et al., 2015a). Despite being an adversarial jurisdiction in which lawyers aim to challenge the credibility of the opponents' witnesses, Scottish courts have a duty to allow witnesses to give their best evidence (Home Office, 2011, section 5.8). However, no official guidance on the use of repeated questions exists in Scotland. This lack of regulation is particularly worrying when findings from the only existing field study on the use and effects of repeated questions in Californian courts (i.e., Andrews et al., 2015a) is considered

QUESTION REPETITION IN SCOTTISH COURTS

alongside recent field research on lawyers' questioning of children in Scottish courts.

As in previous experimental and field research on forensic interviews (i.e., Andrews & Lamb, 2014; La Rooy & Lamb, 2011; for a full review see Andrews et al., 2015a), Andrews et al. (2015a) examined the number of repeated questions and the effects of age and question type on children's responses in a sample of 120 trial transcripts of 5- to 12-year-old alleged victims of child sexual abuse. They further assessed the effects of repetition immediacy, the extent and effects of repeated repetition, and the use of the asked-and-answered objection. They found that defense lawyers 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%) did. In response, children typically repeated or elaborated on their answers, particularly when questions were repeated immediately after the initial response than after a delay, and seldom contradicted themselves. Importantly, and consistent with previous field and experimental research (e.g., Andrews & Lamb, 2014; Quas et al., 2007), self-contradictions were most often elicited by repeated suggestive and option-posing prompts posed by either type of lawyer, but there was no effect on the rate of self-contradictions with repetition immediacy. Child age did not affect the numbers of questions repeated, the types of prompts used by lawyers 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. The authors surmised that lawyers frequently asked children 'risky' repeated questions, and that both lawyers and the judiciary needed more training to identify and restrict the unnecessary repetition of questions.

QUESTION REPETITION IN SCOTTISH COURTS

Recent field research in Scotland, analyzing the same sample as in the current study, found that both prosecutors and defense lawyers used more closed-ended questions than open-ended questions (Chapter 1). In particular, suggestive questions were frequently posed by prosecutors (16% of all questions) and especially by defense lawyers (49% of all questions). All children contradicted themselves at least once, with defense lawyers eliciting more self-contradictions than prosecutors. Suggestive questions were most likely to elicit self-contradictions. Furthermore, unlike previous research (e.g., Andrews et al., 2015b), Chapter 1 found interactions between the types of prompts posed by prosecutors and defense lawyers, children's age, and children's responses. However, these effects did not follow predicted patterns. For example, defense lawyers offered more suggestive prompts to children aged 13 to 15 years than children aged 12 years and under and 16- and 17-year-olds, but were significantly more likely to elicit self-contradictions from children aged 12 years and under than from 13- to 15-year-olds and 16- and 17-year-olds. Furthermore, more self-contradictions were elicited from children aged 12 years and under and 16- and 17-year-olds than from 13- to 15-year-olds when they were suggestively prompted. Because field research on repeated questions has focused exclusively on children aged 12 years and under, research examining differential responses to repeated questions may help elucidate Chapter 1's results and thus inform official guidance on the appropriate repetition of questions in court.

As noted above, no assessment of question repetition has been conducted using Scottish courtroom transcripts (and only one systematic study of courtroom question repetition has been conducted elsewhere), and existing research has focused on children under 12 years of age. The present study thus utilised a sample of Scottish criminal court transcripts involving 56 5- to 17-year-old children questioned in trials held between 2009 and 2014. Like Andrews et al. (2015a), we first investigated the effects of children's age,

QUESTION REPETITION IN SCOTTISH COURTS

lawyer role, and repeated question type on children's responses. Based on previous research, we predicted that defense lawyers would repeat more questions and ask more closed-ended and suggestive questions than prosecutors, children would respond with more self-contradictions when questioned by defense lawyers than when questioned by prosecutors, and there would be no age differences. Second, we coded the effects of immediate versus delayed repetition on children's responses and predicted that questions repeated immediately would result in more elaborations and repetitions than questions repeated after a delay, but due to previous null findings we made no specific predictions regarding self-contradictions. Third, we explored the extent of multiple repetition and predicted that this would be extensive, as found by Andrews et al. (2015a). Lastly, we explored the frequency of 'asked-and-answered' objections, and predicted, again in line with the findings of Andrews et al. (2015a), that objections would be rare.

Method

Sample

The Court Service Team of the Scottish Court Service identified all cases conducted in six major criminal court-houses in Scotland between 2009 and 2014 in which alleged victims of child abuse had testified. Forty-three trials were identified and 36 of these were then selected for detailed study. Recordings of the cases were located, and the portions of the trials in which the children testified were transcribed. Cases involving children who needed the assistance of translators or retracted their sexual abuse allegations or had many sections of inaudible or missing audio were excluded. The 36 trials involved a total of 56 alleged victims of child sexual abuse. 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 in the present study involved at least 25 different

QUESTION REPETITION IN SCOTTISH COURTS

prosecutors, 24 different defense lawyers, and 22 different judges. There were 9 transcripts for which this information could not be determined.

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 of between 5 and 17 years of age ($M = 13.99$, $SD = 2.69$).

Age could not be entered into parametric tests as a continuous variable, because a Kolmogorov-Smirnov test indicated strong deviations from normality, $D(55) = .20$, $p < .001$. Therefore, children were categorized into three age groups at the time of trial: 12-year-olds and under ($n = 15$), 13- to 15-year-olds ($n = 26$), and 16- and 17-year-olds ($n = 15$). These 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 the charge of committing sexual offences 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. No information was available concerning the children's socioeconomic and ethnic backgrounds.

All defendants were male. In 95% ($n = 53$) of the cases, 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 were accorded 'special measures' when they testified. All courts were closed to the public. Four children received no other special measures. Other children gave evidence

QUESTION REPETITION IN SCOTTISH COURTS

in court with screen and a supporter present ($n = 15$), or just a supporter present ($n = 5$).

The remaining children gave evidence via a live TV link either with a supporter present ($n = 21$) or without a supporter present ($n = 3$), or their evidence was taken on commission¹ ($n = 8$).

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-examinations by defense lawyers. 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). Non-substantive 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 non-substantive 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

¹ Evidence is taken by a commissioner only when the witness is considered especially vulnerable. In these instances, delays in testifying may increase distress and trauma, significantly hindering the witness's ability to give evidence. Evidence is therefore 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).

QUESTION REPETITION IN SCOTTISH COURTS

as repeated when the lawyers were clearly seeking information different from that sought in their initial prompt (e.g., Lawyer: “How did he [the accused] touch you?” Child: “He didn’t touch me that time, my friend did.” Lawyer: “How did he [the friend] touch you?”), were probing for more specific information about a topic (e.g., Lawyer: “*Did* he touch you?” Child: “Yes.” Lawyer: “*How* did he touch you?”; Lawyer: “*How* did he hurt J.?” Child: “I don’t know.” Lawyer: “Did you *see* him hurt J.?” Child “No.” Lawyer: “How do you *think* he hurt J.?”), or repeated a question because the child interpreted the initial question too literally (e.g., Lawyer: “Can you tell me how it came out of his jeans?” Child: “Yes.” Lawyer: “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.

Lawyers’ questions. After repeated questions had been identified, the types of lawyer utterances used to refocus the children were categorized. Lawyers’ 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 among interviewer utterances in forensic interviews (e.g., Lamb, Hershkowitz, Orbach, & Esplin, 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.

QUESTION REPETITION IN SCOTTISH COURTS

Multiple repetition 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 lawyers raised the objection.

Inter-rater Reliability

Another rater independently coded 20% of the transcripts that were randomly selected. Reliability in the identification of repeated questions, and the classification of all question and response codes were consistently high, Kappas > .83. We conducted reliability assessments throughout the duration of coding and all disagreements were resolved by discussion.

Results

Preliminary Results

We conducted a series of discriminant function analyses to determine whether there were any associations between children's gender and case verdicts and the proportional frequency of repeated questions, question types, and children's responses. The tests revealed no significant associations. Therefore, gender and case verdict were 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.

Frequency of Repetition

On average, 416.52 ($SD = 250.86$) substantive lawyer prompts were identified in each transcript, with 252.46 ($SD = 181.98$) in direct-examinations and 164.05 ($SD = 116.05$) in cross-examinations. Repeated questions totaled 7,968, with an average of 77.29 ($SD = 63.79$, range = 0 – 250) or 30.61% of all prosecutor utterances repeated in direct-examinations, and 65.00 ($SD = 57.58$, range = 0 – 270) or 39.62% all defense lawyer

QUESTION REPETITION IN SCOTTISH COURTS

utterances repeated in cross-examinations. The difference in proportional question repetition between prosecutors and defense lawyers was significant, $t(55) = 4.14, p < .001, d = .73$. Lawyers repeated questions in all transcripts. Prosecutors repeated their own questions 53.7% ($n = 4,278$) of the time and repeated defense lawyers' questions 0.6% ($n = 50$) of the time. Defense lawyers repeated their own questions 39.9% ($n = 3,178$) of the time and repeated prosecutors' questions 5.8% ($n = 462$) 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 significantly associated with the proportional frequency with which questions were repeated, $F(1, 55) = 4.83, \beta = -.29, p = .03, R^2 = .08$. Younger children were asked proportionally more repeated questions than older children.

A RM-ANOVA was conducted to assess whether different types of questions were more or less likely to be repeated (within-subjects: proportions of repeated invitations, directives, option-posing, and suggestive prompts) depending on the age of the children (between-subjects: 12-year-olds and under, 13- to 15-year-olds, 16- to 17-year-olds). 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. Mauchly's test of sphericity was violated so Greenhouse-Geisser corrections were applied. The analyses revealed significant main effects for the different types of questions, $F(1.85, 92.41) = 56.03, p < .001, \eta_p^2 = .53$. Pairwise comparisons revealed that option-posing ($M = .39, SD = .02$) and suggestive ($M = .39, SD = .02$) questions were more likely to be repeated than

QUESTION REPETITION IN SCOTTISH COURTS

invitations ($M = .19$, $SD = .03$) and directive ($M = .17$, $SD = .01$) questions. There was no significant interaction between children's age and question type.

We conducted a RM-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: 12-year-olds and under, 13- to 15-year-olds, 16- to 17-year-olds). Proportional scores were calculated by dividing the totals for each response type provided by each child by the total number of repeated questions each child was asked. Further, we removed three response types from the analyses (questions ($n = 96$), non responses ($n = 250$), digressions ($n = 74$), and non-substantive responses ($n = 334$)) for which numbers were small, reducing the total number of repeated questions analyzed to 7,214. Mauchly's test of sphericity was violated so Greenhouse-Geisser corrections were applied. The analyses revealed significant main effects for the different types of responses, $F(1.57, 82.94) = 331.01$, $p < .001$, $\eta_p^2 = .86$. Pairwise comparisons revealed that children repeated themselves ($M = .60$, $SD = .01$) significantly more often than they elaborated ($M = .31$, $SD = .01$) and self-contradicted ($M = .10$, $SD = .01$). There was a significant difference between the proportion of elaborations and self-contradictions elicited. There was no significant interaction between children's age and response type.

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

Effects of Lawyer 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 x response type for each child by the total number of repeated questions asked by each lawyer type for that child. Further, we removed one question type (invitations ($n = 150$)) and four response types (questions ($n = 96$), non responses ($n = 250$), digressions ($n = 74$), and non-substantive

QUESTION REPETITION IN SCOTTISH COURTS

responses ($n = 334$) from the analyses, for which numbers were small when cross-tabulated. These steps reduced the total number of repeated questions analyzed to 7,139.

We conducted a RM-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 lawyers' role (within-subjects: prosecution and defense). Greenhouse-Geisser corrections were applied. The analyses revealed significant main effects for the different types of questions, $F(1.78, 95.56) = 178.92, p < .001, \eta_p^2 = .77$ and the different types of responses $F(1.58, 87.09) = 332.23, p < .001, \eta_p^2 = .86$ (see above for pairwise comparisons).

There was a two-way interaction between the types of questions prosecutors or defense lawyers asked repeatedly, $F(1.50, 82.28) = 101.28, p < .001, \eta_p^2 = .65$. Proportionally, more of the prosecutors' repeated questions were directives and option-posing prompts whereas proportionally more of the defense lawyers' repeated questions were suggestive prompts (see Table 3).

There was also a two-way interaction between the types of responses prosecutors or defense lawyers elicited, $F(1.54, 84.58) = 14.35, p < .001, \eta_p^2 = .21$. Prosecutors were significantly more likely to elicit elaborations than defense lawyers, whereas defense lawyers were significantly more likely to elicit repetitions and self-contradictions than prosecutors (see Table 4).

Finally, there was a two-way interaction between the types of questions asked and the types of responses elicited, $F(2.97, 163.24) = 165.32, p < .001, \eta_p^2 = .75$. There were significant differences in the question types that elicited elaborations, repetitions, and self-contradictions. Examination of the means suggested that option-posing questions were

QUESTION REPETITION IN SCOTTISH COURTS

more likely to elicit elaborations and repetitions than repeated directive and suggestive questions. Repeated suggestive questions were more likely to elicit self-contradictions than directive and option-posing questions (see Table 5).

The two-way interactions were qualified by a three-way interaction among lawyers' role, question type, and response type, $F(2.37, 130.57) = 25.97, p < .001, \eta_p^2 = .32$. The three-way interaction is presented in Figure 1. Overall, these results imply that suggestive questions were more problematic when posed by defense lawyers than by prosecutors, whereas non-suggestive question types resulted in more beneficial responses (in terms of consistency) when posed by prosecutors than by defense lawyers.

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 ($n = 2,739, 34\%$) significantly less often than after delays ($n = 5,229, 66\%$), $t(7,967) = 310.36, p < .001, d = 3.92$.

A RM-ANOVA was conducted to determine whether immediacy (within-subjects: immediate or delayed repetition) affected the likelihood of eliciting different responses from children (within-subjects: elaborations, repetitions, and self-contradictions). We removed the small number of questions ($n = 96$), non responses ($n = 250$), digressions ($n = 74$), and non-substantive responses ($n = 334$) from the analyses. This reduced the total number of repeated questions analyzed to 7,214. Greenhouse-Geisser corrections were applied. The RM-ANOVA revealed a main effect for response type, $F(1.38, 75.60) = 388.41, p < .001, \eta_p^2 = .88$. Repetitions ($M = .59, SD = .01$) were more frequent than elaborations ($M = .33, SD = .01$), and elaborations were more frequent than self-contradictions ($M = .08, SD = .01$). There was also an interaction between immediacy and response type, $F(1.36, 74.66) = 8.79, p = .002, \eta_p^2 = .14$. Children were more likely to elaborate when questions were repeated immediately than when questions were delayed,

QUESTION REPETITION IN SCOTTISH COURTS

whereas children were more likely to repeat and contradict themselves when questions were repeated after a delay than when repeated immediately (see Table 6).

Effects of Multiple Repetition

Of all repeated questions ($n = 7,968$), 30.8% ($n = 2,451$) were repeated only once and 69.2% ($n = 5,517$) were repeated more than once. A total of 4,078 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 2.54 ($SD = 2.97$) times.

Asked-and-answered Objections

No asked-and-answered objections were raised in any of the transcripts.

Discussion

This was the first study to investigate the effects of children's age, lawyer role, and question type on children's responses to repeated questions in Scottish direct- and cross-examinations. Repetition immediacy, multiple repetition, and asked and answered objections were also examined. This was also the first study to explore the differential effects of question repetition in a sample with a wide age range (5- to 17-year-olds).

We found that all children were prompted with repeated questions in Scottish courts, and that the rates of repetition were considerably higher than those found in forensic interviews (4.3% of interviewer prompts; Andrews & Lamb, 2014), and higher than those found in Californian courts: 17.8% of all questions asked by Californian prosecutors and 33.6% of all questions asked by Californian defense lawyers (Andrews et al., 2015a) versus 30.6% of all questions asked by Scottish prosecutors and 39.6% of all questions asked by Scottish defense lawyers. Further research is needed to elucidate the reasons for these differences between jurisdictions. Nevertheless, as in forensic interviews and previous courtroom research, repeated questions most often elicited repetition and

QUESTION REPETITION IN SCOTTISH COURTS

elaboration, which may have enhanced the informativeness of the children's testimony (Andrews & Lamb, 2014; Andrews et al., 2015a; La Rooy & Lamb, 2011). Repeated questions also elicited self-contradictions on occasion and these rates were slightly lower than those found by Andrews et al. (2015a). Nevertheless, as noted by Andrews et al. (2015a), 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, Andrews et al. (2015a) showed that the rate increased dramatically as repetition frequency increased. This is of particular concern because nearly 70% of the repeated questions in the present study were repeated more than once.

Unlike Andrews et al. (2015a) but in line with the findings of Andrews and Lamb's (2014) study of forensic interviews, we found that age was associated with the frequency of question repetition in the courtroom; younger children were asked more repeated questions than older children. This discrepancy is likely attributable to the underpowered sample of repeated questions ($n = 333$) analyzed by Andrews and Lamb (2014) alongside the wider age range studied in the present study (5 to 17 years) than by Andrews et al. (2015a; 5 to 12 years). Further replication in studies involving children of diverse ages is clearly needed. However, we found that, consistent with Andrews et al.'s (2015a) findings and our predictions, 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) noted, some research suggests that, even though younger children may produce shorter and less detailed accounts of abuse than older children (Hershkowitz, Lamb, Orbach, Katz, & Horowitz, 2012; Lamb, Sternberg,

QUESTION REPETITION IN SCOTTISH COURTS

Orbach, Esplin, Stewart, & Mitchell, 2003), and thus perhaps prompt lawyers to repeat more questions, their reports may be no less accurate than older children's (Oates & Shrimpton, 1991).

Furthermore, as found by Andrews et al. (2015a) and in line with our predictions, we found that defense lawyers repeated more questions than prosecutors, and were more likely to elicit self-contradictions from children than prosecutors. Most notably, suggestive questions had greater effects on children's consistency when posed by defense lawyers than by prosecutors, whereas non-suggestive questions resulted in more repetitions and elaborations when posed by prosecutors than by defense lawyers. 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.

Again in line with our predictions and Andrews et al.'s (2015a) findings, we found that questions repeated immediately after preceding prompts elicited more elaborations and repetitions from children than when questions were repeated after delays. However, contrary to the null findings of Andrews et al. (2015a), we found that self-contradictions were more likely when there were delays between initial prompts and repeated prompts than when questions were repeated immediately. Unlike Andrews et al. (2015a), the current study was able to control for the number of questions each child was asked and immediacy analyses were therefore conducted at the level of the children rather than at the level of the questions. Thus, based on the present findings, we suggest with confidence that repeated questions pose less risk to children's consistency when repeated immediately after initial prompts than when delayed.

QUESTION REPETITION IN SCOTTISH COURTS

Multiple question repetition has been studied very little but deserves further attention because as repetition frequency increases, so does the number of self-contradictions (Andrews et al. (2015a). In line with our predictions, most repeated questions (69.2%) were repeated more than once (cf. Andrews et al., 2015a, 61.5%). Because each repeated question was repeated an average of 2.5 times in the present study, most repeated questions were closed-ended or suggestive, and 50 separate instances questions were repeated 10 or more times, it is concerning that no Scottish lawyers or judges ever raised an asked-and-answered objection. Such failures to object may have been motivated by lawyers' expectations of the judges' responses, since Andrews et al. (2015a) found that when Californian lawyers objected, their objections tended to be overruled. Nevertheless, there is no obvious reason why judges recurrently failed to intervene. Lawyers and judges 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 children why the questions are being repeated, and repeating the question using less closed-ended and suggestive prompts). Training should encourage lawyers to utilize the asked-and-answered objection and judges to sustain objections when warranted so that children's developmental capabilities are respected.

In sum, this study provides further evidence that the questions asked of young witnesses in court are often repeated. Whatever the motivation of the lawyers 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. Of course, questions may sometimes need

QUESTION REPETITION IN SCOTTISH COURTS

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 lawyers question children in court. Official guidance is needed to ensure that questions are only repeated when necessary and immediately after the initial prompts, reasons for repetition are explicitly explained to children, and that repeated suggestive questions are avoided.

QUESTION REPETITION IN SCOTTISH COURTS

References

- Andrews, S. J., & Lamb, M. E. (2014). The effects of age and delay on responses to repeated questions in forensic interviews with children alleging sexual abuse. *Law and Human Behavior, 38*, 171-180. doi: 10.1037/lhb0000064
- Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015a). The effects of question repetition on responses when prosecutors and defense attorneys question children alleging sexual abuse in court. *Law and Human Behavior, 36*, 559-570. doi: doi.org/10.1037/lhb0000152
- Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015b). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology, 28*, 253-261. doi: 10.1002/acp.3103
- Bruck, M. & Ceci, S. J. (1999). The suggestibility of children's memory. *Annual Review of Psychology, 50*, 419-439. doi: 10.1146/annurev.psych.50.1.419
- Bruck, M., Ceci, S. J., & Principe, G. F. (2006). The child and the law. In K. A. Renninger, I. E. Sigel, W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology, 6th ed, Vol. 4* (pp. 776-816). New York, NY: John Wiley & Sons, Ltd.
- Bruer, K. & Pozzulo, J. D. (2014). Influence of eyewitness age and recall error on mock juror decision-making. *Legal and Criminological Psychology, 19*, 332-348. doi: 10.1111/lcrp.12001
- Eisen, M. L., Qin, J., Goodman, G. S., & Davis, S. L. (2002). Memory and suggestibility in maltreated children: Age, stress arousal, dissociation, and psychopathology. *Journal of Experimental Child Psychology, 83*, 167-212. doi: 10.1016/S0022-0965(02)00126-1

QUESTION REPETITION IN SCOTTISH COURTS

- Hershkowitz, I., Lamb, M. E., Orbach, Y., Katz, C., & Horowitz, D. (2012). The development of communicative and narrative skills among preschoolers: Lessons from forensic interviews about child abuse. *Child Development, 83*, 611–622. doi:10.1111/j.14678624.2011.01704.x
- Home Office (2011). *Achieving the best evidence in criminal proceedings: guidance on interviewing victims and witnesses, and guidance on using special measures.* http://www.cps.gov.uk/publications/docs/best_evidence_in_criminal_proceedings.pdf
- Howie, P., Kurukulasuriya, N., Nash, L., & Marsh, A. (2009). Inconsistencies in children's recall of witnessed events: the role of age, questions format and perceived reason for question repetition. *Legal and Criminological Psychology, 14*, 311-329. doi: 10.1348/135532508X383879
- Howie, P., Nash, L., Kurukulasuriya, N., & Bowman, A. (2012). Children's event reports: factors affecting responses to repeated questions in vignette scenarios and event recall interviews. *Journal of Developmental Psychology, 30*, 550-68. doi: 10.1111/j.2044835X.2011.02064.x
- Krähenbühl, S., Blades, M., & Eiser, C. (2009). The effect of repeated questioning on children's accuracy and consistency in eyewitness testimony. *Legal and Criminological Psychology, 14*, 263-278. doi: 10.1348/135532508X398549
- Lamb, M. E. & Fauchier, A. (2001). The effects of question type on self-contradictions by children in the course of forensic interviews. *Applied Cognitive Psychology, 15*, 483-491. doi: 10.1002/acp.726
- Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses.* Chichester: Wiley.

QUESTION REPETITION IN SCOTTISH COURTS

- Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., Stewart, H., & Mitchell, S. (2003). Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology, 71*, 926–934. doi:10.1037/0022-006X.71.5.926
- La Rooy, D. J. & Lamb, M.E. (2011). What happens when interviews ask repeated questions in forensic interviews with children alleging abuse? *Journal of Police and Criminal Psychology, 26*, 20-25. doi: 10.1007/s11896-010-9069-4
- London, K. & Kulkofsky, S. (2010). Factors affecting the reliability of children's reports. In G. M. Davies & D. B Wright (Eds.), *New Frontiers in Applied Memory* (pp. 119-141). New York, NY: Psychology Press.
- Lyon, T. D. (2002). Applying suggestibility research to the real world: the case of repeated questions. *Law and Contemporary Problems, 65*, 97-126. doi: 10.2307/1192367
- Melinder, A., Scullin, M., Gavvold, T., & Iversen, M. (2007). The stability and generalizability of young children's suggestibility over a 44-month interval. *Psychology, Crime & Law, 13*, 459-468. doi: 10.1080/10683160601092997
- Memon, A. & Vartoukian, R. (1996). The effects of repeated questioning on young children's eyewitness testimony. *British Journal of Developmental Psychology, 87*, 403-415. doi: 10.1111/j.2044-8295.1996.tb02598.x
- Myers, J. E., Redlich, A. D., Goodman, G. S., Prizmich, L. P., & Imwinkelried, E. (1999). Jurors' perceptions of hearsay in child sexual abuse cases. *Psychology, Public Policy, and Law, 5*, 388-419. doi: 10.1037/1076-8971.5.2.388
- Oates, K., & Shrimpton, S. (1991). Children's memories for stressful and non-stressful events. *Medical Science and Law, 31*, 4–10. doi: 10.1177/002580249103100102

QUESTION REPETITION IN SCOTTISH COURTS

Poole, D. A. & Lindsay D. S. (1998). Assessing the accuracy of young children's reports:

Lessons from the investigation of child sexual abuse. *Applied and Preventative Psychology*, 7, 1-26. doi: 10.1016/S0962-1849(98)80019-X

Poole, D. A. & White, L. T. (1991). Effects of question repetition on the eyewitness

testimony of children and adults. *Developmental Psychology*, 27, 975-986. doi: 10.1037/0012-1649.27.6.975.

Quas, J. A., Davis, E. L., Goodman, G. S. & Myers, J. E. B. (2007). Repeated questions,

deception, and children's true and false reports of body touch. *Child Maltreatment*, 12, 60-67. doi: 10.1177/1077559506296141

Semmler, C. & Brewer, N. (2002). Effects of mood and emotion on juror processing and

judgements. *Behavioural Sciences & the Law*, 20, 423-436. doi: 10.1002/bsl.502

Sexual Offences (Scotland) Act (2009). <http://www.legislation.gov.uk/asp/2009/9/contents>

The Advocates Gateway. <http://www.theadvocatesgateway.org/cases>

Victims and Witnesses [Scotland] Act, 2014. Retrieved from:

<http://www.legislation.gov.uk/asp/2014/1>

Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from:

<http://www.legislation.gov.uk/asp/2004/3>

Warren, A. R., Hulse-Trotter, K., & Tubbs, E. C. (1991). Inducing resistance to

suggestibility in children. *Law and Human Behavior*, 15, 273-285. doi: 10.1007/BF01061713

White, T.L., Leichtman, M.D. and Ceci, S.J. (1997). The good, the bad, and the ugly:

Accuracy, inaccuracy, and elaboration in preschoolers' reports about a past event. *Applied Cognitive Psychology*, 11, S37-S54. doi: 10.1002/(SICI)1099-0720(199712)11:7<S37::AID-ACP546>3.0.CO;2-4

QUESTION REPETITION IN SCOTTISH COURTS

Zajac, R., Gross, J., & Hayne, H. (2003). Asked-and-answered: questioning children in the courtroom. *Psychiatry, Psychology and Law, 10*, 199-209. doi:

10.1375/pplt.2003.10.1.199

QUESTION REPETITION IN SCOTTISH COURTS

Table 1

Types of Lawyer 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.	<p>"Tell me everything that happened from the beginning to the end."</p> <p>"Then what happened?"</p> <p>"Earlier you mentioned [person/object/action]. Tell me more about that."</p> <p>"Tell me everything that happened before/after you went to the park." [when 'I went to the park' was previously mentioned by the child]</p>
Directive	Open-ended questions that refocus the child on aspects or details of the allegation that they have previously mentioned, mostly using 'WH' 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	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 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>

QUESTION REPETITION IN SCOTTISH COURTS

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.	Lawyer: "Where did she touch you?" Child: "She touched me on the outside of my clothes." Lawyer: "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.	Lawyer: "What day did M. pick up S. from the store?" Child: "Tuesday." Later in the proceedings, Lawyer: "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 s/he had previously reported or provided conflicting information.	Lawyer: "Did he touch you one time or more than one time?" Child: "He touched me seven times." Lawyer: "But I thought he only touched you one time. Did he only touch you one time?" Child: "He touched me one time." Lawyer: "Did dad touch your privates at P.'s house?" Child: "Yes." Later in the proceedings, Lawyer: "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.	Lawyer: "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." Lawyer: "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.	Lawyer: "Did this happen over or under your clothes?" Child: "Under." Lawyer: "Are you sure it happened under your clothes?" Child: [no response].
Question	The child responded by asking the lawyer a question and the lawyer changed the subsequent line of questioning.	Lawyer: "Did they see him do that?" Child: "My mom, B. and T." Lawyer: "Did they see him do that?" Child: "Do you mean if they saw with their eyes?" Lawyer: "Where were you when he tried to pull your pants down?"

QUESTION REPETITION IN SCOTTISH COURTS

Table 3

Lawyer Role by Question Type Interaction

	Question					
	Directive		Option-posing		Suggestive	
Lawyer	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosecution	.18	.02	.64	.02	.18	.01
Defense	.05	.01	.42	.02	.52	.03

Note. Proportions were calculated by cross-tabulating frequencies of question type x lawyer role for each child and then dividing those frequencies by the total number of repeated questions posed by prosecutors and defense lawyers for each child.

QUESTION REPETITION IN SCOTTISH COURTS

Table 4

Lawyer Role by Response Type Interaction

	Response					
	Elaboration		Repetition		Self-contradiction	
Lawyer	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Prosecution	.36	.02	.57	.02	.06	.01
Defense	.27	.02	.62	.02	.11	.01

Note. Proportions were calculated by cross-tabulating frequencies of response type x lawyer role for each child and then dividing those frequencies by the total number of repeated questions posed by prosecutors and defense lawyers for each child.

QUESTION REPETITION IN SCOTTISH COURTS

Table 5

Question Type by Response Type Interaction

	Response					
	Elaboration		Repetition		Self-contradiction	
Question	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Directive	.06	.00	.03	.00	.01	.00
Option-posing	.14	.01	.38	.01	.02	.00
Suggestive	.11	.01	.18	.01	.06	.01

Note. Proportions were calculated by cross-tabulating frequencies of question type x response type for each child and then dividing those frequencies by the total number of repeated questions posed to each child.

QUESTION REPETITION IN SCOTTISH COURTS

Table 6

Immediacy by Response Type Interaction

	Response					
	Elaboration		Repetition		Self-contradiction	
Immediacy	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Immediate	.37	.01	.57	.02	.06	.01
Delayed	.29	.02	.62	.02	.10	.01

Note. Proportions were calculated by cross-tabulating frequencies of immediacy x response type for each child and then dividing those frequencies by the total number of repeated questions posed to each child immediately and after a delay.

QUESTION REPETITION IN SCOTTISH COURTS

Table 7

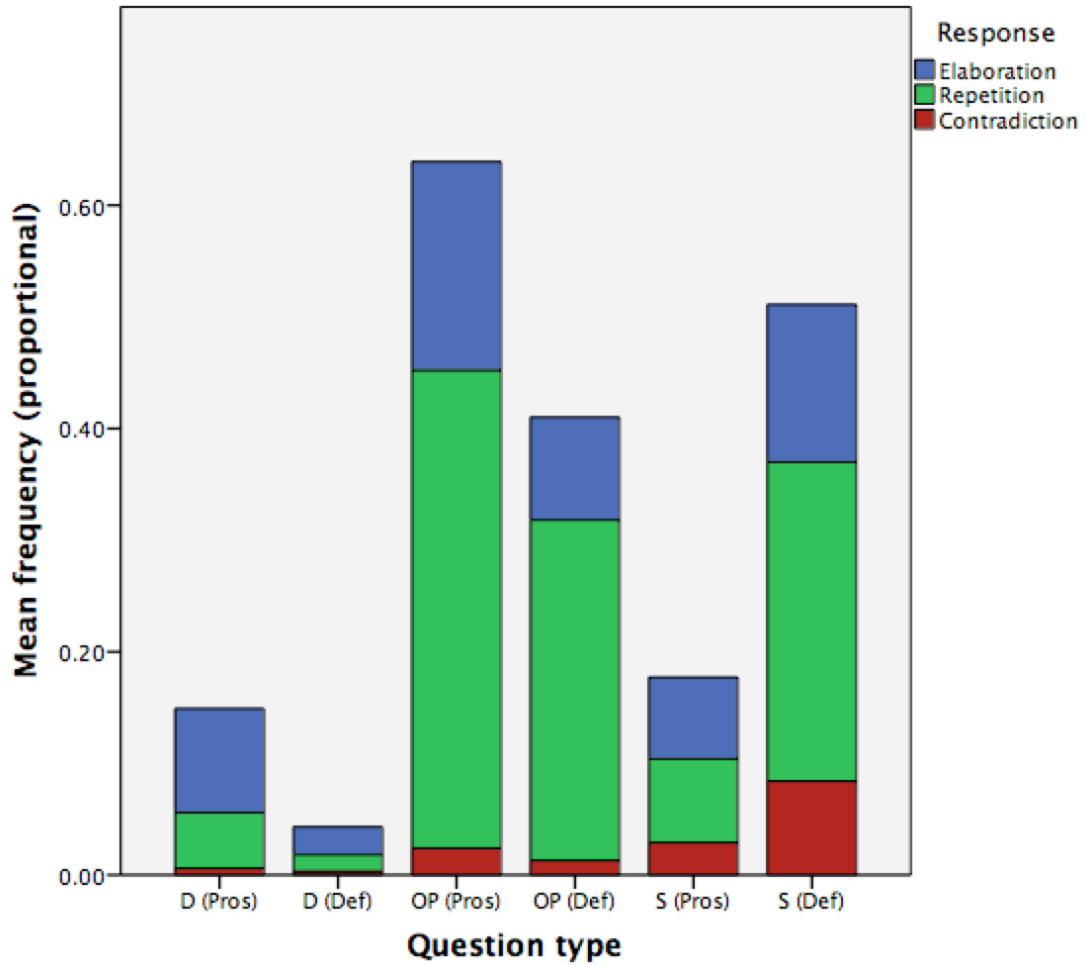
Frequency of Specific Repeated Question Repetition

Number of repetitions	Frequency
1	2,451
2	833
3	323
4	191
5	85
6	61
7	39
8	27
9	18
10	15
11	7
12	5
13	1
14	5
15	3
16	1
17	1
18	1
19	1
20	3
21	2
22	2
25	1
26	1
35	1
Total	4,078

QUESTION REPETITION IN SCOTTISH COURTS

Figure 1

A Three-way Interaction Among Lawyer Role, Question Type and Children's Responses



Note. (Pros) = Prosecution, (Def) = Defense, D = Directive, OP = Option-posing, S = Suggestive.

Chapter 4

Lawyers' question content and children's responses in Scottish criminal courts

Under Review in: Psychology, Crime, & Law

Samantha J. Andrews and Michael E. Lamb

University of Cambridge

Author Note

The authors are extremely thankful to the Court Service Team of the Scottish Court Service and the Typing and Secretarial Team of the Supreme Courts for their assistance with accessing cases and files, their hospitality throughout the transcription process, and their continued support. The authors are also greatly indebted to Katie Vernon, Rosie Barber, Zsófia Szojka, Guy Skinner, Elizabeth Ahern, Misun Yi, and Hayden Henderson for their assistance with data preparation and reliability coding.

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Abstract

We examined 56 trial transcripts of 5- to 17-year-old children testifying as alleged victims of sexual abuse, focusing on differences between prosecutors and defense lawyers with respect to the centrality of the information sought and topic of the questions asked, and the effects on witnesses' responses. Over 40% of all questions focused on peripheral content and defense lawyers asked more questions prompting peripheral information than prosecutors. Overall, children were more productive and responsive to questions that prompted central information than questions that prompted peripheral information, and to questions seeking information about actions rather than any other topic, particularly when prompted by prosecutors. Lawyers did not alter the centrality of the information sought or topic of their questions when prompting children of different ages. These findings suggest that the centrality of the information sought and question topic are important parameters to consider when evaluating children's responses to different types of questions.

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Lawyers' question content and children's responses in Scottish criminal courts

Research investigating the ways in which children are directly and cross-examined by lawyers in court has overwhelmingly focused on the types of questions asked and the effects thereof on children's responses. Whilst more recent research has begun to assess the combined effects of question type, linguistic complexity, and question repetition on children's responses, very few field studies have comprehensively considered how the content of questions, including whether the questions prompt central or peripheral information in relation to the allegations under investigation, affects children's responses. Indeed, the contents of the questions prosecutors and defense lawyers ask are likely to differ due to their opposing motivations. The present quantitative field study was therefore designed to investigate the effects of both the centrality of the information sought and topical focus of prosecutors' and defense lawyers' questions on responses when examining children about alleged sexual offences in Scottish (i.e., adversarial-pluralistic) criminal courts.

Centrality of Information Sought and Children's Responses

Previous research has typically conceptualized the centrality of information sought by questions as either being central to the 'plot' under investigation, thus probing the identification of main characters, the location and time of the incident(s), and abusive (or target) actions, or peripheral to the 'plot' under investigation, thus seeking descriptions of people, places, temporal parameters, emotions, and thoughts. Although diverse responses to questions about peripheral information do not change the plot of the incident(s) under investigation, questions prompting peripheral information may still elicit forensically important information.

In both laboratory and analogue contexts, central details are more accessible in memory than peripheral details (Ibabe & Sporer, 2004), and thus children respond more

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

accurately to questions about central features than questions about peripheral details (Almerigogna, Ost, Akehurst, & Fluck, 2008; Candel, Merckelbach, Jelicic, Limpens, & Widdershoven, 2004; Peterson & Bell, 1996; Poole & White, 1991; Saywitz, Goodman, Nicholas, & Moan, 1991; Tucker, Mertin, & Luszez, 1990; Wright & Stroud, 1998). For example, Peterson and Whalen (2001) examined 2- to 13-year-olds' memories of a medical emergency and found that new peripheral details were more likely than central details to be inaccurate after delays. Furthermore, whilst central detail recall was over 80% complete even after 5-year delays and with the youngest children, recall of peripheral information was never as complete. Researchers have thus suggested that central details are likely to be more resistant than peripheral details to misleading questions (Christianson & Loftus, 1991; Myers, Saywitz, & Goodman, 1996). In court, defense lawyers may ask more questions about peripheral information than prosecutors in an attempt to undermine witnesses' testimony, and this may further explain why children are less productive (Chapter 1) and responsive (Chapter 1), and express more self-contradictions (Chapter 1) and uncertainty (Chapter 2; Chapter 5) in response to defense lawyers than prosecutors.

When considering age differences in the accuracy and consistency of children's responses to questions that prompt central and peripheral details, there is further consensus that young children have more difficulty answering questions that prompt peripheral information than older participants regardless of question type (Brady, Poole, Warren, & Jones, 1999; Roebbers & Schneider, 2000). For example, in Roebbers and Schneider's (2000) study, 284 5- to 64-year-old participants viewed a short video about a theft and were questioned about it three and four weeks afterwards. Participants were most consistent in response to questions that sought central information, but children, especially pre-schoolers, had more difficulty answering questions that sought peripheral information than adults did. Although misleading questions adversely affected response consistency

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

for all age groups, participants responded inconsistently to both open-ended cued-recall questions and closed-ended recognition prompts when recalling peripheral information, suggesting that the centrality of information prompted affected the accuracy of children's responses. Goodman, Rudy, Bottoms, and Aman (1990) suggested that age differences may diminish over time as older participants forget peripheral information that initially gave them an advantage, whereas central events were remembered well by all participants. This may be particularly important in the courtroom context, because many witnesses experience long delays between the alleged incidents(s) and testifying in court (e.g., Henderson & Lamb, 2017; see Plotnikoff & Woolfson, 2009; Spencer & Lamb, 2012).

Despite the relative importance of considering the centrality of the information that questions prompt when assessing the ways in which practitioners question children in forensic contexts and how children of all ages respond, no researchers have investigated the centrality of lawyers' information requests in the courtroom.

Question Topic and Children's Responses

Previous research examining forensic interviews has investigated various aspects of question topic, including temporal attributes (e.g., Orbach & Lamb, 2007) and disclosure processes (see Lindblad, 2007), as well as broader narrative-building techniques (e.g., Westcott & Kynan, 2004). In particular, some researchers have distinguished between wh-prompts focused on static contextual information (e.g., "What did he wear?") and dynamic wh-prompts focused on actions or events (e.g., "How did you get hurt?") (Peterson & McCabe, 1992; Price & Roberts, 2011). Wh-prompts that focus on actions may be especially productive because children are likely to remember actions better than characteristics (Goodman, Hirschman, Hepps, & Rudy, 1991; Lamb, Sternberg, Orbach, Esplin, Stewart, & Mitchell, 2003; Peterson, Dowden, & Tobin, 1999). For example, Peterson and colleagues (1999) questioned 3- to 5-year-olds one week after playing with

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

an adult. Whereas children's responses to wh- questions about actions were quite accurate (84% correct, 5% erroneous), their answers to questions about clothing (43% correct, 29% erroneous) and the room (14% correct, 24% erroneous) were quite inaccurate.

Furthermore, actions are fundamental in sexual abuse cases since sexual abuse involves a series of actions performed by the perpetrator, as do grooming in preparation for the abuse and attempts at concealment. Because most sexual abuse prosecutions involve familiar perpetrators and repeated abuse (Stolzenberg & Lyon, 2014), it is unlikely that descriptions of people and places play a substantial role in determining whether abuse occurred (Ceci, Ross, & Toglia, 1987).

Wh- prompts are therefore likely to vary widely in their specificity and accuracy, but differences among them have largely been ignored in research examining the productivity of different question-types. Only two studies have examined productivity differences among different types of wh- questions (Ahern, Andrews, Stolzenberg, & Lyon, 2015; Andrews, Ahern, Stolzenberg, & Lyon, 2015c). For example, Andrews, Lamb, and Lyon (2015a) examined 120 6- to 12-year-olds' criminal court testimony in Californian child sexual abuse cases to compare the productivity of various substantive wh- questions asked by prosecutors and defense lawyers. Most notably, what/how-happen prompts were the most productive, and both what/how-dynamic prompts and wh- prompts about causality were more productive than other wh- prompts. Prosecutors asked proportionally more what/how-dynamic prompts, and defense lawyers more what/how-static prompts. There were no age differences. This finding is consistent with the suggestion that defense lawyers are more likely to focus on peripheral aspects of the abuse when cross-examining children (Ceci & Bruck, 1995).

No researchers have comprehensively examined the topics of lawyers' questions posed to children during direct- and cross-examinations. Such research is critical, as it

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

would allow direct comparisons to be drawn between the topics of prosecutors' and defense lawyers' questions and the ways in which children respond. While studies investigating lawyers' differential use of and children's responses to wh- prompts are informative, the majority of lawyers' questions are not wh- prompts (see Chapter 1). Furthermore, because prosecutors and defense lawyers have different motivations and are likely to question witnesses accordingly, it follows that the topic of their questions may differ in important ways not illuminated by the past focus on types of wh- prompts. For example, to challenge the character of witnesses and defendants, respectively, defense lawyers might ask more static-questions (i.e., prompt for non-action contextual information) about the alleged victims than prosecutors, whereas prosecutors might ask more static-questions about the suspects than defense lawyers.

Present Study

Given the dearth of research in courtroom samples, the current study sought to comprehensively assess the centrality of the information sought and topic of lawyers' questions asked of 56 5- to 17-year-old children questioned in Scottish criminal trials held between 2009 and 2014. Specifically, associations among child age, lawyer role (prosecution/defense), the centrality of the information sought, and question topic were analysed.

Although this study was conducted to broadly and descriptively investigate information request centrality and question topic, specific hypotheses were addressed within the exploratory analyses, generated both from previous research and what is known of the courtroom context. With regard to the centrality of the information sought, it was predicted that children would find peripheral details more difficult to remember than central details, and would thus be less productive and responsive, and express more uncertainty and self-contradictions in response to questions that prompted peripheral than

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

central information. We further predicted that defense lawyers would focus children more on peripheral details than prosecutors, in an attempt to undermine witnesses' perceived reliability, and thus children's responses would be more detrimental (i.e., less productive and responsive, more self-contradictions and uncertainty) in response to defense lawyers than prosecutors. In line with previous research on this sample (e.g., Chapter 1), we predicted that both prosecutors and defense lawyers would not question children differently depending on their ages, and that age would not affect children's responses either.

With regard to question topic, we predicted that defense lawyers would ask more questions concerning the victims and less about actions than prosecutors, to challenge the character of witnesses rather than focus on the alleged abusive acts. On the other hand, we predicted that prosecutors would ask more questions about the suspect and more questions about actions than defense lawyers. Based on previous research (e.g., Chapter 1; Andrews et al., 2015a; Chapter 2; Chapter 5) it was further predicted that children would be more productive and responsive, and express less uncertainty and self-contradictions, when answering prosecutors' questions than defense lawyers' questions irrespective of question topic. We again predicted that there would be no age differences in the topic of questions and children's responses.

Methods

Sample

The Court Service Team of the Scottish Court Service identified all cases conducted in six major criminal court-houses in Scotland between 2009 and 2014 in which alleged victims of child abuse had testified. Forty-three trials were identified and 36 of these were then selected for detailed study. Recordings of the cases were located, and the portions of the trials in which the children testified were transcribed. Cases involving

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

children who needed the assistance of translators or retracted their sexual abuse allegations or had many sections of inaudible or missing audio were excluded. The 36 trials involved a total of 56 alleged victims of child sexual abuse. 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 in the present study involved at least 25 different prosecutors, 24 different defense lawyers, and 22 different judges. There were 9 transcripts for which this information could not be determined.

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 of between 5 and 17 years of age ($M = 13.99$, $SD = 2.69$).

Age could not be entered into parametric tests as a continuous variable, because a Kolmogorov-Smirnov test indicated strong deviations from normality, $D(55) = .20$, $p < .001$. Therefore, children were categorized into three age groups at the time of trial: 12-year-olds and under ($n = 15$), 13- to 15-year-olds ($n = 26$), and 16- and 17-year-olds ($n = 15$). These 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 the charge of committing sexual offences 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. No information was available concerning the children's socioeconomic and ethnic backgrounds.

All defendants were male. In 95% ($n = 53$) of the cases, children knew the alleged abusers. The suspects were biological parents ($n = 8$), step-fathers/mothers' boyfriends (n

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

= 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 were accorded 'special measures' when they testified. 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 supporter present ($n = 15$), or just a supporter present ($n = 5$). The remaining children gave evidence via a live TV link either with a supporter present ($n = 21$) or without a supporter 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, as well as cross-examinations by defense lawyers. 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). Non-substantive 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

¹ Evidence is taken by a commissioner only when the witness is considered especially vulnerable. In these instances, delays in testifying may increase distress and trauma, significantly hindering the witness's ability to give evidence. Evidence is therefore 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).

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

included. By definition, children's non-substantive responses did not contain incident-related information and were also not included.

Lawyers' questions.

Centrality of information sought. The centrality of the information sought in each lawyer utterance was coded as prompting either central or peripheral details (see Table 1). When questions prompted both central and peripheral information, the question was coded as central. When more than one question was asked in a single utterance, centrality was coded in accordance with the last information request.

Question topic. The topic of each lawyer utterance was coded into one of 17 topic categories (see Table 1). When questions prompted children about more than one topic category, the question was coded in accordance with the main or last information request. When more than one question was asked in a single utterance, topic was coded in accordance with the last information request.

Children's responses.

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 the smallest unit for analyzing information provided by children pertaining to the alleged incidents. 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

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

child's present mental or emotional state (e.g., "I am scared"), phrases that suggested the level of confidence of the interviewee during the interview (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.

Responsiveness. Children's responsiveness was categorized into one of two categories: responsive and unresponsive. Definitions and examples of each category are provided in Table 1.

Self-contradictions. Self-contradictions were defined as responses that negated what the children had previously disclosed during the proceedings or provided conflicting information (see Table 1).

Uncertainty. Expressions of substantive uncertainty were also coded (e.g., "Don't know remember"; "Not sure").

Inter-rater Reliability

Another rater independently coded 20% of the transcripts that were randomly selected. Reliability in the classification of all question and response codes were consistently high, Kappas > .83. We conducted reliability assessments throughout the duration of coding and all disagreements were resolved by discussion.

Results

Analytical Plan

A series of preliminary discriminant function analyses were first conducted to determine whether gender, case verdicts, special measures afforded, and the number of children testifying in each case should be considered further. Research questions were addressed using descriptive and repeated-measures analyses of variance (RM-ANOVAs), with children's age entered as the between-subjects variable (12 years old and under, 13 to 15 years old, 16 and 17 years old), and all other variables entered as within-subjects

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

repeated-measures factors: lawyer role (prosecutor, defense), centrality of the information request (central, peripheral), question topic (suspect, victim, witness, suspect action, victim action, witness action, location, time, object, body part, suspect's verbal statement, victim's verbal statement, witness's verbal statement, disclosure, prior formal questioning, thoughts/emotions, sensory perceptions), children's productivity (number of details) responsiveness (responsive), self-contradictions (contradiction), and children's uncertainty (uncertain). The within-subjects repeated measure scores (apart from children's productivity) were converted into proportional values by dividing the cell count of interest (e.g., number of questions prompting central information asked by defense lawyers) by the appropriate grouping total (e.g., the total number of substantive questions asked by defense lawyers). Using proportional values controls for the number of questions asked by each lawyer and the number of responses per child, and also helps normalize data distributions. All variables entered into parametric tests were normally distributed and alpha levels were adjusted by default in all tests to control for multiple comparisons. When Mauchly's test of sphericity was violated, Greenhouse-Geisser corrections were applied. 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 effect sizes. RM-ANOVAs were unable to be conducted for 1) self-contradictions x question topic and 2) uncertainty x question topic due to low cells counts and subsequent inadequate statistical power. Pairwise comparisons (with Bonferonni corrections) were used to follow-up significant interactions.

Preliminary Analyses

We conducted a series of discriminant function analyses to determine whether there were any associations between children's gender, case verdicts, special measures afforded, and the number of children testifying in each case, and the proportional frequency of

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

information request centrality types, question topic types, and children's responses. The tests revealed no significant associations. Therefore, gender, case verdict, special measures, and victim number were not included in any of the analyses below.

The Centrality of Information Requests and Topics of Lawyers' Questions

A total of 22,200 substantive questions were analyzed; 13,514 (60.9%) were prosecutors' questions and 8,686 (39.1%) were defense lawyers' questions. Table 2 provides the frequencies (*ns*) and relative proportions (%) of questions cross-tabulated by information request centrality, question topic, and lawyer role. To ensure adequate statistical power, three separate tests were conducted to investigate the relative content of questions asked by lawyers.

First, a Repeated-Measures Analysis of Variance (RM-ANOVA) conducted to investigate associations between information request centrality, question topic, and children's age revealed a significant main effect for question topic, $F(6.24, 330.88) = 36.48, p < .001, \eta^2_p = .41$. As shown in Table 2, questions asking about location (comprising 12.2% of all questions asked), time (11.3%), witnesses (11.0%), and suspect actions (10.0%), were asked significantly more often than questions seeking other content. Questions seeking information about victim actions (8.5%), prior formal questioning (7.7%), objects (7.4%), and thoughts and emotions (6.0%) were the next most frequently asked questions. All other question topic categories were asked significantly less frequently, though it is notable that questions asking about victims (4.2%), suspects (3.7%), victim verbal statements (3.7%), disclosure processes (3.3%), and witness actions (3.0%), were asked non-significantly more often than questions seeking to elicit information about body parts (2.9%), suspect verbal statements (2.4%), witness verbal statements (1.6%), and sensory perceptions (1.3%). There was also a significant interaction between question topic and the centrality of the information request, $F(6.02,$

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

319.18) = 44.21, $p < .001$, $\eta^2_p = .46$. Referring to Table 2, questions asking children about suspects, suspect actions, victim actions, time, body parts, suspect verbal statements, victim verbal statements, disclosure, and prior formal questioning were significantly more likely to be focused on central than peripheral details. On the other hand, questions asking children about witnesses, location, thought and emotions, and sensory perceptions, were more likely to be focused on peripheral than central details. Questions asking about victims, witness actions, objects, and witness verbal statements were as likely to probe central as peripheral details. There were no other significant main or interaction effects.

A second RM-ANOVA conducted to investigate associations between information request centrality, lawyer role, and children's age revealed a significant main effect for information request centrality, $F(1, 53) = 26.17$, $p < .001$, $\eta^2_p = .33$. Questions seeking central ($M = .60$, $SD = .02$) content were asked significantly more than questions seeking peripheral ($M = .40$, $SD = .02$) information. There was also a significant interaction between information request centrality and lawyer role, $F(1, 53) = 12.44$, $p < .001$, $\eta^2_p = .19$. Defense lawyers asked significantly more questions that prompted peripheral ($M = .47$, $SD = .03$) information and fewer that prompted central ($M = .54$, $SD = .03$) information than prosecutors ($M = .36$, $SD = .02$; $M = .64$, $SD = .02$, respectively). There were no other significant main or interaction effects.

Lastly, a RM-ANOVA conducted to investigate associations between question topic, lawyer role, and children's age revealed a significant main effect for question topic, $F(5.35, 283.52) = 37.79$, $p < .001$, $\eta^2_p = .42$. Pairwise comparisons are described above. There was also a significant interaction between question topic and lawyer role, $F(4.66, 247.29) = 4.87$, $p < .001$, $\eta^2_p = .08$. Prosecutors were significantly more likely than defense lawyers to ask children about the suspect, victim, suspect actions, time, body parts, and suspect verbal statements. On the other hand, defense lawyers were significantly

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

more likely than prosecutors to ask children about victim actions, witness actions, witness verbal statements, and disclosure processes. There were no differences when lawyers asked children about witnesses, location, objects, victim verbal statements, prior formal questioning, thoughts and emotions, and sensory perceptions. There were no other significant main or interaction effects.

How does the Centrality of Information Requests and Question Topic Affect Children's Responses?

Productivity

Two separate tests were conducted to investigate differences in children's productivity when answering questions prompting different content. First, a information request centrality x lawyer role x children's age RM-ANOVA conducted to investigate children's productivity revealed a significant main effect for lawyer role, $F(1, 53) = 36.53$, $p < .001$, $\eta^2_p = .41$, with prosecutors eliciting significantly more productive responses from children ($M = 1.48$, $SD = .10$), than defense lawyers ($M = .88$, $SD = .05$). There was also a significant interaction between lawyer role and children's age, $F(2, 53) = 6.60$, $p = .003$, $\eta^2_p = .20$: Prosecutors elicited fewer productive answers from children aged 12-years old and under ($M = 1.07$, $SD = .19$) than from 13- to 15-year-olds ($M = 1.74$, $SD = .14$), and 16- to 17-year-olds ($M = 1.63$, $SD = .19$). There were no other significant differences (Defense: 12-years old and under, $M = .99$, $SD = .10$; 13- to 15-year olds, $M = .86$, $SD = .08$; 16- to 17-year olds, $M = .80$, $SD = .10$). There was a further main effect for the centrality of the information request, $F(1, 53) = 4.18$, $p = .05$, $\eta^2_p = .07$, with questions prompting central ($M = 1.22$, $SD = .07$) details eliciting more productive responses than questions that prompted peripheral ($M = 1.13$, $SD = .06$) details. Lastly, there was an interaction between lawyer role and information request centrality, $F(1, 53) = 18.67$, $p < .001$, $\eta^2_p = .26$. Prosecutors elicited significantly more productive answers from children

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

when prompting about central information ($M = 1.62$, $SD = .12$), than peripheral information ($M = 1.33$, $SD = .09$). There were no comparable differences for defense lawyers (central, $M = .83$, $SD = .06$; peripheral, $M = .94$, $SD = .06$). There were no other significant main or interaction effects.

A second question topic x lawyer role x children's age RM-ANOVA examining children's productivity again revealed a significant main effect for lawyer role, $F(1, 53) = 29.60$, $p < .001$, $\eta^2_p = .36$, and a significant interaction between lawyer role and children's age, $F(2, 53) = 4.10$, $p = .02$, $\eta^2_p = .13$. See the previous test for descriptives. There was a further main effect for question topic, $F(6.63, 351.26) = 5.19$, $p < .001$, $\eta^2_p = .09$.

Questions seeking information about victims elicited significantly less information than questions about witnesses and victim actions. Questions asking children about body parts and prior formal questioning were both significantly less productive than questions about witnesses, victim actions, witness actions, location, time, objects, suspect verbal statements, victim verbal statements, and disclosure processes. Questions focused on body parts were further less productive than questions about suspects, suspect actions, and thought and emotions. There were no other significant differences. See Table 3. Lastly, there was a significant interaction between lawyer role and question topic, $F(6.43, 340.68) = 6.05$, $p < .001$, $\eta^2_p = .10$. There were no differences between prosecutors and defense lawyers in children's productivity when prompted about suspects, witness actions, time, witness verbal statements, and prior formal questioning. Children were significantly more productive in response to prosecutors' questions about all other types of topic than those by defense lawyers. See Table 3. There were no other significant main or interaction effects.

Responsiveness

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Two separate tests were conducted to examine children's responsiveness when answering questions focused on different content. First, a information request centrality x lawyer role x children's age RM-ANOVA revealed a significant main effect for the centrality of the information request, $F(1, 53) = 23.32, p < .001, \eta^2_p = .31$, with children more responsive to questions probing central ($M = .54, SD = .02$) than peripheral ($M = .35, SD = .02$) content. There was a further interaction between information request centrality and lawyer role, $F(1, 53) = 12.14, p < .001, \eta^2_p = .19$: When asked about central content, children were more responsive to prosecutors ($M = .59, SD = .02$) than to defense lawyers ($M = .48, SD = .03$), whereas when asked about peripheral content, children were more responsive to defense lawyers ($M = .38, SD = .03$) than to prosecutors ($M = .31, SD = .02$). Finally, there was a significant interaction between lawyer role and children's age, $F(2, 53) = 3.78, p = .03, \eta^2_p = .13$. Children aged 16- to 17-years old were more responsive to prosecutors ($M = .46, SD = .02$) than to defense lawyers ($M = .39, SD = .02$). There were no other significant differences (12-years old and under, $M = .42, SD = .02, M = .45, SD = .02$; 13- to 15-year-olds, $M = .47, SD = .01, M = .46, SD = .02$, respectively), and no other significant main or interaction effects.

A second question topic x lawyer role x children's age RM-ANOVA revealed a significant main effect for question topic, $F(4.54, 236.04) = 22.31, p < .001, \eta^2_p = .30$. Most notably, children were most responsive to questions about witnesses, suspect actions, location, and time than questions about any other topic. Children were least responsive to questions about witness verbal statements and sensory perceptions than questions about any other topic. Full descriptive statistics are provided in Table 4. There was also a significant interaction between lawyer role and question topic, $F(3.62, 188.05) = 2.97, p = .03, \eta^2_p = .05$: Prosecutors elicited more responsive answers from children than defense lawyers when asking about the suspect, victim, suspect actions, time, body parts, and

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

suspect verbal statements. On the other hand, defense lawyers elicited more responsive answers than prosecutors when asking children about witness actions, witness verbal statements, disclosure processes, and thoughts and emotions. See Table 4. There were no other differences, and no other significant main or interaction effects.

Self-contradictions

A information request centrality x lawyer role x children's age RM-ANOVA conducted to investigate the proportional frequency of children's self-contradictions revealed a significant main effect for lawyer role, $F(1, 53) = 23.24, p < .001, \eta^2_p = .31$, with children contradicting themselves more in response to defense lawyers ($M = .03, SD = .00$) than in response to prosecutors ($M = .01, SD = .00$). There was also a main effect for information request centrality, $F(1, 53) = 30.70, p < .001, \eta^2_p = .37$, with children contradicting themselves more in response to questions that prompted central ($M = .03, SD = .00$) details than questions that prompted peripheral ($M = .01, SD = .00$) details. Finally, there was an interaction between lawyer role and information request centrality, $F(2, 53) = 5.94, p = .02, \eta^2_p = .10$. Children were significantly more likely to contradict themselves in response to defense lawyers' central ($M = .05, SD = .01$) and peripheral ($M = .02, SD = .00$) information requests, than when responding to prosecutors' central ($M = .02, SD = .00$) and peripheral ($M = .01, SD = .00$) information requests. There were no other significant main or interaction effects.

Uncertainty

A final information request centrality x lawyer role x children's age RM-ANOVA examining the proportional frequency of children's uncertainty revealed a significant main effect for information request centrality, $F(1, 53) = 20.13, p < .001, \eta^2_p = .28$, with children expressing more uncertainty in response to questions that prompted central ($M =$

.08, $SD = .01$) details than questions that prompted peripheral ($M = .04$, $SD = .00$) details.

There were no other significant main or interaction effects.

Discussion

This was the first study to examine both the centrality of the information sought and topics of lawyers' questions in Scottish criminal courts and the ways children responded. The results help elucidate how prosecutors and defense lawyers differentially construct narratives for jurors and complement existing research examining how different features of questions (e.g., type, linguistic complexity, repetition) can influence children's responses. The current findings should also assist in the evaluation and implementation of currently proposed changes to practices adopted in courts throughout the United Kingdom and other common law jurisdictions, such as the use of ground rules hearings, intermediaries, and taking evidence on commission.

Of note, although lawyers' questions were more likely to focus on central rather than peripheral details, 40% of all questions were focused on peripheral details. In line with our predictions, we found that defense lawyers (47%) asked more questions about peripheral details than prosecutors (36%) did, but because children respond more accurately to questions about central than about peripheral details (Almerigogna et al., 2008; Candel et al., 2004; Peterson & Bell, 1996; Poole & White, 1991; Saywitz et al., 1991; Tucker et al., 1990; Wright & Stroud, 1998), it is surprising that prosecutors asked so many of these riskier questions. Although questions focused on peripheral details can elicit forensically important information, such details (e.g., descriptions of people, locations, emotions and thoughts) are unlikely to be as important as central details in determining whether abuse occurred (Ceci, Ross, & Toglia, 1987). It might thus be important to determine in the future why lawyers, especially prosecutors, ask questions that prompt peripheral information.

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

With regard to question topic, several noteworthy findings should be discussed. First, it is interesting that lawyers devoted a large proportion of their questions to exploring with children the topics of location, time, and witnesses, especially as questions prompting information about location and witnesses were more likely to focus on peripheral than central details. It is also significant that topics such as body parts and sensory perceptions were discussed much less than other details, given that lawyers were exploring sexual abuse allegations. That said, it was clear that there were lawyer role differences in the topics of the questions asked, broadly in line with their motivations and our predictions. Prosecutors asked children more about the suspect, victim (perhaps to bolster character/credibility), suspect actions, time, body parts, and suspect verbal statements than defense lawyers, whereas defense lawyers were more likely than prosecutors to ask children about victim actions (perhaps to draw attention to the actions that victims did or did not take), witness actions, witness verbal statements, and disclosure processes. Question topic is a parameter that has been overlooked in previous research, yet it is clear that the topics of prosecutors' and defense lawyers' questions is very different. Further research should investigate the extent to which the topic of questions interacts with other question parameters to influence children's responses.

In the present study, children were more likely to respond and to do so more productively when asked about central rather than peripheral details and, in line with previous research (Ahern et al., 2015; Andrews et al., 2015c) questions about dynamic actions, such as victim actions, were more productive than questions about static content, such as body parts. These patterns are likely to further vary depending on question type, such that more open-ended questions elicit more productive responses from children than closed-ended questions (see Ahern et al., 2015; Andrews et al., 2015c). However, it is noteworthy that 5 categories of question topic (victim, body parts, witness verbal

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

statement, prior formal questioning, sensory perceptions) elicited relatively few substantive details. Low productivity in response to questions about victims, body parts, and sensory perceptions may reflect resistance or embarrassment on the part of the children, whereas low productivity in response to questions about witness prior statements and prior formal questioning may reflect particular difficulty recalling details about that topic, perhaps because those details are less salient than details about, for example, actions. Some of this speculation, which must be further investigated, is supported by the finding that children were least responsive to questions about witness verbal statements and sensory perceptions.

Although prosecutors elicited more productive and responsive answers from children in response to questions about central rather than peripheral details, contrary to our predictions, there was no difference in children's productivity when responding to defense lawyers' central and peripheral information requests, and children were more responsive to defense lawyers' questions about peripheral details. Of note, prosecutors elicited more responsive answers from children than defense lawyers when asking about the victim and body parts, perhaps reflecting better rapport. On the other hand, and contrary to predictions, defense lawyers elicited more responsive answers than prosecutors when asking children about witness actions, witness verbal statements, disclosure processes, and thoughts and emotions. This may be because witnesses strongly resisted the credibility challenges put to them during cross-examination (see Szojka, Andrews, Lamb, Stolzenberg, & Lyon, 2017).

Children contradicted themselves more in response to defense lawyers' than prosecutors' questions, but, contrary to predictions, they did so in response to questions focused on both central and peripheral details, and there was no difference between lawyers in the rates at which children's expressed uncertainty when answering questions

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

focused on central and peripheral details. The current study did not have enough statistical power to investigate differences in the rates of self-contradictions and uncertainty when responding to questions varying in topic, which needs further elucidation, along with the surprising finding, again contrary to our predictions, that children expressed more uncertainty in response to questions focused on central rather than peripheral details. However, whilst question centrality may play an important role in influencing children's productivity, responsiveness, and expressions of uncertainty, children's self-contradictions were less influenced by the substance of the questions, but more affected, as in previous research, by question type (Chapter 1), structural complexity (Chapter 2), and question repetition (Andrews, Lamb, & Lyon, 2015b; Chapter 3).

Importantly, and consistent with our predictions, there were no differences associated with child age. In particular, this suggests that prosecutors and defense lawyers were as likely to ask questions about peripheral details, despite evidence that young children find peripheral questions much more difficult to answer accurately than older children (Brady et al., 1999; Roebbers & Schneider, 2000). This finding suggests that prosecutors and defense lawyers focus both young and old children on aspects of their narrative that they are likely to struggle with: most notably, prompting temporal information (e.g., Droit-Volet & Izaute, 2005; Wandrey, Lyon, Quas, & Friedman, 2012; Zelanti & Droit-Volet, 2011). Researchers should further examine, using larger samples and/or experimental settings in which the accuracy of children's responses can be monitored, the extent to which the content, type, and complexity of questions combine to diminish the accuracy of children's responses.

It is now widely accepted in Scotland 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). For example, a High Court of Justiciary Practice Note on taking evidence by a commissioner was issued in March 2017; it is hoped that this will held reduce the need for vulnerable witnesses to give evidence in person in court. With a similar aim, the judiciary in in England and Wales has sought to made more extensive use of pre-recorded statements in place of testimony in court and to implement Ground Rules Hearings, at which judges stipulate what types of questions can be asked. These procedures (bringing into force Section 28 of the Youth Justice and Criminal Evidence Act, 1999) are currently being piloted in England and Wales. The use of registered intermediaries, who are neutral specialists bought in to facilitate the communication between particularly vulnerable witnesses and forensic practitioners during testimony, is also becoming more accepted and widespread across England and Wales (see Plotnikoff & Woolfson, 2009; Spencer & Lamb, 2012).

However, it is pivotal that special measures such as these are evaluated systematically. The current findings suggest that, when practitioners are reviewing questions that will be asked of children, careful consideration should be given to the centrality and topic of the information sought. In particular, questions focused on peripheral details and questions that ask about the victim, body parts, sensory perceptions, and prior formal questioning are likely to undermine witness productivity and responsiveness, particularly during cross-examination. Based on previous research and the current findings, prompts that focus on the central details of the allegation and the alleged abusive actions involved are likely to be least risky and most informative.

References

- Ahern, E. C., Andrews, S. J., Stolzenberg, S. N., & Lyon, T. D. (2015). The productivity of wh- prompts in child forensic interviews. *Journal of Interpersonal Violence, Online First*. doi: 10.1177/0886260515621084.
- Almerigogna, J., Ost, J., Akehurst, L., & Fluck, M. (2008). How interviewers' nonverbal behaviors can affect children's perceptions and suggestibility. *Journal of Experimental Child Psychology, 100*, 17-39. doi: 10.1016/j.jecp.2008.01.006
- Andrews, S. J., Ahern, E. C., Stolzenberg, S. N., & Lyon, T. D. (2015c). The productivity of wh- prompts when children testify. *Applied Cognitive Psychology, 30*, 341-349. doi: 10.1002/acp.3204
- Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015a). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology, 28*, 253-261. doi: 10.1002/acp.3103
- Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015b). The effects of question repetition on responses in direct- and cross-examinations of children alleging sexual abuse in court. *Law and Human Behavior, 39*, 559-570. doi: 10.1037/lhb0000152
- Brady, M. S., Poole, D. A., Warren, A. R., & Jones, H. R. (1999). Young children's responses to yes-no questions: Patterns and problems. *Applied Developmental Science, 3*, 47-57. doi: 10.1207/s1532480xads0301_6
- Candel, I., Merckelbach, H., Jelicic, M., Limpens, M., & Widdershoven, K. (2004). Children's suggestibility for peripheral and central details. *Journal of Credibility Assessment and Witness Psychology, 5*, 9-18.
- Ceci, S. J. & Bruck, M. (1995). *Jeopardy in the courtroom: a scientific analysis of children's testimony*. Washington DC: American Psychological Association.

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Ceci, S. J., Ross, D. F., & Toglia, M. P. (1987). *Children's Eyewitness Memory*. Springer-Verlag: New York.

Christianson, S. Å. & Loftus, E. F. (1991). Remembering emotional events: The fate of detailed information. *Cognition & Emotion*, 5, 81-108. doi: 10.1080/02699939108411027

Droit-Volet, S. & Izaute, M. (2005). The effect of feedback on timing in children and adults: the temporal generalization task. *The Quarterly Journal of Experimental Psychology*, 58, 507-520. doi: 10.1080/02724980443000025

Evidence and Procedure Review Report, Scottish Court Service (March, 2015). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/aboutscs/reports-and-data/reports-data/evidence-and-procedure-full-report---publication-version-pdf.pdf?sfvrsn=2>

Goodman, G. S., Hirschman, J. E., Hepps, D., & Rudy, L. (1991). Invitational issue: The socialization of children's cognition and emotion: Toward an integrative view. *Merrill-Palmer Quarterly*, 37, 109-157.

Goodman, G. S., Rudy, L., Bottoms, B. L., & Aman, C. (1990). Children's concerns and memory: Issues of ecological validity in children's testimony. In R. Fivush & J. Hudson (Eds.), *Knowing and remembering in young children* (249-284). New York: Cambridge University Press.

Henderson, H. M. & Lamb, M. E. (in press). Pre-recording children's testimony: Effects on case progression. *Criminal Law Review*.

Ibabe, I. & Sporer, S. L. (2004). How you ask is what you get: On the influence of question form on accuracy and confidence. *Applied Cognitive Psychology*, 18, 711-726. doi: 10.1002/acp.1025

Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., Stewart, H., & Mitchell, S.

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

- (2003). Age differences in young children's responses to open-ended invitations in the course of forensic interviews. *Journal of Consulting and Clinical Psychology, 71*, 926–934. doi:10.1037/0022-006X.71.5.926
- Lamb, M. E., Hershkowitz, I., Sternberg, K. J., Esplin, P. W., Hovav, M., Manor, T., & Yudilevitch, L. (1996). Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development, 19*, 627-637. doi: 10.1177/016502549601900310
- Lindblad, F. (2007). Reflections on the concept of disclosure. In M.-E. Pipe, M. E. Lamb, Y. Orbach, & A.-C. Cederborg (Eds.), *Child sexual abuse: Disclosure, delay and denial* (pp. 291-301). Mahwah, NJ: Lawrence Erlbaum Associates.
- Myers, J. E., Saywitz, K. J., & Goodman, G. S. (1996). Psychological research on children as witnesses: Practical implications for forensic interviews and courtroom testimony. *Pac. LJ, 28*, 3-91.
- Orbach, Y. & Lamb, M. E. (2007). Young children's references to temporal attributes of allegedly experienced events in the course of forensic interviews. *Child Development, 78*, 1100-1120. doi: 10.1111/j.1467-8624.2007.01055.x
- Peterson, C. & Bell, M. (1996). Children's memory for traumatic injury. *Child Development, 67*, 3045-3070. doi: 10.2307/1131766
- Peterson, C., Dowden, C. & Tobin, J. (1999). Interviewing preschoolers: Comparisons of yes/no and wh-questions. *Law and Human Behavior, 23*, 539-555. doi: 10.1023/A:1022396112719
- Peterson, C. & McCabe, A. (1992). Parental styles of narrative elicitation: Effect on children's narrative structure and content. *First Language, 12*, 299-321. doi: 10.1177/014272379201203606

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

- Peterson, C. & Whalen, N. (2001). Five years later: Children's memory for medical emergencies. *Applied Cognitive Psychology, 15*, S7-S24. doi: 10.1002/acp.832
- Plotnikoff, J. & Woolfson, R. (2009). Measuring up?. *Evaluating implementation of Government commitments to young witnesses in criminal proceedings*.
<https://nspcc.co.uk/globalassets/documents/research-reports/measuring-up-report.pdf>
- Poole, D. A. & White, L. T. (1991). Effects of question repetition on the eyewitness testimony of children and adults. *Developmental Psychology, 27*, 975-986. doi: 10.1037/0012-1649.27.6.975
- Price, H. L. & Roberts, K. P. (2011). The effects of an intensive training and feedback program on police and social workers' investigative interviews of children. *Canadian Journal of Behavioral Science, 43*, 235-244. doi: 10.1037/a0022541
- Roebers, C. M. & Schneider, W. (2000). The impact of misleading questions on eyewitness memory in children and adults. *Applied Cognitive Psychology, 14*, 509-526. doi: 10.1002/1099-0720(200011/12)14:6<509::AID-ACP668>3.0.CO;2-W
- Saywitz, K. J., Goodman, G. S., Nicholas, E., & Moan, S. F. (1991). Children's memories of a physical examination involving genital touch: Implications for reports of child sexual abuse. *Journal of Consulting and Clinical Psychology, 59*, 682-691. doi: 10.1037/0022-006X.59.5.682
- Sexual Offences (Scotland) Act (2009). <http://www.legislation.gov.uk/asp/2009/9/contents>
- Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to change the rules?* Oxford and Portland, Oregon: Hart Publishing.
- Stolzenberg, S. & Lyon, T.D. (2014). How attorneys question children about the dynamics of sexual abuse and disclosure in criminal trials. *Psychology, Public Policy, & Law, 20*, 19-30. doi:10.1037/a0035000

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Szojka, Z., Andrews, S. J., Lamb, M. E., Stolzenberg, S. N., & Lyon, T. D.

(2017). Challenging the credibility of alleged victims of child sexual abuse in Scottish courts. *Psychology, Public Policy, & Law*, *23*, 200-210. doi: 10.1037/law0000117

Tucker, A., Mertin, P., & Luszcz, M. (1990). The effect of a repeated interview on young children's eyewitness memory. *Australian and New Zealand Journal of Criminology*, *23*, 117-124. doi: 10.1177/000486589002300204

Victims and Witnesses [Scotland] Act, 2014. Retrieved from:

<http://www.legislation.gov.uk/asp/2014/1>

Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from:

<http://www.legislation.gov.uk/asp/2004/3>

Wandrey, L., Lyon, T. D., Quas, J. & Friedman, W. (2012). Maltreated children's ability to estimate temporal location and numerosity of placement changes and court visits. *Psychology, Public Policy and Law*, *18*, 79-104. doi: 10.1037/a0024812

Westcott, H. L., & Kynan, S. (2004). The application of a 'story-telling' framework to investigative interviews for suspected child sexual abuse. *Legal and Criminological Psychology*, *9*, 37-56. doi: 10.1080/10683160500036962

Westera, N., Kebbell, M., & Milne, R. (2013). Losing two thirds of the story: A comparison of the video recorded police interview and live evidence of rape complainants. *Criminal Law Review*, *4*, 290-308.

Wright, D. B. & Stroud, J. N. (1998). Memory quality and misinformation for peripheral and central objects. *Legal and Criminological Psychology*, *3*, 273-286. doi: 10.1111/j.2044-8333.1998.tb00366.x

Youth Justice and Criminal Evidence [UK] Act 1999. Retrieved from:

<http://www.legislation.gov.uk/ukpga/1999/23>

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Zelanti, P. & Droit-Volet, S. (2011). Cognitive abilities explaining age-related changes in time perception of short and long durations. *Journal of Experimental Child Psychology, 109*, 143-157. doi:10.1016/j.jecp.2011.01.003

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Table 1.

Coding Definitions and Examples.

Code	Definition	Example
Centrality of prompt		
Central	Questions that are plot-relevant, such as the 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.	<p>“Who touched you?”</p> <p>“How did he take your clothes off?”</p> <p>“Were you positioned on the bed when he did this?”</p>
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.	<p>“How were you feeling when he did that?”</p> <p>“Can you describe how your bedroom was laid out at the time?”</p> <p>“Alan did this. Okay. Does Alan have a beard?”</p>
Question topic		
Suspect	Questions requesting information about the suspect.	<p>“You mentioned a man pulled down your pants. Tell me all about that man.”</p> <p>“Who did that to you?”</p>
Victim	Questions requesting information about the victim.	<p>“How old were you at the time?”</p>
Witness	Questions requesting information about witnesses.	<p>“Tell me about the boy who was in the same room.”</p>

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Suspect action	Questions requesting information about suspect actions.	“Tell me about the man holding your arms.” “Did he force you to do that?”
Victim Action	Questions requesting information about victim actions.	“Did you run out of the room?”
Witness Action	Questions requesting information about witness actions.	“Was your brother watching?”
Location	Questions requesting information about locations.	“Where did the man sit?” “Tell me about the shelter where K. took you.” “What do you remember about the room where he raped you?”
Time	Questions requesting information about time.	“What time of year was it?” “Did that happen one time or more than one time?” “Was that the last time it happened?”
Object	Questions requesting information about objects.	“Was it a pen or a pencil that he touched you with?” “Tell me about the Vaseline.”
Body Part	Questions requesting information about suspect, victims, and/or witness body parts.	“Describe his ‘wee-wee.’” “Where did he touch you?” “Where did he touch your brother?”
Suspect’s Verbal Statement	Questions requesting information about the content of suspects’ verbal statements.	“What did you talk about?” “What did he say when he touched you?”
Victim’s Verbal Statement	Questions requesting information about the content of victims’ verbal statements.	“What did you yell?”
Witness’s Verbal Statement	Questions requesting information about the	“What did your brother say to the man?”

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

	content of witnesses' verbal statements.	
Disclosure	Questions requesting information about the victims' disclosure processes.	<p>"You told your mum what he did, yes?"</p> <p>"Did you tell your sister what happened as well?"</p> <p>"What did you say when you told?"</p>
Prior Formal Questioning	Questions requesting information about the victims' prior formal questioning (i.e., during medical examinations or forensic interviews).	<p>"Did the police come and interview you?"</p> <p>"Do you remember saying that to the police?"</p>
Thoughts/Emotions	Questions requesting information about the suspects', victims', and/or witnesses' thoughts or emotions. Questions asking about such content are always peripheral.	<p>"How did you feel when he did that?"</p> <p>"You were angry, weren't you?"</p>
Sensory Perceptions	Questions requesting information about the suspects', victims', and/or witnesses' sensory perceptions. Questions asking about such content are always peripheral.	<p>"What did you see?"</p> <p>"What did you smell?"</p> <p>"What did your brother see?"</p>
Children's responses		
Responsive	Verbal and action responses related to the lawyer's previous utterance. Utterances were assigned this category even if they did not contain new informative details, or when their meaning was unclear.	<p>Lawyer: "Did he take your trousers off?"</p> <p>Child: "Yes." [responsive]</p> <p>Lawyer: "What did he do with your trousers?"</p> <p>Child: "I don't know." [responsive]</p>
Unresponsive	Responses that do not relate to the question asked in the previous lawyer utterance, but provide incident-related information. These include instances when children	<p>Lawyer: "What did he say?"</p> <p>Child: "I was – I said "STOP" and I tried to push him away from me, but he kept holding on to my waist." [unresponsive]</p> <p>Lawyer: "Well that can't be right, can it? Try again. Was he</p>

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

	misunderstood the lawyers' questions.	standing or sitting?" Child: "He licked my private, too". [unresponsive]
Self-contradiction	Responses that negated what the children had previously disclosed during the proceedings or provided self- conflicting information.	Lawyer: "He licked you one time?" Child: "Yes." (later in the proceedings) Lawyer: "How many times did he lick you?" Child: "I don't know - like 5 times." [self-contradiction] Lawyer: "Did he touch your privates when you were in the car?" Child: "No." Lawyer: "But I thought he did touch you in the car. Did he touch your privates in the car?" Child: "No. I never - in the car he touched my privates." [self-contradiction]

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Table 2.

Centrality of Prompt x Question Topic x Lawyer Role.

Question Topic	Prosecution				Defense				Total					
	Central		Peripheral		Central		Peripheral		Central		Peripheral		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Suspect	426	4.9	126	2.6	164	3.5	105	2.6	590	4.4	231	2.6	821	3.7
Victim	380	4.4	282	5.8	118	2.5	146	3.6	498	3.7	428	4.8	926	4.2
Witness	589	6.8	878	18.1	375	8.1	590	14.6	964	7.2	1,468	16.5	2,432	11.0
Suspect action	1,464	16.9	58	1.2	575	12.4	119	2.9	2,039	15.3	177	2.0	2,216	10.0
Victim Action	761	8.8	223	4.6	541	11.6	358	8.9	1,302	9.8	581	6.5	1,883	8.5
Witness Action	160	1.8	73	1.5	219	4.7	209	5.2	379	2.8	282	3.2	661	3.0
Location	908	10.5	899	18.5	378	8.1	522	12.9	1,286	9.7	1,421	16.0	2,707	12.2
Time	1,151	13.3	532	11.0	474	10.2	349	8.6	1,625	12.2	881	9.9	2,506	11.3
Object	702	8.1	443	9.1	168	3.6	322	8.0	870	6.5	765	8.6	1,635	7.4
Body Part	543	6.3	21	0.4	57	1.2	15	0.4	600	4.5	36	0.4	636	2.9
Suspect's Verbal Statement	412	4.8	16	0.3	84	1.8	30	0.7	496	3.7	46	0.5	542	2.4
Victim's Verbal Statement	318	3.7	87	1.8	279	6.0	139	3.4	597	4.5	226	2.5	823	3.7

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Witness's Verbal Statement	74	0.9	20	0.4	155	3.3	102	2.5	229	1.7	122	1.4	351	1.6
Disclosure	323	3.7	10	0.2	368	7.9	38	0.9	691	5.2	48	0.5	739	3.3
Prior Formal Questioning	448	5.2	265	5.5	693	14.9	293	7.3	1,114	8.6	558	6.3	1,699	7.7
Thoughts/Emotions	0	0	723	14.9	0	0	603	14.9	0	0	1,326	14.9	1,326	6.0
Sensory Perceptions	0	0	199	4.1	0	0	98	2.4	0	0	297	3.3	297	1.3
Total	8,659	64.1	4,855	35.9	4,648	53.5	4,038	46.5	13,307	59.9	8,893	40.1	22,200	100.00

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Table 3.

Productivity x Question Topic x Lawyer Role.

Question Topic	Prosecution		Defense		Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Suspect	1.19	.10	.88	.20	1.04	.12
Victim	1.06	.13	.63	.12	.84	.08
Witness	1.46	.11	1.03	.08	1.25	.07
Suspect action	2.34	.34	.52	.06	1.43	.18
Victim Action	1.86	.18	.96	.10	1.41	.11
Witness Action	1.19	.15	1.24	.20	1.22	.12
Location	1.28	.08	.94	.09	1.11	.06
Time	1.12	.09	1.02	.13	1.07	.09
Object	1.64	.22	.71	.06	1.17	.11
Body Part	.90	.09	.21	.05	.55	.05
Suspect's Verbal Statement	2.02	.44	.33	.10	1.18	.23
Victim's Verbal Statement	1.61	.28	.99	.18	1.30	.14
Witness's Verbal Statement	.69	.19	.84	.17	.77	.13
Disclosure	1.55	.21	.83	.13	1.19	.13
Prior Formal Questioning	.72	.08	.65	.08	.69	.05
Thoughts/Emotions	1.51	.19	.12	.18	1.31	.16
Sensory Perceptions	1.04	.21	.60	.13	.82	.13
Total	1.48	.19	.88	.05	1.18	.06

LAWYERS' QUESTION CONTENT AND CHILDREN'S RESPONSES

Table 4.

Responsiveness x Question Topic x Lawyer Role.

Question Topic	Prosecution		Defense		Total	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Suspect	.04	.01	.03	.01	.04	.00
Victim	.05	.00	.03	.01	.04	.01
Witness	.11	.01	.11	.01	.11	.01
Suspect action	.10	.01	.08	.01	.09	.01
Victim Action	.06	.01	.11	.03	.08	.01
Witness Action	.01	.00	.04	.01	.03	.00
Location	.12	.01	.10	.01	.11	.01
Time	.12	.01	.09	.01	.10	.01
Object	.06	.01	.05	.01	.06	.01
Body Part	.04	.00	.01	.00	.02	.00
Suspect's Verbal Statement	.03	.01	.01	.00	.02	.00
Victim's Verbal Statement	.05	.03	.03	.01	.04	.01
Witness's Verbal Statement	.01	.00	.02	.01	.02	.00
Disclosure	.02	.00	.04	.01	.03	.00
Prior Formal Questioning	.07	.02	.09	.02	.08	.01
Thoughts/Emotions	.04	.01	.05	.01	.05	.00
Sensory Perceptions	.01	.00	.01	.00	.01	.00
Total	.06	.00	.05	.00	.05	.00

Chapter 5

Children's uncertain responses when testifying about alleged sexual abuse in Scottish courts

Published in: Behavioral Sciences & the Law

Samantha J. Andrews, Elizabeth C. Ahern, and Michael E. Lamb
University of Cambridge

Author Note

The authors are extremely thankful to the Court Service Team of the Scottish Court Service and the Typing and Secretarial Team of the Supreme Courts for their assistance with accessing cases and files, their hospitality throughout the transcription process, and their continued support. The authors are also greatly indebted to Katie Vernon, Rosie Barber, Zsófia Szojka, Guy Skinner, Elizabeth Ahern, Misun Yi, and Hayden Henderson for their assistance with data preparation and reliability coding.

CHILDREN'S UNCERTAIN RESPONSES IN COURT

Abstract

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.

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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).

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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'

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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, taking the oath, communication rules, introduction of evidence, and

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).

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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.

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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).

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).

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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,

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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.

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-

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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). 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.

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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.,

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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.

References

Advocacy Training Council (2011). Retrieved from:

<http://www.advocacytrainingcouncil.org>

Ahern E. C., Hershkowitz I., Lamb M. E., Blasbalg U., & Winstanley A. (2014). Support and reluctance in the pre-substantive phase of alleged child abuse victim

investigative interviews: revised versus standard NICHD Protocols, *Behavioral Sciences & the Law*, 32, 762–774. doi: 10.1002/bsl.2149

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged

victims of child sexual abuse. *Applied Cognitive Psychology*, 28, 253-261. doi: 10.1002/acp.3103

Brubacher, S. P., Poole, D. A., & Dickinson, J. J. (2015). The use of ground rules in investigative interviews with children: A synthesis and call for research.

Developmental Review, 36, 15-33. doi:10.1016/j.dr.2015.01.001

Cordón, I. M., Saetermoe, C. L., & Goodman, G. S. (2005). Facilitating children's

accurate responses: Conversational rules and interview style. *Applied Cognitive Psychology*, 19, 249–266. doi:10.1002/acp.1090

Danby, M. C., Brubacher, S. P., Sharman, S. J., & Powell, M. B. (2015). The effects of practice on children's ability to apply ground rules in a narrative interview.

Behavioral Sciences & the Law, 33, 446–458. doi: 10.1002/bsl.2194

Earhart B., La Rooy D. J., Brubacher S. P., & Lamb M. E. (2014). An examination of

“don't know” responses in forensic interviews with children. *Behavioral Sciences & the Law*, 32, 746–761. doi: 10.1002/bsl.2141

Endres, J., Poggenpohl, C., & Erben, C. (1999). Repetitions, warnings and video:

Cognitive and motivational components in preschool children's suggestibility.

CHILDREN'S UNCERTAIN RESPONSES IN COURT

Legal and Criminological Psychology, 4, 129-146.

doi: 10.1348/135532599167725

Evidence and Procedure Review Report, Scottish Court Service (March, 2015). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/aboutscs/reports-and-data/reports-data/evidence-and-procedure-full-report---publication-version-pdf.pdf?sfvrsn=2>

Gee, S., Gregory, M., & Pipe, M. (1999). "What colour is your pet dinosaur?" the impact of pre-interview training and question type on children's answers. *Legal and Criminological Psychology*, 4, 111–128. doi: 10.1348/135532599167716

Gombos, V., Pezdek, K., & Haymond, K. (2012). Forced confabulation affects memory sensitivity as well as response bias. *Memory & Cognition*, 40, 127–134. doi:10.3758/s13421-011-0129-5

Hanna, K., Davies, E., Crothers, C., & Henderson, E. (2012). Questioning child witnesses in New Zealand's criminal justice system: Is cross-examination fair? *Psychiatry, Psychology and Law*, 19(4), 530-546. doi:10.1080/13218719.2011.615813

Hershkowitz, I. (2013). Facilitating disclosure of abuse by reluctant children: a test of the revised NICHD Protocol. *European Psychiatry*, 28, 1. doi:10.1016/S0924-9338(13)75907-8

Hershkowitz, I., Lamb, M. E., Katz, C., & Malloy, L. C. (2015). Does enhanced rapport-building alter the dynamics of investigative interviews with suspected victims of intra-familial abuse? *Journal of Police and Criminal Psychology*, 30, 6-14. doi: 10.1007/s11896-013-9136-8

Hershkowitz, I., Orbach, Y., Lamb, M. E., Sternberg, K. J., & Horowitz, D. (2006). Dynamics of forensic interviews with suspected abuse victims who do not disclose abuse. *Child Abuse & Neglect*, 30, 753–769. doi:10.1016/j.chiabu.2005.10.016

CHILDREN'S UNCERTAIN RESPONSES IN COURT

- Hershkowitz, I., Orbach, Y., Sternberg, K., Pipe, M., Lamb, M. E., & Horowitz, D. (2007). Suspected victims of abuse who do not make allegations: An analysis of their interactions with forensic interviewers. In M-E. Pipe, M. E. Lamb, & Y. Orbach (eds.) *Child sexual abuse: Disclosure, delay, and denial* (2013) pp. 97-113. NY, USA: Taylor & Francis Group.
- Hughes, M., & Grieve, R. (1980). On asking children bizarre questions. *First Language, 1*, 149–160. doi: 10.1177/014272378000100205
- Koriat, A., Goldsmith, M., Schneider, W., & Nakash-Dura, M. (2001). The credibility of children's testimony: can children control the accuracy of their memory reports? *Journal of Experimental Child Psychology, 79*, 405-437. doi:10.1006/jecp.2000.2612
- Lamb, M. E., Hershkowitz, I., Sternberg, K. J., Esplin, P. W., Hovav, M., Manor, T., & Yudilevitch, L. (1996). Effects of investigative utterance types on Israeli children's responses. *International Journal of Behavioral Development, 19*, 627-637. doi: 10.1177/016502549601900310
- Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses*. Chichester, UK: Wiley
- Lamb, M. E., Malloy, L. C., Hershkowitz, I., & La Rooy, D. (2015). Children and the law. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of child psychology and developmental science (7th ed.)*, Volume 3, *Social, emotional and personality development*. Hoboken, NJ: Wiley
- Lamb, M. E., Orbach, Y., Hershkowitz, I., Esplin, P. W., & Horowitz, D. (2007). Structured forensic interview protocols improve the quality and informativeness of investigative interviews with children: A review of research using the NICHD

CHILDREN'S UNCERTAIN RESPONSES IN COURT

- Investigative Interview Protocol. *Child Abuse & Neglect*, 31, 1201-1231. doi: 10.1016/j.chiabu.2007.03.021
- Lyon, T. D. (2010). Investigative interviewing of the child. In D. N. Duquette & A. M. Haralambie (Eds.), *Child welfare law and practice* (2nd ed., pp. 87–109). Denver, CO: Bradford
- Mulder, M. R. & Vrij, A. (1996). Explaining conversation rules to children: An intervention study to facilitate children's accurate responses. *Child Abuse & Neglect*, 20, 623–631. doi:10.1016/0145-2134(96)00050-6
- Nesbitt, M. & Markham, R. (1999). Improving young children's accuracy of recall for an eyewitness event. *Journal of Applied Developmental Psychology*, 20, 449–459. doi:10.1016/S0193-3973(99)00027-1
- Peterson, C. & Whalen, N. (2001). Five years later: Children's memory for medical emergencies. *Applied Cognitive Psychology*, 15(7), S7-S24. doi: 10.1002/acp.832
- Pratt, C. (1990). On asking children – and adults – bizarre questions. *First Language*, 10, 167–175. doi: 10.1177/014272379001002905
- Roebbers, C. M. & Schneider, W. (2005). Individual differences in young children's suggestibility: Relations to event memory, language abilities, working memory, and executive functioning. *Cognitive Development*, 20, 427-447. doi: 10.1016/j.cogdev.2005.05.006
- Saywitz, K. & Moan-Hardie, S. (1994). Reducing the potential for distortion of childhood memories. *Consciousness and Cognition*, 3, 408–425. doi:10.1006/ccog.1994.1023
- Sexual Offences Act (2003). Retrieved from: <http://www.legislation.gov.uk/ukpga/2003/42/part/1/crossheading/child-sex-offences>
- Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to*

CHILDREN'S UNCERTAIN RESPONSES IN COURT

- change the rules?* Oxford and Portland, Oregon: Hart Publishing
- Stolzenberg, S., & Pezdek, K. (2013). Interviewing child witnesses: The effect of forced confabulation on event memory. *Journal of Experimental Child Psychology, 114*, 77–88. doi: 10.1016/j.jecp.2012.09.006
- Victims and Witnesses [Scotland] Act, 2014. Retrieved from:
<http://www.legislation.gov.uk/asp/2014/1>
- Vulnerable Witnesses [Scotland] Act, 2004. Retrieved from:
<http://www.legislation.gov.uk/asp/2004/3>
- Walker, A. G., Kenniston, J., & Inada, S. S. (2013) (Eds.). *Handbook on questioning children: A linguistic perspective (3rd ed.)*. Washington D. C.: American Bar Association.
- Waterman, A. H. & Blades, M. (2011). Helping children correctly say “I don’t know” to unanswerable questions. *Journal of Experimental Psychology: Applied, 17*, 396–405. doi:10.1037/a0026150
- Waterman, A. H., Blades, M., & Spencer, C. (2000). Do children try to answer nonsensical questions? *British Journal of Developmental Psychology, 18*, 211–225. doi:10.1348/026151000165652
- Waterman, A., Blades, M., & Spencer, C. (2001). Is a jumper angrier than a tree? *The Psychologist, 14*, 474–477
- Waterman, A. H., Blades, M., & Spencer, C. P. (2004). Indicating when you do not know the answer: the effect of question format and interviewer knowledge on children’s ‘don’t know’ responses. *British Journal of Developmental Psychology, 22*, 335–348. doi: 10.1348/0261510041552710
- Warren, A., Hulse-Trotter, K., & Tubbs, E. C. (1991). Inducing resistance to suggestibility in children. *Law and Human Behaviour, 15*, 273–285. doi: 10.1007/BF01061713

CHILDREN'S UNCERTAIN RESPONSES IN COURT

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"

CHILDREN'S UNCERTAIN RESPONSES IN COURT

		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	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.	“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.” Lawyer: “Did he touch your pee-pee over or under your clothes?” [when the child had not previously mentioned genital touching] “Did that really happen?”

CHILDREN'S UNCERTAIN RESPONSES IN COURT

Centrality	Central	Questions that are plot-relevant, such as the 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.	<p>“Who touched you?”</p> <p>“How did he take your clothes off?”</p> <p>“Were you positioned on the bed when he did this?”</p>
	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.	<p>“How were you feeling when he did that?”</p> <p>“Can you describe how your bedroom was laid out at the time?”</p> <p>“Alan did this. Okay. Does Alan have a beard?”</p>
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.	<p>“Who did that to you?”</p> <p>“Tell me about the man holding your arms.”</p> <p>“Tell me what you mean by his ‘wee-wee.’”</p> <p>“What did he say when he touched you?”</p>
	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	<p>“You ran out of the room?”</p> <p>“Where did he touch you?”</p> <p>“Did you yell?”</p>

CHILDREN'S UNCERTAIN RESPONSES IN COURT

	emotions or thoughts, or victim's sensory perceptions.	<p>"Tell me how you were feeling."</p> <p>"Did you see anything?"</p>
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>"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	<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>

CHILDREN'S UNCERTAIN RESPONSES IN COURT

Prior formal questioning	disclosure recipient's reactions, and 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?”
--------------------------	---	--

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
Defense	.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>	<i>Average n (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

Discussion

The studies described in this dissertation yielded a number of important findings relating to the nature of the questions posed to children in court, underlining the validity of oft-expressed concerns (summarized earlier) about the ways in which children's testimony is presented and challenged. Below, the key findings from the studies conducted to investigate four parameters of questioning and an in-depth analysis of children's propensity to express uncertainty are summarized in turn. The implications of these findings are then discussed.

Question Types [Chapter 1]

The types of questions used to elicit accounts of children's experiences affect both the quantity and quality of the information they provide (see Lamb, La Rooy, Malloy, & Katz, 2011; Lamb, Malloy, Hershkowitz, & La Rooy, 2015; Saywitz, Lyon, & Goodman, 2011, for reviews). On the one hand, when questioned with open-ended free-recall prompts (e.g., "Tell me what happened."), children provide accounts that may be brief but are more likely to be accurate, whereas the probability that responses will be erroneous increases considerably when children are questioned using closed-ended recognition prompts (e.g., "Did he touch you with his fingers?"), due to the false recognition of details and response biases (e.g., Jones & Pipe, 2002; Lamb, Orbach, Hershkowitz, Horowitz, & Abbott, 2007). Younger children are more likely than older children and adults to provide erroneous details in response to closed-ended questions (e.g., Waterman, Blades, & Spencer, 2001, 2004; see Melnyk, Crossman, & Scullin, 2007, for a review). Suggestive prompts are most problematic because children, especially young children, may change details in their accounts and thus respond inconsistently, either by incorporating suggested information or acquiescing to perceived interviewer coercion (e.g., Bruck & Ceci, 1999; Bruck, Ceci, & Principe, 2006; Eisen, Qin, Goodman, & Davis, 2002; Lamb & Fauchier,

2001; London & Kulkofsky, 2010; Orbach & Lamb, 2001).

Because the quantity and quality of the information obtained from children is affected by the form of the questions posed, it was important to analyze the types of questions lawyers asked in court and how children of different ages (discussed here and below using three age groups that accord with the Sexual Offences Act (2003): 12 years and under, 13 to 15 years, 16 to 17 years) responded to those questions.

We found that prosecutors were significantly more likely than defense lawyers to use invitations, directives, and option-posing prompts, whereas defense lawyers were significantly more likely than prosecutors to use suggestive prompts. The present findings also made clear that the difficulties children face with respect to being able to respond productively and consistently in court are not solely attributable to cross-examination by defense lawyers. Prosecutors, too, used more closed-ended than open-ended prompts, were most likely to use option-posing prompts, and virtually never asked invitations. The same was true of judges, too, although the majority of the questions they asked were non-substantive.

In response, children gave less appropriate answers and were less informative when answering defense lawyers than prosecutors. There were few age differences in children's tendencies to answer appropriately, but the youngest children provided the least information in response to prosecutors' questions. Furthermore, the youngest children were least informative in response to prosecutors' suggestions and more productive in response to defense lawyers' suggestions, perhaps because the younger children did not understand why they were being asked suggestive questions by the prosecutors.

We further found that both prosecutors and defense lawyers elicited a substantial amount of information inconsistent with the children's other responses. Although self-contradictions were proportionally rare, all children contradicted themselves at least once,

with defense lawyers eliciting more self-contradictions than prosecutors. Prosecutors elicited more self-contradictions from the oldest children than from children in the middle age group, whereas defense lawyers elicited fewest contradictions from the youngest children, but there were no age differences in acquiescence to suggestion. In response to suggestive questions, more self-contradictions were elicited from children aged 13 to 15 years than from the youngest and oldest children. These findings highlight children's ability to resist some suggestions by both prosecutors and defense lawyers, but also make clear that suggestive questions can have diverse effects on children depending on their age and the identity of the questioner.

Suggestive questioning places pressure on children to reconsider and change their previous responses; both experimental (e.g., Jack & Zajac, 2014; Fogliati & Bussey, 2014; Zajac & Hayne, 2003) and field (Zajac, Gross, & Hayne, 2003) research has shown that children are most likely to change their answers when questioned using closed-ended suggestive prompts. In the present research, we found that suggestive questions were more likely to elicit self-contradictions than closed-ended option-posing prompts, open-ended directives, and invitations, while option-posing questions were more likely to elicit self-contradictions than invitations. The present findings are further concerning because children acquiesced to suggestive questions almost 70% of the time, and acquiesced more in response to defense lawyers' suggestions than to prosecutors'.

Further, it is widely acknowledged that tagged questions are highly suggestive and persuasive (see Plotnikoff & Wolfson, 2007; Spencer & Lamb, 2012), and, given their complexity (Walker, Kenniston, & Inada, 2013), there have been calls for judges to restrict the use of tag questions, particularly when directed to the youngest children (Judicial College [fairness in courts and tribunals], 2010; R v Barker, 2010). However, 6% of all prosecutors' and 25% of all defense lawyers' suggestive questions in the present

study were tagged. Children were less responsive and more acquiescent in response to tagged questions than untagged questions, and lawyers did not alter their use of tagged questions depending on the children's ages. Such findings raise serious concerns about the extent to which suggestive questions, particularly tagged questions, are being avoided or proscribed in court.

Overall, the current findings suggest that the majority of lawyers' prompts, particularly defense lawyers' prompts are 'risky' question types (closed-ended and suggestive). Such prompts had detrimental effects on children's responsiveness, productivity, and consistency, and lawyers did not alter the nature of their questioning with children's ages. However, question type is not the only parameter that may influence the way children are afforded to give evidence in court, as was shown in a close examination of the language used by the lawyers when questioning children.

Linguistic Complexity [Chapter 2]

One major concern has been that lawyers ask many linguistically complex questions, and that children may not possess the linguistic capacity and psychological competence necessary to effectively comprehend and respond to courtroom questioning (Hanna, Davies, Henderson, Crothers, & Rotherham, 2010; Zajac, O'Neill, & Hayne, 2012). Indeed, children seldom request clarification of grammatically complex and/or nonsensical questions (Carter, Bottoms, & Levine, 1996; Zajac et al., 2003), perhaps because they have difficulty detecting whether or not they have understood the requests. Such questioning techniques violate guidelines, based on an extensive body of experimental and field research, outlining the best ways to elicit testimony (see Rush, Quas, & McAuliff, 2012; Spencer & Lamb, 2012) and raise serious questions about the extent to which courts ensure both that guilty suspects are convicted and that innocent suspects are not wrongly convicted.

Operationalizing linguistic complexity is a complex issue in itself. By definition, the complexity of questions is enhanced whenever any lexical, syntactic, semantic, or pragmatic aspect of the question increases processing time (Walker et al., 2013). Since adding length and additional structural components to questions is likely to greatly increase processing time, the present research focused on the structural complexity of lawyers' questions and the effects of complexity on children's responses. The linguistic complexity of lawyers' questions was assessed using 8 quantitative measures of each utterance's components (number of questions, phrases, clauses, sentences, false starts, average word count, word length, and sentence length). These 8 measures were compiled to form a composite measure of complexity that was used in the analyses.

We found that defense lawyers tended to ask more complex questions of children in the courtroom than prosecutors did, but there was considerable variability. Many of the lawyers' questions were quite simple in structure, whereas others were more complex. The average utterance contained one question, formed by 14 relatively short words within one sentence, with few false starts. However, the average number of phrases per utterance was 4, and the average number of clauses per utterance was 2.5, suggesting that many utterances contained multiple clauses. Such questions are notoriously difficult for children, particularly those aged 12 years and under, to monitor and answer accurately (see Walker, 1993; Walker et al., 2013). Furthermore, some utterances contained 8 questions, some involved as many as 10 sentences, some included up to 184 words, and some contained words that averaged as many as 15 letters in length! Such questions would likely be extremely difficult for adults to monitor and answer, let alone children responding in extremely stressful and upsetting circumstances and after long delays between the event(s) in question and the courtroom testimony.

These issues are further exacerbated by both the prosecutors' and defense lawyers' manifest insensitivity to the children's ages. Lawyers did not alter the structural complexity of the questions they posed depending on the children's ages, suggesting insensitivity to children's developmental capacities and limitations. Put another way, both prosecutors and defense lawyers used similarly complex questions to address 5- to 12-year-olds and 16- to 17-year-olds. Studies conducted in New Zealand (Davies & Seymour, 1998; Zajac et al., 2003) and California (Evans, Lee, & Lyon, 2009) similarly showed lawyers' inattention to children's ages, implying that this problem is not unique to Scotland, but may be a common characteristic of adversarial legal systems.

Open-ended directive questions were less linguistically complex than closed-ended option-posing questions, open-ended invitations, and suggestive questions. Suggestive utterances were the most linguistically complex questions, particularly when asked by defense lawyers. Tagged questions were the most linguistically complex form of suggestive questions. Not only do tag questions pose risks to the veracity of children's responses because of their suggestiveness (Spencer & Lamb, 2012; Walker et al., 2013), but such risks are exacerbated due to the high degree of linguistic competence they demand (Walker et al., 2013). The current findings thus support recent calls for courts to restrict the use of the suggestive questions (Carloway, 2013; Lord Chief Justice's Criminal Practice Directions, 2013; Spencer & Lamb, 2012).

As the linguistic complexity of the questions increased, so too did the likelihood that children would be unresponsive, express uncertainty, or (non-significantly) contradict themselves. Our findings are consistent with those of studies showing that increased complexity reduces the accuracy and informativeness of children's reports (Cashmore & DeHaas, 1992; Zajac et al., 2003; Zajac & Cannan, 2009). Increases in such responding may have deleterious effects on the evaluation of children's testimony (Bruer & Pozzulo,

2014; Goodman, Golding, & Haith, 1984; Myers, Redlich, Goodman, Prizmich, & Imwinkelried, 1999; Semmler & Brewer, 2002), and the consequences may be serious. In the present study, children's responses were largely influenced only by the linguistic complexity of questions, regardless of who asked them and how the questions were formulated, suggesting that linguistic complexity is a powerful determinant of children's responses.

We found no age differences in the children's responses, suggesting that young witnesses of all ages are remarkably responsive and consistent in the face of challenging courtroom questioning. However, since the accuracy of children's responses cannot be assessed in field research, it is possible that the children simply acquiesced to the large number of suggestions and option-posing questions asked of them in court (Chapter 1; Andrews, Lamb, & Lyon, 2015a). Indeed, because option-posing and suggestive questions are more likely to be linguistically complex, it is possible that many children were responsive to questions they did not fully understand, and thus our results underestimated the deleterious effects of question complexity on children's responses.

In sum, although defense lawyers tended to ask more complex questions of children in the courtroom than prosecutors did, the present study revealed considerable variability. Many of the lawyers' questions were quite simple in structure, whereas others were more complex. Importantly, both prosecutors and defense lawyers asked similarly complex questions of children regardless of their age. Suggestive questions were the most complex. Variations in the complexity of questions had an impact on the quality of children's responses. Children were less likely to respond, more likely to express uncertainty, and non-significantly more likely to contradict themselves when questions were more complex. These findings highlight the additional risks associated with asking some types of questions in structurally complex ways and highlight the need for further

innovations (e.g., the use of intermediaries) to facilitate the questioning of vulnerable witnesses in Scottish criminal courts. The detrimental effects of risky question types and linguistically complex questions is likely to be further exacerbated when such questions are repeated, as examined in the next Chapter.

Question Repetition [Chapter 3]

Repeated questions provide interviewees with opportunities to change their initially correct or incorrect responses. Since triers of fact often place emphasis on report consistency when assessing the credibility of oral testimony (Bruer & Pozzulo, 2014; Myers et al., 1999; Semmler & Brewer, 2002), the adverse effects that inappropriate question repetition may have on children's testimony merited close examination. We found that all children were prompted with repeated questions in Scottish courts. Defense lawyers repeated more questions (39.6% of all the questions they asked) than prosecutors (30.6%) and they repeated questions using more suggestive question types (52% of their repeated questions) than prosecutors (18%) did. Younger children were asked more repeated questions than older children, but the effects of question repetition were no more detrimental, in terms of consistency, for younger children than for older children.

Repeated questions most often elicited repetition and elaboration, which may have enhanced the informativeness of the children's testimony (Andrews & Lamb, 2014; Andrews et al., 2015b; 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, Andrews et al. (2015b) showed in a previous study of Californian cross-examinations that the rate increased dramatically as repetition frequency increased. This is of particular concern because nearly 70% of the

repeated questions in the present study were repeated more than once. Because in the present study each repeated question was repeated an average of 2.5 times, most repeated questions were closed-ended or suggestive, and in 50 separate instances questions were repeated 10 or more times, it is worrying that no Scottish lawyers or judges ever raised asked-and-answered objections. Such failures to object may have been motivated by the lawyers' expectations of the judges' responses, since Andrews et al. (2015b) found that when Californian lawyers objected, their objections tended to be overruled. Nevertheless, there is no obvious reason why judges repeatedly failed to intervene.

Suggestive repeated questions had greater effects on children's consistency when posed by defense lawyers than by prosecutors, whereas non-suggestive repeated questions resulted in more repetitions and elaborations when posed by prosecutors than by defense lawyers. 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 were somewhat resistant to the implicit coercion. As noted above, however, the risks may be substantial, particularly when questions are repeated multiple times. As in Andrews et al.'s (2015b) study, questions repeated immediately after preceding prompts elicited more elaborations and repetitions from children than when questions were repeated after delays. By contrast, self-contradictions were more likely when there were delays between initial prompts and repeated prompts than when questions were repeated immediately.

Of course, questions may sometimes 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), 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 and findings suggest that lawyers frequently ask children ‘risky’ repeated questions. Lawyers and judges should be made aware of the potential harm associated with unnecessary question repetition and of how these effects may be reduced (i.e., ensure questions are repeated immediately after the initial prompts, that reasons for repetition are explicitly explained to children, and repeated suggestive questions are avoided). Training should encourage lawyers to utilize the asked-and-answered objection and judges to sustain objections when warranted so that children’s developmental capabilities are respected.

Question Content [Chapter 4]

Research investigating the ways in which children are directly and cross-examined by lawyers in court has overwhelmingly focused on the types of questions asked and the effects thereof on children’s responses. Whilst more recent research has begun to assess the combined effects of question type, linguistic complexity, and question repetition on children’s responses, very few field studies have comprehensively considered how the content of questions, including whether the questions prompt central or peripheral information in relation to the allegations under investigation, affects children’s responses. Indeed, the contents of the questions prosecutors and defense lawyers ask are likely to differ due to their opposing motivations. This study investigated the centrality of the information sought by lawyers, the topical focus of the questions asked, and the effects of these factors on witnesses’ responses.

Although lawyers’ questions were more likely to focus on central (e.g., identification of main characters, the location and time of the incident(s), and abusive (or target) actions) rather than peripheral details (e.g., descriptions of people, places, temporal parameters, emotions, and thoughts), 40% of all questions were focused on peripheral details. Defense lawyers (47%) asked more questions about peripheral details than

prosecutors (36%) did, but because children respond more accurately to questions about central than about peripheral details (Almerigogna, Ost, Akehurst, & Fluck, 2008; Candel, Merckelbach, Jelicic, Limpens, & Widdershoven, 2004; Peterson & Bell, 1996; Poole & White, 1991; Saywitz, Goodman, Nicholas, & Moan, 1991; Tucker, Mertin, & Luszcz, 1990; Wright & Stroud, 1998), it is surprising that prosecutors asked so many of these risky questions. Although questions focused on peripheral details can elicit forensically important information, such details are unlikely to be as important as central details in determining whether abuse occurred (Ceci, Ross, & Toglia, 1987).

With regard to question topic, lawyers devoted a large proportion of their questions to exploring with children aspects of the location, time, and witnesses, with questions prompting information about location and witnesses more likely to focus on peripheral than central details. It is also significant that topics such as those asking about body parts and sensory perceptions were discussed much less than other details, given that the lawyers were exploring allegations of sexual abuse. That said, it was clear that there were lawyer role differences in the topics of the questions asked, broadly in line with their motivations. Prosecutors asked children more about the suspect, victim (perhaps to bolster character/credibility), suspect actions, time, body parts, and suspect verbal statements than defense lawyers, whereas the latter were more likely than prosecutors to ask children about victim actions (perhaps to draw attention to the actions that victims did or did not take), witness actions, witness verbal statements, and disclosure processes.

Children were more likely to respond and to do so more productively when asked about central rather than peripheral details. Questions about dynamic actions, such as victim actions, were more productive than questions about static content, such as body parts. These patterns are likely to further vary depending on question type, such that more open-ended questions elicit more productive responses from children than closed-ended

questions (see Ahern, Andrews, Stolzenberg, & Lyon, 2015; Andrews et al., 2015c). However, it is noteworthy that questions focused on five topics (victim, body parts, witness verbal statement, prior formal questioning, sensory perceptions) elicited relatively few substantive details. Low productivity in response to questions about victims, body parts, and sensory perceptions may reflect resistance or embarrassment on the part of the children, whereas low productivity in response to questions about witness prior statements and prior formal questioning may reflect particular difficulty recalling details about that topic, perhaps because those details are less salient than details about, for example, actions. Some of this speculation, which must be further investigated, is supported by the finding that children were least responsive to questions about witness verbal statements and sensory perceptions.

Although prosecutors elicited more productive and responsive answers in response to questions about central rather than peripheral details, there was no difference in children's productivity when responding to defense lawyers' questions probing central as opposed to peripheral information, and children were more responsive to defense lawyers' questions about peripheral details. Defense lawyers elicited more responsive answers than prosecutors when asking children about witness actions, witness verbal statements, disclosure processes, and thoughts and emotions. This may be because witnesses strongly resisted the credibility challenges put to them during cross-examination (see Szojka, Andrews, Lamb, Stolzenberg, & Lyon, 2017).

Children contradicted themselves more in response to defense lawyers' than prosecutors' questions (see also Chapter 1), but they did so in response to questions focused on both central and peripheral details, and there was no difference between lawyers in the rates at which children's expressed uncertainty when answering questions focused on central and peripheral details. Whilst question centrality may play an important

role in influencing children's productivity, responsiveness, and expressions of uncertainty, children's self-contradictions were less influenced by the substance of the questions, but more affected, as in previous research, by question type (Chapter 1), structural complexity (Chapter 2), and question repetition (Chapter 3).

Importantly, there were no differences associated with child age. In particular, this suggests that the lawyers were as likely to ask questions about peripheral details, despite evidence that young children find peripheral questions much more difficult to answer accurately than older children (Brady, Poole, Warren, & Jones, 1999; Roebbers & Schneider, 2000). This finding suggests that prosecutors and defense lawyers focus both young and old children on aspects of their narrative that they are likely to struggle with: most notably, prompting temporal information (e.g., Droit-Volet & Izaute, 2005; Wandrey, Lyon, Quas, & Friedman, 2012; Zelanti & Droit-Volet, 2011). Overall, the centrality of the information sought and question topic are important parameters to consider when evaluating children's responses to different types of questions.

Children's Propensity to Express Uncertainty [Chapter 5]

One study closely examined children's propensity to express uncertainty. In criminal court, the reliability and completeness of children's accounts, especially of sexual abuse, is critical because witness testimony is often the primary source of evidence. It is thus important to examine the 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 et al., 2015a; Hanna et al., 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 to question alleged victims of child sex abuse accordingly, by asking easier or more difficult questions, respectively (Andrews et al., 2015a). 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.

Thirty-eight percent of the children studied were instructed to express uncertainty when they do not know the answers to questions but this 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.

However 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, there was no difference in the propensity of children to express uncertainty in response to prosecutors and defense lawyers. It is possible that the children were aware that the defense lawyers were 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 (see

above) and pressure to tell the truth may partly explain the absence of differences related to the lawyers' roles.

Directive questions (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 are consistent with the results of 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, Gregory, & Pipe, 1999; Waterman et al., 2000, 2004).

Children aged 13 to 15 years old expressed less uncertainty than older and younger children, particularly when answering invitations and suggestive questions. Perhaps such 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.

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. In cases of adolescents and teenagers, the willingness to express uncertainty may be enhanced if it is also acknowledged that lack of memory or knowledge is common when one is asked about

past events. The present findings highlight concerns surrounding preparatory procedures to help witnesses, especially adolescents, indicate uncertainty when testifying.

When considering question content, children were no more likely to express uncertainty in response to questions seeking peripheral information than questions about 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. 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.

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 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 (see Earhart et al., 2014; Hershkowitz, Lamb, Katz, & Malloy, 2015). However, the current study found 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 whereas the rates at which children expressed uncertainty were positively associated with overt expressions of resistance and confusion. Thus, uncertainty expressed in court may only sometimes reflect witness discomfort rather than a genuine lack of knowledge – and thus should not be deemed to reflect “reluctance”. 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.

Overall, this study showed 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 instructions would have affected their willingness to actually do so. 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 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 to express uncertainty when appropriate 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.

Summary

In sum, a large proportion of the questions posed to children by lawyers involved the use of suggestive questions that implied expected responses or introduced undisclosed

information. Questions were overly complex linguistically, heavily repetitious, and focused to a large extent on peripheral elements of the allegations. In response, children acquiesced to suggestions the majority of the time and expressed low rates of uncertainty given the nature of the questioning. Overall, both prosecutors and defense lawyers were insensitive to the developmental capacities of children of different ages; 5-years-olds were questioned in a similar manner to 17-year-olds. Taken together, it is clear that the nature of lawyers' questions posed to children in court can undermine the quality of the evidence obtained, regardless of the role of the lawyer or the children's ages.

Implications

Taken together, the findings obtained in this dissertation largely substantiate concerns about the inappropriateness of the ways in which children are questioned in court (e.g., Spencer & Lamb, 2012). Indeed, the suggestive and closed-ended questions that dominated cross-examinations in particular resulted in reduced responsiveness, less productivity, more compliance, and more self-contradictions from children than did open-ended questions. On the whole, children were not given the opportunity to freely recall their evidence during direct-examinations, nor were they given the opportunity to fully respond to the challenges put to them during cross-examination. In adversarial jurisdictions, lawyers aim to undermine the opponents' witnesses, and it was clear that they questioned child witnesses accordingly. Further, lawyers may challenge witness credibility and persuade children to change details in their accounts, often by exploiting their developmental limitations (Andrews et al., 2015a; Szojka et al., 2017; Zajac et al., 2003). However, in the interests of fairness and justice, both prosecutors and defense lawyers need to consider the problems associated with these questioning practices.

It is difficult for experts and laypersons alike to assess veracity (see Vrij, 2008). This problem is confounded when lawyers do not use the types of open-ended questions

that are likely to elicit accurate information (see Lamb et al., 2011). By asking misleading questions and inducing self-contradictions, whether intended or not, lawyers are hindering fact-finders' abilities to reliably assess child witnesses' credibility. Indeed, experimental research shows that children are just as likely to change initially correct answers during cross-examination as they are to change initially incorrect answers, suggesting that cross-examination does not expose dishonest child witnesses effectively (Zajac & Hayne, 2003). Because triers-of-fact must determine guilt or innocence based on the evidence presented, it behooves us to provide them with the most reliable evidence possible (Henderson & Andrews, in press). Veracity can be assessed more accurately when children provide narrative accounts in the course of examinations adhering to the best-practice guidelines (see Earhart, La Rooy, & Lamb, 2016; Henderson & Andrews, in press; Hershkowitz, Fisher, Lamb, & Horowitz, 2007). Is it thus in the public interest for jurors to make decisions based on what amounts to manufactured and contaminated evidence (Cossins, 2012)? For a trial to be fair, evidence needs to be elicited in accordance with research-informed best-practice guidelines.

One could argue that the cross-examination of witnesses is essential to protect the accused's right to a fair trial (e.g., Article 6 (3d), of the European Convention on Human Rights; Sixth Amendment to the U.S. Constitution), and that restricting the nature of the questioning reduces the extent to which the evidence can be challenged. Of course, the right for defendants to challenge evidence put against them should be protected. However, courts must also allow witnesses to give their best evidence (Home Office, 2011, section 5.8), and the current findings suggest that this duty is not being fulfilled.

One could also argue that much has changed in the education, attitudes, and practices of Scottish judges and advocates since 2009 as evidenced, for example, by the launch of the High Court of Justiciary Practice Note on Taking Evidence by a

Commissioner (2017), rendering the current results (based on trials conducted between 2009 and 2014) of limited relevance to today's questioning practices, especially if Commissioners are more widely involved in the taking of children's evidence. Whilst there may be wider recognition of the need to consider children's developmental capacities and limitations during forensic questioning since 2009, and there have been procedural changes developed to help address these issues, however, it is important to recognize that education and changes in attitudes and procedure do not necessarily yield changes in the nature of questioning within an adversarial culture. Our findings are relevant to current practices in two ways.

First, the lawyers studied here questioned children in much the same way as lawyers in Californian cases tried 16 to 20 years ago (Andrews et al., 2015a). In fact, if anything, whilst prosecutors in Scotland and California questioned children using similar proportions of question types, defense lawyers in Scotland asked more suggestive questions than Californian defense attorneys. Although direct comparisons between two different jurisdictions and samples is far from ideal, these similarities nevertheless raise concerns about the extent to which the nature of questioning changes when those asking the questions are acting in accordance with their clients' instructions.

Second, we were able to test whether taking evidence on commission affects the nature of lawyers' questioning. Eight children in the present sample gave evidence on commission. Although this sample was too small to allow sophisticated statistical comparisons with children who did not give evidence on commission, we were able to compare the two groups descriptively on many measures (see Table 2). The key difference between the groups was that that, although cases taken on commission involved younger children, their cross-examinations were longer. There was no evidence that the use of Commissioners resulted in less suggestive, linguistically complex, or repetitive

questioning. This finding is noteworthy because, as Lady Dorrian (2017) made clear when launching the High Court of Justiciary Practice Note on Taking Evidence by a Commissioner (2017), "...a successful Commission depends not only on the practical arrangements, but also on the nature of the questioning". Our findings underline the need for legal practitioners to have additional support when it comes to questioning young and vulnerable witnesses.

The nature of questioning can be improved through practitioner training at all levels. However, in order for training to be effective, three points should be considered (see Lamb, 2016; Stewart, Katz, & La Rooy, 2011). First, the delivery and content of the training should be based on methods that have been the subject of scientific study and proven to work. Second, training in best-practice questioning should be supported with information about the research base supporting the approach. Finally, training programs should be continuous and ongoing so that the quality of questioning is maintained at the highest standards possible (Lamb, Sternberg, Orbach, Esplin, & Mitchell, 2002; Lamb, Sternberg, Orbach, Hershkowitz, Horowitz, & Esplin, 2002). Of course, such training is likely to be both time consuming and costly.

This realization has led several practitioners to create and advocate for the use of alternative self-administered training resources. For example, evidence-based "Toolkits" (see Advocacy Training Council (ATC), 2011) have been introduced to provide continuing education and thus improve practice in England and Wales. These Toolkits were endorsed in the Lord Chief Justice's Criminal Practice Directions (2013), and more recently acknowledged by Lady Dorrian (2017) with the launch of the High Court of Justiciary Practice Note on Taking Evidence by a Commissioner. Although such materials are useful resources, there is no evidence that self-administered training without external review has the desired effects. Indeed, the effectiveness of "Toolkits" and other similar

resources for improving the nature of lawyers' questioning has never been systematically assessed. It is not yet clear whether the ways in which vulnerable witnesses are questioned in court can be ameliorated by training alone, if at all.

One alternative is exemplified by the increasingly accepted and widespread use of registered intermediaries in England and Wales (see Plotnikoff & Woolfson, 2009; Spencer & Lamb, 2012). Intermediaries are neutral specialists (often speech and language therapists) who facilitate the communication between particularly vulnerable witnesses and forensic practitioners during testimony. Proponents of the intermediary system believe that their involvement offers a range of benefits -- facilitating communication, helping witnesses cope with the stress of court, assisting in bringing offenders to justice, and identifying prosecutable cases (thus saving court time and money). By ensuring effective communication with vulnerable witnesses, the most reliable evidence possible should be presented to triers of fact (Henderson & Andrews, 2017).

In many parts of the United Kingdom, Ground Rules Hearings (GRHs) are now required in all cases involving serious sexual allegations in which questions to be put to witnesses can be reviewed by all the practitioners involved. GRHs may be the critical forum in which intermediaries can be most effective (Rafferty, 2016). Indeed, practitioner surveys (e.g., Plotnikoff & Woolfson, 2009) and preliminary results from experimental analogue studies (e.g., Henry, Crane, Wilcock, & Jones, 2017) suggest that intermediaries indeed help children give better (i.e., more productive, less experienced distress) evidence.

However, the effectiveness of this special measure has never been objectively and systematically evaluated in the field. There is cause for concern because extremely suggestive and unnecessary questions are often put to very young witnesses even after the intermediary and judge have reviewed the questions in a Ground Rules Hearing (personal observations). Intermediaries may also fail to distinguish between making witnesses feel

comfortable through context-appropriate rapport-building, and distracting witnesses through high-stimulation play, which can compromise proceedings. Further, many intermediaries still advocate the use of props, such as toys and diagrams, during forensic questioning, even though carefully conducted experimental research has shown them to do more harm than good to the quality of children's evidence (Bruck, Kelley, & Poole, 2016). In sum, there remains considerable variability in the levels of expertise and the actual behavior of intermediaries (Henderson, 2012), and training is variable (Plotnikoff & Woolfson, 2007), yet the potential benefits associated with the involvement of well-trained intermediaries are unmistakable.

Finally, the Barnahus (children's house) model has been identified as a long-term goal for Scotland (see Dorrian, 2017). Informed by the Children's Advocacy Centers in the USA, Barnahus was introduced in Iceland in 1998, and has since resulting in a trebling of the number of perpetrators charged, a doubling of the number of convictions, and better therapeutic outcomes for children and their families (Children's Commissioner, 2016). Each Barnahus is an unmarked residential property, designed to be a non-threatening, child-friendly, and familiar setting. Within the Barnahus, alleged victims are forensically interviewed by experts, undergo medical examinations, and are provided with ongoing therapeutic support. Critically, the interviews conducted there also serve as the children's entire testimony. Only forensic interviewers question the children although defense lawyers have an opportunity to suggest questions for the interviewers to ask. This approach minimizes the trauma experienced by alleged victims and improves the quality of the evidence in accordance with best-practice guidelines (Children's Commissioner, 2016). Variations of the Barnahus model are currently being prepared for piloting in England and Wales.

Legal practitioners and researchers need to develop practices and public policies together. Systematic, quantitative, objective psychological research can be a critical tool in that context. Improving the questioning of all witnesses, not only children and other vulnerable witnesses, should make it easier for the criminal justice system to ascertain the truth and reach fair decisions.

References

Advocacy Training Council (2011). Retrieved from:

<http://www.advocacytrainingcouncil.org>

Ahern, E. C., Andrews, S. J., Stolzenberg, S. N., & Lyon, T. D. (2015). The productivity of wh- prompts in child forensic interviews. *Journal of Interpersonal Violence, Online First*. doi: 10.1177/0886260515621084.

Almerigogna, J., Ost, J., Akehurst, L., & Fluck, M. (2008). How interviewers' nonverbal behaviors can affect children's perceptions and suggestibility. *Journal of Experimental Child Psychology, 100*, 17-39. doi: 10.1016/j.jecp.2008.01.006

Andrews, S. J., & Lamb, M. E. (2014). The effects of age and delay on responses to repeated questions in forensic interviews with children alleging sexual abuse. *Law and Human Behavior, 38*, 171-180. doi: 10.1037/lhb0000064

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015a). Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse. *Applied Cognitive Psychology, 28*, 253-261. doi: 10.1002/acp.3103

Andrews, S. J., Lamb, M. E., & Lyon, T. D. (2015b). The effects of question repetition on responses when prosecutors and defense attorneys question children alleging sexual abuse in court. *Law and Human Behavior, 36*, 559-570. doi: doi.org/10.1037/lhb0000152

Andrews, S. J., Ahern, E. C., Stolzenberg, S. N., & Lyon, T. D. (2015c). The productivity of wh- prompts when children testify. *Applied Cognitive Psychology, 30*, 341-349. doi: 10.1002/acp.3204

- Brady, M. S., Poole, D. A., Warren, A. R., & Jones, H. R. (1999). Young children's responses to yes-no questions: Patterns and problems. *Applied Developmental Science, 3*, 47-57. doi: 10.1207/s1532480xads0301_6
- Bruck, M. & Ceci, S. J. (1999). The suggestibility of children's memory. *Annual Review of Psychology, 50*, 419-439. doi: 10.1146/annurev.psych.50.1.419
- Bruck, M., Ceci, S. J., & Principe, G. F. (2006). The child and the law. In K. A. Renninger, I. E. Sigel, W. Damon & R. M. Lerner (Eds.), *Handbook of Child Psychology, 6th ed.*, Vol. 4 (pp. 776-816). New York, NY: John Wiley & Sons, Ltd.
- Bruck, M., Kelley, K., & Poole, D. A. (2016). Children's reports of body touching in medical examinations: The benefits and risks of using body diagrams. *Psychology, Public Policy, and Law, 22*, 1-11. doi: 10.1037/law0000076
- Bruer, K. & Pozzulo, J. D. (2014). Influence of eyewitness age and recall error on mock juror decision-making. *Legal and Criminological Psychology, 19*, 332-348. doi: 10.1111/lcrp.12001
- Candel, I., Merckelbach, H., Jelicic, M., Limpens, M., & Widdershoven, K. (2004). Children's suggestibility for peripheral and central details. *Journal of Credibility Assessment and Witness Psychology, 5*, 9-18.
- Carloway, C. S. (2013). *Scots criminal evidence and procedure – meeting the challenges* Criminal Law Conference at Murrayfield. Retrieved from: <http://www.scotlandjudiciary.org.uk/Upload/Documents/CriminalLawConferenceMurrayfield9May2013.pdf>
- Carter, C., Bottoms, B., & Levine, M. (1996). Linguistic and socioemotional influences on the accuracy of children's reports. *Law and Human Behavior, 20*, 335-358. doi: 10.1007/BF01499027

- Cashmore, J., & DeHaas, N. (1992). The use of closed-circuit television for child witnesses in the act. *Australian Law Reform Commission Research Paper No. 1*.
- Ceci, S. J., Ross, D. F., & Toglia, M. P. (1987). *Children's Eyewitness Memory*. Springer-Verlag: New York.
- Children's Commissioner (2016). *Barnahus: Improving the response to child sexual abuse in England*. Retrieved from:
<https://www.childrenscommissioner.gov.uk/sites/default/files/publications/Barnahus%20-%20Improving%20the%20response%20to%20child%20sexual%20abuse%20in%20England.pdf>
- Cossins, A. (2012). Cross Examining the Child Complainant in Australia. In J. R. Spencer & M. E. Lamb (Eds.), *Children and cross-examination: Time to change the rules?* Hart Publishing: Oxford, UK.
- Davies, E. & Seymour, F. (1998). Questioning child complainants of sexual abuse: Analysis of criminal court transcripts in New Zealand. *Psychiatry, Psychology and Law*, 5, 47–61. doi: 10.1080/13218719809524919
- Dorrian, L. (2017). *Speech for the Launch of Practice Note No 1. of 2017 - High Court of Justiciary Practice Note on Taking Evidence by a Commissioner*. Retrieved from:
<http://www.scotland-judiciary.org.uk/Upload/Documents/PNNo1of2017speechLJC28March2017.pdf>
- Droit-Volet, S. & Izaute, M. (2005). The effect of feedback on timing in children and adults: the temporal generalization task. *The Quarterly Journal of Experimental Psychology*, 58, 507-520. doi: 10.1080/02724980443000025
- Earhart B., La Rooy D. J., Brubacher S. P., & Lamb M. E. (2014). An examination of “don't know” responses in forensic interviews with children. *Behavioral Sciences &*

- the Law*, 32, 746–761. doi: 10.1002/bsl.2141
- Earhart, B., La Rooy, D., & Lamb, M. E. (2016). Assessing the Quality of Forensic Interviews with Child Witnesses. In W. T. O'Donohue & M. Fanetti (Eds.), *Forensic interviews regarding child sexual abuse* (pp. 317-335). Springer International Publishing.
- Eisen, M. L., Qin, J., Goodman, G. S., & Davis, S. L. (2002). Memory and suggestibility in maltreated children: Age, stress arousal, dissociation, and psychopathology. *Journal of Experimental Child Psychology*, 83, 167-212. doi: 10.1016/S0022-0965(02)00126-1
- European Convention on Human Rights, Art 6(d). Retrieved from: http://www.echr.coe.int/Documents/Convention_ENG.pdf
- Evans, A. D., Lee, K., & Lyon, T. D. (2009). Complex questions asked by defense attorneys but not prosecutors predicts convictions in child abuse trials. *Law and Human Behavior*, 33, 258-264. doi: 10.1007/s10979-008-9148-6
- Fogliati, R. & Bussey, K. (2014). The effects of cross-examination on children's reports of neutral and transgressive events. *Legal and Criminological Psychology*, 19, 296-315. doi: 10.1111/lcrp.12010
- Gee, S., Gregory, M., & Pipe, M. (1999). "What colour is your pet dinosaur?" the impact of pre-interview training and question type on children's answers. *Legal and Criminological Psychology*, 4, 111–128. doi: 10.1348/135532599167716
- Goodman, G. S., Golding, J. M., & Haith, M. M. (1984). Jurors' reactions to child witnesses. *Journal of Social Issues*, 40, 139-156. doi: 10.1111/j.15404560.1984.tb01098.x
- Hanna, K., Davies, E., Crothers, C., & Henderson, E. (2012). Questioning child witnesses in New Zealand's criminal justice system: Is cross-examination fair? *Psychiatry*,

Psychology and Law, 19, 530-546. doi:10.1080/13218719.2011.615813

Henderson, E. (2012). Alternative routes: Other accusatorial jurisdictions on the slow road to best evidence. In J. R. Spencer & M. E. Lamb (Eds.), *Children and cross-examination: Time to change the rules?* Hart Publishing: Oxford, UK.

Henderson, H. M. & Andrews, S. J. (*in press*). Assessing the veracity of children's forensic interviews: Implications for the courtroom. Chapter to appear in H. Otgaar & M. L. Howe (Eds). *Can we Know What's the Truth in the Courtroom? Problems with Deception, Lies, and False Memories*. Oxford University Press.

Henry, L., Crane, L., Wilcock, R., & Jones, J. (2017, May). *Research findings – do intermediaries help children give better evidence*. Talk presented to the Intermediaries for Justice Conference, City University, London, UK.

Hershkowitz, I., Fisher, S., Lamb, M. E., & Horowitz, D. (2007). Improving credibility assessment in child sexual abuse allegations: The role of the NICHD investigative interview protocol. *Child Abuse & Neglect*, 31, 99-110. doi: 10.1016/j.chiabu.2006.09.005

Hershkowitz, I., Lamb, M. E., Katz, C., & Malloy, L. C. (2015). Does enhanced rapport-building alter the dynamics of investigative interviews with suspected victims of intra-familial abuse? *Journal of Police and Criminal Psychology*, 30, 6-14. doi: 10.1007/s11896-013-9136-8

High Court of Justiciary Practice Note on Taking Evidence by a Commissioner (2017). Retrieved from: <https://www.scotcourts.gov.uk/docs/default-source/rules-and-practice/practice-notes/criminal-courts/criminal-courts---practice-note---number-1-of-2017.pdf?sfvrsn=4>

Home Office. (2011). *Achieving the best evidence in criminal proceedings: Guidance on interviewing victims and witnesses, and guidance on using special measures*.

Retrieved from:

http://www.cps.gov.uk/publications/docs/best_evidence_in_criminal_proceedings.pdf

Jack, F. & Zajac, R. (2014). The effect of age and reminders on witnesses' responses to cross-examination-style questioning. *Journal of Applied Research in Memory and Cognition*, 3, 1-6. doi: 10.1016/j.jarmac.2013.12.001

Jones, C. H. & Pipe, M. E. (2002). How quickly do children forget events? A systematic study of children's event reports as a function of delay. *Applied Cognitive Psychology*, 16, 755-768. doi: 10.1002/acp.826

Judicial College (2010). Fairness in courts and tribunals.

Koriat, A., Goldsmith, M., Schneider, W., & Nakash-Dura, M. (2001). The credibility of children's testimony: can children control the accuracy of their memory reports? *Journal of Experimental Child Psychology*, 79, 405-437.
doi:10.1006/jecp.2000.2612

Lamb, M. E. (2016). Difficulties translating research on forensic interview practices to practitioners: Finding water, leading horses, but can we get them to drink? *American Psychologist*, 71, 710-718. doi: 10.1037/amp0000039

Lamb, M. E., & Fauchier, A. (2001). The effects of question type on self-contradictions by children in the course of forensic interviews. *Applied Cognitive Psychology*, 15, 483-491. doi:10.1002/acp.726

Lamb, M. E., Hershkowitz, I., Orbach, Y., & Esplin, P. W. (2008). *Tell me what happened: structured investigative interviews of child victims and witnesses*. Chichester, UK: Wiley

Lamb, M. E., Malloy, L. C., Hershkowitz, I., & La Rooy, D. (2015). Children and the law. In R. M. Lerner & M. E. Lamb (Eds.), *Handbook of child psychology and*

developmental science (7th ed.), Volume 3, Social, emotional and personality development. Hoboken, NJ: Wiley.

- Lamb, M. E., La Rooy, D. J., Malloy, L. C., & Katz, C. (Eds.). (2011). *Children's testimony: A handbook of psychological research and forensic practice.* Chichester, UK: Wiley-Blackwell.
- Lamb, M. E., Orbach, Y., Hershkowitz, I., Horowitz, D., & Abbott, C. B. (2007). Does the type of prompt affect the accuracy of information provided by alleged victims of abuse in forensic interviews? *Applied Cognitive Psychology, 21*, 1117-1130. doi: 10.1002/acp.1318
- Lamb, M. E., Sternberg, K. J., Orbach, Y., Esplin, P. W., & Mitchell, S. (2002). Is ongoing feedback necessary to maintain the quality of investigative interviews with allegedly abused children? *Applied Developmental Science, 6*, 35–41. doi: 10.1207/S1532480XADS0601_04
- Lamb, M. E., Sternberg, K. J., Orbach, Y., Hershkowitz, I., Horowitz, D., & Esplin, P. W. (2002). The effects of intensive training and ongoing supervision on the quality of investigative interviews with alleged sex abuse victims. *Applied Developmental Science, 6*, 114–125. doi: 10.1207/S1532480XADS0603_2
- La Rooy, D. J. & Lamb, M.E. (2011). What happens when interviews ask repeated questions in forensic interviews with children alleging abuse? *Journal of Police and Criminal Psychology, 26*, 20-25. doi: 10.1007/s11896-010-9069-4
- London, K. & Kulkofsky, S. (2010). Factors affecting the reliability of children's reports. In G. M. Davies & D. B Wright (Eds.), *New Frontiers in Applied Memory* (pp. 119-141). New York, NY: Psychology Press.
- Lord Chief Justice's Criminal Practice Directions (2013). Retrieved from: <https://www.judiciary.gov.uk/wpcontent/uploads/JCO/Documents/Practice+Directi>

- ons/Consolidated-criminal/criminal-practice-directions-2013.pdf
- Lyon, T. D. (2010). Investigative interviewing of the child. In D. N. Duquette & A. M. Haralambie (Eds.), *Child welfare law and practice* (2nd ed., pp. 87–109). Denver, CO: Bradford
- Melnyk, L., Crossman, A. M., & Scullin, M. H. (2007). The suggestibility of children's memory. In M. P. Toglia, J. D. Read, D. F. Ross & R. C. L. Lindsay (Eds.), *Handbook of eyewitness psychology, Vol 1: Memory for events* (pp. 401-427). Mahwah, NJ: Lawrence Erlbaum.
- Myers, J. E., Redlich, A. D., Goodman, G. S., Prizmich, L. P., & Imwinkelried, E. (1999). Jurors' perceptions of hearsay in child sexual abuse cases. *Psychology, Public Policy, and Law*, 5, 388-419. doi: 10.1037/1076-8971.5.2.388
- Orbach, Y. & Lamb, M. E. (2001). The relationship between within-interview contradictions and eliciting interviewer utterances. *Child Abuse & Neglect*, 25, 323-333. doi: 10.1016/S0145-2134(00)00254-4
- Peterson, C. & Bell, M. (1996). Children's memory for traumatic injury. *Child Development*, 67, 3045-3070. doi: 10.2307/1131766
- Plotnikoff, J. & Woolfson, R. (2007). *The “go-between”: evaluation of intermediary pathfinder projects. Research Summary No. 1*. London: Ministry of Justice. Retrieved from: <http://embed.policyreview.tv/media/documents/11.%20gillian%20harrison%20summary.pdf>
- Plotnikoff, J. & Woolfson, R. (2009). Measuring up?. *Evaluating implementation of Government commitments to young witnesses in criminal proceedings*. <https://nspcc.co.uk/globalassets/documents/research-reports/measuring-up-report.pdf>

- Poole, D. A. & White, L. T. (1991). Effects of question repetition on the eyewitness testimony of children and adults. *Developmental Psychology*, 27, 975-986. doi: 10.1037/0012-1649.27.6.975
- Rafferty, A., QC. (2016, April). *Ground rules hearings and section 28 pre recorded cross examination*. CBA Handout.
- Roebers, C. M. & Schneider, W. (2000). The impact of misleading questions on eyewitness memory in children and adults. *Applied Cognitive Psychology*, 14, 509-526. doi: 10.1002/1099-0720(200011/12)14:6<509::AID-ACP668>3.0.CO;2-W
- R v Barker [2010] EWCA Crim 4.
- Rush, E., Quas, J. A., & McAuliff, B. D. (2012). Child witnesses' experiences of distress in criminal courts: sources, consequences and solutions. In M. K. Miller & B. H. Bornstein (Eds.), *Stress, trauma, and well-being in the legal system* (pp. 89-121). New York, NY: Oxford University Press.
- Saywitz, K. J., Goodman, G. S., Nicholas, E., & Moan, S. F. (1991). Children's memories of a physical examination involving genital touch: Implications for reports of child sexual abuse. *Journal of Consulting and Clinical Psychology*, 59, 682-691. doi: 10.1037/0022-006X.59.5.682
- Saywitz, K. J., Lyon, T. D., & Goodman, G. S. (2011). Interviewing children. In J. E. B. Myers (Ed.), *The APSAC handbook on child maltreatment (3rd ed.)* (pp. 337-360). Newbury Park, CA: Sage.
- Semmler, C. & Brewer, N. (2002). Effects of mood and emotion on juror processing and judgments. *Behavioral Sciences & the Law*, 20, 423-436. doi:10.1002/bsl.502
- Sexual Offences Act (2003). Retrieved from:
<http://www.legislation.gov.uk/ukpga/2003/42/part/1/crossheading/child-sex-offences>

- Sixth Amendment to the US Constitution: Rights of Accused in Criminal Prosecutions (pg. 1399). Retrieved from: <http://www.gpo.gov/fdsys/pkg/GPO-CONAN-1992/pdf/GPO-CONAN-1992-10-7.pdf>
- Spencer, J. R. & Lamb, M. E. (2012) (Eds.). *Children and cross-examination: Time to change the rules?* Oxford and Portland, Oregon: Hart Publishing.
- Stewart, H., Katz, C., & La Rooy, D. J. (2011). Training forensic interviewers. In M. E. Lamb, D. J. La Rooy, L. C. Malloy, & C. Katz (Eds.), *Children's Testimony: A Handbook of Psychological Research and Forensic Practice* (pp. 199-216). Wiley-Blackwell.
- Szojka, Z., Andrews, S. J., Lamb, M. E., Stolzenberg, S. N., & Lyon, T. D. (2017). Challenging the credibility of alleged victims of child sexual abuse in Scottish courts. *Psychology, Public Policy, & Law*, 23, 200-210. doi: 10.1037/law0000117
- Tucker, A., Mertin, P., & Luszcz, M. (1990). The effect of a repeated interview on young children's eyewitness memory. *Australian and New Zealand Journal of Criminology*, 23, 117-124. doi: 10.1177/000486589002300204
- Vrij, A. (2008). *Detecting lies and deceit: Pitfalls and opportunities*. John Wiley & Sons: New York, NJ.
- Walker, A. (1993). Questioning young children in court: A linguistic case study. *Law and Human Behavior*, 17, 59-81. doi: 10.1007/BF01044537
- Walker, A. G., Kenniston, J., & Inada, S. S. (2013) (Eds.). *Handbook on questioning children: A linguistic perspective (3rd ed.)*. Washington D. C.: American Bar Association.
- Waterman, A. H., Blades, M., & Spencer, C. (2000). Do children try to answer nonsensical questions? *British Journal of Developmental Psychology*, 18, 211-

225. doi:10.1348/026151000165652
- Waterman, A. H., Blades, M., & Spencer, C. P. (2001). Interviewing children and adults: The effect of question format on the tendency to speculate. *Applied Cognitive Psychology, 15*, 521-531. doi: 10.1002/acp.741
- Waterman, A. H., Blades, M., & Spencer, C. P. (2004). Indicating when you do not know the answer: the effect of question format and interviewer knowledge on children's 'don't know' responses. *British Journal of Developmental Psychology, 22*, 335-348. doi: 10.1348/0261510041552710
- Wandrey, L., Lyon, T. D., Quas, J. & Friedman, W. (2012). Maltreated children's ability to estimate temporal location and numerosity of placement changes and court visits. *Psychology, Public Policy and Law, 18*, 79-104. doi: 10.1037/a0024812
- Wright, D. B. & Stroud, J. N. (1998). Memory quality and misinformation for peripheral and central objects. *Legal and Criminological Psychology, 3*, 273-286. doi: 10.1111/j.2044-8333.1998.tb00366.x
- Zajac, R. & Cannan, P. (2009). Cross-examination of sexual assault complainants: A developmental comparison. *Psychiatry, Psychology and Law, 16*, 36-54. doi: 10.1080/13218710802620448
- Zajac, R., Gross, J., & Hayne, H. (2003). Asked and answered: Questioning children in the courtroom. *Psychiatry, Psychology and Law, 10*, 199-209. doi: 10.1375/pplt.2003.10.1.199
- Zajac, R. & Hayne, H. (2003). I don't think that's what really happened: the effect of cross-examination on the accuracy of children's reports. *Journal of Experimental Psychology: Applied, 9*, 187-195. doi: 10.1037/1076-898X.9.3.187
- Zajac, R., O'Neill, S., & Hayne, H. (2012). Disorder in the courtroom? Child witnesses under cross-examination. *Developmental Review, 32*, 181-204. doi:

<http://dx.doi.org/10.1016/j.dr.2012.06.006>

Zelanti, P. & Droit-Volet, S. (2011). Cognitive abilities explaining age-related changes in time perception of short and long durations. *Journal of Experimental Child Psychology*, 109, 143-157. doi:10.1016/j.jecp.2011.01.003

Table 1

Scottish and Californian Sample Question Type Comparison

Question type	Scotland		California	
	Prosecution	Defense	Prosecution	Defense
Invitation	.03	.01	.03	.00
Directive	.28	.09	.29	.13
Option-posing	.54	.37	.52	.46
Suggestive	.15	.54	.16	.42

Table 2

Descriptive Comparison between Evidence Taken on Commission and Evidence Not Taken on Commission

	Commission (<i>n</i> = 8)		Not Commission (<i>n</i> = 48)	
Mean age (years)	11.6		14.4	
Gender	50% boys		25% boys	
Relationship to perpetrator	Comparable – most biological father/step-father			
Alleged offence	Comparable – most involved penetration			
Outcome	Comparable – most resulted in convictions			
Average length of direct-examination (in # questions)	305		308	
Average length of cross-examination (in # questions)	260		192	
	Prosecution	Defense	Prosecution	Defense
Average proportion of open-ended questions (invitations and directives)	.15	.08	.17	.04
Average proportion of option-posing questions	.38	.42	.50	.35
Average proportion of suggestive questions	.47	.50	.33	.61
Average proportion of suggestive tag questions	.01	.14	.06	.21
Average linguistic complexity	2.28	2.64	3.26	2.73
Average # of repeated questions	78	63	77	65

Note. No statistical differences were significant between those who were questioned by commission and those who were not. For some comparisons the lack of statistical difference is likely due to the large standard deviations (i.e., variation) within the small commission sample.