

*University of Southern California Law  
School*

Legal Studies Working Paper Series

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*Year 2016*

*Paper 200*

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Attorney Questions Predict Jury-Eligible  
Adult Assessments of Attorneys, Child  
Witnesses, and Defendant Guilt

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# Attorney Questions Predict Jury-Eligible Adult Assessments of Attorneys, Child Witnesses, and Defendant Guilt

Allison P. Mugno, J. Zoe Klemfuss, and Thomas D. Lyon

## Abstract

Children are often the primary source of evidence in maltreatment cases, particularly cases of child sexual abuse, and may be asked to testify in court. Although best-practice protocols for interviewing children suggest that interviewers ask open-ended questions to elicit detailed responses from children, during in-court testimony, attorneys tend to rely on closed-ended questions that elicit simple (often “yes” or “no”) responses (e.g., Andrews, Lamb, & Lyon, 2015; Klemfuss, Quas, & Lyon, 2014). How then are jurors making decisions about children’s credibility and ultimately the case outcome? The present study examined the effect of two attorney-specific factors (e.g., temporal structure and questioning phase) on mock jurors’ perceptions of attorney performance, child witness credibility, storyline clarity, and defendant guilt. Participants were randomly assigned to read a trial excerpt from one of eight conditions and were then asked to evaluate the attorney, child witness, and the case. Selected excerpts were from criminal court case transcripts and contained either high attorney temporal structure (e.g., use of temporal markers) or low temporal structure (e.g., frequent topic switching), involved direct or cross examination, and represented cases resulting in a conviction or acquittal. Child responses were kept consistent across all excerpts. Results showed that participants perceived the attorney’s performance and child’s credibility more favorably and thought the storyline was clearer when attorneys provided high rather than low temporal structure and when the excerpt contained direct rather than cross examination. Participants who read a direct rather than cross examination excerpt were also more likely to think the defendant was guilty. The study highlights the impact of attorney questioning style on mock jurors’ perceptions.

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Children are often the primary source of evidence in maltreatment cases, particularly cases of child sexual abuse, and may be asked to testify in court. Although best-practice protocols for interviewing children suggest that interviewers ask open-ended questions to elicit detailed responses from children, during in-court testimony, attorneys tend to rely on closed-ended questions that elicit simple (often “yes” or “no”) responses (e.g., Andrews, Lamb, & Lyon, 2015; Klemfuss, Quas, & Lyon, 2014). How then are jurors making decisions about children’s credibility and ultimately the case outcome? The present study examined the effect of two attorney-specific factors (e.g., temporal structure and questioning phase) on mock jurors’ perceptions of attorney performance, child witness credibility, storyline clarity, and defendant guilt. Participants were randomly assigned to read a trial excerpt from one of eight conditions and were then asked to evaluate the attorney, child witness, and the case. Selected excerpts were from criminal court case transcripts and contained either high attorney temporal structure (e.g., use of temporal markers) or low temporal structure (e.g., frequent topic switching), involved direct or cross-examination, and represented cases resulting in a conviction or acquittal. Child responses were kept consistent across all excerpts. Results showed that participants perceived the attorney’s performance and child’s credibility more favorably and thought the storyline was clearer when attorneys provided high rather than low temporal structure and when the excerpt contained direct rather than cross-examination. Participants who read a direct rather than cross-examination excerpt were also more likely to think the defendant was guilty. The study highlights the impact of attorney questioning style on mock jurors’ perceptions. Copyright © 2016 John Wiley & Sons, Ltd.

Children are often involved in the legal system as victims and as witnesses. In fact, over three million cases of child maltreatment are investigated in the U.S. annually (U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children’s Bureau, 2015). Children’s statements may be primary sources of evidence, particularly in cases involving alleged child sexual abuse (CSA). Best-practice protocols for interviewing child witnesses indicate that interviewers should ask high proportions of open-ended questions, thus allowing children to freely recall the event in question. However, during in-court testimony, children are rarely given an opportunity to provide a free narrative of the event. Under both direct and cross-examination, attorneys rely primarily on closed-

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ended questions, and children often do not provide detailed responses (Andrews, Lamb, & Lyon, 2015; Klemfuss, Quas, & Lyon, 2014; Stolzenberg & Lyon, 2014). How then are jurors judging the credibility of these children and deciding the verdict of the case? Given that over 100,000 children testify in legal proceedings each year (National CASA Association, 2015), it is critical to identify those factors that may be influencing jurors' credibility assessments and case decisions.

Although much research regarding courtroom testimony has focused on child-specific (e.g., child age and suggestibility) and juror-specific (e.g., juror biases about children's eyewitness testimony) factors, there is less research on attorney-specific factors. Yet within the context of the courtroom, attorney questioning style may play a crucial role in how jurors form opinions about the case. For example, Klemfuss *et al.* (2014) found that the different types of questions asked by defense and prosecuting attorneys (i.e., option-posing and suggestive questions) were predictive of trial outcome, whereas child responses were not. In the present study, we were interested in whether additional attorney-specific factors (i.e., temporal structure and questioning phase) influence mock jurors' beliefs about the attorney's performance, the credibility of the child witness, and, ultimately, the trial outcome.

## ATTORNEY TEMPORAL STRUCTURE

Temporal structure refers to placing an event, or elements of an event, in time. This can be achieved through the use of linguistic markers, such as first, before, after, or next, to assist with the construction of a cohesive and coherent narrative (Buckner & Fivush, 1998; Fivush, 1991; Fivush, Haden, & Adam, 1995; Nelson & Fivush, 2004; Peterson & McCabe, 1991). These temporal markers cue the listener to the order and storyline of the event through the use of chronology. Temporal structure may also be achieved by indicating when an event occurred in a general timeline, for example, by indicating what time of day or year an event occurred.

Pennington and Hastie's (1986, 1988, 1992) research on the "story model" of juror decision-making suggests that jurors may be particularly influenced by attorneys who provide temporal structure because it assists in their construction of a cohesive storyline. These researchers posit that jurors create a story with all of the presented trial information in order to understand the connection between pieces of evidence (or causal chain of events), to decide how much weight to assign to individual pieces of evidence, and ultimately to make verdict decisions. Although jurors may create multiple stories during the course of a trial, the story that affects jurors' verdict decision contains the most coverage and coherence. That is, most, if not all, aspects of the trial evidence are incorporated into a plausible and meaningful narrative.

Pennington and Hastie (1988) found that jurors' decision-making is most likely influenced by stories that are easily constructed. They manipulated whether participants heard temporally ordered evidence from the prosecution and defense and subsequently examined their verdict decisions. Temporally ordered evidence meant that participants heard witness testimony about different parts of an event chronologically (i.e., testimony about the first part of the event before moving onto the second part of the event, and so forth). The witness order condition lacked such chronology. For example, participants may have heard witness testimony about the target event before hearing testimony about the event antecedents, and so forth. Guilty verdicts were more

frequent after participants heard temporally ordered evidence from the prosecution but not the defense, and not guilty verdicts were more frequent after participants heard temporally ordered evidence from the defense but not the prosecution.

In the present study, we expected that attorney temporal structure during questioning would help mock jurors to more easily create a coherent and plausible storyline, thus influencing trial outcomes. In fact, Voss, Wiley, and Sandak (1999) found results consistent with this hypothesis when examining temporal structure in attorney arguments. Participants were more likely to think a defendant was guilty when a prosecutor's argument was highly structured (i.e., followed a chronological sequence) than when it lacked structure. We were interested in taking this a step further to examine how temporal structure in attorney questioning of child witnesses relates to mock juror ratings of the trial storyline, and, subsequently, of attorney performance, child credibility, and defendant guilt.

## ATTORNEY QUESTIONING PHASE

Attorney questioning of alleged child victims takes place in four potential phases. First, prosecuting attorneys have the opportunity to directly question the child (direct examination phase). Next, defense attorneys ask cross-examination questions. Direct and cross-examination can then be followed by re-direct by the prosecutor and re-cross-examination by the defense. The goal during direct examination of an alleged child victim is to elicit consistent responses so that the child seems more credible, and the trial results in a conviction. The goal during cross-examination is to elicit inconsistent responses from child witnesses so that the child seems less credible, and the trial results in an acquittal.

In line with these goals, attorneys use different questioning strategies depending on the questioning phase. During direct examination, prosecuting attorneys tend to use more open-ended questions than do defense attorneys during cross-examination (Andrews *et al.*, 2015; Davies & Seymour, 1998), thus allowing the child to account the event in his or her own words. They also ask more questions that are consistent with previous questions or child responses (Zajac, Gross, & Hayne, 2003). During cross-examination, defense attorneys tend to use more suggestive questions than do prosecuting attorneys during direct examination (Andrews *et al.*, 2015; Zajac & Cannan, 2009), which research has shown jurors can identify (Schmidt & Brigham, 1996), and negatively affects perceptions of child credibility (Castelli, Goodman, & Ghetti, 2005; Tubb, Wood, & Hosch, 1999). Cross-examination also tends to include more closed-ended questions than direct examination (Davies & Seymour, 1998; Hanna, Davies, Crothers, & Henderson, 2012; Zajac *et al.*, 2003). Further, defense attorneys tend to ask more difficult and confusing questions than do prosecuting attorneys during direct examination (Davies & Seymour, 1998; Zajac & Cannan, 2009; Zajac *et al.* 2003; for a review, see Goodman, Golding, & Haith, 1984, but also see Evans, Lee, & Lyon, 2009). For example, they may use legal jargon, switch topics often, or focus on peripheral details. Given these differences in questioning style, cross-examination is likely to provide less story structure for jurors (Klemfuss Cleveland, Quas, & Lyon, unpublished data). The present study examined mock juror perceptions of attorneys during direct and cross-examination, as well as mock juror perceptions of the child witnesses and trial outcomes.

## PRESENT STUDY

In the present study, we tested whether attorney questioning style, specifically the amount of temporal structure attorneys provide when questioning a child (high vs. low temporal structure) and the questioning phase (direct vs. cross-examination), affect mock jurors' beliefs about the attorney's performance, the credibility of the child witness, the clarity of the storyline provided, and the trial outcome. To isolate the effects of attorney questioning style on these outcomes, we kept children's responses constant, such that in all excerpts children provided almost exclusively yes/no responses, and "yes" and "no" responses were balanced across temporal structure, questioning phase, and trial outcome conditions. We used excerpts from criminal court transcripts of cases involving suspected CSA. Excerpts were chosen that were high or low in attorney temporal structure, involved direct or cross-examination, and where the actual trial outcome resulted in a conviction or acquittal. Thus, the study conformed to a 2 (temporal structure)  $\times$  2 (questioning phase)  $\times$  2 (trial outcome) between-subjects factorial design. Participants read an excerpt from one of the eight conditions and responded to a series of questions. Actual trial outcome served as a proxy for other case variables (e.g., evidence strength). Transcript excerpts were balanced for cases ending in convictions versus acquittals because trial outcome may reflect other important case factors, such as the strength of the evidence in the case or the quality of the attorneys in the case. We tested for main effects of trial outcome on our dependent variables as well as whether trial outcome interacted with temporal structure or questioning phase, as this might suggest that the effects of these factors on participants' perceptions were dependent on evidence strength or some other factor conveyed in the excerpts that may vary between the cases ending in convictions versus acquittals.

### *Hypotheses*

First, we expected that, compared with participants who read an excerpt low in attorney temporal structure, the participants who read an excerpt high in attorney temporal structure would rate the attorney's performance and child witness's credibility more favorably and that they would rate the excerpt as having a clearer storyline. Given that temporal structure facilitates the construction of a coherent narrative that jurors can use to comprehend and make decisions about trial information (Pennington & Hastie, 1988), temporal structure should provide a clearer storyline for participants that they may attribute broadly to all elements of the case, including both the attorney's questioning and potentially the child's responses.

Second, given documented differences in direct and cross-examination questioning (e.g., Davies & Seymour, 1998; Zajac & Cannan, 2009; Zajac *et al.*, 2003), we hypothesized that, compared with participants who read an excerpt involving cross-examination, participants who read an excerpt involving direct examination would rate the attorney's performance and child witness's credibility more favorably and that they would rate the excerpt as having a clearer storyline. We also hypothesized that participants who read direct examination excerpts would be more likely to think that the case should result in conviction, given that they would be hearing questioning from an attorney looking to enhance perceptions of the child's credibility.

Finally, we hypothesized that there would be a significant interaction between attorney temporal structure and questioning phase on participants' perceptions of the trial outcome. On the one hand, consistent with Pennington and Hastie's (1988 findings, we thought that participants who read an excerpt involving cross-examination that was high in temporal structure would be less likely to think the defendant was guilty than those who read an excerpt involving cross-examination that was low in temporal structure. This interaction would reflect a defense attorney successfully creating an alternative storyline with his or her questioning. We also hypothesized that participants who read an excerpt involving direct examination that was high in temporal structure would be more likely to think the defendant was guilty than those who read an excerpt involving direct examination that was low in temporal structure.

On the other hand, the goal of cross-examination is to make the child appear less credible, and this is often achieved by switching topics (i.e., providing little temporal structure; e.g., Davies & Seymour, 1998) and eliciting inconsistent responses (e.g., Zajac *et al.*, 2003), which combine to produce a form of poor temporal structure. Therefore, it may also be the case that when defense attorneys provide poor temporal structure, the child being questioned seems less credible, and the trial likely results in an acquittal. However, when prosecuting attorneys provide a cohesive and persuasive account of how an event unfolded by using temporal structure, the child appears more credible, and the trial likely results in a conviction.

## METHOD

### Participants

In all, 171 undergraduate students between the ages of 18 and 33 years (age,  $M = 21.75$  years,  $SD = 2.69$ , 27.5% male) participated in exchange for extra credit in a psychology course. These participants were representative of the south Florida community from which they were drawn [74% Hispanic/Latino, 14% African American, 6% Caucasian (non-Hispanic/Latino), 2% Asian American, 3% Multiracial, and 1% Other]. Participants were excluded if they did not meet the jury eligibility requirements for the state of Florida (i.e., U.S. citizenship and no prior felony conviction). Participants were also excluded if they missed an attention check question or if their survey completion time was either longer than three standard deviations from the mean or shorter than the minimum amount of time required to read through the entire survey. Further, several participants did not select any response option when asked to consent to the study, and thus their data were excluded. In total, the following participants were excluded to comprise the final sample of 171 participants: 19 who were not U.S. citizens; one who failed to indicate whether she had ever had a felony conviction; one who missed all three attention check questions; 19 who had a survey completion time outside of the specified cutoffs; six who failed to consent to the study; and 12 who met some combination of the exclusion criteria.

### Materials

Online surveys were created with carefully selected excerpts from criminal court transcripts in which alleged child victims were questioned about sexual abuse. The transcripts were from cases that occurred in Los Angeles County between 1997 and

2001. The sample of 42 transcripts included only cases where the defendant had representation, and the alleged victims were females, 18 years of age or under at the time of the trial, and less than 18 years of age at the time of the alleged child sexual abuse. Cases varied in severity and the number of allegations made. Incidents of abuse were closely matched across attorney questioning phase and trial outcome conditions. Because high temporal structure requires maintaining the current conversational topic, and low temporal structure requires topic switching (as described later), the excerpts with high temporal structure all described one incident of abuse, ranging from exposure to describing the perpetrator on top of the child with no clothes on. The excerpts with low temporal structure described more than one incident of abuse ( $M = 3$ ,  $SD = 1.69$ ), ranging from touching to rape. Excerpts for the low temporal structure condition were selected in which topic switching occurred multiple times per incident of abuse.

### *Transcript Selection*

As part of a previous study (Klemfuss Cleveland, Quas, & Lyon, unpublished data), attorney questions were coded on a scale from 1 (high) to 5 (low) based on the amount of temporal structure they provided for the child.<sup>1</sup> The codes from highest to lowest structure were: 1, sequencing – a question that focused on the chronology of an event and used temporal markers; 2, temporal cue – a question that specified when an event occurred; 3, event consistent – a question that continued the topic from the previous attorney–child conversational turn without adding temporal structure or detracting from temporal structure; 4, temporal asking – a question that inquired about the specific date or timing of an event; and 5, event change – a question that focused on a different event or period of time from the previous attorney–child conversational turn. The event consistent code was only used if a sequencing, temporal cue, or temporal asking code was not appropriate and was considered the central, neutral point of the scale (see Table 1 for examples of each type of attorney question). Some of the questions used in the present study were not coded as part of the Klemfuss Cleveland, Quas, & Lyon, unpublished data (study and thus were coded by a new, blind coder.<sup>2</sup> This coder achieved reliability with the original coders and with a new coder on 20% of the total questions included in the selected transcript excerpts (Cohen's kappa = 0.74).

### *Excerpt Selection*

Excerpts were selected from these 42 transcripts for the present study to adhere to a 2 (attorney temporal structure: high, low)  $\times$  2 (questioning phase: direct examination, cross-examination)  $\times$  2 (actual trial outcome: conviction, acquittal) between-subjects design. First, transcripts with particularly high attorney temporal structure and those with particularly low attorney temporal structure were selected within each questioning

<sup>1</sup> Klemfuss, Cleveland, Quas, & Lyon, unpublished data, (examined the effects of attorney temporal structure on children's response productivity, whereas the present study examined the effects of attorney temporal structure on jurors' perceptions). Coders in that study obtained a Cohen's kappa of 0.77 for their reliability coding of attorney temporal structure.

<sup>2</sup> Klemfuss, Cleveland, Quas, & Lyon, unpublished data, (used more strict inclusion criteria and excluded elements that were considered repetitions or not directly concerning the abuse event). Examples of some of the questions coded in the present study that were not previously coded include, "Are you certain about that?" and "You testified about that at the last time, didn't you? Remember that?"



Table 1. Examples of attorney temporal structure codes

Attorney temporal structure codes	Examples
Sequencing	What happened next? After he locked the door, did he come back over to where you were on the bed?
Temporal cue	Where were you at the time he put his tongue in your mouth? When he laid you down, were you lying on your back or were you lying on your tummy?
Event Consistent	Did you say anything to him? <i>then</i> What did you say?
Temporal asking	What time of the day or night did you do that? When was the first time that his hands actually came toward you?
Event change	And on the third occasion, it was just you and Paul in the bedroom? <i>then</i> Your mom is no longer dating Paul; is that right?

phase (direct, cross) and trial outcome (acquittal, conviction) combination. Two excerpts were chosen for each cell of the  $2 \times 2 \times 2$  design such that excerpts across high and low temporal structure conditions were matched on child age to the extent possible (high  $M = 12.38$ ,  $SD = 2.45$ ; low  $M = 11.00$ ,  $SD = 4.31$ ). To further mask variations in age, child responses were modified so that excerpts were also matched on the amount and type of information children provided in their responses. This allowed us to control for children's responses and thus better isolate the effect of the independent variables on participants' perceptions of the attorney, child witness, clarity of the storyline, and trial outcome. This selection process resulted in 16 total transcript excerpts (see the Appendix for examples).

### *Excerpt Reduction*

The 16 selected excerpts were strategically reduced so that each focused on direct discussion of the alleged abuse incidents and was matched on the number of words and the number of conversational turns across the temporal structure conditions. Excerpts were also closely matched across questioning phase on the number of words and conversational turns, as well as across actual trial outcome (Table 2).

### *Selected Excerpts*

In the selected high temporal structure excerpts, the majority of attorney questions were coded as sequencing, temporal cue, or consistent (Table 3). No event change

Table 2. Excerpt length across temporal structure, questioning phase, and case outcome conditions

Condition	Word count	Conversational turns
Temporal structure		
High	294.88 (35.53)	21.50 (3.63)
Low	326.00 (28.59)	21.00 (2.67)
Questioning phase		
Direct	326.13 (23.23)	22.25 (1.39)
Cross	294.75 (39.13)	20.25 (4.03)
Trial outcome		
Acquittal	305.00 (33.70)	20.00 (3.66)
Conviction	315.88 (37.81)	22.50 (1.85)

Note: Data are presented as  $M$  (SD).

Table 3. Percentages of temporal structure attorney codes across high and low conditions

Attorney code	High temporal structure			Low temporal structure		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
Sequencing	36%	12%	24–62%	1%	2%	0–6%
Temporal cue	15%	8%	4–24%	11%	5%	5–22%
Consistent	48%	15%	15–68%	53%	10%	39–68%
Temporal asking	1%	2%	0–5%	2%	5%	0–13%
Event change	0%	0%	–	33%	9%	21–48%

questions were present in any of these excerpts, and there was only one temporal asking question across all high temporal structure excerpts. In the low temporal structure excerpts, a small percentage of attorney questions were coded as sequencing or temporal cue. Rather, the majority of questions were either consistent or event change, and there were only four temporal asking questions across all low temporal structure excerpts (Table 3).

Attorney questions were also coded for whether they were open-ended, meaning the syntax was likely to elicit a multi-word response (e.g., “What happened next?”; “Where were his hands?”), or closed-ended meaning, the syntax limited the number of possible responses (yes/no or forced-choice questions; e.g., “Did he say anything to you?”; “Did he also touch you that time or was that a different time?”). Two coders achieved reliability on 20% of the attorney questions (Cohen’s kappa =0.94). Across temporal structure, questioning phase, and trial outcome conditions, the percentages of closed-ended questions were closely matched (Table 4).

Finally, attorney questions were coded for how suggestive or leading they were (Klemfuss *et al.*, 2014). The coding of suggestive and leading questions included negative term (i.e., statements that question a negative assertion – “And you never said anything?”), tag (i.e., statements that request agreement with an interrogative fragment – “You indicated that your mom said to him he had done something wrong, right?”) and declarative questions (i.e., statements written in the form of questions – “He actually laid on top of you?”). Two coders achieved reliability on 20% of the attorney questions (Cohen’s kappa =0.91). The means, standard deviations, and ranges of the

Table 4. Percentages of open- and closed-ended attorney questions across temporal structure, questioning phase, and trial outcome conditions

Condition	Open-ended			Closed-ended		
	<i>M</i>	<i>SD</i>	Range	<i>M</i>	<i>SD</i>	Range
Temporal structure						
High	30%	13%	9–45%	70%	13%	55–91%
Low	19%	14%	0–40%	81%	14%	60–100%
Questioning phase						
Direct	25%	17%	0–45%	75%	17%	55–100%
Cross	23%	11%	9–43%	77%	11%	57–91%
Trial outcome						
Acquittal	27%	15%	0–45%	73%	15%	55–100%
Conviction	22%	14%	0–40%	78%	14%	60–100%

percentages of attorney questions that were suggestive or leading across temporal structure, questioning phase, and trial outcome are presented in Table 5. The cross-examination excerpts contained a higher proportion of suggestive and leading questions, as would be expected for cross-examination in actual trials.

Children's responses usually consisted of a single word or phrase, hereafter referred to as a simple response (e.g., attorney: "What happened next?"; child: "He started kissing me"). Children's simple responses were well matched on average across temporal structure excerpts, and these single words or phrases were most often "yes" or "no" (Table 6). Children's simple responses were also balanced across the questioning phase and trial outcome conditions.

Each excerpt also had rare instances in which the child provided additional detail when responding, hereafter referred to as elaborated responses (e.g., attorney: "After he locked the door, what happened?"; child: "He laid me down, *and he got on me*"; Table 6). Two research assistants independently coded 20% of the total number of child responses (Cohen's kappa = 0.92).

### Survey Questions

All participants responded to the same set of at least 62 questions, which were organized into the following categories: trial (four questions); child witness credibility (22 questions); attorney performance (eight questions); child witness beliefs (12 questions); demographic (at least 15 questions with the potential for several follow-up questions); and general feedback (one question). Trial questions asked participants if they thought the defendant was found guilty (yes/no), if they would vote the defendant guilty

Table 5. Percentages of suggestive or leading questions across temporal structure, questioning phase, and trial outcome conditions

Condition	<i>M</i>	SD	Range
Temporal structure			
High	32%	24%	5–73%
Low	34%	21%	5–58%
Questioning phase			
Direct	17%	13%	5–45%
Cross	49%	17%	21–73%
Trial outcome			
Acquittal	25%	16%	5–50%
Conviction	41%	25%	5–73%

Table 6. Percentages of child simple and elaborated responses across temporal structure conditions

Child responses	High temporal structure			Low temporal structure		
	<i>M</i>	SD	Range	<i>M</i>	SD	Range
Simple						
Yes or no	62%	14%	45–86%	73%	17%	52–100%
Other	38%	14%	14–55%	27%	17%	0–48%
Elaborated	18%	4%	12–23%	18%	7%	5–25%

(yes/no and why/why not), and how clear the storyline was (1 = not clear at all, 6 = very clear). Child witness credibility questions inquired about the child on a number of dimensions, such as intelligence, honesty, accuracy, believability, and confidence. All responses were on a six-point scale [e.g., How believable was the child when recalling what happened? (1 = very unbelievable, 6 = very believable)]. Attorney questions inquired about the attorneys on a number of dimensions such as how structured, suggestive, convincing, experienced, and thorough they were. All but one item utilized a six-point scale [e.g., How structured was the attorney when questioning the child? (1 = very unstructured, 6 = very structured); How would the child perform with another attorney? (worse/about the same/better)]. Child witness beliefs questions asked participants to indicate how strongly they disagreed or agreed with statements concerning child witnesses using a six-point scale [e.g., children cannot remember events well enough to be reliable witnesses in court (1 = strongly disagree, 6 = strongly agree)]. Demographic questions inquired about participants' general demographic information, jury eligibility, and experience with the legal system and children (e.g., Do you have any children? yes/no; Have you ever served on a jury? yes/no). Finally, the general feedback question asked participants to speculate as to the purpose of the study. Three attention check questions (e.g., If you are reading this, please indicate a "2" as your response) were also inserted throughout the survey. If participants missed any of these attention check questions, their data were excluded from all analyses. For the present study, we were primarily interested in the trial, child witness credibility, and attorney performance categories.

### *Variable Reduction*

Because all of the 22 child witness credibility items were on a six-point scale (1 = low, 6 = high), we calculated a Cronbach's alpha value to examine the reliability of these items. The Cronbach's alpha value was high, at  $\alpha = 0.95$ . Thus, we were able to average the values on the child witness credibility questions for each participant and create one child witness credibility variable to use as an outcome variable with higher values indicating greater credibility ( $M = 3.78$ ,  $SD = 0.84$ ).

Of the attorney performance questions, seven were on a six-point scale (1 = low, 6 = high), so we calculated a Cronbach's alpha value to examine the reliability of these items. The Cronbach's alpha was high,  $\alpha = 0.84$ . Thus, we were able to average the values on these attorney performance questions for each participant and create one attorney performance variable to use as an outcome variable ( $M = 3.48$ ,  $SD = 0.96$ ). Higher scores were indicative of higher attorney performance ratings. The eighth question, "How would the child perform with another attorney?" (worse/about the same/better) was analyzed separately given the three-response option format.

### **Procedure**

Qualtrics, an online survey platform (<http://www.qualtrics.com>) was used to administer the survey. Participants signed up for the study via an online university research participation pool program and were then provided with a link to the survey. The survey began with an online consent document, and participants were asked to indicate their consent before moving forward with the survey. Participants who opted to continue were then presented with the following instructions:

You are about to read an excerpt from an actual case of possible child sexual abuse. A child is being questioned by an attorney. Child sexual abuse charges can include requests for sexual activities (regardless of the outcome), indecent exposure, physical sexual contact, or production of pornography with a child below the age of 18. Please read the court excerpt carefully. After reading the excerpt, we will ask you a series of questions about your perceptions and opinions regarding the excerpt and the case.

Participants were randomly presented with a single excerpt. Once participants finished reading the excerpt, they were presented with the trial, child witness credibility, attorney performance, child witness beliefs, demographic, and general feedback questions in fixed order. Upon completion of the survey, all participants were awarded extra credit toward a psychology course.

## RESULTS

Consistent with previous research (Gabora, Spanos, & Joab, 1993; Quas, Bottoms, Haegerich, & Nysse-Carris, 2002), preliminary analyses revealed that females viewed children as more credible than did males [ $F(1, 169) = 5.14, p = 0.025$ , partial  $\eta^2 = 0.03$ ] (females,  $M = 3.86$ ,  $SD = 0.82$ ; males,  $M = 3.54$ ,  $SD = 0.86$ ). However, given that gender was not of interest in the present study and that gender was balanced across conditions, we did not consider it further. Pearson correlations among attorney temporal structure, questioning phase, and actual trial outcomes revealed no significant intercorrelations. To examine the effects of attorney temporal structure, questioning phase, and actual trial outcomes on mock juror perceptions related to CSA cases, we conducted three separate  $2$  (attorney temporal structure: high, low)  $\times$   $2$  (questioning phase: direct, cross)  $\times$   $2$  (trial outcome: acquittal, conviction) between-subjects ANOVAs with ratings of storyline clarity, perceived child witness credibility, and attorney performance as dependent variables. Next, we tested whether our primary independent variables predicted perceptions of defendant guilt via two logistic regressions with attorney temporal structure (high, low), questioning phase (direct, cross), and trial outcome (conviction, acquittal), predicting whether participants thought the defendant was found guilty and whether participants would vote the defendant guilty. Finally, we conducted an ordinal regression to examine the effects of attorney temporal structure, questioning phase, and trial outcome on perceptions of whether the child would perform worse, about the same, or better with a different attorney.

### Trial Variables

The ANOVA with attorney temporal structure, questioning phase, and trial outcome entered as independent variables and perceived storyline clarity as the dependent variable revealed a significant main effect of temporal structure [ $F(1, 160) = 7.25, p = 0.008$ , partial  $\eta^2 = 0.04$ ]. Those participants in the high structure condition rated the trial storyline as clearer ( $M = 3.70$ ,  $SD = 1.14$ ) than those in the low structure condition ( $M = 3.21$ ,  $SD = 1.14$ ). There was also a significant main effect of questioning phase [ $F(1, 160) = 12.01, p = 0.001$ , partial  $\eta^2 = 0.07$ ]. Those participants who read an excerpt with direct questioning rated the trial storyline as clearer ( $M = 3.73$ ,  $SD = 1.14$ ) than those who read a cross-examination excerpt ( $M = 3.12$ ,  $SD = 1.11$ ). No other main effects or interactions were significant.

The logistic regression with attorney temporal structure, questioning phase, and trial outcome variables predicting whether participants thought the defendant was found guilty (0 = no, 1 = yes) and whether participants would vote the defendant guilty (0 = no, 1 = yes) revealed significant main effects of questioning phase. The first model with attorney temporal structure, questioning phase, and trial outcome predicting whether participants thought the defendant was found guilty was significant [ $\chi^2(3, N = 170) = 26.42, p < 0.001$ ], and correctly classified 74.1% of the cases (Nagelkerke  $R^2 = 0.211$ ). Those participants who read an excerpt with direct questioning were 6.76 times more likely to say the defendant was found guilty (Wald  $\chi^2$  value = 22.00,  $p < 0.001$ ) than those participants who read a cross-examination excerpt. No other main effects were significant. Adding the attorney temporal structure  $\times$  questioning phase  $\times$  trial outcome interaction into the second model did not produce a significant increase in explained variance [ $\Delta R^2 = 0.009, \chi^2(4, N = 170) = 1.16, p = 0.884$ ].

The first model with attorney temporal structure, questioning phase, and trial outcome predicting whether participants would vote the defendant guilty was also significant [ $\chi^2(3, N = 170) = 24.20, p < 0.001$ ] and correctly classified 70.6% of the cases (Nagelkerke  $R^2 = 0.187$ ). Those who read an excerpt with direct questioning were 5.52 times more likely to vote the defendant guilty (Wald  $\chi^2$  value = 21.28,  $p < 0.001$ ) than those who read a cross-examination excerpt. Again, no other main effects were significant. Adding the temporal structure  $\times$  questioning phase  $\times$  trial outcome interaction into the second model did not produce a significant increase in explained variance [ $\Delta R^2 = 0.001, \chi^2(4, N = 170) = 0.12, p = 0.998$ ].

### Child Witness Credibility

The ANOVA with attorney temporal structure, questioning phase, and trial outcome entered as independent variables and child witness credibility as the dependent variable revealed a significant main effect of attorney temporal structure [ $F(1, 163) = 17.94, p < 0.001, \eta^2 = 0.10$ ]. Participants in the high structure condition rated the child witness more favorably ( $M = 4.03, SD = 0.76$ ) than those in the low structure condition ( $M = 3.51, SD = 0.84$ ). There was also a significant main effect of questioning phase [ $F(1, 163) = 18.48, p < 0.001, \text{partial } \eta^2 = 0.10$ ], such that participants who read an excerpt with direct questioning rated the child witness more favorably ( $M = 4.01, SD = 0.80$ ) than those who read a cross-examination excerpt ( $M = 3.49, SD = 0.80$ ). No other main effects or interactions were significant.

### Attorney Performance

The ANOVA with attorney temporal structure, questioning phase, and trial outcome entered as independent variables and perceptions of attorney performance as the dependent variable revealed significant main effects of attorney temporal structure [ $F(1, 163) = 14.15, p < 0.001, \text{partial } \eta^2 = 0.08$ ] and questioning phase [ $F(1, 163) = 12.15, p = 0.001, \text{partial } \eta^2 = 0.07$ ]. Participants in the high structure condition rated the attorney's performance more favorably ( $M = 3.75, SD = 0.96$ ) than those in the low structure condition ( $M = 3.19, SD = 0.87$ ), and participants who read an excerpt with direct questioning rated the attorney's performance more favorably ( $M = 3.70, SD = 1.04$ ) than those who read a cross-examination excerpt ( $M = 3.21, SD = 0.77$ ). These main effects were subsumed within a significant attorney temporal

structure  $\times$  questioning phase  $\times$  trial outcome interaction [ $F(1, 163) = 4.27, p = 0.040$ , partial  $\eta^2 = 0.03$ ]. More specifically, simple effects analyses revealed the following: (a) participants who read a direct examination excerpt that ended in acquittal rated the attorney's performance more favorably if the attorney used high temporal structure ( $M = 4.17, SD = 1.01$ ) compared with low temporal structure ( $M = 3.11, SD = 0.94$ ) [ $F(1, 163) = 18.53, p < 0.001$ , partial  $\eta^2 = 0.10$ ]; participants who read a low temporal structure excerpt that ended in conviction rated the attorney's performance more favorably if the excerpt was from direct examination ( $M = 3.57, SD = 0.92$ ) as opposed to cross-examination ( $M = 2.97, SD = 0.69$ ) [ $F(1, 163) = 4.74, p = 0.03$ , partial  $\eta^2 = 0.03$ ]; and participants who read a high temporal structure excerpt that ended in acquittal rated the attorney's performance more favorably if they read a direct examination excerpt ( $M = 4.17, SD = 1.01$ ) than if they read a cross-examination excerpt ( $M = 3.26, SD = 0.84$ ) [ $F(1, 163) = 12.05, p = 0.001$ , partial  $\eta^2 = 0.07$ ]. No other combinations were significant.

Finally, an ordinal regression revealed no significant effects of temporal structure, questioning phase, or trial outcome on whether participants thought the child would perform worse, the same, or better with another attorney.

## DISCUSSION

This is the first study to examine how attorney temporal structure and questioning phase affect perceptions of child witness credibility, attorney performance, and trial variables such as storyline clarity and defendant guilt. The results confirmed our primary hypotheses concerning direct effects of temporal structure and questioning phase on the outcomes of interest. Both attorney provision of temporal structure and the questioning phase viewed by participants affected not only perceptions of attorney performance, but also trial variables, and, most notably, child credibility, despite children providing minimal responses that were matched across conditions.

### Attorney Temporal Structure

The use of temporal structure appears to help mock jurors better create a story about how an alleged abusive event unfolded, leading to enhanced perceptions of the case, the attorney, and the child witness. When attorneys do not abruptly switch topics (in contrast to when they do so, as would be the case when low temporal structure is provided), they are rated as more prepared, experienced, and convincing. Indeed, in the present study, when participants viewed transcript excerpts that were high in attorney temporal structure, they reported that they perceived the storyline presented in the questioning to be clearer, and they rated the attorney performance more highly.

Of particular interest, participants who viewed excerpts high in temporal structure also rated the child witness as more credible. The effect of temporal structure on participants' perceptions of the child witness' credibility is particularly notable given that we matched for the types of responses that children provided (i.e., simple and elaborated) across the conditions. As such, participants probably based their perceptions more on the attorney's questioning style than on variations in the child's responses. According to Pennington and Hastie (1988), jurors rely heavily on a plausible storyline when making decisions about a case. The results of this study suggest that when

attorneys facilitate a meaningful storyline through their questions, jury-eligible adults extend their confidence in how the story unfolded to their confidence in both the attorney and the child witness even though the child's responses may be minimal. Future research should vary both attorney temporal structure and child responses to see whether there is an interaction between these variables or if attorney temporal structure is solely influencing mock jurors' perceptions of the child witness' credibility.

We found no significant direct or interaction effects of temporal structure on perceptions of the defendant's guilt. This is a bit surprising, particularly because attorney temporal structure had a significant effect on participant perceptions of the trial storyline, the child witness's credibility, and the attorney's performance. However, a large majority of participants indicated that they thought the defendant was found guilty at trial (74%) and would vote the defendant guilty (69%), even though they were given instructions stating that the excerpt represented possible CSA, so there may not have been enough variability in their responses to detect an effect. Qualitative responses varied, but it appeared that many participants took the allegations as fact and when asked why they would convict made comments such as "because he touched the child inappropriately."

### Attorney Questioning Phase

Participants rated the child and attorney more favorably and thought the storyline was clearer during direct examination than during cross-examination. Direct examination excerpts were presumably easier to follow and understand based on the fact that participants rated the storyline as clearer. Subsequently, this may have influenced participants' perceptions of the child's credibility for the same reason identified for high temporal structure excerpts (i.e., participants also attribute the clearer storyline to the child's testimony). The greater proportion of suggestive and leading questions present in the cross-examination excerpts may also have accounted for participants' less favorable view of the child after reading these excerpts (Castelli *et al.*, 2005; Tubb *et al.*, 1999).

Despite the lack of variability in participant responses regarding defendant guilt, we also found that participants who read a direct examination excerpt were more likely to find the defendant guilty than those who read a cross-examination excerpt. This was expected given that a defendant's conviction is the end goal for prosecuting attorneys, and a defendant's acquittal is the end goal for defense attorneys. Thus, it is unsurprising that when participants were exposed to only questioning by a prosecuting attorney, their inclination was to convict, and when they were exposed to only questioning by a defense attorney, they were more likely to vote for acquittal. This finding highlights the powerful qualitative differences between direct and cross-examination (Andrews *et al.*, 2015; Mueller & Kirkpatrick, 2012; Zajac & Cannan, 2009; Zajac *et al.*, 2003).

### Actual Trial Outcome

We did not find that the actual trial outcome affected mock juror perceptions of child witness credibility, attorney performance, storyline clarity, or defendant guilt. This was expected because jurors selected for the criminal court cases saw direct and cross-examination of the child, as well as opening and closing arguments, by both attorneys. They may have also heard testimony from experts and/or other witnesses and



instructions from the judge. A combination of these factors probably influenced their perceptions of the trial verdict. However, participants in our study only read an excerpt of a child under either direct or cross-examination, not both, before making a decision about child credibility, attorney performance, storyline clarity, and defendant guilt. Reading an excerpt where the opposing attorney also questions the child, for example, may have altered participants' perceptions of these outcome variables. Although actual trial outcome is not a perfect proxy of evidence strength, this null finding suggests that excerpts did not differ in the overall strength of the case.

We found an unexpected three-way interaction among attorney temporal structure, attorney questioning phase, and actual trial outcome on perceptions of the attorney's performance. Of interest, in cases ending in acquittals, prosecuting attorneys (in direct examination excerpts) were rated more highly if they asked highly structured questions. In cases ending in convictions, the direct/cross-examination difference was most evident when attorneys used low structure. At a broad level, these findings suggest that some underlying element of the cases, reflected in the original outcomes, plays a role in ratings of attorney performance. Two likely candidates are evidence strength and attorney skill. The specific findings suggest that in cases with weak evidence and/or a less skilled attorney, a combination of direct examination style questions paired with high temporal structure may be necessary to increase attorney performance ratings. However, in cases with strong evidence and/or a highly skilled attorney, direct examination-style questioning is sufficient to increase attorney performance ratings. So, perhaps in cases with minimal evidence, if prosecutors use a particularly strong amount of temporal structure, they may be able to increase juror perceptions of their performance and shift juror decisions in their favor. In fact, Voss and Van Dyke (2001) reasoned that the structure of prosecutors' arguments may have the greatest influence on verdict decisions when the evidence is inconclusive. However, we hesitate to make strong claims about this interaction, given that it was not predicted, that we found no significant main effects of actual trial outcome on any of our outcomes of interest, and that three-way interactions can pose problems in interpretation. Future research should further unpack potential effects of case strength, questioning phase, and temporal structure on opinions of attorney performance.

### **Limitations and Future Directions**

As with any study, the present one had some limitations, which should be addressed in future work. First, when choosing excerpts we were forced to constrain the excerpt length to eliminate the presence of any event change codes in the high temporal structure conditions. Future studies should use lengthier excerpts, perhaps by artificially manipulating the transcripts, particularly when examining the effect of attorney temporal structure. It is possible that longer excerpts would give participants in the high temporal structure condition a more complete story of the event. This may increase the effect of temporal structure on mock jurors' perceptions. Artificially manipulating the transcripts would also allow for a clearer examination of evidence strength. In the present study, we could use only actual trial outcome as a proxy for evidence strength. However, there are many factors that influence trial outcomes, and we only presented participants with one piece of an entire case. Therefore, it is unclear as to whether this was an accurate assessment of evidence strength. Additionally, we selected only two excerpts to represent each study condition, which may limit the generalizability of

our results. It was difficult to find excerpts that fit all of the study criteria and conditions. Therefore, future studies should use greater stimulus sampling. This may be more feasible in a study where the excerpts are artificially manipulated.

Second, the number of incidents of abuse mentioned across high and low temporal structure excerpts was not matched. As mentioned, the absence of any event change codes was a criterion for the selection of high temporal structure excerpts. Thus, all high temporal structure excerpts only mentioned one incident of abuse. However, a key element of low temporal structure is topic switching, which can be achieved by discussing multiple incidents of abuse, as was the case in almost all of the low temporal structure excerpts. Future studies should match temporal structure conditions on the number of abuse incidents discussed. Despite the greater number of abuse incidents mentioned in the low temporal structure conditions, mock jurors still rated the child's credibility more favorably in the high temporal structure conditions.

Third, participants read the excerpts, and thus were not exposed to the attorney's speech style (e.g., intonation, speech rate), which may also influence juror perceptions. This was necessary to the present design because we were using excerpts from actual court transcripts and because we wanted to ensure that participants would not pick up on behavioral credibility cues in the child. However, accounting for this in a future study (e.g., through watching a clip of direct or cross-examination) would likely only increase the effect of questioning phase on mock jurors' perceptions. Defense attorneys may, for example, use a more accusatory tone of voice than prosecuting attorneys when questioning a child witness.

Fourth, participants only read one excerpt from either direct or cross-examination. This design was intentional in order to isolate the effects of temporal structure and questioning phase independent of potential confounds. However, jurors in an actual trial would listen to both direct and cross-examination in addition to opening and closing arguments. Also, other witnesses or experts might testify, and judges would give jury instructions. Future studies should explore the effects of attorney temporal structure and attorney questioning phase on mock jurors' perceptions using materials that more closely simulate an actual court case.

Fifth, the participants recruited in the present study were undergraduate students who chose to complete the study in exchange for extra credit in a psychology course. Although we used several criteria for excluding participants' data in our analyses (e.g., not meeting jury eligibility requirements, incorrectly responding to attention check questions), it is possible that the participants who remained in our sample were not entirely representative of all jury pools.

Finally, the present study examined the effect of attorney temporal structure on mock jurors' perceptions while minimizing children's responses. It would also be of interest to examine the types of attorney questions to which children provide more or less temporal structure and how that affects subsequent attorney questions.

## CONCLUSIONS

Attorney questioning style plays a critical role in how mock jurors perceive a case, including both the child witness's credibility and the attorney's performance, and how they ultimately make verdict decisions. The effect of questioning style is apparent even when responses from child witnesses are minimal. The present study suggests that

mock jurors are particularly influenced by what the attorneys are saying while questioning child witnesses and that mock jurors extrapolate this information to estimate the child's credibility.

## ACKNOWLEDGEMENTS

This research was supported in part by the National Science Foundation (SES-1228638 and SES-1228560) and the National Institutes of Health (HD047290).

## 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, 29*, 253–261. doi: 10.1002/acp.3103
- Buckner, J. P., & Fivush, R. (1998). Gender and self in children's autobiographical narratives. *Applied Cognitive Psychology, 12*, 407–429. doi: 10.1002/(SICI)1099-0720(199808)12:4
- Castelli, P., Goodman, G. S., & Ghetti, S. (2005). Effects of interview style and witness age on perceptions of children's credibility in sexual abuse cases. *Journal of Applied Social Psychology, 35*, 297–319. doi: 10.1111/j.1559-1816.2005.tb02122.x
- Davies, E., & Seymour, F. W. (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
- Evans, A. D., Lee, K. Lyon, T. D. (2009). Complex questions asked by defense lawyers but not prosecutors predicts convictions in child abuse trials. *Law and Human Behavior, 33*, 258–264. doi: 10.1007/s10979-008-9148-6
- Fivush, R. (1991). The social construction of personal narratives. *Merrill-Palmer Quarterly, 37*, 59–81.
- Fivush, R., Haden, C., & Adam, S. (1995). Structure and coherence of preschoolers' personal narratives over time: Implications for childhood amnesia. *Journal of Experimental Child Psychology, 60*, 32–56. doi: 10.1006/jecp.1995.1030
- Gabora, N. J., Spanos, N. P., & Joab, A. (1993). The effects of complainant age and expert psychological testimony in a simulated child sexual abuse trial. *Law and Human Behavior, 17*, 103–119. doi: 10.1007/BF01044540.
- 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.1540-4560.1984.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
- Klemfuss, J. Z., Quas, J. A., & Lyon, T. D. (2014). Attorneys' questions and children's productivity in child sexual abuse criminal trials. *Applied Cognitive Psychology, 28*, 780–788. doi: 10.1002/acp.3048
- Mueller, C. B., & Kirkpatrick, L. C. (2012). *Evidence* (5th ed.). New York, NY: Wolters Kluwer Law & Business.
- National CASA Association (2015). *The Judges' Pages Newsletter, September 2012: Rationale and methods for preparing children for success in the courtroom*. Retrieved from [http://www.casaforchildren.org/site/c.mtJSJ7MPIsE/b.8173513/k.1FB7/JP\\_10\\_NCAC.htm](http://www.casaforchildren.org/site/c.mtJSJ7MPIsE/b.8173513/k.1FB7/JP_10_NCAC.htm)
- Nelson, K., & Fivush, R. (2004). The emergence of autobiographical memory: A social cultural developmental theory. *Psychological Review, 111*, 486–511. doi: 10.1037/0033-295X.111.2.486
- Pennington, N., & Hastie, R. (1986). Evidence evaluation in complex decision making. *Journal of Personality and Social Psychology, 51*, 242–258. doi: 10.1037/0022-3514.51.2.242
- Pennington, N., & Hastie, R. (1988). Explanation-based decision making: Effects of memory structure on judgment. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 14*, 521–533. doi: 10.1037/0278-7393.14.3.521
- Pennington, N., & Hastie, R. (1992). Explaining the evidence: Tests of the story model for juror decision making. *Journal of Personality and Social Psychology, 62*, 189–206. doi: 10.1037/0022-3514.62.2.189
- Peterson, C., & McCabe, A. (1991). Linking children's connective use and narrative macrostructure. In A. McCabe & C. Peterson (Eds.), *Developing narrative structure* (pp. 29–53). Hillsdale, NJ: Lawrence Erlbaum Associates.

- Quas, J. A., Bottoms, B. L., Haegerich, T. M., & Nysse-Carris, K. (2002). Effects of victim, defendant and juror gender on decisions in child sexual assault cases. *Journal of Applied Social Psychology, 32*, 1993–2021. doi: 10.1111/j.1559-1816.2002.tb02061.x
- Schmidt, C. W., & Brigham, J. C. (1996). Jurors' perceptions of child victim-witnesses in a simulated sexual abuse trial. *Law and Human Behavior, 20*, 581–606. doi: 10.1007/BF01499233
- Stolzenberg, S. N., & Lyon, T. D. (2014). How attorneys question children about the dynamics of sexual abuse and disclosure in criminal trials. *Psychology, Public Policy, and Law, 20*, 19–30. doi: 10.1037/a0035000
- Tubb, V. A., Wood, J. M., & Hosch, H. M. (1999). Effects of suggestive interviewing and indirect evidence on child credibility in a sexual abuse case. *Journal of Applied Social Psychology, 29*, 1111–1127. doi: 10.1111/j.1559-1816.1999.tb02031.x
- U.S. Department of Health and Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2015). *Child Maltreatment 2013*. Retrieved from <http://www.acf.hhs.gov/programs/cb/research-data-technology/statistics-research/child-maltreatment>
- Voss, J. F., & Van Dyke, J. A. (2001). Narrative structure, information certainty, emotional content, and gender as factors in a pseudo jury decision-making task. *Discourse Processes, 32*, 215–243. doi: 10.1207/S15326950DP3202&3\_07
- Voss, J. F., Wiley, J., & Sandak, R. (1999). On the use of narrative as argument. In R. Susan, A. C. Graesser, & P. van den Broek (Eds.), *Narrative comprehension, causality, and coherence: Essays in honor of Tom Trabasso* (pp. 235–252). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.
- Zajac, R., & Cannan, P. (2009). Cross-examination of sexual assault complainants: A developmental comparison. *Psychiatry, Psychology and Law, 16*, S36–S54. 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

## APPENDIX

### Example of High Temporal Structure, Direct Examination Excerpt.

**Attorney:** Did you take off any other items of clothing at first?

**Child:** No.

**Attorney:** After you took off your white uniform shirt, what happened then?

**Child:** He told me to take off the undershirt.

**Attorney:** Did you?

**Child:** Yes.

**Attorney:** And did you want to?

**Child:** No.

**Attorney:** Why did you take off your undershirt?

**Child:** Because I was always taught to listen to my uncle.

**Attorney:** All right. So when you took off your undershirt, were you naked on top, or did – were you wearing a bra?

**Child:** I was naked on top.

**Attorney:** All right. At that time, you weren't wearing a bra?

**Child:** No.

**Attorney:** You hadn't developed yet?

**Child:** I hadn't developed yet.

**Attorney:** Okay. All right. So after you were naked from the waist up; is that right?

**Child:** Yes.

**Attorney:** What happened then?

**Child:** He told me to take my pants off.

**Attorney:** Were you wearing pants?

**Child:** I was wearing shorts. He told me to take my shorts off.

**Attorney:** Were they uniform shorts?

**Child:** Yes.

**Attorney:** What color were they?

**Child:** Blue.

**Attorney:** Did you take off your shorts?

**Child:** No.

**Attorney:** Why not?

**Child:** Because I didn't want to.

**Attorney:** Did you tell him that?

**Child:** No.

**Attorney:** You just didn't respond to his request?

**Child:** Yes.

**Attorney:** And then what happened?

**Child:** Then he says take them off again, and I started to cry because I realized what was happening.

**Attorney:** When you started to cry, did he back off and say, "Never mind," or –.

**Child:** No.

**Attorney:** What happened then?

**Child:** He said – I don't remember exactly what he said.

**Attorney:** Was it in a happy tone of voice or an angry tone of voice?

**Child:** An angry tone of voice.

**Attorney:** And at that time, when he was saying something to you in an angry tone of voice, were your shorts still on, or were you taking them off?

**Child:** They were still on.

**Attorney:** So after he said something to you angrily, what happened next?

**Child:** Then I took them off.

### Example of High Temporal Structure, Cross-examination Excerpt

**Attorney:** You feel the hands on the stomach. You pretend like you are asleep, and what did you do next?

**Child:** I pulled the blankets over me, and I turned on my side.

**Attorney:** And I think you told us that you turned on your side closer to your sister, correct?

**Child:** Yes.

**Attorney:** Was there any distance between you and your sister? Were you trying to hug up close to her?

**Child:** I was trying to hug tight.

**Attorney:** And after you changed a position on your bed, how long was it until you felt something else?

**Child:** Not long.

**Attorney:** And what did you first feel?

**Child:** His hands on my feet.

**Attorney:** Wearing any socks that night?

**Child:** No.

**Attorney:** Again, skin to skin touching on the feet?

**Child:** Yes.

**Attorney:** And then I think you told us that the hand moved up and gradually went up the leg; is that right?

**Child:** Yes.

**Attorney:** Could you tell had Michael changed his position at all? In other words, had he gone from standing to sitting to kneeling, or could you tell?

**Child:** I couldn't tell.

**Attorney:** And at this time when you felt the hand on the leg, were you looking at his face still or no?

**Child:** No. I had the blanket over my head.

**Attorney:** And you tell us that all lasted about 30 minutes?

**Child:** Yes.

**Attorney:** Your estimate, right?

**Child:** Yes.

**Attorney:** You used 30 minutes, right?

**Child:** Yes.

**Attorney:** And then at some point in time his hands moved to your shoulder and began shaking your shoulder; is that right?

**Child:** Yes. He put his hands over the blanket and started shaking my shoulder.

**Attorney:** And did you move at all?

**Child:** No.

**Attorney:** Did you say anything to him at that point?

**Child:** No.

**Attorney:** And then after he shook your shoulder, he left, right?

**Child:** Yes.

**Attorney:** And during this approximately what you estimate to be 30 minutes in your room, did Michael ever say anything?

**Child:** No.

**Attorney:** And you never said anything?

**Child:** No.

### Example of Low Temporal Structure, Direct-examination Excerpt

**Attorney:** Where were you guys when he touched you?

**Child:** In his chair.

**Attorney:** Okay. Is that in the living room?

**Child:** Yeah.

**Attorney:** What else was in the living room?

**Child:** A couch. A TV.

**Attorney:** Okay. Do you remember if it was just the one time or it was more than one time that he touched you?

**Child:** More than one time.

**Attorney:** More than – what about – was it two times or more than two times?

**Child:** More than two times.

**Attorney:** Do you remember – did you ever go in there to use the bathroom?

**Child:** Yes.

**Attorney:** Okay. Do you remember one time when you went to use the bathroom if he – did he do something to you with his tongue that you didn't like?

**Child:** He stuck it in my mouth.

**Attorney:** Was that – did he like kiss you or what was going on?

**Child:** Just stuck it in my mouth.

**Attorney:** Where were you when that happened?

**Child:** In the living room. He was in his chair.

**Attorney:** Did you tell your sister when that happened?

**Child:** No.

**Attorney:** Did you tell Kayla, Sammy, or Susan?

**Child:** No.

**Attorney:** How come?

**Child:** Because I didn't want to.

**Attorney:** Okay. Did you tell your dad that –

**Child:** Yeah.

**Attorney:** And where were you guys when you told your dad?

**Child:** In his chair.

**Attorney:** In your dad's chair?

**Child:** Yeah.

**Attorney:** Was that in – is that in your house?

**Child:** Yeah.

**Attorney:** Okay. When you say he touched your privates, did he touch you – did you have like underwear on?

**Child:** Yeah.

**Attorney:** Now, did he touch you like on top of your underwear or underneath your underwear?

**Child:** Top.

**Attorney:** On top? Let's say this is my shirt here, and I have my hand like this. Did he touch you on the underwear like this on the outside?

**Child:** Yeah.

**Attorney:** What about this? Did he ever put his hand underneath your underwear?

**Child:** No.

**Attorney:** Okay. So just on the outside, right?

**Child:** Yeah.

**Attorney:** And now, the time that he put his tongue in your mouth, did he also touch you that time or was that a different time?

**Child:** A different time.

### **Example of Low Temporal Structure, Cross-examination Excerpt**

**Attorney:** The times that he put his tongue in your mouth, where were the other kids?

**Child:** In the backyard.

**Attorney:** And when you went back in the backyard, you didn't tell them?

**Child:** Nope.

**Attorney:** What were they doing back there, do you know?

**Child:** Playing. Running around.

**Attorney:** Okay. So why were you in the house, then, at that time?

**Child:** To go to the bathroom.

**Attorney:** Okay. Now, you lived right next door, didn't you?

**Child:** Yeah.

**Attorney:** And you could have gone to your house, right? To go to the bathroom?

**Child:** Yeah. But this was close.

**Attorney:** Okay. Now, the first time Bob touched you on your private, did that make you feel uncomfortable?

**Child:** Yeah.

**Attorney:** Okay. Did it make you a little afraid of him?

**Child:** Yeah.

**Attorney:** And the first time he put his tongue in your mouth, did that make you feel uncomfortable?

**Child:** Yes.

**Attorney:** When he put his tongue in your mouth, was that always in the living room?

**Child:** Yeah.

**Attorney:** Okay. And where were you at the time he put his tongue in your mouth? Were you standing? Were you sitting? What were you doing?

**Child:** Coming in to go to the bathroom.

**Attorney:** Okay. So you walk into the house to go to the bathroom, and then what would happen?

**Child:** He will stick his tongue in my mouth or touch my private.

**Attorney:** Did you walk right up to him or did he call you over?

**Child:** Call me over.

**Attorney:** And did you get on his lap or stand next to him or what did you do?

**Child:** He made me stand in front of him.

**Attorney:** Okay. Do you remember where that chair was in the house?

**Child:** Yeah.

**Attorney:** And it was facing a television set?

**Child:** No.

**Attorney:** What was it – If Bob was sitting in the chair, could he watch television?

**Child:** What?

**Attorney:** I'm sorry. We won't even go – we won't even ask you that question, okay? Did you ever tell anybody that Bob put his tongue in your mouth one time was in the kitchen and one time was in the bathroom?

**Child:** Yeah.

**Attorney:** Okay. Did that happen, too?

**Child:** Yeah.

