

Getting the story in forensic interviews with child witnesses:

Applying a story grammar framework

REPORT TO THE CRIMINOLOGY RESEARCH COUNCIL

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Pamela C. Snow<sup>1</sup> PhD

Martine B. Powell<sup>2</sup> PhD

<sup>1</sup>School of Psychology, Psychiatry and Psychological Medicine  
Monash University, Victoria

<sup>2</sup>School of Psychology, Deakin University, Victoria



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## EXECUTIVE SUMMARY

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### Background

Increased rates of child abuse reporting over recent years have resulted in closer attention being paid to the interviewing techniques employed by police and human services staff to elicit the child's account of alleged abuse incident(s). Such accounts are commonly elicited under Video and Audiotaped Evidence (VATE) conditions and form a crucial component of a prosecution case against an alleged offender. Serious and pervasive problems with such accounts have, however been identified in the literature on investigative interviewing with child witnesses. Key amongst these is the fact that interviewers seem to rely too heavily on specific questioning, in spite of the fact that best-practice guidelines from around the globe emphasise the importance of using open-ended questions that promote free narrative on the part of the child.

In this study, we examine the concept of "free narrative" from a linguistic, rather than an eye-witness memory perspective. We review relevant literature on the composition of a linguistically intact narrative, and employ Stein and Glenn's (1979) *Story Grammar* framework to examine the extent to which current police interviewing practices are successful at eliciting a narrative account that is linguistically coherent. This framework provides a 'template' that users of language employ to convey information to a naïve listener in a way that is temporally and logically coherent. Hence and ideal story begins with the *setting* (the physical and temporal location of events), moves to the *initiating event* (the act that commences the "action" in the story), the *internal response* (the emotional reaction of the story teller to the initiating event), the *plan* (a statement indicating what the story teller decided to do in response to the initiating event, or an inference about the alleged perpetrator's motivational state), the *attempt* (the actual abuse episode), the *direct consequence* (what the child did in response to the attempt), and the *resolution* (the outcome of the direct consequence).

## Procedure

Fifty-one (51) de-identified transcripts of police interviews with children (mean age 103.8 months, SD=34.2 months) formed the basis of the analysis. Transcripts came from child abuse investigation units in various states and territories across Australia. Alleged offences included physical assault, sexual exposure, touching and fondling, abduction, and sexual penetration. A coding protocol was developed to enable children's utterances to be classified as relating to one of Stein and Glenn's (1979) seven story grammar elements, *or* context / background information, *or* "don't know". The interviewers' prompts / questions were also coded, as either being open-ended or specific.

## Results and Discussion

Only about one third of the children's utterances were classified as being story grammar content – i.e. being direct information transfer via narrative content as captured by the story grammar framework. When story grammar elements were examined individually, it was evident that the *setting* and *attempt* elements were most likely to be included in the children's testimony. Unfortunately, as most child abuse cases are based on repeated events, these elements are most likely to be ritualized in the form of scripts in the child's memory. This means that their elicitation by open-ended questions is important for the robustness of the child's testimony in the courtroom setting. However, nearly two thirds of the interviewer prompts were specific rather than open questions. It is important to note that while open questions accounted for only a little over one third of interviewer prompts, these elicited nearly as much story grammar content as did specific questions, which were used far more frequently, and result in significant disruption to the child's narrative. Further, specific questions resulted in context / background information being provided much more frequently than narrative content. While contextual details may be useful, our evidence indicates that they are elicited in a way that disrupts the child's free narrative and isolates these additional details from the narrative itself. It must be stressed that for younger children in particular, narrative competence is an emergent skill, and interviewers seem to lack awareness of this in the way in which they interrupt and seek additional information before the child's own narrative is exhausted. This interviewer behaviour probably also fosters in children's minds the idea that their task in an

investigative the interview is to participate a “stimulus – response” paradigm, i.e. passively responding to the interviewer’s questions, rather than being expected to tell their story, in their own words, and in their own time.

### **Recommendations**

Overall, there are three main recommendations arising from this work.

1. Trainers need to increase awareness among investigative interviewers of the importance of eliciting story grammar and the role of open-ended questions in doing this.
2. Police organisations need to work with experts to develop more effective training packages that optimise interviewers’ ability to acquire and maintain an open-ended questioning style.
3. Researchers should extend work in this area by investigating the relationship between different types of open-ended questions and the production of various story grammar elements across various age groups.

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## INTRODUCTION

The reporting rates of child abuse and neglect have risen dramatically in the past twenty years, thus it is not surprising that police interviewing of children about abuse has also increased in frequency (Victoria Law Reform Commission, 2004). The investigative interview is the main aspect of legal proceedings that children are most likely to encounter as the interview establishes what contribution, if any, the child may make to any further legal proceedings. In an effort to increase the access of children and other vulnerable witnesses to the criminal justice system, Victoria (as with many other jurisdictions) introduced the Video and Audio Taping of Evidence (VATE) from children about indictable offences, including assaults or threats to assault. The initial VATE statement not only has the potential to serve as an investigative tool (i.e., the first account of the alleged incident/s upon which a criminal investigation may be based) but also as an evidentiary item (i.e., the evidence-in-chief in whole or part of a witness for the prosecution). A wide range of benefits are reportedly associated with the introduction of video-taped evidence of vulnerable witnesses. These include (albeit in part): greater admission of guilt from offenders due to the more vivid and compelling nature of these interviews; an improvement in the quality of training (due to increased scrutiny of the interview process), reduction in the need for vulnerable complainants to repeat their story to multiple professionals or to give live examination-in-chief (this offers greater access of vulnerable witnesses to the criminal justice); better ‘safeguarding’ of evidence over long delays and advantages associated with ‘locking in’ evidence early and assessing the credibility or demeanour of the complainant prior to the commencement of the trial.

To ensure that the evidence obtained from children about abuse is both accurate and admissible in court, investigative interviewers need to adhere to recommended interview guidelines. Overall, these guidelines stress the importance of developing good interviewer-child rapport, and the importance of making the groundrules and structure of the interview clear. However, the central aim of these guidelines is to obtain an account of the alleged offence in *the child’s own words, at his or her own pace, and without interruption* (Poole & Lamb, 1998; Wilson & Powell, 2001). This account is referred to as a ‘free narrative account’, which generally proceeds with the interviewer asking a general or broad, open-

ended question (e.g., “Tell me everything you can remember about...from the beginning to the end”). The interviewer then uses minimal nonverbal encouragers (e.g., head nods, pauses, “Mmmm”, silence, “Uh-Huh”) and further open-ended questions (e.g., “Tell me more about that.” “What happened then?” “What else can you remember about...?”) to steer the interviewee to the next point in the story or to gently encourage the interviewee to provide further narrative information. The degree to which the interviewer can exhaust the child’s free-narrative account depends on the ability to ask open-ended questions. Such questions encourage an elaborate response, but they do not dictate what specific information is required (Wilson & Powell, 2001). In contrast, specific questions seek to elicit specific detail or content and can often be answered in just one or two words (e.g., “Who is Billy?”, “Where did he touch you?”).

Despite the establishment of clear best-practice interview guidelines which emphasise the importance of open-ended questions, most professionals (including police) do not consistently use such questions when interviewing children. Although they can usually generate examples of open-ended questions (e.g., they can start the child talking about the alleged offence with a broad question such as “Tell me everything that happened from beginning to end”), they have difficulty *maintaining* open-ended questions (Davies & Wilson, 1997). On average, less than 25% of information reported by children in field interviews is elicited with open-ended questions or free-narrative prompts (see Powell, Fisher, & Wright, 2005 for review). The recommended percentage is three times that amount (Wilson & Powell, 2001).

There are several distinct advantages associated with using open-ended questions as opposed to more focused or specific questions. First, responses to open-ended questions are usually more accurate than responses to specific or specific questions (Lipton, 1977). The greater accuracy of open-ended questions may occur because the resulting free narrative format allows the witness to use a more stringent meta-cognitive level of control or because the retrieval process is less influenced by external contamination, viz., the interviewer. Second, specific questions where responses generally require fewer words compared to open-ended questions, can lead interviewers to underestimate the witness’ language limitations, especially when the witness adopts strategies to cover up language limitations



(Snow and Powell, 2004). Third, open-ended questioning which is conducted at the interviewee's own pace allows the interviewee time to collect his or her thoughts and consequently promotes elaborate (more detailed) memory retrieval. Excessive questioning—as opposed to asking fewer, but open-ended questions—is distracting for witnesses because the questions redirect the witness' attention from searching internally through memory to focusing externally on the interviewer's questions (Broadbent, 1958; Kahneman, 1973).

In view of the numerous benefits of open-ended questions, recent attention has been focused on identifying interviewers' difficulties in adhering to best-practice guidelines and suggesting techniques that may be able to overcome these difficulties. Overall, the existing research suggests three main factors preventing the adoption of 'best-practice' interview guidelines. First, mastery of the skill of forensic interviewing is only one of many work-related challenges that child abuse investigators must overcome and it often takes lower priority to other challenges (Wright, Powell, & Ridge, 2006). Second, training programs in investigative interviewing are not currently structured in a way that promotes and can sustain expertise in forensic interviewing (Powell, Wright, & Clark, 2007). Third, conceptual principles underlying 'best-practice' guidelines in interviewing children do not seem to be well understood and reinforced. Specifically, there seems to be incongruity between experts' versus interviewers' perceptions of what constitutes 'best-practice' guidelines in interviewing (Wright, Powell, & Ridge, in press). This latter issue was identified in two recent studies (Powell, Fisher, & Hughes-Scholes, 2006; Wright & Powell, 2006) where trainee investigative interviewers were directly asked (on an individual basis) why they had used certain specific questions in a mock interview they had completed immediately before with a 5-year-old child. The most frequent explanation offered by the interviewers was that they needed to elicit specific details from the witness and such details could (they believed) only be elicited via specific questions. The problem with this explanation is that children's ability to narrate an event in their own words (the very substance of a good investigative interview) depends largely on skills that are 'under construction' in a typically-developing child. Unless the interviewer persists with an open-ended interviewing style, and refrains from interrupting the child with excessive questioning, children do not engage in the type of elaborate memory retrieval and narrative

production required to elicit a detailed narrative account. Added to this is the fact that in western culture, children are typically socialised to adopt a subservient conversational stance with an adult, particularly an authority figure such as a police officer (Tobey & Goodman, 1992). Children may also have been exposed to media stereotypes of the police interview, in which a suspect or witness is expected to respond to specific questions when and as they are asked.

One of the limitations of the prior research on investigative interviewing is that it has evolved primarily from an eyewitness memory framework. This framework is concerned with the degree to which the child's report of the event adheres to the *actual* event that occurred. In other words, the dependent variable in studies adopting an eyewitness memory framework is the number of correct event details reported. Since open-ended questions elicit more accurate event details, a good interview is defined as one where the majority of event details reported by the child are elicited in response to open-ended questions. From an evidential perspective, however, a good interview is not only detailed *per se*, but is well structured and coherent, and presents the information required (within the rules of evidence) in a meaningful and informative way to the listener. Having a coherent story unfold from the child's perspective is considered important for allowing the jury to assess the credibility of the child's statement (Herschkowitz, 2001; Nield, Milne, Bull, & Marlow, 2003; Raskin & Esplin, 1991). It is also considered important for establishing the 'essence of criminality' (i.e., the precise nature of the acts committed; Guadagno, Powell, & Wright, 2006). At present, however, little research has focused on the degree to which current interview techniques elicit a linguistically complete story from the child. Further, we have little knowledge regarding what type of questions are most likely to elicit such a story from children of various age groups. An understanding of these issues would have important implications for trainers of investigative interviewers who are responsible for developing protocols that maximise the investigative and evidential usefulness of child witness accounts.

The aim of this research was to evaluate a representative sample of child abuse interviews from the field using a narrative framework derived from the field of linguistics. Before outlining the specific objectives of this research and how it builds on prior work, a review

of the background literature is provided. Specifically, the review is structured around three major questions; (a) what is a narrative account from a linguistic perspective? (b) how does narrative language emerge at different stages of children's development? and (c) what do we know so far about the current narrative quality of child abuse interviews?

### **What is a narrative account from a linguistic perspective?**

A key task associated with language acquisition and development during childhood is the ability to master and refine the use of a variety of different discourse genres. The successful use of discourse genres by the child involves the ability to use and understand language that is embedded within a social context (Paul, 2001). These discourse genres include (but are not restricted to) *conversation* (usually a two-way interaction between speakers, with a social and/or information exchange purpose) and more formal discourse genres, such as '*literate*' and *procedural* discourse. Narrative discourse is believed to fall midway between the informal conversation and more formal literate discourse genres (Paul, 2001).

Narrative competence is the means by which speakers apply culturally relevant 'rules' to relate a story (e.g., a personal experience) in a logical and sequential manner to a listener (Westby, 1982). Such competence is one of many facets of language that develop throughout the childhood years. To be a successful user of this genre, children need to become competent at both generating *and* understanding stories. The production of the narrative is a task which requires the speaker (i.e., the child) to do the following: firstly, s/he must integrate a variety of themes pertaining to inferences about characters' motives and internal responses. Secondly, s/he must be able to interweave that content regarding themes and characters with socially appropriate and logical arguments for plans and outcomes. Thirdly, s/he is required to represent that content in a linguistic form that supports the narrative's communicative function, and finally s/he must monitor all of the above in order to produce the desired effect on the intended recipient (Liles 1993). Thus, the complex task of producing a narrative relies on the child's ability to manipulate and master many distinct component linguistic skills.

Past research has established that well formed narratives adhere to certain story grammar (i.e., structure and sequence) rules (Paul, 2001; Snow, Douglas, & Ponsford, 1999; Stein &

Glenn, 1979). Although narratives are often complex (i.e., they may be composed of several subplots and/or episodes), they can be viewed as generally comprising up to seven logically related story grammar elements which have been outlined by Stein and Glenn (1979). These story grammar elements include:

- (i) The *setting*, which refers to the physical location where events took place.
- (ii) The *initiating event*, which refers to the event that commences the sequence of events in question.
- (iii) The *internal response*, which refers to the way the speaker felt (in the case of a first-person account) or to the inferred emotions of the person affected by the initiating event (in the case of a second-person account).
- (iv) The *plan*, which refers to a set of intentions formed in the mind of the person affected by the initiating event.
- (v) The *attempt*, which refers to what that person did, in his or her effort to execute the plan.
- (vi) The *direct consequences*, which are the outcomes of this attempt, and
- (vii) The *resolution*, which refers to the outcome of the story (Stein & Glenn, 1979).

Researchers in the area of children's language development have primarily focused on measuring the content of narratives in terms of the number and type of Stein and Glenn's (1979) story grammar elements within the narrative. Experimentally, narratives have generally been elicited via either one of the two following paradigms; '*narrative generation tasks*' which require the participant to formulate a story narrative from a given stimulus or personal event, or '*narrative retelling tasks*' which require the participant to retell a previously viewed or heard story in their own words. Generally speaking, all studies in this area adopt the following procedure. First, children are presented with a stimulus that will form the basis of their narrative. A wide variety of stimuli have been used in previous studies. These include multi-frame cartoon drawings (Snow et al., 1999; Snow & Powell, 2005), pictures (Vallance, Im, & Cohen, 1999), movies (Liles, Duffy, Merritt, & Purcell, 1995), and phrases or themes such as "a trip to the amusement park" (Biddle, McCabe, & Bliss, 1996). Such tasks obviously afford far greater experimental control than does the analysis of connected discourse under interviewing conditions. It is perhaps not surprising

therefore, that the current work is only the second study that has attempted this kind of analysis on transcripts of child abuse police interviews.

### **How does narrative language develop in children?**

Narrative language begins to emerge in early childhood as children initially learn to relate isolated and salient incidents in a story, and later, as greater cognitive and linguistic flexibility develops, they begin to spontaneously generate more story grammar elements. As children develop they learn to link these story grammar elements using cohesive devices (such as “so”, “then”, “because”) which act as markers for cause-effect relationships in the story (Paul, 2001). During their third year, children begin to narrate personal experiences in the context of conversations with caregivers. At this stage in narrative language development, the child’s caregivers play an integral role. Indeed, in everyday interactions between adults and young children, it is typical for adults to assume more than half the responsibility for the success of the communicative flow (Bochner, Price, & Jones, 1997). Adults do this by carefully phrasing their questions and by providing ‘scaffolding’ to maximise the child’s communicative success and minimise the risk of miscommunication, embarrassment and/or loss of face (Carter, Bottoms, & Levine, 1996).

By the age of five years, children can usually provide well-sequenced, chronologically ordered accounts of their past experiences. During this stage of narrative language development, when children become more fluent, the child’s caregivers play a less integral role in the building of the narrative. At the ages of six and seven years, children start to become more sophisticated in knowing how and where cues are needed to maximise the likelihood that the listener will find the account meaningful (Guajardo & Watson, 2002). For example, at this age, contextual information is often placed at the beginning of the narrative, as the child learns that this is where it needs to be placed to be of greatest value to the listener. At around this age, children's narratives are often judged as complete in terms of story-grammar content (Liles et al., 1995).

Narrative discourse is the means by which the child locates events in time and place (Nelson 1996). It requires the speaker to use perspective taking (i.e., assuming the standpoint of the listener, who is often completely naïve about the events in question) and

to adjust the message according to the listener's perceived level of background knowledge. Nelson (1996) has stressed the cognitive demands inherent in competent narrative generation. She observed that: "Reporting an event in sequence is a very complicated manoeuvre, requiring the child to hold in mind the present time, then to move back (or forward) to the beginning of a prior event, move forward again through the event and reach the end, then move forward to the present" (Nelson, 1996, p. 201). The ability to narrate a story is thus a complex task that not only requires the mastery of language skills such as grammar and vocabulary, but also the use of coherent event sequences. Furthermore, the child must possess the ability to take the viewpoint of characters in the story and take into account the listener's knowledge and perspective. Westby (1982) observed that narrative language competence draws heavily on the speaker's attentional skills, turn taking, planning and organization skills, and the ability to attend to topic coherence. Further, the ability to detect and repair breakdown when a listener misunderstands something that has been said also impacts upon narrative language competence (Vallance et al., 1999), as does role adjustment ability (i.e., altering one's style of communication according to the context and the relationship between interactants).

Narrative competence is sensitive to a range of developmental factors, most notably cognitive development, emotional well-being, and the presence of factors that could specifically impair narrative skills (e.g., learning disability, history of acquired brain injury, and socio-emotional neglect resulting in inadequate language stimulation by key caregivers (Snow & Powell, 2007, in press). Further, to be competent in perspective taking, a key task in the production of narrative language, a child must possess a well developed 'Theory of Mind'. Theory of Mind refers to the child's ability to understand that the process of creating mental representations is subjective and related to the information available to a person (Liles, 1993). Theory of Mind undergoes a striking period of development between the ages of three and five and as such has been implicated as a prerequisite for competent narrative language production (Ceci, Crossman, Scullin, Gilstrap, & Huffman, 2002). Furthermore, children who do not possess a well-developed Theory of Mind have been shown to have difficulty using knowledge of different perspectives and levels of background information to generate structurally adequate narratives.

In summary, the development of narrative language involves the child learning the ability to produce stories about personal experiences. From a linguistic perspective, a competent narrative is both structurally adequate in terms of the story grammar elements (i.e., showing evidence of Stein and Glenn's (1979) story grammar elements) and qualitatively adequate. 'Qualitatively adequate' means that the content is sufficient for genuine information transfer to take place between the speaker and the listener. The production of a competent narrative is therefore reliant upon both the child's acquisition of cognitive and linguistic abilities on the one hand, and individual factors such as emotional status, on the other.

### **What do we know so far about the degree of story grammar in child abuse interviews?**

In the first study applying story grammar analysis to the question of investigative interviewing with children, Westcott and Kynan (2004) examined the presence and clarity of children's narrative output, as well as children's inclusion of what they termed "related features" in accounts. Their analysis was conducted on 70 interviews concerning sexual abuse with children aged up to 12 years from England and Wales, and emphasised the extent to which the child's account was judged as consistent and unambiguous, and logically ordered. Westcott and Kynan employed a fairly elaborate scoring tool in an effort to rate a number of qualitative aspects of the child's account, including clarity, linearity, and consistency. Not surprisingly, they found that *setting* and *attempt* information were most frequently represented, however they cautioned that in the case of repeated abuse, the story grammar framework may not adequately capture the complexity of the account that needs to be conveyed by the child. They found that while children's accounts broadly adhere to a story structure, definite age effects exist on this dimension, and the behaviour of the interviewer (particularly the reliance on specific questioning) appeared to be an important variable in influencing narrative (i.e., story grammar content) output, though they did not measure this directly.

In addition to not quantifying the relationship between question / prompt types used and the elicitation of narrative and other content, Westcott and Kynan did not quantify the extent to which a child's account could be characterised as proportionately comprising a linguistic

*narrative*, as opposed to comprising other types of output that are related to but are not necessarily central to the story of the alleged abuse incident(s), i.e. context and background information. This lack of clarity stems from overlap in the way in which they classified children's utterances as containing story grammar content Vs "related features", thus making it difficult to quantify the unique contribution made by story grammar content, as opposed to other types of output, in each transcript. The overlap between their categories also seems to have compounded the subjectivity in some aspects of their coding protocol. The question of narrative content as a "story-line" versus other contextual information that is relevant (but not central to) the story, needs some attention for the purposes of analysis, and for distilling implications for trainers. Consider the following simple story for example:

When I was at work today (*setting*), the boss came in and said she wanted to discuss my monthly sales figures later this morning (*initiating event*). I was really worried (*internal response*), but I thought it would be better if I could get some data together before I met with her (*plan*). So I asked if we could meet in the afternoon instead (*attempt*). We had a good meeting this afternoon (*direct consequences*) and she seemed happy with my figures (*resolution*).

Depending on a range of factors, such as the relationship between the speakers, the purpose of the interaction, and the listener's perceived level of background knowledge, the speaker could choose to include additional information that augments (contextualises) the story. Such contextual information might include information about the location of the workplace, the fact that retrenchments had been occurring in the month prior, what the boss was wearing, what the narrator had to do in order to collate the additional information, and the fact that the narrator and the boss had experienced difficulties in their working relationship in the past. Whether or not such context / background information is included in a child's account of alleged abuse depends on a range of factors, including his / her level of cognitive development and narrative competence, together with the extent to which an opportunity for a free narrative is genuinely afforded by the interviewer. In reality, contextual details are frequently the target of specific questions on the part of the interviewer (Guadagno & Powell, 2007). They may be of special importance to the



question of *particularising* the child's account for the purposes of mounting a prosecution case, however the extent to which they are best elicited via a free narrative compared to via specific questioning remains unclear.

### **Aims and rationale of the current research**

The current research aims to extend the fledgling prior work on children's narrative discourse in investigative interviewing by examining the degree to which child videotaped statements of abuse adhere to a story grammar framework among children of different stages of development. Further, it aims to examine the relationship between the production of certain story-grammar elements and the interviewers' questioning style (open vs. specific). Given the exploratory nature of this research, there were no specific hypotheses *per se*. The analyses were directed by the following four broad questions;

1. Within our representative sample of field interviews, what proportion of the child interviewee's responses can be classified as story grammar content, as opposed to context / background information, or "don't know" responses?
2. What types of story grammar elements are being elicited from different question types?
3. Are open-ended questions (best-practice interview techniques) more effective at eliciting story grammar elements?
4. Are the patterns of responses regarding the rate of various story grammar elements consistent across two different age groups?

## **PROCEDURE**

### **The interview pool**

The study included investigative interviews with 51 children (37 girls and 14 boys) aged 3 to 16 years ( $M$  age = 103.82 months,  $SD$  = 34.21 months). All of the interviews were conducted by police officers located in child abuse investigation units across various states of Australia. The 51 interview transcripts included disclosures of a range of abusive events recruited during an 8 month period in 2003: 9 of the cases involved disclosures of physical

assault, 3 of sexual exposure, 22 of sexual touching or fondling, and 17 of sexual penetration.

Ninety-six percent of the interviews involved repeated abuse. Repeated abuse refers to one or more abusive acts (e.g., oral penetration, vaginal penetration) where any combination of acts was repeated across at least two occurrences separated in time (e.g., oral and vaginal penetration on Tuesday, oral and digital penetration on Friday). All of the interviews constituted the first recorded interview with the child about the alleged offence.

Throughout Australia, statements of abuse from children are usually recorded on videotape. For ethical and legal (privacy) reasons, the researchers were only permitted to work with de-identified written transcripts (i.e., neither the interviewer's nor the child's identity was attached to the transcripts).

The pool of interviews was obtained for the purpose of another research project that was not directly related to the current study. In the original project, the pool of interviews was elicited via letters distributed by senior members of the child abuse units in the three states. All officers in the three states who were authorised to conduct investigative interviews with child abuse victims were invited by their team leader on the researchers' behalf (via email) to participate in a research study. Specifically, they were invited to send one videotaped statement with a child (or relevant identification number so that the statement could be retrieved from storage) to the training unit along with completed consent forms (both the officer and parents/guardians were required to provide consent). A person located at the training unit then organised for the statements to be transcribed and de-identified before passing them on to the researchers for analysis. Although the interviewers were self-selected, their profile indicated that the sample was heterogeneous. Specifically, the sample consisted of 29 female and 22 male police officers from diverse areas including metropolitan units ( $n = 45$ ) and rural centres ( $n = 6$ ). The participants' level of experience in the field of child abuse investigation ranged from 6 months to 10 years. The ranks of the officers ranged from Constable to Detective Sergeant. The use of the existing de-identified transcripts for the current project was approved by the Monash University Standing Committee on Ethics in Human Research.

Information on interview duration was available for 43 of the transcripts. The mean duration of these interviews was 37.6 minutes (Range = 12 – 168;  $SD = 26.6$ ). Mean duration of interviews with younger children (28.4 minutes,  $SD = 9.4$ ) was significantly shorter than that with older children (42.5 minutes,  $SD = 31.3$ ;  $t = -2.2$ ,  $p = 0.03$ ). In order to address the question of interviewee age in relation to narrative production, the sample was divided into two subgroups: notionally “younger” children (aged up to 8 years) and those aged 9 years or over. This split was based on the median age of the current sample (9), together with developmental evidence that suggests that children around the age of 7 or 8 typically produce well-formed narratives (Paul, 2001). There were 23 children in the younger group ( $M = 6.2$  years,  $SD = 1.5$ ) and 28 in the older group ( $M = 10.7$ ,  $SD = 1.9$ ).

### **The analysis and coding protocol**

Interviewer’s questions: Using criteria developed in prior research (e.g., Powell & Snow, 2007), the interviewers’ questions were categorised as being open or specific:

Open-ended questions included any question designed to elicit an elaborate response without dictating what specific details the child needed to report (e.g., “Tell me what that happened the first time you did the Deakin Activities.”). Questions that met this criteria were included, irrespective of whether they commenced with “Can you tell me ...?” or “Tell me....?”

Specific questions included questions that focused the child on specific aspects of the event and/or narrowed the response options. These included cued-recall questions (e.g., “You mentioned you saw a koala puppet. What was the koala wearing?”) as well as specific questions (e.g., “Was the koala puppet wearing anything?” , “Did you see the Koala puppet just one time or more than one time?”).

Children’s responses: For the purposes of this study, an utterance was defined as the child’s verbal response to a question, statement or minimal encourager. An utterance was judged to have ended at the point where the interviewer said something, even if this was simply a minimal encourager, such as “uh huh”.

The two research assistants who conducted the coding were trained by one of the authors (PCS) in the application of story grammar analysis. The principal objective of coding was

to classify each interviewee utterance as either a story grammar element (SGE), context / background information (CBG), or “don’t know” (DK). Each of the interviewer prompts that elicited the utterance was also considered, and was classified as either an open-ended question (including minimal encouragers), or a specific question.

Reliability: One researcher first coded all of the transcripts. A researcher who was not otherwise involved in the study coded a random selection of 20% of the transcripts. Inter-rater reliability was calculated by dividing the total number of agreements between the two coders by the total possible number of agreements. Reliability was at least 90% for each question type and story-grammar element. Examples (from the data) of each story grammar element are provided below in Box 1:

## Box 1: Story Grammar Elements: Examples from the data

**Setting (The physical and / or temporal location of events)**

Example of physical location: “Up at Dad’s house we were in the shed”

Example of temporal location: “...daytime, probably three pm or something”

**Initiating Event (The action that was the beginning of an abuse episode)**

“He come and woke me up and took me to his room. And we got into the bed”.

“Pop asked us to come and have a cuddle”

**Internal Response (The child’s subjective response to the Initiating Event)**

“I didn’t like it”

“It was yucky”

“It was disgusting”

**Plan (Either A statement indicating what the child decided to do in response to the Initiating Event OR A statement indicating the child’s inference about the alleged offender’s motivational state)**

“I think he wanted me to be scared”

**Attempt (The actual abuse episode)**

“He stuck his penis into my vagina

“He rubbed around my crotch”

**Direct Consequence (What the child did in response to the Attempt)**

“I tried to push him away and told him to stop”

“We wanted to tell Mum but they threatened to bash us”

**Resolution (The outcome of the Direct Consequence – normally the end of a story episode)**

“And then I told Mum what had happened”

“And then we went and had dinner and no-one said anything”

Output that was coded as **context / background information** included material that was related, but not central to, the story being narrated. This included explanatory information, such as the relationship between an alleged perpetrator and the child’s family (e.g., “He’s

lived down the road from us for years”) and other detail that was not central to the narrative in a story grammar (i.e., structural) sense (e.g., “My little sister has always loved his red car”; “He always has two sugars in his coffee”). Utterances such as these did not constitute a story grammar element *per se*.

## **RESULTS**

### **Nature of interviewers’ questions**

Interviewers used a total of 9,881 questions / prompts. Of these, 3,836 (38.8%) were classified as open-ended questions or minimal encouragers. When open-ended questions were considered separately (i.e., with minimal encouragers excluded), they accounted for 1,401 (18.8%) of interviewer questions.

In the sample as a whole, a median of 60 open questions were used (inter-quartile range [*IQR*] = 60) and a median of 94 specific questions were used (*IQR* = 86). A Wilcoxon Signed-Ranks test showed this difference to be statistically significant ( $z = -4.6, p = .000$ ). In the younger age-group, interviewers used a median of 40 open questions / prompts (*IQR* = 37) questions per interview, while with older children the median was 74 (*IQR* = 63.25) per interview. A Mann-Whitney U-Test showed this difference to be statistically significant ( $U = 178.5, p = .007$ ).

In the sample as a whole, a mean of 1.86 open-ended questions were asked before the first specific question ( $SD = 1.27$ ).

### **Interviewee Response Types**

In terms of total coded output (the summed total of children’s utterances accounted for by story grammar content + context / background information + “don’t know” responses), the mean total for the group as a whole was 193.8 ( $SD = 146.6$ ) utterances. Figure 1 shows a breakdown of the children’s utterances according to whether these provided context / background information, story grammar content, or were “don’t know” responses, either via a verbal response, or a non-verbal action such as shoulder shrugging. While the children produced a mean of 125.3 context / background responses ( $SD = 108.3$ ), fewer than half of this number of responses could be accounted for by actual story grammar content ( $M = 57.3, SD = 46.6$ ).

A mean of 24.2 ( $SD = 23.9$ ) utterances were classified as “do not code” as they were concerned with aspects of the interview other than direct transfer of information between the parties, e.g. a child asking the interviewer for clarification, such as “Do you mean the first time or the last time?”, or an interviewer asking the child to speak a little louder for the benefit of the tape. Once “do not code” utterances were identified they were excluded from further analysis.

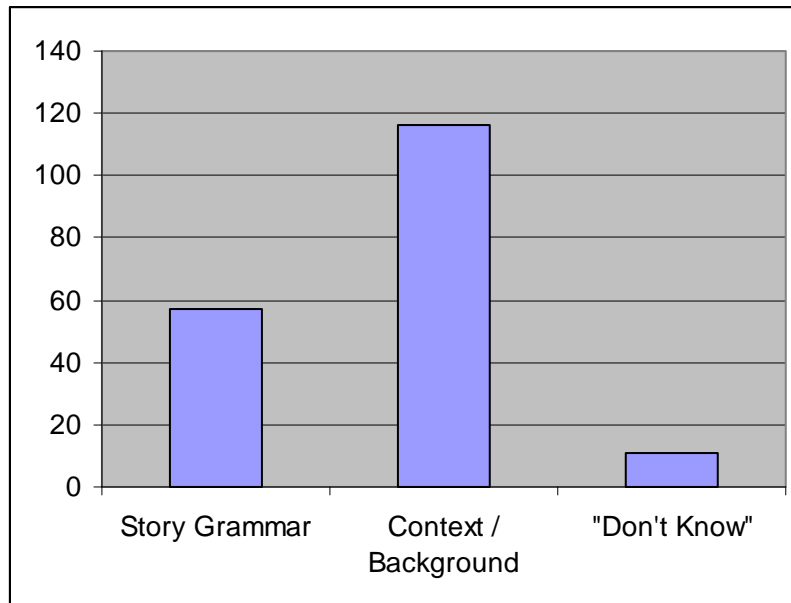


Figure 1: Interviewee responses: Mean amount of story grammar content, context / background information, and “don’t know” responses per transcript.

In terms of the children’s total output, the mean *proportion* of story grammar content for the sample overall was 31.7% ( $SD = 14.0$ ). Values for the two age groups are shown in Table 1. As may be seen, the proportion of story grammar content in the narratives of older children was significantly higher than that of the younger children, and younger children produced more than double the number of “Don’t Know” responses compared to the older speakers. The two groups did not differ however with respect to the proportion of their output that could be accounted for by context / background information however a trend was evident on this comparison.

Table 1

Proportion (%) of responses accounted for by story grammar, context / background information and “don’t know” responses in both age groups

	<i>Age ≤ 8</i>		<i>Age ≥ 9</i>			
	% Mean	<i>SD</i>	% Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Story Grammar	27.0	11.9	35.5	14.5	-2.2	.001*
Context / Background Info	60.9	11.8	55.2	13.4	1.6	.06
“Don’t Know” Responses	9.25	7.1	4.4	3.2	3.3	.001*

\* $p < 0.5$  (1-tailed)

### **The story grammar elements evident in children’s testimony**

Figure 2 shows a breakdown of the median number of each of Stein of Glenn’s (1979) story grammar elements evident in the 34.3% of utterances that could be characterised as narrative content (as opposed to context / background information or “don’t know” responses). As may be seen, in response to the questions and prompts used by interviewers, the children provided more *attempt* data than any other kind of story grammar element. The second most frequently occurring story grammar element was the *setting*.



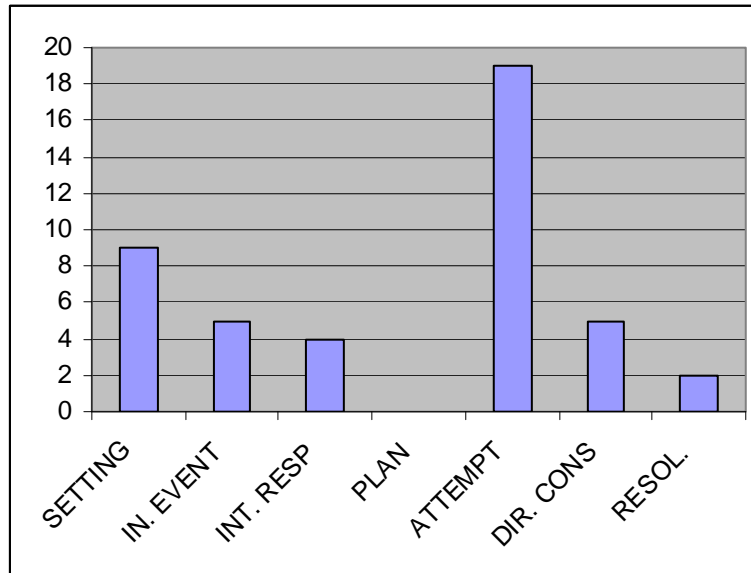


Figure 2  
Median number of story grammar elements represented in interviewees' testimony for the sample as a whole.

Children in the younger age-group produced a median of 29 story grammar elements overall (range = 12 – 75) while those in the older age-group produced a median of 66 story grammar elements (range = 18 – 259). A Mann-Whitney U-Test showed that this difference was significant ( $U = 139.5, p = .001$ ).

Of the total of 9,881 interviewee utterances (i.e., SGE + CBG + DK) in the data-pool, 3,836 (38.3%) followed open-ended questions or minimal encouragers, while the remaining 61.2% followed specific questions. Figure 3 shows a breakdown of utterance types elicited as a function of interviewer question / prompt type for both age-groups. As can be seen in this Figure, for both age-groups, the single biggest category of responses was CBG in response to specific questions. It is interesting to note here that while open questions accounted for only a little over one third of interviewer prompts, these elicited nearly as much story grammar content as did the far more frequently used specific question.

Figure 3

Utterance type (median values) as a function of interviewer prompt / question type for both age groups

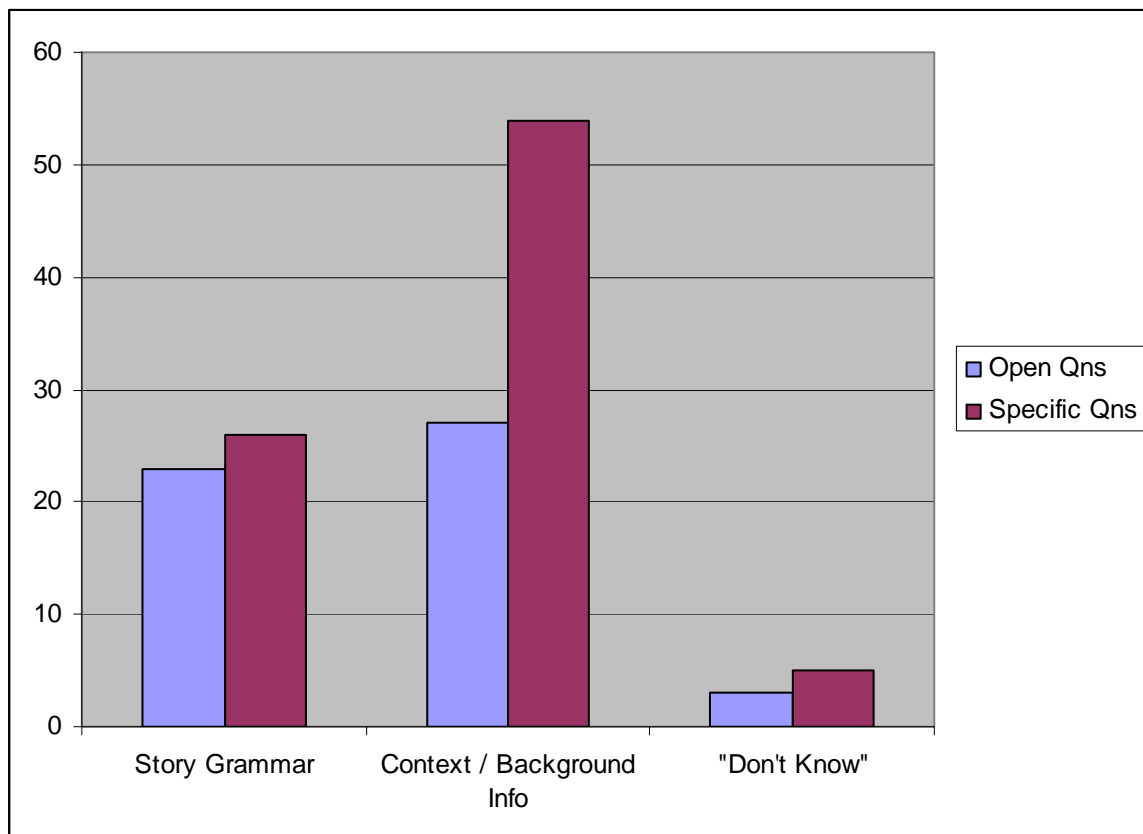


Table 2 shows the descriptive and inferential statistics pertaining to the nature of the questioning used as a function of age group.

Table 2  
Median number of story grammar elements elicited following open and specific questions used as function of age group

AGE GROUP								
≤ 8 Years					≥ 9 Years			
	Open	Specific	<i>z</i>	<i>p</i>	Open	Specific	<i>z</i>	<i>p</i>
Median	12.0	20.0	-2.3	.02	29.0	38.0	-2.7	.007
(IQR)	(15.0)	(14.0)			(27.0)	(44.0)		

As may be seen in this table, in both age groups there were significantly more instances where story grammar content was elicited as a result of specific questions than as a result of open questions.

#### **Question types in relation to the elicitation of story grammar elements**

In the sample as a whole, a total of 9,881 child utterances occurred. Table 3 shows a breakdown of these utterances according to their type (story grammar, context / background information and “don’t know”) and as a function of the type of question that elicited them.

Table 3: Children's utterances as a function of the question type that elicited them (totals)

	Open Questions	Specific Questions	<b>Total</b>
<i>Story Grammar</i>	1430	1956	3386
<i>Context / Background Information</i>	2213	3731	5944
<i>"Don't Know"</i>	193	358	551
<b>TOTAL</b>	<b>3836</b>	<b>6045</b>	<b>9881</b>

This table shows that most (nearly two thirds) of the questions used were specific, and the single most frequently occurring utterance type was context / background information. Only a little over a third of the children's testimony could be classified as story content, and over half of this was derived from specific questions.

Overall, the median number of SGEs in response to open questions / prompts was 23 (*IQR* = 36) and the median number in response to specific questions was 26 (*IQR* = 26). A Wilcoxon Signed-Ranks test showed that this difference was statistically significant ( $z = -3.5, p = .001$ ).

Finally, the distinction between open and specific questions was considered on an element-by-element basis, for six of Stein and Glenn's (1979) story grammar elements, across the two age groups. The *plan* SGE was excluded from this analysis due to its low frequency of occurrence across all samples. The  $z$ -scores derived from a series of Wilcoxon Signed-Ranks tests are summarised in Table 4.

Table 4

Descriptive statistics (median and inter-quartile ranges) and inferential statistics (Wilcoxon Signed-Ranks Tests): Story grammar elements elicited via open-ended questions / prompts Vs specific questions for both age groups

<i>Story Grammar Element</i>	AGE GROUP											
	≤ 8 years						≥ 9 years					
	Median (Open Questions)	<i>IQR</i>	Median (Specific Questions)	<i>IQR</i>	<i>z</i>	<i>p</i>	Median (Open Questions)	<i>IQR</i>	Median (Specific Questions)	<i>IQR</i>	<i>z</i>	<i>p</i>
Setting	1.0	2.0	10.0	11.0	-4.1	.000	2.5	4.75	20.5	27.75	-4.63	.000
Initiating Event	1.0	3.0	1.0	2.0	-2.2	.031	5.0	4.75	1.5	5.0	3.4	.001
Internal Response	0.0	1.0	1.0	3.0	-1.9	.055	3.0	3.75	3.0	3.75	-1.5	.13
Attempt	6.0	7.0	4.0	6.0	1.92	.055	12.0	10.75	7.5	12.5	-2.8	.005
Direct Consequence	2.0	3.0	1.0	2.0	3.3	.001	4.0	6.25	2.0	7.0	3.2	.001
Resolution	0.0	2.0	0.0	2.0	-.52	.60	1.0	2.75	0.0	1.0	3.3	.001

As may be seen in Table 4, in the younger age-group, differences reached or closely approached significance across all story grammar elements except the *resolution*, with respect to their elicitation via open vs. specific questions. In the older age-group, significant differences were evident on all elements except the *internal response*. Of the ten comparisons that reached or approached significance, 6 reflected a higher median number of story grammar elements elicited as a result of open-ended questions.

Figures 4 and 5 show a breakdown of median story grammar output as a function of interviewer question / prompt type for both age-groups.

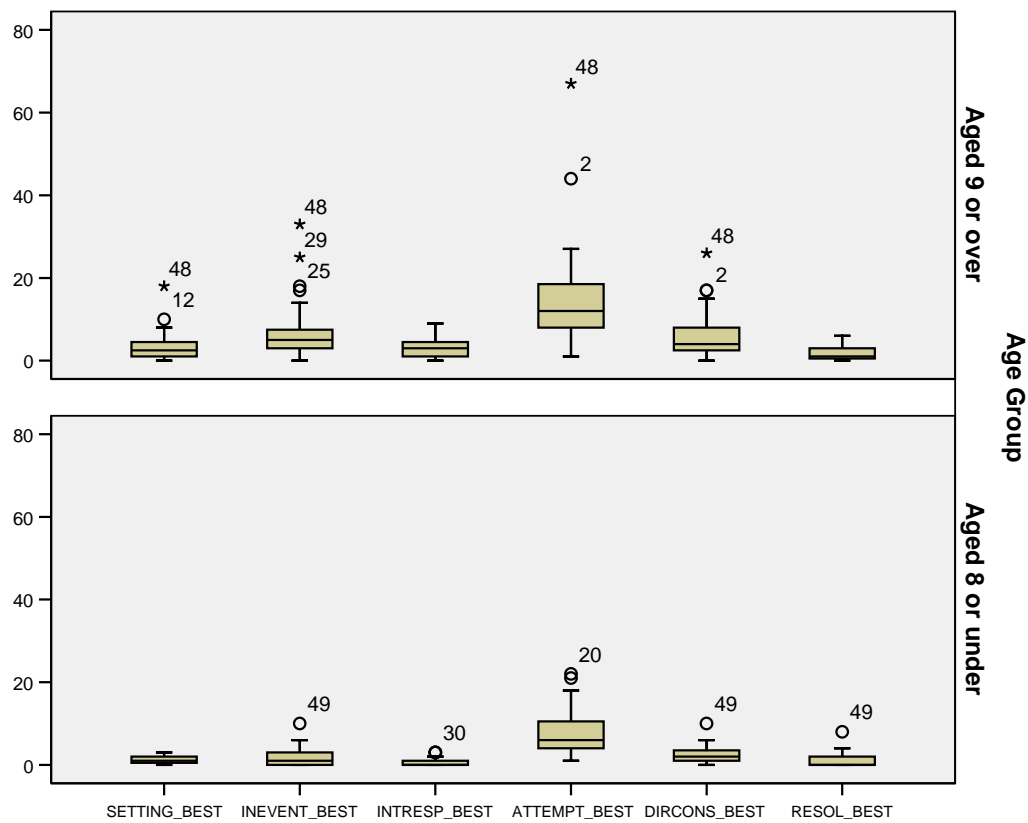


Figure 4 – Median story grammar elements produced in response to open-ended questions and prompts as a function of age-group\*.

\*Note: The horizontal black line marks the median value, while the box contains the 50% of cases between the 25<sup>th</sup> and 75 percentiles (excluding outliers, which are marked by their case number). “Best” refers to open-ended questions and minimal encouragers

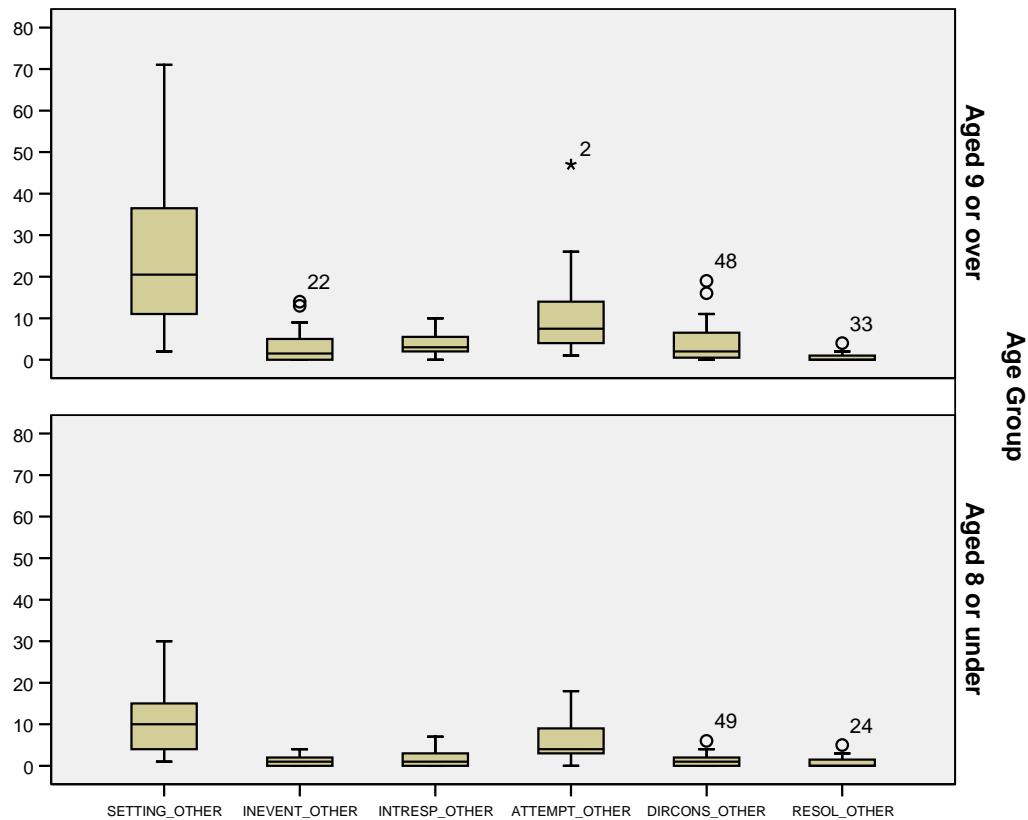


Figure 5 – Median story grammar elements produced in response to specific questions as a function of age-group\*.

\*Note: The horizontal black line marks the median value, while the box contains the 50% of cases between the 25<sup>th</sup> and 75 percentiles (excluding outliers, which are marked by their case number). “Other” refers to specific questions

As may be seen in these Figures, for both age groups, open-ended questions and minimal encouragers seemed to result in *attempt* information more often than any other elements. However when specific questions are considered, these appear more likely to result in *setting* (followed by *attempt*) information from interviewees in both aged groups.

### Context / Background Information (CBG) in relation to question / prompt type

In the data-set as a whole, a total of 5,944 utterances were coded as “context / background information” (CBG). Of these, only a little over a third (37.2%) occurred following the use of an open-ended question or minimal encourager. A median of 27 CBG utterances per transcript occurred following the use of a “best practice” prompt ( $IQR = 32$ ), while a median of 54 utterances ( $IQR = 32$ ) per transcript occurred following the use of a specific question. This difference was statistically significant ( $z = -5.3, p = .000$ ). Table 5 summarises the descriptive and inferential statistics pertaining to the ways in which CBG information was elicited. In both age groups, this kind of output was most likely to follow the use of a specific question.

Table 5  
Context / Background Information: Question type x Age group

AGE GROUP								
$\leq 8$ Years					$\geq 9$ Years			
	Open	Specific	$z$	$p$	Open	Specific	$z$	$p$
Median	22.0	51.0	-4.12	.000	35.0	60.5	-3.35	.001
<i>IQR</i>	27.0	63.0			51.0	98.5		

### “Don’t Know” (DK) responses in relation to question / prompt type

In the data-set as a whole, 551 “DK” responses were coded. Of these, 358 (65%) occurred following the use of specific questions. A median of 3 DK utterances per transcript occurred following the use of an open question / prompt ( $IQR = 5$ ), while a median of 5 utterances ( $IQR = 7$ ) per transcript occurred following the use of a specific question. This difference was statistically significant ( $z = -3.8, p = .000$ ). Table 6 summarises the descriptive and inferential statistics pertaining to the ways in which DK responses were elicited. In both age groups, DK was most likely to follow the use of a specific question.



Table 6  
 “Don’t Know” responses: Question type x Age group

AGE GROUP								
$\leq 8$ Years					$\geq 9$ Years			
	Open	Specific	<i>Z</i>	<i>p</i>	Open	Specific	<i>z</i>	<i>p</i>
Median	4.0	6.0	-2.05	.04	2.0	5.0	-3.37	.001
<i>IQR</i>	3.0	8.0			5.0	6.5		

## DISCUSSION

The current findings provide a clear but simple message for police organisations. They indicate that current interviewing procedure is potentially undermining the ability of children to provide coherent and credible reports of abusive events. Further, the current findings suggest that improvement in the narrative coherence of children's reports of abusive events can potentially be achieved by increasing interviewers' use of open-ended questions. Specifically, there were three major findings that led to these conclusions:

- (a) The proportion of story grammar was relatively low compared to that which is expected of children's developmental level;
- (b) Open-ended questions were more effective in producing story grammar elements (when considering the low rate of these questions overall); and
- c) The types of story grammar elements commonly elicited from specific questions are most vulnerable to error when retrieved in response to these questions.

A discussion of each of these findings is offered in turn. This is followed by a discussion of the implications of the findings for police organisations and trainers along with suggestions for further research.

### **Proportion of story grammar contained in the children's accounts**

Overall, our findings indicated that police officers employed in child abuse investigation units are more effective at eliciting context and background information about abusive events from children than actual story content. This means that their interviewing techniques are more likely to elicit information which is relevant, though *peripheral* to the narrative on which a prosecution case may be based. What remains unknown, is the extent to which such contextual details are provided spontaneously by child witnesses, if optimal interviewing approaches had been used more consistently throughout the interviews. In fact, the story grammar analysis in the current study was based on just over one third (34.4%) of the utterances produced by the interviewee. The remaining 65.6% of utterances were concerned with providing context / background information (which may or may not be of value in an investigative or evidentiary sense) and "don't know" responses. The low rate of story grammar can *not* be solely attributed to the more conservative manner in

which we coded story grammar compared to previous researchers. The overall rate of story grammar was consistent with prior work by Westcott and Kynan (2004) who were more inclusive in what they regarded as setting features compared to our analysis.

In contrast to Westcott and Kynan's (2004) study, the current study made a clearer distinction between two key types of content in a child's output: (1) actual story grammar content and (2) context / background information that *supplements* and *augments* the core narrative, but is not central to it. In the best case scenario, where a child is provided with adequate opportunities to provide a free-narrative account (i.e. through the use of best-practice interviewing techniques) it might be expected that context / background information would be embedded within the child's free narrative. However this study confirms earlier findings that police do not fully utilise techniques that elicit free narrative accounts. Instead, they frequently disrupt the free narrative with specific questions. This not only decreases the amount of output that can be classified as story grammar. It also means that context / background information is elicited in a de-contextualised way in response to specific and / or specific questions. Many of the interviewing techniques evident here are therefore harmful in two ways: they inhibit the narrative flow from the child and (paradoxically) they *de-contextualise* context / background information. Both outcomes serve to weaken the child's testimony in the forensic setting.

Qualitatively, it was observed at various stages of the interviews that the children *could* provide narrative detail. Unfortunately they were frequently interrupted when doing so. For instance, a mean number of only 1.86 open-ended questions were asked before the first specific question ( $SD = 1.27$ ). This pattern is well illustrated in the following dialogue taken from an interview with a 10-year-old female child.

Interviewer: What happened on the second day you were there?

**Child: He just started putting his hands down my pants.**

Interviewer: And whereabouts did that happen?

**Child: At his house.**

Interviewer: Yeah that's right, but which part of his house was it?

**Child: The lounge room.**

Interviewer: And who was at home when that happened?

**Child: No-one, just [Alleged Offender] and me.**

Interviewer: And where was [Alleged Offender's Wife]?

**Child: At work.**

Interviewer: Okay. And what day was it?

**Child: The second day.**

Interviewer: Do you know what day of the week?

**Child: I think a weekend because we only go there when Mum works.**

Interviewer: A weekend. And what time of the day did this happen?

**Child: Um probably early.**

Interviewer: Would it have been before lunch or after lunch do you think?

**Child: Um... before lunch.**

The problem of interviewers prematurely abandoning open questions in favour of specific and specific questions is also illustrated in this extract from an interview with an 11-year-old boy:

Interviewer Mm'm. Yep. Tell me everything you can remember about the games, and everything, and - and just from the start right through to the finish; everything you can remember about those games.

**Child Yes. Oh, one day, well, me and (Interviewee's Friend) went there.**

Interviewer Mm'm.

**Child He was okay. He was nice.**

Interviewer Mm'm.

**Child He let us play the games, and then a few days later, me, and (Interviewee's Friend ), and (Interviewee's Friend), we - - -**

Interviewer Mm.

**Child All went. And (Alleged Offender) let us play the games, and then he asked me to play the pinball machine, and he showed me how to play it.**

Interviewer Mm'm. And how did - how did you do that?

**Child And he pressed these 2 side buttons to hit the ball.**

Interviewer Mm'm.

- Child**            **And then I - then he let me do it. Then he was - and then he just pulled his rude - pulled his penis out - - -**
- Interviewer        Mm'm.
- Child**            **And started goin' up and down.**
- Interviewer        Okay. Alright. Well, from the start there, I - I don't understand what you mean by - about going up and down. So, can you tell me, so in - in as much detail as you can, so I can picture it in my head, of what you're trying to tell me. So, you were standing where and - and what happened there?
- Child**            **Mm.**
- Interviewer        Alright. We'll go back, and you said that he was gonna - he was teaching you how to play the pinball game.
- Child**            **Mm.**
- Interviewer        What happened then?
- Child**            **He pulled his penis out, and then he started going up and down.**
- Interviewer        Mm'm. And where were you?
- Child**            **Playing the pinball machine.**
- Interviewer        Mm'm. And where was (Alleged Offender)?
- Child**            **Behind me.**
- Interviewer        Mm'm. Where behind you?
- Child**            **Just behind me, behind my back.**
- Interviewer        Mm'm.
- Child**            **And then he asked (Interviewee's Friend) to play the pinball machine, so (Interviewee's Friend) went there, and then he pulled his penis - (Alleged Offender) pulled his penis out - his penis out, and then he started doing the same thing as he done to me.**
- Interviewer        Mm'm. Okay. I - I - I don't understand quite what you're saying about - that he pulled his penis out and he went up and down. Did you see this happen? What did you see?
- Child**            **Mm. He was being dirty behind our backs.**
- Interviewer        Did you see it, though?
- Child**            **Mm.**
- Interviewer        Yep? No? I don't - I - well, what does, "Mm," mean. I don't know, mate.

This child is clearly capable of producing narrative output that contains story grammar content, but his efforts to do so are thwarted by interruptions and specific questions. Had he

been encouraged and allowed to continue with a free narrative account, many of the specific details elicited (e.g., the location of the child in relation to the alleged perpetrator) may have been elicited in a contextualised way as part of the free narrative. Instead, these isolated details are not only elicited as a result of an interruption to the free narrative, but the child has not had an opportunity to provide them spontaneously, within the context of *his story*.

Importantly, the low rate of story grammar content in the current investigative interviews would potentially undermine the credibility of the children's accounts. Although it was not possible for us to determine whether the children's statements were eventually played in court and whether the cases resulted in guilty verdicts of the alleged offenders (the transcripts were de-identified prior to their inclusion in this study), a lack of coherence and clarity in child abuse interviews is a common criticism of prosecutors and judicial officers when reflecting on the usefulness of investigative interviews involving children (Guadagno, Powell & Wright, 2006). These professionals report that poor coherence is associated with a difficulty in teasing apart individual incidents of abuse in order to establish a charge. Further, from the perspective of jurors, poor narrative coherence lowers the credibility of the child witness statement and makes it difficult to understand the evidence presented. Indeed, narrative coherence is critical for comprehending and evaluating *any* account, irrespective of the mode of presentation or topic (Graesser, McNamara, Louwerse, & Cai, 2004; Graesser, Singer, & Trabasso, 1994; van den Broek, Lorch, Linderholm, & Gustafson, 2001). Although some research has shown that the detrimental effect of poor narrative coherence on jurors' assessment of credibility is minimized when the evidence is strong rather than weak (Voss & Van Dyke, 2001), in child abuse cases there is usually little or no physical evidence (Trocmé et al., 2001) and often only one witness (i.e., the child) to guide the investigation.

A narrative account is more likely to be judged as *coherent* when it contains sufficient story grammar content to ensure adequate transfer of information from speaker to listener. Mastery of story grammar as a means of conveying information means that a child can convey novel information to a naïve listener, notwithstanding the fact that the listener may need to "top up" his / her understanding by asking some questions to clarify and / or seek

greater understanding. Our current findings suggest that police interviewers do not allow adequate opportunity for maximum information transfer via the child's own narrative, instead "leaping in" with specific, specific questions, to seek additional information. This not only interrupts the child's free narrative (which is a fragile skill in a younger speaker), but also conveys an implicit message to the child that his / her job is actually to respond to specific questions. It is not unreasonable for a child to assume that an adult authority figure knows which aspects of the story are important, and will ask questions to draw these out.

Like Westcott and Kynan (2004), we found predictable age effects with respect to narrative elaboration, with the older children producing more than double the number of story grammar elements than the younger children. The fact that younger interviewees provided significantly fewer story grammar elements and significantly less context / background information is not unexpected on developmental grounds, but has important implications for the way in which police conceptualise and execute the investigative interview. This age difference may reflect;

- Reduced story grammar / narrative competence on the part of younger speakers
- Less well developed ability to take the perspective of the listener
- Theory of Mind deficiencies in the younger age-group – i.e. less understanding that the interviewer does not already know the answers to questions posed
- Greater inequality between speakers, leading to more passivity on the part of younger interviewees.

In summary, the compelling message is that if we are to provide a fair trial for child witnesses, interviewers need assistance in maximising the degree to which they elicit coherent free narrative accounts from children. A coherent account is one that maximises the amount of story grammar elements. The next section considers which types of questions are particularly useful in eliciting story grammar.

### **Interviewing techniques most likely to elicit story grammar elements**

A high rate of specific questions was revealed in the current interviews (81.2% once minimal encouragers were removed). Overall, this style of interviewing is consistent with that reported in other evaluation studies around the globe (see Powell, Fisher, & Wright, 2005 for review). The present findings extend the work of Westcott and Kynan (2004) however, by showing that, not only do interviewers display an over-reliance on specific questions, such an approach skews the child's output towards context and background information and *away from his / her narrative account*. This evidence needs to be incorporated into police training programs so that interviewers learn to persist with open-ended questions, and resist the urge to interrupt the child's narrative account. An important message for trainers is that while open questions accounted for only a little over one third of interviewer prompts, these elicited nearly as much story grammar content as did specific questions, which were used far more frequently, and result in significant disruption to the child's narrative.

It needs to be noted, however, that while open-ended questions are most likely to elicit a coherent story, this does not mean that they will elicit a story in manner that can be presented to court without editing (e.g., by editing the videotape in which the account is recorded, or in the case of live evidence instructing the child not to report certain aspects). In court, lawyers need to be selective regarding what detail is presented. While an interviewer has some degree of control over the content with open-ended questions (i.e., s/he can guide the child with regard to what parts of the account s/he wishes the child to elaborate about) the child is free to report whatever details come to mind, irrespective of whether it seems trivial, out of place or inconsistent (Fisher & Geiselman, 1992; Poole & Lamb, 1998; Wilson & Powell, 2001). If editing of videotaped statements is a considerable problem, then maximising the evidential usefulness of the videotaped statement may require that two separate interviews be conducted with the child witness; the first with a more investigative focus and the second with a more evidential focus.

### **Types of story grammar elements most likely to be elicited by specific questions**

The high use of specific questions in these field interviews raises the question of what sort of details the officers were attempting to elicit. The findings revealed that the *setting* and



*attempt* elements were most strongly represented. This is consistent with Westcott and Kynan's (2004) work and is not surprising given the sort of information needed to establish a charge of abuse. In all states and territories in Australia, for an alleged offender to be charged and convicted of one or more criminal offences, the law requires that each individual offence is identified and 'particularised'. Specifically, each separate act of which the suspect is charged must be clearly named (e.g., assault, indecent assault, unlawful sexual penetration). Further, each act must also be identified with reasonable precision with reference to time, place or some other unique contextual detail (*S v. R*, 1989). This latter requirement (referred to as particularisation) is needed to ensure that both the accused individual and the court are aware of the individual act that forms the basis of each charge. An absence of particularising details has widespread implications for the integrity of the legal process. It jeopardises: (i) the defendant's right to a fair trial, (ii) the court's ability to establish rules of evidence and procedure, (iii) the accuracy and integrity of the verdict, and (iv) the judge's ability to determine the appropriate sentence (*S v. R*, 1989). While the legislation in all Australian states and territories clearly articulates the need for clarity as to the act that forms the basis of each charge laid against an alleged offender, there is little specific discussion of the actual details that may serve as particulars (Guadagno, Powell, & Thomson, 2007). Thus, the officers' focus of specific questions on the act and the particular context (time and place) in which the act occurred could reflect (albeit in part) their desire to elicit sufficient specific details to particularise the event.

Ironically, however, the officers' attempts to elicit details relating to the setting and act were potentially undermining (rather than increasing) the likelihood that the event would be particularised. There are two reasons for proposing this. The first relates to the effect of repeated experience on memory. As indicated in the method section, 96% of the transcripts related to abuse that occurred on more than one occasion. The effect of repeated experience differs according to whether the detail being recalled was repeated the same way across different occurrences of the event. For details that are fixed (i.e., repeated the same way) memory is highly accurate irrespective of the type of question asked (Powell, Roberts, Ceci, & Hembrooke, 1999). For details that vary across occurrences, however, repeated experience has detrimental effects on children's ability to remember a particular occurrence (Powell et al., 1999). This is depicted by a reduction in the accuracy, certainty, and

consistency in children's reports (compared to those about a single event) which is heightened when interviewers ask specific questions as opposed to open-ended questions (see Roberts & Powell, 2001 for review). The relevance of this to the current study is that the *setting* and *attempt* (specific act) are likely to be details that vary across occurrences as they depend on the context (i.e., location, duration of time and opportunities open to the offender and the nature of the relationship between the child and offender which tends to unfold over time; Conte, 1991). In contrast, the *initiating event*, *internal response* and *direct consequence* are likely to be consistent across occurrences of abuse and to form part of the child's general event representation or script. If this is the case, then the *setting* and *attempt* are the very details that need to be elicited with open rather than specific questions. This will help to ensure that these critical details are free of the contaminating and / or distorting effects of specific questions.

Secondly, research has demonstrated that although references to temporal attributes of an abusive event (e.g., the number of incidents, the time of occurrences, and the sequence of event components) increase with age, they are more likely to be reported in response to recall rather than recognition (i.e., specific) questions, irrespective of the child's age (Orbach & Lamb, in press). The fact that open-ended questions can elicit temporal information from children suggests that police investigators need not rely on the more risky (i.e., potentially contaminating) specific questions (Orbach & Lamb, in press).

In summary, our findings show that under typical conditions, police interviews with children about alleged abuse result in about two thirds context / background information and only about one third story grammar (i.e., narrative) content. The police in this study displayed an over-reliance on specific questions, as has been demonstrated elsewhere. Specific questions are damaging in two main ways: they interrupt (and hence curtail) the child's own free narrative, and they elicit additional background details in a way that decontextualises them from the child's spontaneous account of events.

### **Conclusion and directions for future research**

Collectively, the current findings support other research regarding the potential benefits of using open-ended questions, and the need to improve the effectiveness of training programs for investigative interviewers. Although prior recommendations evolved from an

eyewitness memory framework (i.e., an understanding that open questions facilitate the accuracy and detail of children's reports), this study showed that an increase in the use of open-ended questions is also important for increasing the coherence (and subsequently the comprehension and credibility) of children's accounts of abuse as well. Unfortunately, improving the rate of open-ended questions among interviewers will not be easy. The prior research as a whole suggests the need for systematic and global changes (Powell, 2002). In other words, change will be gradual and will need to occur within a variety of different areas. These areas include the quality and structure of training in interviewing, the level of access to such training, the identification and management of work-related stressors experienced in the area of child abuse investigation, and increased recognition within the organisation that forensic interviewing is a highly specialised skill (see Powell, Wright, & Clark, 2007 for review).

Importantly, this work has come at a time when researchers are starting to think about ways to improve the *quality* as well as the quantity of open-ended questions. As Powell and Snow (2007) emphasised, different types of open-ended questions are not equally effective in eliciting elaborate event details. It may also be that different types of open-ended questions are differentially effective in eliciting various story-grammar elements as well. For example, we propose that questions that invite the child to elaborate on certain event components (referred to as depth questions) are more effective in eliciting spontaneous details about the setting and response, whereas questions that ask the child what to report next (referred to as breadth questions) may be more effective in eliciting spontaneous details about the consequence and resolution. An investigation of this issue would require evaluation of a large sample of interviews containing a relatively high level of open-ended questions. As indicated earlier, the range of open-ended questions used in the current transcripts was narrow and thus they were potentially ineffective in getting detailed responses from the children. This in turn may have reduced the likelihood that the officers would persist with open-ended questions (Wright & Powell, 2006).

Overall, there are three main recommendations arising from this work.

1. Trainers need to increase awareness among investigative interviewers of the importance of eliciting more story grammar and the role of open-ended questions in doing this.
2. Police organisations need to work with experts to develop more effective training packages that optimise interviewers' ability to acquire and maintain an open-ended questioning style.
3. Researchers should extend work in this area by investigating the relationship between different types of open-ended questions and the production of various story grammar elements across various age groups.

## REFERENCES

- Biddle, K. R., McCabe, A., & Bliss, L. S. (1996). Narrative skills following traumatic brain injury in children and adults. *Journal of Communication Disorders*, 29(6), 446-469.
- Bochner, S., Price P., & Jones, J. (1997). *Child Language Development. Learning to Talk*. London: Whurr.
- Broadbent, D. E. (1958). *Perception and communication*. London: Pergamon Press.
- Carter, C. A., Bottoms, B. L., & Levine, M. (1996). Linguistic and socioemotional influences on the accuracy of children's reports': Erratum. *Law and Human Behavior*, 20(5), 579.
- Ceci, S.J., , Crossman, A.M., Scullin, M.H., Gilstrap, L. & Huffman, M.L. (2002). Children's suggestibility research: Implications for the courtroom and the forensic interview. In H.L. Westcott, G.M. Davies and R.H.C. Bull (Eds). *Children's testimony: A handbook of psychological research and forensic practice* (pp 117-130). West Sussex: Wiley.
- Conte, J. R. (1991). The nature of sexual offences against children. In C. R. Hollin & K. Howells (Eds.). *Clinical approaches to sex offenders and their victims* (pp. 11-34). Oxford, England: John Wiley & Sons.
- Davies, G. & Wilson, C. (1997). Implementation of the Memorandum: An overview. In H. Westcott & J. Jones (Eds.), *Perspectives on the Memorandum: Policy, practice and research in investigative interviewing* (pp. 1-12). Aldershot, England: Arena Publishers.
- Fisher, R. P. & Geiselman, R. E. (1992). *Memory-enhancing techniques for investigative interviewing: The cognitive interview*. Springfield, IL, England: Charles C Thomas.
- Graesser, A. C., McNamara, D. S., Louwerse, M. M., & Cai, (2004). Coh-Metrix: Analysis of text on cohesion and language. *Behavioral research Methods, Instruments and Computers*, 36, 193-202.
- Graesser, A. C., Singer, M., & Trabasso, T. (1994). Constructing inferences during narrative text comprehension. *Psychological Review*, 101(3), 371-395.
- Guadagno, B. & Powell, M. B. (2007). A qualitative examination of police officers' questioning of children about repeated abuse. *Manuscript under review*.
- Guadagno, B., Powell, M. B., & Thomson, D. M. (2007). Particularisation of child abuse offences: A review and analysis. *Manuscript under review*.

- Guadagno, B., Powell, M. B., & Wright, R. (2006). Police officers' and legal professionals' perceptions regarding how children are, and should be, questioned about repeated abuse. *Psychiatry, Psychology & Law, 13*(2), 251-260.
- Guajardo, N. R. & Watson, A. C. (2002). Narrative discourse and theory of mind development. *Journal of Genetic Psychology, 163*(3), 305-325.
- Hershkowitz, I. (2001). Children's responses to open-ended utterances in investigative interviews. *Legal and Criminological Psychology, 6*, 49-63.
- Kahneman, D. (1973). *Attention and effort*. Englewood Cliffs, NJ: Prentice-Hall.
- Liles, B. Z. (1993). Narrative discourse in children with language disorders and children with normal language: a critical review of the literature. *Journal of Speech and Hearing Research, 36*(5), 868-873.
- Liles, B. Z., Duffy, R. J., Merritt, D. D., & Purcell, S. L. (1995). Measurement of narrative discourse ability in children with language disorders. *Journal of Speech and Hearing Research, 38*, 415-425.
- Lipton, J. P. (1977). On the psychology of eyewitness testimony. *Journal of Applied Psychology, 62*, 90-93.
- Nelson, K. (1996). *Language in cognitive development: The emergence of the mediated mind*. Cambridge: Cambridge University Press.
- Nield, R., Milne, R., Bull, R., & Marlow, K. (2003). The Youth Justice and Criminal Evidence Act 1999 and the interviewing of vulnerable groups: A practitioner's perspective. *Legal and Criminological Psychology, 8*(2), 223-228.
- Orbach, Y. & Lamb, M. E. (in press). Young children's references to temporal attributes of allegedly experienced events in the course of forensic interviews. *Child Development*.
- Paul, R. (2001). *Language disorders from infancy through adolescence. Assessment and intervention* (2<sup>nd</sup> ed.). St. Louis: Miss Mosby.
- Poole, D. A. & Lamb, M. E. (1998). *Investigative Interviews of Children; A guide For Helping Professionals*. Washington, DC: American Psychological Association.
- Powell, M. B. (2002). Specialist training in investigative and evidential interviewing: Is it having any effect on the behaviour of professionals in the field? *Psychiatry, Psychology and the Law, 9*, 44-55.

- Powell, M. B., Fisher, R. P., & Hughes-Scholes, C. H. (2006). The effect of using trained versus untrained adult respondents in simulated practice interviews about child abuse. *Manuscript under review*.
- Powell, M. B., Fisher, R. P., & Wright, R. (2005). Investigative interviewing. In N. Brewer & K. D. Williams (Eds.), *Psychology and law: An empirical perspective* (pp. 11-42). New York: Guilford Press.
- Powell, M. B., Roberts, K. P., Ceci, S. J., & Hembrooke, H. A. (1999). The effects of a repeated experience on children's suggestibility. *Developmental Psychology, 35*, 1462-1477.
- Powell, M. B. & Snow, P. C. (2007). A guide to questioning children during the free-narrative phase of an interview about abuse. *Australian Psychologist, 42*, 57-65.
- Powell, M. B., Wright, R., & Clarke, S. (2007). Improving the competency of police officers in conducting investigative interviews of children. *Manuscript under review*.
- Raskin, D. C. & Esplin, P.W. (1991). Statement validity assessment: Interviewing procedures and content analysis of children's statements of sexual abuse. *Behavioral Assessment, 13*, 256-291.
- Roberts, K. P. & Powell, M. B. (2001). Describing individual incidents of sexual abuse: A review of research on the effects of multiple sources of information on children's reports. *Child Abuse and Neglect, 25*, 1643-1659.
- Snow, P. C., Douglas, J. M., & Ponsford, J. L. (1999). Narrative discourse abilities following severe traumatic brain injury: A follow-up study. *Aphasiology, 13*(7), 529-551.
- Snow, P. C. & Powell, M. B. (2004). Developmental language disorders and adolescent risk: A public-health advocacy role for speech pathologists? *Advances in Speech Language Pathology, 6*(4), 221-229.
- Snow, P. C. & Powell, M. B. (2005). What's the story? An exploration of narrative language abilities in male juvenile offenders. *Psychology, Crime and Law., 11*(13), 239-253.
- Snow, P.C. & Powell, M.B. (2007, in press) Oral language competence, social skills, and high risk boys: What are juvenile offenders trying to tell us? *Children and Society*.

- Stein, N. L. & Glenn, C. G. (1979). An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), *New directions in discourse processing* (pp. 53-120). New Jersey: Ablex Publishing Corporation.
- S v. R (1989). 89 A.L.R., 321.
- Tobey, A. E. & Goodman, G. S. (1992). Children's eyewitness memory: Effects of participation and forensic context. *Child Abuse & Neglect, 16*, 779-796.
- Trocme, N., et al. (2001). *Canadian incidence study of reported child abuse and neglect: Final report*. Ottawa, Ontario: Minister of Public Works and Government Services Canada.
- Vallance, D. D., Im, N., & Cohen, N. J. (1999). Discourse deficits associated with psychiatric disorders and with language impairments in children. *Journal of Child Psychology and Psychiatry, 40*(5), 693-704.
- van den Broek, P., Lorch, R. F., Linderholm, T., & Gustafson, M. (2001). The effect of readers' goals on inference generation and memory for texts. *Memory and Cognition, 29*(8), 1081-1087.
- Victorian Law Reform Commission. (2004). *Sexual offences: Law and procedure final report*. Melbourne, Australia: Victorian Law Reform Commission.
- 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*(2-3), 215-243.
- Westby, C. E. (1982). Cognitive and linguistic aspects of children's narrative development. *Communication Disorders, 7*(1), 1-16.
- 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.
- Wilson, J. C. & Powell, M. B. (2001). *A Guide to Interviewing Children: Essential skills for counsellors, police, lawyers and social workers*. NSW: Allen & Unwin.
- Wright, R. & Powell, M. B. (2006). Investigative interviewers' perceptions of their difficulty in adhering to open-ended questions with child witnesses. *International Journal of Police Science and Management, 8*, 316-325.



Wright, R., Powell, M. B., & Ridge, D. (2006). Child abuse investigation: An in-depth analysis of how police officers' perceive and cope with daily work challenges.

*Policing: An International Journal of Police Strategies and Management*, 29(3), 498-512.

Wright, R. & Powell, M. B. & Ridge, D. (in press). What criteria do police officers use to measure the success of an interview with a child witness? *Psychology, Crime and Law*.