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# Child Witness Statement Quality

## Question Type and Errors of Omission\*

**Graeme D. Hutcheson, James S. Baxter, Karen Telfer,  
and David Warden**

Use of general questions in child witness interviews often limits the completeness of young children's recall. In this study experienced professionals interviewed 5–6 year olds and 8–9 year olds "as they would normally" about live events witnessed by the children. Interviewers' spontaneous use of general and specific questions was assessed, as were the effects of these question types on the children's recall. A main result was that the younger children would frequently fail to answer general questions but would then provide information relevant to these same questions later in the interview. Use of specific questions in these relatively naturalistic interviews did not necessarily improve the overall completeness of younger children's recall, contrary to some previous findings, although, in line with previous findings, such questioning reduced overall accuracy rates. These results highlighted the scale of the problem of "omission errors" in young children's recall. Implications for the use of general questions by professionals who interview child witnesses are discussed.

Although children's evidence has historically been seen as weak (Brigham & Spier, 1992; Heydon, 1984; see Goodman, 1984; Spencer & Flin, 1993; and Ceci & Bruck, 1993 for reviews), experimental studies have shown that when children are allowed to recall information "freely," or when information is elicited through the use of general questions, even very young children can give evidence that is as accurate as that given by adults (Dent, 1986, 1991; Dent & Stephenson, 1979; Goodman, Rudy, Bottoms, & Aman, 1990). However, general questions elicit less information from children than can be elicited with questions that are more specific (Cohen & Harnick, 1980; Dent, 1992; Goodman & Reed, 1986; King & Yuille,

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1987); that is, children make "errors of omission" and may not report all the information potentially available to them when answering general questions. Conversely, although the completeness of a child's statement may be increased by asking specific questions, use of such questions often results in a decrease in children's overall accuracy (Dent, 1992; King & Yuille, 1987): use of specific questions may lead children to make "errors of commission" such that they include in their "recall" details that are unrelated to the event in question.

A series of experiments by Dent (1986, 1992) and Dent and Stephenson (1979), for example, examined the effects of different forms of questioning on the quality of information elicited from children. In these studies, trained interviewers questioned children about staged events using free recall techniques, and general and specific questions. Generally these authors found that young children provided information that was as accurate as that provided by older children and adults when information was elicited using free-recall and general questions. The use of specific questions, however, reduced the younger children's accuracy compared with that of the older groups. The completeness of the children's recall was found to be directly related to the children's age and the amount of prompting used by interviewer.

Such findings appear to leave interviewers with a dilemma when questioning young children: specific questions may be needed in order to elicit information, but the answers to these questions are likely to be less accurate than information produced during free recall or in response to general questions. It would appear, therefore, that information elicited from young children in interviews can be either relatively complete but inaccurate, or relatively incomplete but accurate. In practice, given the importance of accuracy to the judicial process, interviewers tend to be encouraged to use general, open-ended questions whenever possible (e.g., recommendations published by the U.K. Home Office, 1992), despite the fact that this is likely to result in errors of omission.

A difficulty with experimental studies of the child witness interview is that, because these have typically sought to assess the effectiveness of particular interviewing practices in isolation, their findings may not readily generalize to "real-life." For example, to investigate the responses that are made to general questions, interviewers may be restricted to using only general questions, whereas in a real interview interviewers are free to use whichever strategies and combinations of question type they consider to be appropriate. The choice of which question type to use in a given situation will depend to a large degree upon the interaction between the interviewer and the interviewee, a complexity that can be difficult to incorporate into an experimental study.

A number of studies have nonetheless attempted to achieve greater ecological validity than has been present in more traditional experiments. One method that has been used to do this involves the assessment of real-life interviews, often conducted by police officers (e.g., Geiselman & Padilla, 1988; Evans & Webb, 1993), or conducted within a court setting (Walker, 1993). While such studies can provide insights into the effects that certain interviewing practices have on children, they can be limited in that they cannot easily be used to assess the effectiveness of particular interviewing styles or questioning techniques. The principal

reason for this is that it is seldom possible to make an accurate evaluation of either the completeness or the accuracy of the information obtained in the absence of an objective record of what happened (such as a video recoding of the incident). There are, however, some instances where children can be questioned about real events of which the researchers have a detailed record, such as medical and dental procedures (e.g., Goodman, Hirschman, Hepps, & Rudy, 1991; Ornstein, Gordon, & Larus, 1992; Steward, 1989; Vandermaas, 1991).

One such study was conducted by Saywitz, Goodman, Nicholas, and Moan (1991), who investigated children's recall of a physical examination. In support of most experimental studies it was found that children's free recall provided less information than was provided as a result of questioning. Most instances of vaginal and anal touching during the medical procedure went unreported in the children's free recall and were mentioned only when the children were asked direct questions. However, the use of direct questioning procedures led to less accurate reporting by the children. In the free recall condition there were no false reports of such touching, whereas some false reports were made in response to direct questions (the proportion of false allegations was, however, quite low). Again, therefore, it seems that, although there is a risk of increased error with more direct questioning, there is also a risk that potentially crucial information will not be reported at all if no direct questions are asked. Errors of omission would therefore appear to be of primary concern, at least when free recall and general questioning techniques are used to elicit information about genital touching.

Although there is a relatively large body of research that details the effects of different type of questioning on children in a number of experimental conditions, with the exception of those studies conducted in court and also those conducted using police interviewers (e.g., Brennan & Brennan, 1988), few have attempted to evaluate the techniques used by experienced, practicing interviewers questioning children as they would normally.

The present study aimed to address this issue by assessing the influence of the spontaneous use of general and specific questions by experienced interviewers on the recall of 5–6 and 8–9-year-old children. The incidents used were tightly scripted and carefully rehearsed, allowing measures of the completeness and accuracy of each child's recall to be made. The interviewers were professionals who customarily conducted interviews with children. No restrictions were placed on their interviewing style by the researchers in an attempt to provide a degree of ecological validity often missing from more strictly controlled studies.

## METHOD

### Participants

Eight police officers, four social workers, and four reporters to the Children's Panel<sup>1</sup> acted as interviewers (11 female, 5 male). The interviewers were the most

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<sup>1</sup> In Scotland all cases involving children may be referred to a children's panel who decide how a

experienced who were available to participate. Over the course of the study 55 children selected from schools in the greater Glasgow area (5–6 and 8–9 year olds) took part, parental permission having been obtained. Parents were asked not to tell their children that they were to be interviewed. The only selection criterion used for the children was that, as far as possible, particularly shy children were not interviewed. Even with this initial selection criterion, eight children did not provide any information about the incident that they had seen. These interviews were excluded from the analysis on the grounds that, within the limited time available to the interviewers, the quality of the child's statements might depend less on the skills of the interviewer than on the children's habitual shyness with a stranger.<sup>2</sup> Indeed, one interviewer who elicited no information at all when interviewing one child managed to elicit a statement that was over 70% complete when interviewing another. Of the eight children excluded, six were from the younger age group (cf. Marin, Holmes, Guth, & Kovac, 1979). This selection procedure necessarily meant that the interviews of the more capable children (i.e., better witnesses) were analyzed, which may have reduced differences in statement quality between the two age groups. The final group of interviews analyzed cannot therefore be considered to be a random sample as selection depended on parental consent and teacher selection, the sample was not balanced for sex or ability, and also because of the subgroup of quiet children which was excluded. In total 47 interviews were included in the analysis, 20 interviews (13 male, 7 female) with 5–6 year olds and 27 interviews (17 male, 10 female) with the 8–9 year olds.

## Procedure

Because of limitations on the numbers of interviewers who could participate in the study and on accommodation in the schools, two different incidents were used. This enabled each interviewer to question four children during one day (the maximum number of interviews possible given the school timetable), questioning two children about each incident.<sup>3</sup> Each interviewer questioned two 5–6 year olds and two 8–9 year olds. Approximately half of the children in each age group saw Incident One, and approximately half saw Incident Two.

The incidents were staged by one male and one female actor on the school premises early in the morning with each age group witnessing a different incident. Later in the day eight children were interviewed individually by one of two in-

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particular case is to proceed. The reporter to the children's panel investigates cases brought to his or her attention and decides which are to be referred to the panel (see Spencer & Flin, 1993, chapter 2).

<sup>2</sup> An unwillingness to talk may, however, also be indicative of a particular interviewing technique, with the result that interviews conducted by "poor interviewers" as well as "poor witnesses" are both excluded. As the present study was primarily concerned with interviewer style, all such interviews were excluded from the analyses on the grounds that their inclusion would have had a marked effect on an interviewer's overall performance, an effect that may not be related to the interviewer's skills.

<sup>3</sup> In order to minimize the effect of learning, the interviewers were restricted to interviewing only two children about the same event.

interviewers. Each interviewer conducted two interviews (one from each age group) between the first break and lunch time and two more after lunch. Each professional group was equally represented, proportionately, in each type of interview, i.e., across age groups and incidents.

## **Incidents**

The children were not told that the incidents were going to happen or that, afterwards, they were to be questioned about them. As noted above, the incidents were carefully scripted and rehearsed. This helped ensure that they were essentially similar over a number of stagings at different schools. Because of obvious ethical restrictions on the nature of the incidents that can be staged before young children, two incidents were scripted which, although not explicitly showing any wrong-doing, contained an element of “seriousness” that could be inferred by the children and which was offered as the reason for the interviews taking place. The two incidents used were as follows:

*Incident One.* Two “technicians” arrived at a school to set up a projector for a talk which was to be given later that day. The technicians needed to put out chairs and asked a teacher for some children to help. Four children were selected by the teacher and were taken out of the class by the technicians to the room where the projector was being set up. While the children were putting out the chairs the technicians had an argument about how to load the film and “accidentally” broke the projector. They discussed what they were to do and then took the children back to their classroom. When the interviewers, who were to give the talk, arrived in the school later the same day they said that they could not find the projector and asked the teachers what had happened to it. All the teachers were able to do was to tell them which four children from the class had helped the technicians to set up the equipment earlier that day.

*Incident Two.* This incident took place in front of a class of children while their teacher was out of the room. A stranger entered the class and walked over to a toolbox that had been placed in the classroom before the children had arrived in school. This person opened the box and took out an electric drill. At this point, a second stranger entered the class and told the first one to leave the drill where it was. These two then argued about what to do with the drill, and eventually decided to leave it where it was, whereupon they both left the classroom. A short time later the first stranger returned alone and quickly removed the drill. The children were later to be told by their interviewers that the drill had been found outside the school gates. The interviewers would tell the children that they had been asked by the head teacher to find out how it came to be there.

## **Instructions Given to the Interviewers**

The interviewers were informed of the general aims of the project (that is, it was an investigation into the effectiveness of interviewing techniques used by

experienced interviewers) and were asked to interview “as they would normally.” They were informed that interviews could last up to 30 minutes and were asked to terminate any interview if a child became distressed. Printed instructions explained that they were to interview four children during the day about the two incidents (two children about Incident One, and two about Incident Two). Each interviewer therefore interviewed two children about the same event. Although the interviewer might therefore have more knowledge about the incident when questioning the second child, the effect of this additional knowledge did not appear to influence the quality of the second interview (see results). To make it more likely that all interviewers were attempting to access the same information, they were asked to concentrate on eliciting information about what happened and what was said, descriptions and names of anyone involved, and the child’s overall thoughts and impressions about what happened.

The interviewers were provided with just enough information about the incidents to enable them to explain to the children why they were being interviewed and also to focus the interviews onto the appropriate topics. The information given made no reference to any specific event and was designed to only provide a general starting point for the interviews. The information all interviewers were provided with prior to interviewing the children was as follows:

*Incident One.* You have arrived at the school to give a talk to the children about road safety.<sup>4</sup> The projector you were going to use for your talk was supposed to have already been set up. There is no projector in the school now. However, the child you are interviewing knows something about what happened to it.

*Incident Two.* You have found a blue and black box containing an expensive drill outside the school premises. Apparently it had been left in a classroom overnight by its owner. You have been asked by the head teacher to try and find out why it was removed from the class. The child you are interviewing knows how it came to be outside.

## Data Transcription and Coding

All interviews were videotaped and then transcribed and analyzed using the CHILDES system (MacWhinney, 1991). Each incident was broken down into a number of points relating to three categories of information: event, speech, and appearance. The event category included information about “what happened” and comprised 15 discrete points for Incident One and 13 points for Incident Two.<sup>5</sup> The appearance category included information about the actors’ looks (descriptions of clothes, height, hair color, etc.), one description for the male actor and one for the female. Incident One comprised 11 points each for the male and female, and incident Two 14 points for each actor (the actors wore more distinct clothing in incident Two). Speech also constituted a large part of the incidents and

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<sup>4</sup> The topic of the talk changed according to the profession of the interviewer. Road safety was used in the case of the police.

<sup>5</sup> The full coding scheme is available on request from the first author.

was represented by 14 and 15 points in the coding schemes for the Incidents One and Two, respectively. In total, 51 points for Incident One and 56 points for Incident Two were included in the coding scheme.

Statement quality was assessed by two measures: accuracy and completeness. Accuracy rates were measured by dividing the number of points in the coding scheme about which accurate information had been reported by the total number of accurate and inaccurate points reported (see Dent, 1992). For example, if a child gave information about 13 points on the coding scheme and only 11 of these were accurate, the child's statement would be considered to be 84.62% accurate ( $11/13 \times 100$ ). Completeness was measured by dividing the number of points referred to by the child in each report (accurate and inaccurate) by the number of points in the coding scheme. This measure is different from that used by Dent (who included only the number of correct points in each report and divided this by the total number of points in the coding scheme) and reflects the amount of relevant information obtained, whether it was accurate or not. In a statement taken about Incident One (which had 51 separately coded points of information) a child who mentioned 35 of them would have achieved a statement that was 64.71% complete ( $35/51 \times 100$ ).

In addition to coding information that was fully complete and accurate, the coding scheme also allowed for "semicomplete" and "semiaccurate" answers when only one half of a point was awarded. For example, one point on the Incident One coding scheme concerned a description of what the children did once they arrived at the room where the projector was being set up. The children had helped to set out rows of chairs with the male actor, and information such as "We put the chairs out" and "We arranged the seats" was considered to be fully accurate and complete. An answer such as "We helped them" without any reference to putting chairs out was considered to be semicomplete but fully accurate. If the child said "We put out the chairs with the lady" this was considered to be semiaccurate, but fully complete, as the information about putting the chairs out with one of the actors is correct while the identification of the lady is incorrect. For each point of the coding scheme it was decided in advance what would constitute a partial and a full reply.

Interobserver reliability for accuracy and completeness was calculated for two independent coders, and a point-by-point reliability score (see Kadzin, 1982) of above 90% was obtained for a random sample of over 10% of the transcripts. Also, to guard against coding errors, all transcripts were coded twice.

## RESULTS

The aim of the data analysis was to identify those factors that had an effect on the quality of statements elicited during an interview. Analysis was directed particularly to (a) the quality of statements elicited from the two age groups, (b) the relationship between statement quality and the type of question that had elicited this information, and (c) errors of omission and the effect that these had on statement quality.



## Quality of Statements

The results from the two incidents were analyzed together as there were no significant differences between the incidents in the overall completeness or accuracy ( $t(45) = .22, p = .824$ ;  $t(42.82) = 1.89, p = .066$ , or for the separate types of information ( $p > .1$  in all cases). There was also no significant difference between the completeness and accuracy of the first and second interviews for any of the separate categories of information, for the group of children as a whole, or for the 5–6 and 8–9-year-old children ( $p > .1$  in all cases), indicating that there was not any significant “learning” effect between repeated interviews about the same incident.

Table 1 shows the overall accuracy and completeness scores for the two age groups and for the sample as a whole. Scores are provided for each type of information, with information on the appearance of both of the actors recorded in a single group (containing 22 points for the projector incident and 28 for the drill incident).

## The Type of Information

As found in previous studies (Goodman & Reed, 1986; Oates & Shrimpton, 1991; see Spencer & Flin, 1993, for a review) certain types of information seemed easier for the children to recall than did others. With respect to completeness, the type of information was found to play a significant role with both the 5–6 and 8–9 year olds,  $F(2,57) = 21.85, p < .00005$ ;  $F(2,78) = 46.57, p < .00005$ , respectively. Scheffé’s post-hoc analyses showed that, for both groups of children, event recall was significantly more complete than recall of either speech or actors’ appearance ( $p < .001$  in both cases). With respect to accuracy, information type also had a significant effect on both age groups,  $F(2,57) = 7.37, p < .005$ ;  $F(2,78) = 10.54, p < .0001$ , with Scheffé’s post-hoc analyses showing that for the 5–6-year-old children, event information was remembered more accurately than appearance ( $p < .01$ ), and for 8–9-year-old children event information was remembered more accurately than both appearance and speech ( $p < .01$ ).

## The Age of the Child

Comparisons of the two age groups showed that the 8–9-year-old children recalled more information of each type than did the 5–6 year olds (for events  $t(45)$

Table 1. Quality of Statements

Information type		5–6 years		8–9 years		Overall	
		Completeness	Accuracy	Completeness	Accuracy	Completeness	Accuracy
Event	<i>M</i>	47.0%	88.6%	75.9%	96.5%	63.6%	93.1%
	<i>SD</i>	16.9	15.6	15.6	5.6	21.5	10.5
Speech	<i>M</i>	16.5%	72.3%	33.0%	78.0%	26.0%	75.6%
	<i>SD</i>	10.7	31.5	19.3	27.2	18.0	28.9
Appearance	<i>M</i>	23.6%	55.4%	41.1%	72.3%	33.6%	65.1%
	<i>SD</i>	17.3	32.6	17.1	21.5	19.1	27.8
Overall	<i>M</i>	28.2%	79.2%	48.2%	85.6%	39.7%	82.9%
	<i>SD</i>	11.1	12.8	12.1	8.3	15.3	10.8

=  $-6.09$ ,  $p < .0005$ , for speech  $t(42.15) = -3.73$ ,  $p = .001$ , and for appearance  $t(45) = -3.44$ ,  $p = .001$ ). Considering accuracy of recall, although there was not a significant overall difference between the groups,  $t(30.6) = -1.95$ ,  $p = .06$ , there was an effect depending on the type of information (for events  $t(23.76) = -2.45$ ,  $p = .022$ , for speech  $t(45) = -.66$ ,  $p = .512$ , and for appearance  $t(30.83) = -2.01$ ,  $p = .053$ ), with information about events being recalled with significantly greater accuracy by the older children.

The scatter plot in Figure 1 displays overall completeness and accuracy scores for the two age groups and demonstrates a significant difference between the age groups in statement completeness with a degree of overlap in the distributions. Some 5–6-year-old children compare favorably to some 8–9 year olds, at least when compared on overall measures of completeness and accuracy.

In summary, the older children provided statements that were significantly more complete than those provided by the younger children, and, depending on the type of information, this information also tended to be more accurate. The variation between children resulted in some overlap between the ages with a number of 5–6-year-old children providing higher quality statements than those provided by some of the 8–9 year olds.

### Question Type in Relation to Statement Quality

Children's ability to respond to certain types of question has been identified as an important influence on the amount of information they give. The following analysis investigates the quality of children's responses to two categories of question: general and specific.

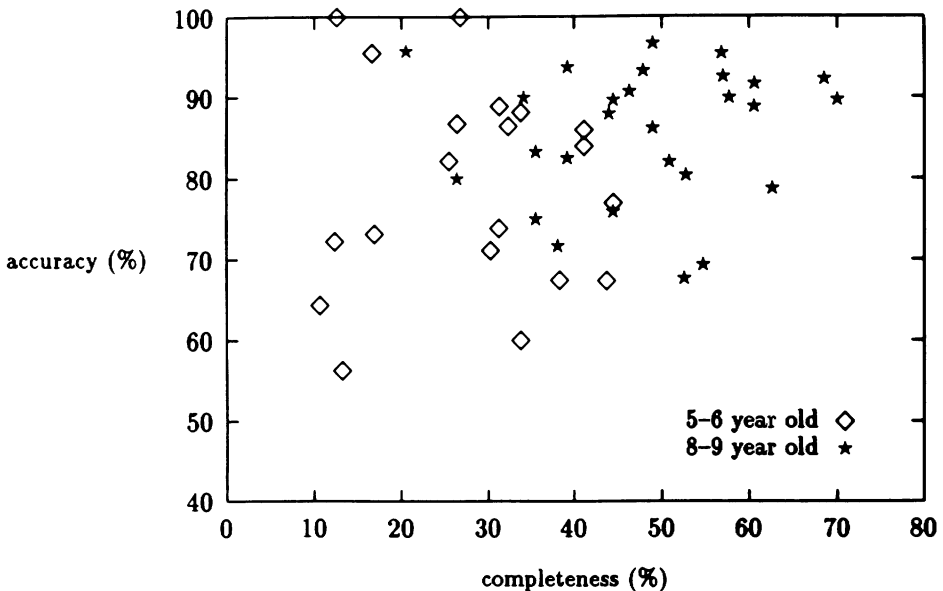


Fig. 1. Quality of statements elicited from 5–6 and 8–9-year-old children.

In the present study the definition of a question as either general or specific was based on the number of points on the coding scheme that that question addressed. In more than one point was addressed, the question was considered to be general. For example, "Can you tell me what he was wearing?" would be classed as a general question, whereas a question such as "Tell me what the lady was doing when you first went into the room?" would be classed as a specific question as it only relates to one point (in the incident, the lady was trying to thread the film into the projector when the children came into the room). It should be noted that this definition is not the same as that used by Dent (1992) and Gudjonsson (1992), who defined general questions as nonleading questions that encourage narrative responses. The generality of questions in the present study was not based on a global linguistic concept of generality, but on a more functional description of the scope of the question *in relation to the incident*. This type of definition of general and specific questions made it possible to divide questions into two groups without the need for an analysis of the linguistic structure of the questions (although many of the questions defined as general in the present study would also have been defined as such using a more linguistically based definition).

A number of questions were excluded from the analysis if, for example, the children had not been given an adequate opportunity to answer (in cases where, for example, a number of questions were asked by the interviewer concurrently without a break), or if the question was not related to the incident ("What does your Mum look like?") and when the question was subjective or involved imagination or guess-work on the part of the child (for example, an answer to the question "What do you think she was planning to do with the drill once she took it outside?" could only involve conjecture as this information was not part of the incident). Such questions were excluded from *all* analyses presented in this article. Only those questions that were directly related to the incidents and which also elicited answers that could be evaluated for completeness and accuracy were included.

It can be seen from Table 2 that there was no significant difference in the mean number of questions asked of the two age groups,  $t(45) = -0.51$ ,  $p > 0.1$ , indicating that the difference in statement completeness (see Table 1) is not simply due to the older children having been asked a greater number of questions. There was, however, a significant difference in the proportion of general and specific questions asked of the two groups, with the 5–6 year olds being asked a higher percentage of general questions and a lower percentage of specific questions than the 8–9 year olds,  $t(45) = 2.11$ ,  $p = .041$  and  $t(45) = -2.11$ ,  $p = .041$ , respec-

Table 2. General and Specific Questions

Age group	No. of questions		General questions			Specific questions		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	Percent	<i>M</i>	<i>SD</i>	Percent
5–6	69.2	34.0	11	6.1	15.9%	58.2	32.5	84.1%
8–9	73.9	30.5	8.9	4.7	12.0%	65.0	28.3	88.0%
Overall	71.9	31.8	9.8	5.4	13.6%	62.1	30.0	86.4%

**Table 3. Completeness and Accuracy in Relation to Question Type**

No. of questions	Completeness	Accuracy
5–6 year old		
Total	.2746	– .4659*
Specific	.2285	– .5337*
General	.3152	.2498
8–9 year old		
Total	.633***	– .0643
Specific	.664***	– .0309
General	.1093	– .2299
Overall		
Total	.4094**	– .2483
Specific	.4294**	– .2613
General	.0211	– .0084

Pearson's Product-Moment correlation coefficient: \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .000$ .

tively. If, as has been suggested, the type of question asked to some extent determines the answers, this finding has important implications when assessing the quality of statements from the two age groups.

The relationship between question type and statement quality is shown in Table 3. This table shows the correlation coefficients for each child's overall scores for accuracy and completeness in relation to the number of specific and general questions asked during the interview (for simplicity, the scores for each type of information are combined).

#### *The Relationship Between Question Type and Completeness*

The total number of questions asked of the 5–6-year-old children was not significantly correlated with statement completeness.<sup>6</sup> Interviewers who asked a relatively large number of questions of this group did not, therefore, tend to elicit accounts that were more complete. The number of questions asked of 8–9-year-old children was significantly correlated with statement completeness,  $r = .633$ ;  $p < .0005$ , with those interviewers who used relatively large numbers of questions tending to elicit more complete statements. The number of general questions asked was not significantly related to completeness for either age group; however, the number of specific questions was significantly related to completeness, but only for the 8–9-year-old children,  $r = .664$ ;  $p < .0005$ .

#### *The Relationship Between Question Type and Accuracy*

The overall number of general questions used by the interviewers was not significantly correlated with the accuracy of the statements elicited from either

<sup>6</sup> Although the number of questions must affect statement completeness to some extent (asking no questions at all would be likely to elicit no information), the present study concentrates on "normal interviewing practice."

age group. The number of specific questions used by the interviewers was not significantly correlated with accuracy for the 8–9-year-old children,  $r = -.0309$ ;  $p = .878$ , but the number of specific questions asked of the 5–6 year olds was significantly negatively correlated with their accuracy,  $r = -.5337$ ;  $p = .015$ .

The children, then, responded differently to questions depending on their age. Interviews who asked 5–6-year-old children a high proportion of specific questions tended to elicit statements that were no more complete but were significantly less accurate. In contrast to this, those interviewers who asked 8–9-year-old children a relatively large number of specific questions elicited significantly more information without significantly affecting accuracy. On the basis of these results it could be argued that interviewers should modify the type of question they use according to the age of the child. When interviewing 5–6-year-old children it may be best for interviewers to restrict their use of specific questions in order to minimize errors of commission. Such a restriction could perhaps be relaxed with older children as they appear able to provide accurate answers regardless of the type of question used. This finding gives some support for recommendations that when interviewing children as young as 5 years of age, interviewers should use general questions to elicit information whenever possible (e.g., UK Home Office, 1992).

### General Questions and Errors of Omission

Avoiding the use of specific questions when interviewing children as young as 5–6 years of age may improve the accuracy but reduce the completeness of their statements. However, there is evidence that a reliance on the use of general questions can significantly reduce the amount of information elicited from young children as often they do not relate all that they know in response to such questions. The use of general questions appears to produce relatively accurate, but incomplete statements. The following analysis looks in detail at the answers elicited by general questions and distinguishes between negative and positive responses. A negative response was recorded when no information was provided (for example, when a child does not answer a question, indicates that she or he does not know, or provides a straight “No”) and a positive response was recorded when the child provided information, or at least indicated that they knew more (e.g., “What was his name, can you remember?” “It was Iain,” and “Can you tell me something about what happened in the television room this morning?”, “I think I can”). Table 4 shows the positive and negative replies that were elicited

Table 4. Responses to General Questions

Age group	No. of generals		Positive answer		Negative answer	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
5–6	11	6.1	48.5%	26.3	51.5%	26.3
8–9	8.9	4.7	75.1%	17.1	24.9%	17.1
Overall	9.8	5.4	63.8%	25.1	36.2%	25.1

from both age groups in response to general questions and shows that the 5–6-year-old children were asked a greater number of general questions,  $t(45) = 1.34$ ,  $p = .186$ , and answered a significantly greater proportion of them negatively,  $t(30.61) = 3.95$ ,  $p < 0.0005$ .

The stronger tendency of the younger children to answer general questions negatively may help explain the difference in statement completeness between the younger and older children and may also help to explain the difference in the proportions of general and specific questions addressed to the children (refer to Table 2). Negative answers provide no information about the incident and reduce overall statement completeness. In addition to this such answers may halt a particular line of questioning as an interviewer is often unable to formulate appropriate specific questions, or indeed any specific questions on this topic at all. For example, if a child is asked “Was there a man in the classroom?” and replies “Don’t know,” it is very difficult for the interviewer to proceed with questions about what the man looked like.

A tendency to provide negative answers, however, does not necessarily indicate that a child has not encoded information relevant to the question; a negative reply might also mean simply that the child is reluctant to provide information or has some other difficulty. Rates of errors of omission made by children in the present study were investigated by analyzing those interviews in which general questions had been answered negatively, only for information relevant to this question to be provided later. For example, if a question such as “Was there a man in your classroom?” is answered negatively we cannot be sure whether the child did not know the information or was unable or unwilling to give it to the interviewers. In cases where information relevant to this question is elicited later in the interview it is clear that the related general question did not elicit relevant information and could have resulted in an error of omission. An assessment of general questions that were answered negatively, and the identification of instances where subsequent relevant information was elicited from the children, provides some indication of the scale of this problem and an indication of the amount of information that can be lost through such errors. Table 5 shows the number of instances in which negative answers were given to general questions and those instances in which relevant information was elicited later in the interview.

Included in Table 5 are all the general questions about the incident that were answered negatively (e.g., “What did the people wear?”, “Don’t know”). If information relevant to this initial question was provided later in the interview (e.g., “The man had a white coat on”), this was recorded as “more information given.” Such an analysis can only indicate the number of times when at least some

**Table 5. Indications of Omissions**

Age group	General questions answered negatively	More information given	Proportion
5–6	54	41	76.0%
8–9	40	29	72.5%
Overall	94	70	74.3%

information was given after a general question had been answered negatively. It does not reveal the amount of additional information that was given or distinguish omission errors in cases where the child only provides limited information in response to a general question when in fact s/he knew more. For, example, if the interviewer asked "What was he wearing?" and the child replied "He had a hat," this was recorded as a positive response even though the information given is very limited and more may have been available. Even with these limitations, which are likely to underestimate the role played by errors of omission,<sup>7</sup> it is clear that sometimes the children in this study did not provide all the relevant information they had in response to general questions, at least not initially.

For both groups of children, in over 70% of the cases where a general question had been answered negatively, at least some relevant information was given later in the interview. Both age groups showed a tendency to answer general questions negatively *even when they had relevant information*. A negative reply to a general question about the incident the child had witnessed was therefore not necessarily indicative of a lack of knowledge. Given that general questions are crucial for eliciting information from the children and that there were a number of instances where questioning was terminated on a negative answer to a general question, it is likely that, in the present study, the completeness of statements from the children, particularly the younger children, was significantly reduced by omission errors.

## DISCUSSION

It should be noted that the results from the present study are subject to a sampling bias deriving from the exclusion of a number of children who could be described as poor witnesses. As the majority of these children were from the younger age group, this was likely to have led to differences between the age groups being diminished. This study therefore provides a comparison of a relatively able group of 5–6-year-old children and a group of 8–9-year-olds who are perhaps more representative of the general 8–9-year-old population.

In the main the present findings support those of previous studies of the ways in which different types of question affect the quality of children's statements. Children aged 5–6 years provided significantly poorer statements than did children aged 8–9 years. The older children provided significantly more information than the younger children (overall as well as for each type of information) and also tended to provide information that was more accurate (this was, however, only significant for event information). The type of question used by the interviewers also played an important role in determining statement quality. The use of specific questions was significantly correlated with statement completeness, but did not significantly affect statement accuracy, of the 8–9-year-old children.

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<sup>7</sup> As this total also includes instances where the interviewer had terminated questioning on a negative answer (cases where the child was not asked for any more information) it is likely that the children could have provided more information on other points as well.

The use of specific questions with 5–6-year-old children was significantly correlated with lower accuracy scores but not correlated with completeness. This finding seems to be at variance with those of experimental studies that have found that use of specific questions enhances statement completeness although at a cost to accuracy (see Dent, 1992; King & Yuille, 1987). However, in the present study the younger children were asked a significantly lower proportion of specific questions compared with the older children. A possible reason for this is that in the present study interviewers were given almost no basis for the formulation of specific questions by the research design, and were often given little or nothing more to go on by the 5–6-year-old interviewees. If an interviewer attempted to elicit information in the first instance by asking a general question that the child did not answer then the interviewer could go no further with that line of questioning without leading the child. If interviewers nonetheless attempted to ask specific questions then these tended to be “shots in the dark,” answers to which reduced the children’s overall accuracy without contributing relevant information. Such conditions may, of course, be common in real-life interviews with child witnesses. Had the interviewers been able to formulate and ask greater numbers of specific questions this may have increased the overall completeness of the younger children’s statements.

In respect of the interviewers’ prior knowledge the present study differed from that of Saywitz et al. (1991), wherein the interviewer had a clear idea of what had happened to the child and a standard set of questions to ask. Finding that specific questions reduced children’s errors of omission (see above) Saywitz et al. suggested that interviewers’ weigh the costs and benefits of asking such questions. This may be an important point when forensic or other evidence exists that a child has definitely been harmed in certain ways. However, the present findings suggest that the costs may tend to outweigh the benefits if the adult has little or no idea of what a child has experienced.

It may be that some interviewers in the present study did not appreciate how different the effects of questioning strategies on children in different age groups could be. The likelihood of obtaining a complete and accurate statement from 8–9-year-old children was increased by the use of a large number of specific questions, whereas the same strategy when used with 5–6-year-old children was not only unlikely to improve completeness but also led to statements that were relatively inaccurate. This may be a point to which interviewers in general need to be more sensitive.

Current recommendations that general questions are to be used whenever possible with young children because these questions promote accuracy seem reinforced by the present findings. However, a reliance on the use of general questions creates its own problems in that these questions do not tend to encourage complete recall. Children, particularly the younger ones, show a tendency to answer general questions negatively, even when they know relevant information, thus making errors of omission. One reason for this may be that a general question such as “Was there a man in your classroom?” may not provide a 5 year old with enough support for, or constraint on, retrieval (cf. Ackerman, 1985). Given that over 50% of general questions asked of 5–6-year-old children in the present study



were answered negatively, and of these, in at least 76% of cases, it was demonstrated that the child knew relevant information, errors of omission were likely to have played a major role in determining statement quality. A reliance on general questions to elicit information may increase the likelihood that such errors occur, thereby reducing the quality of statements.

How might such omission errors be reduced? One strategy that can be used to increase the amount of information elicited from children is to re-ask those general questions that have been answered negatively. While this strategy might increase the likelihood of obtaining a positive reply, it should be realized that such a strategy may reduce accuracy. Repeatedly asking questions about the same event could give the impression to the child that they should know the answer and that their initial answer was incorrect (Cassel & Bjorklund, 1992; Gelman, Meck, & Merkin, 1986). This may encourage children to guess answers to questions or to provide answers that they are not sure about, even though telling children not to guess and that "Don't know" answers are legitimate is an integral part of current interviewing recommendations. For the reasons discussed above, the alternative option of simply asking greater numbers of specific questions may simply not be available to interviewers when working with younger children, even in cases where the risk of increasing inaccuracy rates might be worth taking.

On balance it might seem that the safest option open to interviewers is somehow to improve the effectiveness of their general questions. The primary problem experienced by interviewers when dealing with young children is that their answers are either negative or tend to be quite short (the problem of "kiddie conciseness"; Poole, 1992). This limits the amount of information that can be elicited and also limits the variety of questions that can be used by the interviewer using purely verbal means. If statements are to be substantially improved then methods for encouraging accurate narrative responses must be developed. The problem facing interviewers when questioning young children is to assist the children to cope with and answer general questions.

A number of techniques have been developed to encourage children to provide more complete statements. These include the Cognitive Interview (Fisher & Geiselman, 1990; Geiselman, Fisher, Mackinnon, & Holland 1986; Memon & Bull, 1991;), visual and auditory feedback (Poole, 1992; Steward, Bussey, Goodman, & Saywitz, 1993) and context cues (see Davies & Thomson, 1988, for a review). However, the effectiveness of these techniques with children has yet to be fully researched and validated (Poole, 1992; Memon & Köhnken, 1992). Another possibility is that other variations in the social and cognitive dynamics of the interview may influence children's recall. Baxter, Hutcheson, Telfer, Warden, and Stocks (in prep) found that interviewers who adopt a formal, "businesslike" interviewing style elicit more complete accounts from 5–6-year-old children, possibly because such an approach concentrates children's retrieval efforts more effectively than does an informal, conversational approach. Generally, however, significant improvements in the quality of statements elicited from children are unlikely without a better understanding of children's verbal behavior and more thorough investigations of a broad range of interviewing techniques.

What does seem clear is that omission errors significantly affect the quality of

children's statements. At least some of the information that is currently lost using standard interviewing techniques (verbal questioning) may be retrievable from the children if the interviewers understand how these errors arise and understand the problems younger children have with answering general questions. Acquiring such understanding would be a first step toward reducing the amount of information lost to errors of omission, and should ultimately enable recent procedural changes in the justice systems of the UK and the USA to have greater effect.

## REFERENCES

- Ackerman, B. P. (1985). Constraints on retrieval search for episodic information in children and adults. *Journal of Experimental Child Psychology*, *40*, 152–180.
- Baxter, J. S., Hutcheson, G. D., Telfer, K., Warden, D., & Stocks, R. (in preparation). The effects of interviewer style on the completeness and accuracy of children's recall.
- Brennan, M., & Brennan, R. (1988). *Strange language*. Wagga Wagga, New South Wales, Australia: Riverina Murry Institute of Higher Education.
- Brigham, J. C., & Spier, S. A. (1992). Opinions held by professionals who work with child witnesses. In H. R. Dent & R. Flin (Eds.), *Children as witnesses* (pp. 93–111). Chichester: Wiley.
- Cassel, W. S., & Bjorklund, D. F. (1992, April). Age differences and suggestibility of witnesses. In D. F. Bjorklund & P. A. Ornstein (Co-chairs), *Children's memory for real world events: Implications for testimony*. Symposium conducted at the annual meeting of the conference on human development, Atlanta.
- Ceci, S. J., & Bruck, M. (1993). Suggestibility of the child witness: A historical review and synthesis. *Psychological Bulletin*, *113*, 403–439.
- Cohen, R. L., & Harnick, M. A. (1980). The susceptibility of child witnesses to suggestion. *Law and Human Behavior*, *4*, 201–210.
- Davies, G. M., & Thomson, D. M. (1988). Context in context. In G. M. Davies, & D. M. Thomson (Eds.), *Memory in context: Context in memory* (pp. 335–345). New York: Wiley.
- Dent, H. R. (1986). An experimental study of the effectiveness of different techniques of questioning mentally handicapped child witnesses. *British Journal of Clinical Psychology*, *25*, 13–17.
- Dent, H. R. (1991). Interviewing. In J. Doris (Ed.), *Suggestibility of children's recollections* (pp. 138–146). Washington: American Psychological Association.
- Dent, H. R. (1992). The effects of age and intelligence on eyewitness ability. In H. R. Dent & R. Flin (Eds.), *Children as witnesses* (pp. 1–13). Chichester: Wiley.
- Dent, H. R., & Stephenson, G. M. (1979). An experimental study of the effectiveness of different techniques of questioning child witnesses. *British Journal of Social and Clinical Psychology*, *18*, 41–51.
- Evans, G., & Webb, M. (1993). High profile — but not that high profile: Interviewing of young persons. In E. Shepherd (Ed.), *Aspects of police interviewing* (pp. 37–45). Published by the British Psychological Society for the Division of Criminological and Legal Psychology.
- Fisher, R. P., & Geiselman, R. E. (1990). *Evaluation and field implementation of the cognitive interview*. Final report to the Institute of Justice, grant No. USDJ-85-IJ-CX-0053.
- Geiselman, R. E., Fisher, R. P., Mackinnon, D. P., & Holland, H. L. (1986). Enhancement of eyewitness memory with the cognitive interview. *American Journal of Psychology*, *99*, 385–401.
- Geiselman, R. E., & Padilla, J. (1988). Interviewing child witnesses with the cognitive interview. *Journal of Police Science and Administration*, *16*, 236–242.
- Gelman, R., Meck, E., & Merkin, S. (1986). Young children's numerical competence. *Cognitive Development*, *1*, 1–29.
- Goodman, G. S. (1984). Children's testimony in historical perspective. *Journal of Social Issues*, *40*, 9–31.
- Goodman, G. S., Hirschman, J. E., Hepps, D., & Rudy, L. (1991). Children's memory for stressful events *Merrill Palmer Quarterly*, *37*, 109–158.

- Goodman, G. S., Rudy, L., Bottoms, B., & Aman, C. (1990). Children's concerns and memory: Ecological issues in the study of children's eyewitness testimony. In R. Fivush & J. A. Hudson (Eds.), *Knowing and remembering in young children* (pp. 249–284). New York: Cambridge University Press.
- Goodman, G. S., & Reed, R. S. (1986). Age differences in eyewitness testimony. *Law and Human Behavior, 10*, 317–332.
- Gudjonsson, G. H. (1992). *The psychology of interrogations, confessions and testimony*. Chichester: Wiley.
- Heydon, J. (1984). *Evidence. Cases and materials* (2nd ed.). London: Butterworths.
- Home Office (1992). *Memorandum of good practice on video recorded interviews with child witnesses for criminal proceedings*. London: HMSO.
- Kazdin, A. E. (1982). *Single-case research designs: Methods for clinical and applied settings*. New York: Oxford University Press.
- King, M. A., & Yuille, J. C. (1987). Suggestibility and the child witness. In P. Toglia & D. F. Ross (Eds.), *Children's eyewitness memory* (pp. 24–35). New York: Springer-Verlag.
- MacWhinney, B. (1991). *The CHILDES Project: Tools for analyzing talk*. Hillsdale, NJ: Erlbaum.
- Marin, B. V., Holmes, D. L., Guth, M., & Kovac, A. (1979). The potential of children as eyewitnesses. *Law and Human Behavior, 3*, 295–305.
- Memon, A., & Bull, R. (1991). The cognitive interview: Its origins, empirical support, evaluation and practical implications. *Journal of Community and Applied Social Psychology, 1*, 291–307.
- Memon, A., & Köhnken, G. (1992). Helping the witness to remember more: The cognitive interview. *Expert Evidence, 1*, 39–48.
- Oates, R., & Shrimpton, S. (1991). Children's memories for stressful and nonstressful events. *Medicine, Science and the Law, 31*, 4–10.
- Ornstein, P. A., Gordon, B. N., & Larus, D. (1992). Children's memory for a personally experienced event: Implications for testimony. *Applied Cognitive Psychology, 6*, 49–60.
- Poole, D. A. (1992, May). *Eliciting information from children with nonsuggestive visual and auditory feedback*. Paper presented at the NATO Advanced Study Institute: The Child Witness in Context, Lucca, Italy.
- Saywitz, K., Goodman, G. S., Nicholas, G., & Moan, S. (1991). Children's memory for genital exam: Implications for child sexual abuse. *Journal of Consulting and Clinical Psychology, 59*, 682–691.
- Spencer, J. R., & Flin, R. (1993). *The evidence of children: The law and the psychology* (2nd ed.). London: Blackstone.
- Steward, M. (1989). *The development of a model interview for young child victims of sexual abuse*. (Technical Report No. 90CA1332). Washington, DC: U.S. Department of Health and Human Services.
- Steward, M., Bussey, K., Goodman, G., & Saywitz, K. (1993). Implications of developmental research for interviewing children. *Child Abuse and Neglect, 17*, 25–37.
- Vandermaas, M. (1991, April). *Assessment of young children's anxiety during dental procedures*. Paper presented at the biennial meeting of the Society for Research in Child Development, Seattle, WA.
- Walker, A. (1993). Questioning young children in court: A linguistic case study. *Law and Human Behavior, 17*, 59–81.