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The main aim of this thesis was to examine interviewing techniques for child witnesses. Specifically, the effectiveness of the cognitive interview was investigated. In sum, the results show that the cognitive interview can be used when interviewing child witnesses, both after short and long retention intervals. Also, well in line with previous research, it is confirmed that children are sensitive to interviewer interference and that rapport building is crucial when interviewing child witnesses.

Anneli S. Larsson conducts research on interviewing techniques that facilitate children's memory. She has a strong interest in promoting and protecting the rights of vulnerable groups such as abused and neglected children. Her research involves assessment of factors that influence the accuracy and completeness of child abuse victims' reports. Her long term intention is to work for a thorough and systematic implementation of relevant research findings within concerned authorities, establishments and organisations.

Interviewing child witnesses

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Abstract

The general aim of this thesis was to examine interviewing techniques for child witnesses. Specifically, the effectiveness of the cognitive interview with children was investigated. In addition, the self-reported practice of police officers who interview child witnesses was explored. The principal objective of **Study I** was to explore how the cognitive interview affects children's recall after a long delay. In **Study II** the effects of the cognitive interview on the validity of a reliability assessment technique, the Reality Monitoring technique, was assessed. **Study III** examined whether the cognitive interview would be improved by physical reinstatement of sensations. **Study VI** investigated the self-reported practice of police officers who interview child witnesses in the United Kingdom, the Netherlands, and Sweden. In study I, 10-11-year-old children (20 girls and 29 boys) saw a film. Half of the children were interviewed after seven days and half after six months. At each test session, half were interviewed according to a cognitive interview (CI), and half according to a structured interview (SI). The children in the CI condition recalled significantly more correct information than the children in the SI condition, both after seven days and after six months. Study II examined whether the Reality Monitoring framework is a valid method for assessing the reliability of statements obtained from a CI. Fifty-eight 10-11-year-old children (27 girls and 31 boys) participated. One-third watched a film and were interviewed according to a CI and two-thirds made up a story and were interviewed according to either a CI or a SI. The CI statements based on observed events contained more visual, affective, spatial and temporal information compared to CI statements based on imagined events. The CI statements based on imagined events did not differ from the SI statements based on imagined events. Considerable developmental work is needed to turn the Reality Monitoring technique into a valid reliability assessment technique. In study III, 6-7-year-old children (38 girls and 37 boys) were presented with a smell, a song and a taste while watching a live event. Each child was allocated to one of five interview types; the CI, the SI, the CI while physically reinstating either the same smell, sound or taste as was present during the live event. No significant differences were found between the interview types. In study IV, 230 police officers (159 women and 71 men) from the United Kingdom ($n = 59$), the Netherlands ($n = 49$), and Sweden ($n = 123$) completed a questionnaire on how to interview child witnesses. Significant differences were found between the three countries. Despite possible discrepancies between actual and self-reported practice, the results support that adequate training being available to practitioners is crucial. In sum, this thesis demonstrates that the cognitive interview can be used successfully with children, both after shorter and longer delays. The results also indicate that children's recall is sensitive to interviewer interference. Finally, practitioners and researchers are advised to work together to increase the benefits of future research on interviews with children.

Keywords: Children's Recall, Child Witnesses, Interviewing Techniques, Cognitive Interview

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Contents

Interviewing Child Witnesses

It is well established in the literature that certain factors should influence how children are interviewed. Accordingly, researchers have proposed a concept, *suggestibility*, which refers to the degree to which a person is influenced by a range of psychological factors when encoding, storing, retrieving and/or reporting information. The present thesis explores such factors which are relevant when interviewing child witnesses. The term *witness* should here be taken to mean both victim and non-victim witnesses. The particular order in which these factors are introduced progresses from general to more specific characteristics of the interview. The intention of this is to make the material as accessible and comprehensible as possible. The factors will be introduced in the following order: memory, language and social factors.

The sections presented on memory are encoding, storage, and retrieval. This is followed by memory development, delayed recall, multiple retrieval attempts, scripts, source monitoring, and reality monitoring. The next part, which deals with language, explores phonology, vocabulary, syntax, pragmatics, and sociolinguistics. This is followed by social aspects of the interview such as social pressures, willingness to comply, repeated questioning, misleading questions, props and interviewer behaviour.

Before one particular interview technique, the cognitive interview, is introduced, aspects of interviewing child witnesses about forensically important events are investigated. Here, the focus is on how children come to report forensically significant events, such as a crime or abuse. The third part of the thesis examines the cognitive interview. First, the technique is anchored in a section on the theoretical principles of the technique. After that, the basic components are described. This is followed by a description of some field modifications of the cognitive interview. Before research findings on the cognitive interview and children are presented, general empirical findings are considered.

The last part of the thesis comprises a summary of four empirical studies. The general aim of these is to examine interviewing techniques for child witnesses. The first study explores how the cognitive interview affects children's recall after a long delay. In the second study, the effects of the cognitive interview on the validity of a reliability assessment technique, the reality monitoring technique, is assessed. The third study examines whether the cognitive interview can be improved by physical reinstatement of sensations. In the fourth study,

the self-reported practice of police officers who interview child witnesses is investigated. The discussion of the empirical studies is then followed by some concluding remarks.

Memory

There is nothing in the scientific literature that proves that if a child incorrectly remembers one aspect of an event, s/he will be incorrect about everything else as well. Memory is not static. It changes in response to many factors, and it is common for both children and adults to accurately report one detail but not another (Ceci & Bruck, 1995). This means that some inconsistency in recall is normal, and no one should routinely dismiss testimony just because the child cannot recall the answer to every question that an interviewer asks. Anyone who expects a child to be able to recall the answer to every question does not understand this fundamental aspect of human memory; it is selective (Howe, 1999). Also, memory is a reconstructive process, and both children and adults work actively in order to retrieve and organise memory traces (Baddeley, 1997). That is, memories are not passively recorded, then not necessarily stored in their natural form in our brains, and not necessarily mechanically accessed in their original condition at the time of remembering. Rather, because of the constructive nature of memory, reports may be incomplete and incorrect because of a number of factors that intrude at the point of encoding of the event, during the storage of the event, or at the time of retrieval of the event (Ceci & Bruck, 1995). These processes are usually discussed in terms of a flow of information from one stage of the memory system to another. The likelihood that events from the past are remembered depends on our skill in executing a complex set of processes, initially during the event in question, then during storage, and later at the time of retrieval (Howe, 1999). The stages of the memory system: encoding, storage, and retrieval, are examined below.

Encoding

The first phase of the memory system is called encoding. This refers to the process by which a trace of an experience becomes registered in memory. There is selectivity in what gets encoded into the storage. In part, this selectivity reflects our limited attentional recourses; we cannot attend to everything at the same time. As a result we generally only attend to certain aspects of an event and ignore other aspects (Baddeley, 1997). Thus, given the limitations of the human cognitive system, not all information experienced is encoded. There

are moreover a number of factors that may influence what enters the memory system, and consequently how strongly a trace becomes encoded. For example, the interest value or salience of the events, the repetition of the original event, and the stress level at the time of encoding the original event (Ceci & Bruck, 1995).

Storage

In the second phase of the memory system, encoded events enter a short-term memory store. Not all memories survive the short-term memory's limited storage capacity, but those that do survive enter a long-term memory store. The encoded information can be transformed or lost while in storage and some factors can have a strong impact on the strength and organisation of the stored information (Howe, 1999). For example, memories can increase or decrease in strength as a function of how long they have been stored. That is, shorter delays usually result in better recall. Also, the number of times that the original event has been recalled influences the storage of memories. In some cases, repeated recall or multiple retrieval attempts strengthens the memory; at other times it weakens it (Baddeley, 1997). The influence of the length of the retention interval, or how long memories are stored, and the impact of repeated recall will be discussed in later sections.

Retrieval

The final step in remembering involves the retrieval of stored information. It is not necessarily the case that there is perfect retrieval of stored memories. In fact, there are times when the contents of memories simply are not retrievable. A variety of factors influence the retrievability of stored memories, and the nature of their influences is not static. For example, the condition of the original memory trace is important. Traces that have undergone some decay will be harder to retrieve than those that retain their original strength (Ceci & Bruck, 1995). In some cases, retrieval of a memory may be facilitated when the conditions for retrieval resemble those of encoding (i.e., the encoding specificity principle). Accordingly, when an interviewer provides cues that may reinstate the encoding context, accuracy of recall improves (Tulving & Thomson, 1973). Among other things, Geiselman and Fisher considered such principles of memory as this, when they developed the cognitive interview (e.g., Fisher & Geiselman, 1992). The cognitive interview is introduced and discussed in the third part of this thesis. Also, differences and similarities of the effects of physical and mental reinstatement of the encoding context are examined in the

third empirical study on which this thesis is based, and which is presented in the last part of this thesis.

Many constructive factors enter into the retrieval stage. For example, when asked to recall a faded event, we may use our knowledge about what *typically* happens to fill gaps in our memory. A more specific term for this phenomenon is script based knowledge, which refers to our predictions and expectations of how events in the world are sequenced and related to each other (Johnson, Hashtroudi, Lindsay, 1993). This will be further explored in later sections. In short, what we remember does not always come directly from storage. We sometimes add, delete, and shape memories of our experiences and these transformations can occur at the encoding, storage and retrieval stages. What gets retrieved is therefore rarely a direct match of the original event (Baddeley, 1997).

Memory development

Memory begins with understanding an event as it is being experienced. Children's understanding of an experience is what to a great extent will decide how the memory of that event is organised. It is therefore important to know about how children make sense of experiences when they happen (Ornstein & Haden, 2002). The complexity of children's memories increases as they grow older and hence the accounts of younger children are often briefer than the accounts of older children and adults (Goodman & Reed, 1986). Children's as well as adults' reports of remembered events can be both incomplete and incorrect. It has however been repeatedly demonstrated that when children make errors they tend to make errors of omission (i.e., leaving information out) rather than commission (i.e., reporting erroneous information) (Ceci & Bruck, 1993). The main concern regarding children's reports is in other words that they tend to be brief. One way of coming to terms with children's brief accounts that has been suggested by various researchers is to use open-ended questions. It is well established in the literature that the use of open-ended questions elicits more complete as well as accurate accounts, than does the use of focused and specific questions (Hershkowitz, Lamb, Sternberg & Esplin, 1997).

What are open-ended questions? There is no generally recognised manner in which questions are classified. However, Poole and Lamb (1998) propose that open-ended questions are questions that require multiple-word responses. Examples of such would be a free recall question "Tell me about what happened" or a more focused question "Tell me all the things you remember about his

appearance". Specific questions, such as "What colour was the car?" focus on detailed features and can on the contrary often be answered with a single word. When the ways in which you can answer a specific question are restricted, the question is often referred to as a closed question. Other examples of such are multiple-choice and yes-no questions. In most cases, open-ended questions relate to wider themes than do specific questions, but open-ended questions can also be relatively focused. An example of a focused open-ended question is "Tell me about her clothes". Furthermore, open-ended questions make it possible for children to choose which part of an event they want to talk about. For example, "Tell me about the car" is more open than "What colour was the car?" As a result, even if children's accounts may be brief when they are asked to describe events from free recall they are more likely to be accurate. Also, children often remember more information if they are asked for additional details with open-ended questions, such as "And then what happened?" However, if the interviewer asks leading questions, such as "Was the house red?" the risk of errors increases considerably (Dent, 1986). Consequently, experts and professional groups recommend interviewers to rely as much as possible on open-ended questions, because open-ended questions elicit more complete and accurate responses than do focused and specific questions (Sternberg, Lamb, Esplin, Orbach & Hershkowitz, 2002). Because children are often interviewed a long time after experiencing an event, the effects of retention intervals, or delay, on children's recall will be explored in the next paragraph.

Delayed recall

A general finding is that children interviewed after longer delays report less correct and more incorrect information than children interviewed after shorter delays (Flin, Boon, Knox, & Bull, 1992). Correspondingly, the proportion of correct information recalled relative to the total amount of information recalled (i.e., accuracy) has been found to decrease over time. This decline has however been found to vary as a function of age, the types of questions asked, as well as the salience of the event. In general, because both children and adults start to forget shortly after an event, it is usually best to interview as soon as possible after a witnessed event (Brainerd & Reyna, 1990). In addition, when recall is delayed it is particularly important to avoid specific questions. This is so because children are less likely to remember specific details after delay, but nonetheless they often try to answer specific questions (Poole & Lamb, 1998). Though it is not unusual that a long time passes before a witness is interviewed, few studies have investigated the effects of different interview techniques on

children's recall after long retention intervals. Therefore, the main question under investigation in the first empirical study on which this thesis is based was whether the positive effects of the cognitive interview hold after a longer delay. This study is presented in the last part of this thesis. In addition to being interviewed after longer delays, children are often interviewed more than once about one specific event.

Multiple retrieval attempts

Memories can increase or decrease in strength as a function of the number of times that the original event has been recalled. In some cases, multiple retrieval attempts strengthen the memory; at other times it weakens it (Baddeley, 1997). There are different types of repeated questions. For example, questions can be repeated in one interview or in different interviews. The impact of repeated questioning varies depending on the timing of repetition and the type of questions repeated (Poole & Lamb, 1998). For example, multiple retrieval attempts can be valuable because children report different details in different interviews. Thus, repeating open-ended questions can elicit new information (Howe, Kelland, Bryant-Brown & Clark, 1992). Also, repeating open-ended questions can delay the loss of information that otherwise occurs naturally with time (Flin et al., 1992). Furthermore, children might learn how to communicate memories through repeated interviewing. This might ultimately mean that they later need fewer specific questions to relate events fully (Hudson, 1990).

Even if it can be advantageous to use multiple retrieval attempts, results from previous research are somewhat ambiguous. Indeed, there is no consensus on whether interviewers should be restricted to one interview or be allowed to gather evidence in several interviews. In sum, multiple retrieval attempts can increase the accuracy of children's reports and give interviewers a second chance to clarify children's accounts. However, because children might be suggestively interviewed between interviews (for example through conversations with friends, parents or other adults) repeated suggestive interviews can decrease accuracy (Memon & Vartoukian, 1996). In any case, because records of consistency of reports and the techniques used to obtain them is often crucial for example when assessing the reliability of statements, researchers highly recommend videotaping all interviews (Bull, 1992; Bull, 1996). Just as the interview may be carried out more than once, the witnessed event may also reoccur. The reoccurrence of events might lay the ground for the development of so called scripts or scripted knowledge, which is explored next.

Scripts

Script based knowledge refers to our expectations of how events in the world are sequenced and related to each other (Schank & Abelson, 1977). Scripts are used to help us know how to act in certain situations and remember important features of reoccurring events. We develop scripts in memory that represent commonly experienced events, such as catching a bus or going to a restaurant (Nelson, 1986). For example, our script for going to a restaurant may include the expectation that the waitress first shows us to a table, gives us a menu, takes our order, followed by eating, and then hands us the bill. Scripts lead to the generation of expectations and when these expectations do not match what actually happens in a situation, the result can be that scripts lead to erroneous reconstructions of what happened in the specific event (Ceci & Bruck, 1995).

Scripts develop with age, but even very young children possess scripts for familiar events. These scripts will influence the way they reconstruct past events. Scripts can be effective reminders for activities, but they can also lead to erroneous filling in missing or expected activities. The relationship between age, scripted knowledge, and recall is complex, and it has been suggested that, as children grow older, they become better able to tag unexpected events and to note that they are special (Nelson, 1986). Because younger children are more likely to incorporate one-time special events into their scripts, they do not give very detailed accounts about these events when interviewed. Also because children are often unaware of the level of detail required in an interview, they tend to provide scripted accounts. In order to avoid these brief scripted accounts, the interviewer should instruct the child to describe specific incidents (e.g., "Tell me everything that happened the last time…") and motivate the child to be maximally informative (Milne & Bull, 1999).

Scripted knowledge can have more negative consequences in the recall of older children and adults than on that of younger children. Older children and adults may make more false inferences about events that were not witnessed but are part of their scripts (Ceci & Bruck, 1995). Because younger children's scripted knowledge is sometimes insufficient this might not happen to such a great extent to them. For example, Lindberg (1991) erroneously told both younger and older children that the film they were viewing depicted cheaters. Older children were more likely to report more cheating than were younger children. The younger children's limited cheating script made them less prone than older children to the erroneous suggestion. In conclusion, when events are freely recalled, most people report the event in the order of which it took

place. When recalling in this way people use their script knowledge to help them recall the particular event. This results in the recall of information that is consistent with the script. Consequently, script inconsistent information that did occur (i.e., information not in line with the script) may not be recalled (Geiselman, 1987). Geiselman and Fisher considered this when they developed the basic components in the cognitive interview which will be further explored in later sections of this thesis. In sum, scripted knowledge may lead adults as well as children to make false inferences. Something else that might be confusing when trying to remember experienced events is not knowing the origin of remembered information. This will be the scope of the next section.

Source monitoring

Source monitoring refers to the cognitive processes by which information from memory is attributed to particular origins or sources in our past experiences (Johnson et al., 1993). These processes are important to us, because they help us validate our memories. Errors in source monitoring can lead us to report that we experienced events or saw objects that we only heard about, saw on television, or imagined (Lindsay, 2002). Children as well as adults are more likely to make source monitoring errors if the sources are similar or if memory information is incomplete. Also, children sometimes confuse memories when the sources are similar or the memory traces have degraded (Johnson et al., 1993; Lindsay, Johnson, & Kwon, 1991). Even if source monitoring accuracy has been found to vary, it is generally more difficult for children, when compared to adults, to determine whether the obtained information originates from own experiences or from other sources. However, children who do remember the source of their knowledge may nevertheless describe events they have only heard about from adults (Poole & Lindsay, 1995). They might do so because they view the interview as an opportunity to demonstrate their knowledge. It is therefore important that interviewers take special care to clarify the purpose of their questions. Also, because children may come to believe that they actually experienced events that were only mentioned by the interviewers, it is important that the interviewer does not talk about specific names, objects, or actions before that information has been brought up by the child (Ceci & Bruck, 1995).

In sum, people can confuse imagined events with real events. This suggests that adults and children can remember experiencing events even when they were only imagined (Johnson & Raye, 1981). So, is it possible to distinguish between memories of imagined and real events? One way to address questions

of reliability is to use a technique called Reality Monitoring (RM) which will be explored below.

Reality monitoring

The fundamental assumption behind the reality monitoring approach is that memories based on perceptual processes differ from memories based on internal processes (Johnson, Hashtroudi & Lindsay, 1993; Johnson & Raye, 1981). Memories of real events are assumed to contain more perceptual information, contextual information, and affective information. In contrast, memories based on imagination or fantasies are derived from an internal source and are expected to contain more cognitive operations such as thoughts and reasoning.

Distinguishing memories of real events from memories of imagined events is of particular importance when assessing the reliability of children's testimony (Davies, 2001; 2004). Children's statements based on real events and children's statements based on imagined events have been found to be successfully discriminated by raters trained in the RM technique (Vrij, Akehurst, Soukara & Bull, 2004). The RM technique will be further investigated in the second empirical study on which this thesis is based. However, because children have more difficulty in differentiating between experienced and imagined events, when compared to adults, it has been proposed that a different subset of RM criteria may be valid for children vs. adults (Sporer, 1997; 2004) and that the discriminatory power of some criteria may possibly vary between children and adults (Alonso-Quecuty, 1996). It has even been suggested that the RM technique is possibly less valid for children's statements (Vrij, 2000). Age differences should be considered when assessing the validity of the RM approach (Masip, Sporer, Garrido, & Herrero, 2005).

High-quality interviews are essential when assessing the reliability of both children's and adult's statements (Lamb, 1998). This is addressed in the second empirical study on which this thesis is based. The aim of this study was to evaluate whether the reality monitoring framework could be trusted to assess the reliability of statements obtained by the use of a cognitive interview. This study will be presented in the last part of this thesis. Among other things, the quality of an interview is dependent on what the interviewer says, when she/he says it and how it is said. This has been highlighted in research on high-quality interviews. Indeed, communication may fail because adults misunderstand children's speech, interject new information into the conversation, use words that children do not understand, present multiple questions without waiting

for a response, or use linguistic forms that are hard even for adults to comprehend. Skilled interviewing consequently requires knowledge of language as well as knowledge of children's language level.

Language

When children are interviewed, they are asked to transform their memories of an event into words. Then they are instructed to communicate these verbally according to often unfamiliar sociolinguistic principles. Children and adults have been found to differ in phonology, semantics, syntax, and pragmatics. These aspects are further discussed below. Adult-like communicative competence is not fully developed until 10-12 years of age. Until then, miscommunication can hinder the elicitation of reliable information from children. This can be understood through the study of communication, and specifically through the study of language.

The study of language can be divided into four major topics: phonology, semantics, syntax and pragmatics. Also, the importance of culture on conversational conventions, or sociolinguistics, has been emphasised as influential by many researchers. Phonology has to do with language sounds and the rules for combining sounds. Semantics involves the acquisition of the meaning of words, which is more commonly referred to as vocabulary. The rules for combining words or their equivalents meet under the term syntax. Pragmatics focuses on the social functions for language, and aim to study language in social contexts and the practical uses of language and its effects on other individuals. Phonology, semantics, syntax, pragmatics, and sociolinguistics will be examined in the sections below.

Phonology

Communication can break down because an interviewer takes a child's productions literally instead of verifying their intended meaning. A practical example regarding phonology is when interviewers then do not understand the child. When they suspect that mispronunciation is causing confusion, the first rule is to avoid suggesting a specific interpretation. Second, it may be useless to repeat the utterance and ask the child for verification. Instead, it is better to ask the child to repeat the word or phrase and follow up with a series of questions that might clarify what the phrase means. The child's articulation is furthermore a major issue regarding phonology. It is helpful to design initial rapport-building questions that for example ask the child to identify some pictures that illustrate

problematic sounds. By doing so, the interviewer gets a chance to elicit information about systematic mispronunciations (Poole & Lamb, 1998).

Vocabulary

On the subject of vocabulary, children learn the meaning of words over a long period of time. They might use words that they do not understand the full adult meaning of. Children as young as 5 years of age might understand common prepositions such as *up* and *down*. Temporal terms such as *before* and *after* can, however, cause problems for younger children. Also, younger children are very limited in their ability to identify days or times accurately. Interviewers should thus examine children's understanding of different words prior to the interview (Ceci & Bruck, 1995).

Syntax

Adults often put too much information into utterances by using complex sentences or questions with more than one verb, such as "Did your sister, who was watching, play with you?" This might be difficult to understand for both adults and children. Instead, the interviewer should keep the subject and main verbs together at the beginning of the question (e.g., "Did you laugh when you played with your sister?" rather than "Did your sister, when she was playing with you, make you laugh?"). Moreover, questions do not have to be long and complex to be confusing. Short questions too can be difficult to answer if they contain more than one concept. Such questions are often referred to as multiple questions. An example of such a question is "Do you remember telling your sister that you walked home from school yesterday?" The child might answer *no* because she/he doesn't remember telling, or because she/he didn't walk home from school yesterday. Clearly, interviewers should avoid using multiple questions. Also, the interviewer should give only one piece of information at a time, allow for many pauses during the interview so that the child has enough time to answer, and take time to formulate questions carefully. Also, both children and adults find it easier to understand more direct questions, when compared to questions that include a negative, such as "Did she ask you not to go to school?" (Perry, McAuliff, Tam, Claycomb, Dostal, & Flanagan, 1995).

Tag questions are questions that transform declarative sentences into questions by adding a request for confirmation at the end. Such questions often include negatives, such as "He bought you a present, didn't he?" Correct answers to negatives and tag questions are arbitrary and difficult to fully comprehend for adults as well as children. Because negatives in general, and negative tag

questions in particular, are so linguistically complex, they should be avoided. Positive tag questions, such as "You had breakfast before coming here today, right?" imply that the speaker would prefer a particular answer, which makes them very suggestive. They should therefore not be used when interviewing children.

Pragmatics

In addition to developing linguistic competence by mastering phonology, vocabulary and syntax, children also learn to adapt their language to the demands of the situation. Pragmatics is the study of language in social contexts where conversational competence has a key role. Many issues concerning pragmatics and conversational competence are highly relevant in interviewing situations. For example, younger children are less likely to indicate when they shift topics, than are older children and adults (Gleason, 2004). During the course of an interview the interviewer should seek clarification and restate the topic of conversation. Because topic coherence develops gradually, this is especially important with younger children. When relating utterances to those of the conversational partners, young children use a variety of strategies. For example, many children often repeat utterances addressed to them. Interviewers should then keep in mind that these utterances are not affirmations. Instead, children may repeat the conversational partner's prior utterance, because they are confused. Children can not differentiate between literal and intended meaning until 6 years of age or later (Gleason, 2004). This may cause children to fail to respond literally and instead assume that the adult expected them to provide some specific information. Interviewers can benefit from understanding that theses errors can be the result of misunderstanding one's role in the interview rather than from memory failure (Poole & Lindsay, 1995). Moreover, young children do not always notice if a speaker says something ambiguous, and even if they do, they do not tell the speaker that they are confused. Sophisticated strategies such as altering an utterance if a conversational partner is confused or asking for clarification when one is uncertain about the meaning of something during a conversation develop gradually. Interviewers should thus instruct children to ask for clarification and try to avoid ambiguity in questions (Ceci & Bruck, 1995).

Sociolinguistics

Many aspects of sociolinguistics are relevant during the course of an interview. Interviewers who only are familiar with one single culture can however fail to

realise how much in a conversation is culturally determined. Overall, if interviewers are not aware of the cultural norms of the children with whom they are interacting, they should try to avoid inferring body language or other culturally prescribed features of the conversation (Stockwell, 2002). In addition, children try to comply with perceived demands, social and cultural contexts of the interview situation. Interviewers benefit from appreciating this as well as other factors known to influence children's recall. Until this point, the focus has been on cognitive factors that are crucial when interviewing children. Now, social factors highlighted as influential when interviewing children will be considered.

Social Factors

Based on of what we know about the social development of children, it is clear that social factors should play a large role when interviewing children. Factors with social features that will be discussed below are social pressures, willingness to comply, repeated questioning, misleading questions, and props.

Social pressures

Garven, Wood, Malpass and Shaw (1998) evaluated the effects of combining suggestive questions with different types of social pressures. They identified *social incentive techniques* from authentic child interviews, and present the following five social incentives: other people (saying that other children had already told), positive consequences (giving praise or approval), negative consequences (criticising a child's statement), already answered (repeating a question that the child had already answered), and inviting speculation (comments such as "Let's figure out what happened"). They found that children agree with misleading questions at a substantially higher rate when suggestive questions were combined with social incentives. Their findings highlight many important features that are crucial for the social context in which child interviews take place. Among other things, the impact of misleading questions is stressed, as is repeated questions. They also emphasise the importance of characteristics of the interviewer (Garven et al., 1998), which will be discussed next as well as in the paragraph Interviewer behaviour, and in the section on Forensic interviews with children.

Children make fewer errors when interviewers are generally supportive, and a supportive atmosphere during the interview has also been found to reduce the negative effect of misleading questions (Goodman, Bottoms, Schwartz-Ken-

ney, & Rudy, 1991). In short, children are sensitive to the social pressure of being interviewed by authority figures. Hence, interviewers should not over-emphasise their authority in relation to the child (Ceci & Bruck, 1995). Other concerns regarding the relationship between an adult interviewer and a child interviewee is the child's willingness to comply. This is discussed in the next section.

Willingness to comply

More constraints exist in child-adult interactions than in adult-adult interactions (Ceci & Bruck, 1995). For example, when adults engage children in interviews, the interaction usually ends when the adult wants it to end. Children are rarely allowed to end such interactions by saying, "I am not talking about this any more" or "Stop this, you are bothering me". When children are interviewed, they are required to continue until the adult decides to terminate. In comparison with adults, it is much more difficult for children to say, "Stop questioning me, I already told you that I can't remember" or "I already told you that nothing happened". Saying such words is more available to adults. This probably occurs because adult interviewers have such a high status in the eyes of children, and children see adults as trustworthy and truthful and rarely question adults' statements or actions (Ceci & Bruck, 1995).

On most occasions, children try to comply with what they perceive to be the adult's wishes. This makes children likely to accept the suggestions of the interviewer, no matter how bizarre the suggestions, just because they trust the interviewer and want to please her or him (Hughes & Grieve, 1980). In short, the child's motivation to be completely accurate and to comply with the interviewer plays an important role for the outcome of an interview, and is thus important for the interviewer to recognise (Ceci & Bruck, 1995). Moreover, interviewers should acknowledge that repeated questioning (i.e., when the child is asked the same question within an interview) may influence children's reports, which is further explored below.

Repeated questioning

Repeating open-ended questions within an interview is often harmless, but repeating closed or specific questions is risky. This is so because closed or specific questions tend to elicit inconsistency and speculation (Poole & White, 1991; 1993). Indeed, Memon and Vartoukian (1996) found that children's accuracy increased when interviewers repeated open-ended questions within an inter-

view but decreased when interviewers repeated specific questions. Moreover, the number of incorrectly reported items has been found to increase as the interviewer moves from free recall to open-ended questions (or for that matter, from open-ended questions to closed) (see, e.g. Dent and Stephenson, 1979). In sum, the repetition of closed questions within interviews has been found to have a particularly negative effect, while the repetition of open questions may not. This is so because open-ended questions invite children not to contradict their earlier responses but to elaborate upon them (Memon & Vartoukin, 1996). If a child has answered a question, yet it is later repeated, the child may conclude that her or his first answer was not what the interviewer wanted (Ricci, Beal, & Dekle, 1996). When the question is then repeated the child may consequently produce a different answer.

Furthermore, accuracy undoubtedly declines when misleading questions are repeated within an interview as well as in subsequent interviews. This is specifically true regarding younger children. When interviewing children repeatedly, the interviewer should be aware that any suggestions made to the child in an earlier interview might carry over into the child's recall when repeatedly interviewed. The interviewer should thus be cautious when deciding to repeat a question within an interview. If an interviewer repeats a question in identical format, it may be of little use other than to put pressure on the child to reply with something. Instead, the interviewer can rephrase the question into a format more likely to be understood by the child. Also, the reasons for repeating questions should be made very clear to the child (Ceci & Bruck, 1995).

Additionally, it is vital that the interviewer makes it clear to the child that she/he is not expected to remember everything, and that "don't know" or "don't understand" are acceptable responses (Milne & Bull, 1999). Interviewers as well as researchers are continuously searching for non-suggestive ways to facilitate children's recall. For example, the impact of misleading questions on children's events reports has received considerable attention and is thus the scope of the following paragraph.

Misleading questions
In early research on the effects of misinformation, adult participants witnessed an event and then answered questions about the event. The variable of interest was the extent to which the wording of initial questions influenced witnesses' accuracy on subsequent questions. For example, when initial questions include objects that did exist in the event compared to initial questions that mention

objects that were not in the event, witnesses are more likely to later report having seen the mentioned objects that were not in the event (Loftus, 1975). It was later established that asking misleading questions also influences children's accounts and that misleading questions can influence children's answers to later questions that are not explicitly misleading (Ceci, Ross, & Toglia, 1987). Hence, interviewers should understand that even if children are more likely to give accurate reports to open-ended questions in non-suggestive interviews, there is no guarantee that children's accounts will be uncontaminated. This is specifically so if they have been exposed to misinformation at an earlier stage (Milne & Bull, 1999).

Problems are moreover likely to occur if interviewers state their opinions or make evaluative comments and then ask misleading questions. For example, Lepore and Sesco (1994) found that if children are asked misleading questions followed by accusatory statements ("They weren't supposed to go there … that was bad"), they are likely to make errors. Interviewers should thus avoid offering their own evaluations during interviews because children are likely to produce misleading reports if they are questioned by opinionated interviewers (Poole & Lamb, 1998). Researchers are continuously investigating techniques that minimise children's misleading accounts. For example, the impact of props on children's events reports has received considerable attention, which is discussed in the following sections.

Props

The term *prop* is generally reserved for object cues. Props can be real items, or small-scale representations (e.g., toys), or dolls (Milne & Bull, 1999). When using props in interviews with children, it is important to recognise that if props are present during the interview, the fantasy world or general knowledge of some children might be stimulated. This might cause children to report incorrect or confabulated information. Second, the presence of irrelevant props could lead the interviewer who selected the cues in the first place to confirm her or his prior beliefs (Poole & Lamb, 1998).

Four general conclusions can be drawn from studies on props. First, props often help children report additional information. Second, some of this additional information is erroneous. Third, real objects facilitate accurate recall more effectively than do toys. Fourth, the use of props increases age differences in the completeness of children's recall. In sum, because older children benefit more from cues and props, when compared to younger children, differences

between younger children will be greater when using props (Poole & Lamb, 1998).

There are many issues regarding props that remain unsolved (Everson & Boat, 2002). For instance, the relative efficacy of various anatomical dolls, the appropriateness of different types of questions with props, and the possible role of interview props in encouraging fantasy and confabulation in young children (Everson, 1997). Interviewers should thus use props only to encourage children to expand on information that has already been provided by the child (Poole & Lamb, 1998). Other examples of behaviour worth striving for as an interviewer are highlighted below.

Interviewer Behaviour

Ways in which interviewers should and should not behave have been considered by many researchers and recommendations for child interviewers can be found in the literature. For example, it is important that interviewers do not make comments such as "Well done!" to a child during the course of an interview. This may be interpreted as selective reinforcement of specific types of answers. Also, the interviewer should try not to ask questions about why someone did something, or why the child behaved in a particular way. The child may then feel somewhat responsible for what happened, and that is not suitable. Moreover, the interviewer should not use words like "pretend" or "imagine". This is because the child might then think of the interview as a game, where one should fantasise. Furthermore, the interviewer should never guess what the child says. Instead it is suggested that the interviewer asks the child to repeat inaudible comments by saying "What did you say?" or "I couldn't hear that, can you say that again?" Also, the interviewer should not use reinforcements for talking. The child's answer may then be considered less credible because the child could have answered as such just to end the conversation (Pool & Lamb, 1998).

There is a growing interest in the effect of social support on children's eyewitness reports, and quite a few studies have investigated the possible effects of the interviewer's social behaviour. This research has for example examined children's obedience to authorities (Ricci et al., 1996) and the effect of social support on the accuracy of responses to questions (Bull & Corran, 2002). It is now well established in the literature that interviewer manner and social support affect witness recall (Memon, Vrij, & Bull, 2003). Social support is

often conceptualized as a form of interaction or communication that fosters a feeling of well-being in the target and can be operationally defined in various ways (Burleson, Albrecht, & Sarason, 1994). Perceived support of all kinds often lead to better physical and emotional health and more fulfilling social relationships (Sarason, Sarason, & Pierce, 1990). Moreover, the settings that child witnesses encounter can be either socially supportive or intimidating. For example, children may be questioned by a cold, intimidating interviewer or by a friendly, warm person (Davis & Buttoms, 2002).

Further, children's speech has been found to be related to interviewer behaviour. However, more research is needed to investigate what variations in interviewer behaviour may cause children to demonstrate a powerful or powerless speech style (Memon et al., 2003). What has been established so far is that when a child demonstrates a powerful speech style, this probably has a positive impact on juries and relevant professionals (Ruva & Byrrant, in submission).

In sum, studies on interviewing provide clear evidence that children's reports are influenced by a variety of factors. It is moreover apparent that linguistic and memorial difficulties do not make children incompetent interviewees (Aronsson, 2004). Nevertheless, obtaining valuable information from children requires understanding and realistic awareness of children's capacities and limitations. The aspects of the interviewee situation discussed so far are somewhat general and applicable in most child interviews. Aspects that have been emphasised by researchers as specifically important when interviewing children about forensically important events will be taken into consideration in the next section.

Forensic Interviews With Children

How do children come to report forensically significant events, such as a crime or abuse? Some children make spontaneous disclosures and deliberately tell adults about the event. Others accidentally refer to an event during a conversation. In other cases, an adult has a suspicion that an event may have occurred, even if the child has never confirmed it. Whether children make spontaneous or accidental disclosures, or whether adults have a suspicion that the child has experienced some event, the next step involves interviewing the child about the alleged or suspected event.

Crimes of abuse against children have been alleged with alarming frequency in the last two decades and as a result the number of children brought into the legal system is growing (Barnombudsmannen, 2004). As a result, there is increasing concern over their ability to provide credible testimony (Cederborg, 2004; Gumpert, 2001; Sjöberg, 2002). European Human Rights legislation confirms that children have the right to access the court system and to have their evidence heard (Davies, 2004). Unfortunately, crimes of abuse are very difficult to investigate (Christiansson & Granhag, 2004). One of the reasons for this is that the evidence often consists only of the victims' and the suspects' accounts of the alleged events, which consequently has increased the importance of eliciting and evaluating information provided by children (Esam, 2002; Granhag, 2001). Many researchers have recognised this and studied the capacity of children to provide reliable and valid information about forensically significant events (Christiansson, Engelberg, & Holmberg, 1998; Lamb, Sternberg, & Esplin, 1994; Lamb, Sternberg, Orbach, Hershkowitz, & Esplin 1999).

Even if there is consensus in the literature that children are more likely to remember personally meaningful and salient, as opposed to meaningless, items and events, considerable controversy persists concerning the effects of increased arousal or stress on the accuracy of children's memory (Engelberg & Christiansson, 2002). Some researchers argue that stress can improve children's accuracy, whereas others report that arousal either reduces accuracy or has little effect. Unsurprisingly, the impact of stress and trauma on memory has been argued to have particular bearing when children are asked to recall incidents of maltreatment, which is examined below.

Children's Reports of Maltreatment

When dealing with incidents of maltreatment, certain aspects are important to keep in mind. For instance, not all incidents of abuse are at the time of the abuse perceived as painful or traumatic to the child. This implies that the facilitative effects of arousal on the process of encoding information cannot be assumed. Also, even if the event itself was not stressful, the interview may be perceived as such by the child. Third, different types of memory encoding, storage and retrieval might be influenced by stress in different ways (Lamb et al., 1999). One should also be aware of the problem of the definition of stress that occurs in this literature. While clinical descriptions of stressful memories focus on highly traumatic events, such as sexual abuse (Terr, 1991), experimentally controlled studies focus on less stressful events such as painful medical procedures (Ornstein, 1995). In the following sections memories of stressful and traumatic experiences will be considered.

Under some conditions stress seems to enhance memory, but under other conditions stress can hinder memory (Engelberg & Christiansson, 2002). Memory can be enhanced at moderate levels of stress, while extreme levels of stress will hinder memory (Easterbrook, 1959). Also, a single occurrence of extreme stress will be vividly and accurately recalled, but repeated stressful experiences will lead to more fragmentary memory (Terr, 1991). Different measures of stress may also give different results. When stress is measured by behavioural ratings, by hormonal measures or by physiological measures, dissimilar relationships between stress and memory are obtained (Ornstein, 1995). Thus, empirical relationships between stress and memory are difficult to assess. However, even if the results from this research are indistinct, an emerging conclusion is that stress does not hinder memory overall, and may even enhance certain aspects of memory (Fivush, 2002).

Only a few comparisons have been made between children's memories of stressful events and of more emotionally positive events. This is indeed a limitation of existing data. However, Fivush, Hazzard, Sales, Sarfati, & Brown (2003) asked 5-12-year-old children to recall both emotionally positive and emotionally negative experiences. Overall, children recalled the same amount of information about both types of events, but they focused on different kinds of information. The results from this study suggest that emotional valance may lead to different attentional focus. For positive events, the focus is on what is happening externally in the world, but for negative events the focus may turn inward to what one feels and thinks about the event.

Given the robust findings on the role of adults in guiding and structuring young children's memories, a critical question concerning memories of trauma becomes the ways in which these kinds of experiences are discussed. Even if talking about traumatic experiences seems to be an effective means for coping, not much research has examined how adults talk about stressful or traumatic experiences with young children. Some studies have however found that talking about and organising traumatic experiences is beneficial.

For example, Goodman, Quas, Batterman-Faunce, Riddlesberger and Kuhn (1994) assessed young children's memories of a VCUG procedure. A VCUG (Voiding Cystourethrogram) is a test that uses contrast liquid and x-rays to study the urinary system. During the procedure, a urinary catheter is inserted through the penis in males and through the urethra in females. The catheter is used to fill the bladder with contrast liquid. X-ray pictures are then taken, before the catheter is removed. The VCUG procedure is of particular interest to memory researchers because the procedure involves painful, forced genital contact, and thus presents a physical approximation to sexual assault on a child (Pezdek & Taylor, 2002). Goodman et al. (1994) found that children of mothers who reported having more open and emotionally supportive conversations about this event recalled the event more fully and more accurately than children whose mothers reported not talking about it with their children. The opportunity to talk about events, both positive and negative, appears to help children form more accurate and more organised memories of experienced events (Fivush, 2002).

Abuse often happens within the family, in which it is implicitly or explicitly silenced. If children try to discuss the abuse, they are often ignored. However, should the abuse be discussed, it is often framed in such a way as to change its meaning or interpretation (Fivush, 2002). For instance, adults might tell children that the sexual abuse is some kind of a game (London, Bruck, Ceci, & Shuman, 2005). Because children's process of forming and organising memories are dependent on discussions with adults, this process might be negatively affected. Children can indeed recall abuse, but memories of abuse may be more fragmented than memories of events that are openly discussed (Pipe, Lamb, Orbach, & Esplin, 2004).

Because abuse often reoccurs, memories of it tend to be differently organised compared to memories of events that only happen once. The more distinctive an event is, the easier it is to recall and access. When an event occurs more

regularly, the memory of it becomes more schematic. As previously discussed, what usually happens is likely to be remembered and specific details can be lost. Memories of repeated abuse may thus be less detailed than memories of a single traumatic event (Powell & Thomson, 2002). Not only might the abuse be reoccurring, but children are also often interviewed several times during the course of an investigation (Whitcomb, 1992). Thus, the impact on retrieval attempts has a particularly central role in forensic contexts. Because repeated suggestive interviews are likely to degrade accuracy, it is specifically important to interview children in a non-suggestive manner when having to do so repeatedly (Ceci & Bruck, 1995).

In sum, memories of stressful events are highly influenced by the degree to which the experiences have been discussed with others. Even if children are capable of recalling both stressful and not so stressful experiences, all events are differently encoded, stored and retrieved. Hence, because forensic and non-forensic interviews are indeed different and sometimes even contradictory, one should be careful when formulating implications from experimentally controlled studies to forensic settings.

Forensic and Non-forensic Interviewing

Forensic and non-forensic interviewing differs in many aspects. There are two general principles that characterise forensic interviewing. First, forensic interviews are characterised by a hypothesis testing rather than a hypothesis-confirming approach. Interviewers prepare by gathering information about the alleged incident and generating a set of alternative hypotheses about the sources and meaning of the allegations. When children use terms that suggest sexual touching, for example, interviewers test the children's understanding and use of those terms. Similarly, when children report information that could be inconsistent interviewers try to determine whether these events could have occurred as described. Second, forensic interviews are child centred. Although interviewers direct the flow of conversation, children should determine the vocabulary and specific contents of the conversation as much as possible. In contrast, many non-forensic interviews, such as conversations between parents and their children or between teachers and students, are adult directed, with adults suggesting events through directive questioning or offering their own interpretations of children's behaviour or reactions (Poole & Lamb, 1998).

What can thus so far be concluded regarding interviewing children? First, research on interviewing child witnesses has improved over the years, and in

contrast to older studies where children were asked to recall neutral stories or pictures, many newer studies examine the manner in which children process and recall important, personally experienced, highly salient, affectively loaded events. Second, the focus of research on children's recall has shifted from simply examining whether children are suggestible to determining under what conditions they are the least suggestible. Though much of this research has been carried out in more naturalistic contexts, this still does not mean that results are general to a particular case, and therefore general guidelines must be made with caution. Third, it is well established that younger children are capable of recalling much that is forensically relevant, and even if younger children usually report less information than older children or adults, they are not therefore less accurate. That is, younger children's reports may be more vulnerable than those of older individuals, but young children are still capable of providing accurate testimony. Many researchers, legal professionals, and child-protection specialists have recognised these issues and produced various drafts of developmentally appropriate interview protocols. One procedure for interviewing witnesses about forensically significant events that has attracted much research is the cognitive interview, which will be described below.

The Cognitive Interview

In the early 1980s there was a pressing need for an investigative interviewing technique based on established psychological findings concerning memory. To meet this need Fisher and Geiselman developed the cognitive interview (Geiselman, Fisher, Firstenberg, Hutton, Sullivan, Avetissan, & Prosk, 1984). The original goal of the Cognitive Interview (CI) was to improve the quality of police interviews with adult witnesses, and the primary aims were to increase both the quantity and the quality of information elicited from co-operative witnesses, victims and suspects. Many researchers have noted that the performance of professionals is important to consider when improving the quality of police interviews. Nevertheless, few studies have focused on the practice of professionals who interview child witnesses. Consequently, the principal research question in the fourth empirical study of this thesis was to investigate self-reported practice of police officers who interview child witnesses. As will be apparent below the cognitive interview has been modified for field settings as well as for children. Before exploring these modifications, the theoretical principles behind the technique as well as its basic components are described below.

Theoretical Principles

The CI represents the alliance of two fields of study: cognitive and social psychology. It is based on what psychologists know about the way in which memory works. It also draws upon our knowledge of how best to manage a social interaction and improve communication between interviewer and interviewee. The CI procedure initially consisted of four basic cognitive techniques for increasing the amount of information recalled. These cognitive components, which will be described below, derive from two theoretical principles: the multiple trace theory (Bower, 1967) and the encoding specificity hypothesis (Tulving & Thomson, 1973). The multiple trace theory suggests that rather than having memories of discrete and unconnected incidents, our memories are made up of a network of associations. The mental representation of an event is a collection of individual features, and there may be several retrieval paths to the encoded event. Thus, there are several means by which a memory could be cued, and at a given point in time some features of a memory trace are accessible and some are not. Information not accessible with one retrieval cue may therefore be accessible with a different cue (Bower, 1967). The encoding specificity hypothesis implies that a retrieval cue is effective to the extent that there is an overlap

between the encoded information and the retrieval cue. The effectiveness of a retrieval cue is thus determined by its similarity to the encoding operations. In other words, when the retrieval environment effectively reinstates the original encoding environment, the accessibility of stored information increases. Consequently, reinstatement of the original encoding context enhances memory. In practical terms, putting the witness back in the same state as when the event occurred increases her/his recall (Tulving & Thomson, 1973).

Basic Components

The founders of the CI, Fisher and Geiselman, suggested four mnemonics, which originate from the two cognitive perspectives discussed above: (1) the mental reinstatement of context; (2) the report everything instruction; (3) the recalling of events in a variety of different temporal orders; and (4) the change perspective technique (Geiselman et al., 1984; Geiselman, Fisher, MacKinnon, & Holland, 1985; Geiselman, Fisher, MacKinnon, & Holland, 1986).

Mental reinstatement of context

The first cognitive technique in the CI is the reconstruction of the physical and personal contexts which existed at the time an event was experienced. The interviewer instructs the interviewee to mentally reconstruct the external (physical surroundings) and internal context (subjective states-of-mind) of the to-be-remembered event. The interviewee is asked to form an image or impression of the environmental aspects of the scene and to remember feelings and thoughts. For example, the interviewer could say:

Interviewer: "Now what I would like you to do is close your eyes and take yourself back in time to the event you have described. Take your time … Think about the setting where the event took place, recall any sounds you could hear, any smells you associate with the event, try and recall the setting in which the event occurred. For example, who was there [pause]. Think about your feelings and reactions to the event [pause]. Try and recall as much about the context in which the event occurred as you can by mentally taking yourself back to that context" (Memon, 1999).

The report everything instruction

A second technique of the CI is to ask the interviewee to report everything. Interviewees are encouraged to report in full without screening out anything they consider to be irrelevant or for which they have only partial recall. The inter-

viewer thus encourages the interviewee to report all details she/he remembers even if she/he thinks the details are not important or she/he cannot remember a particular aspect of the event completely. In addition to facilitating the recall of additional information, this technique may yield information that may be valuable in putting together details from different witnesses of the same crime. For example, the interviewer could say:

Interviewer: "I would like you to tell me in as much detail as you can, I want you to include every little detail you can remember, try not to edit anything out. Just give me as much information as you can" (Memon, 1999).

The change temporal order instruction

The third component of the CI is the instruction to make retrieval attempts from different starting points. Interviewees usually feel they have to start at the beginning and are usually asked to do so. However, the CI encourages extra focused and extensive retrieval by encouraging interviewees to recall in a variety of orders, from the end, or from the middle or from the most memorable event. This instruction, like the change perspective technique, is assumed to change the retrieval description, resulting in the recall of additional details (Geisleman & Callot, 1990). This technique appears to have the same effect as asking the interviewee to make a second retrieval attempt (Memon, Wark, Bull, & Köhnken, 1997). In other words, by going through the event a second time, the interviewee comes up with some new information not reported earlier. When instructing an interviewee to recall the event in a different temporal order, the interviewer could for example say:

Interviewer: "Okay, the last thing you described is that the musician left in a hurry. Now if we start at that point and work backwards, can you describe the event to me in reverse order."

Interviewee: "Where do I start?"

Interviewer: "Well, the last thing you said was he slammed the door shut. If you start there and work backwards, what happened right before he left?" (Memon, 1999).

The change perspective instruction

The fourth CI retrieval aid is to ask for recall from a variety of perspectives. This technique tries to encourage the interviewees to place themselves in the shoes of the victim or of another witness and to report what they saw or would have

seen. The theoretical assumption is that a change perspective forces a change in retrieval description, thus allowing additional information to be recalled from the new perspective. Again the aim is to use multiple pathways to retrieval and to increase the amount of detail elicited. There are a number of concerns about the use of the change perspective instruction, in particular the possibility that it could lead to fabricated detail and confuse the witness (Memon & Köhnken, 1992). When instructing an interviewee to change perspective, the interviewer could for example say:

Interviewer: "Okay, so you've told me what you saw from where you were. Now I would like you to put yourself in the position of the victim. She was standing on the other side of the room talking to a stranger. Now put yourself in her shoes, and try to describe the scene again from her perspective" (Memon, 1999).

Field Modifications

The original version of the CI resulted in substantial gains in the amount of correct information that was elicited from witnesses without any apparent increases in errors. In light of this, and because the originators of the CI found that real-life interviewing lacked much of what the psychology of interpersonal communication deemed important (Fisher, Geiselman, & Amador, 1989), Fisher and Geiselman revised the CI for use in field settings (Fisher & Geiselman, 1992; Fisher, Geiselman, Raymond, Jurkevich, & Warhaftig, 1987). In addition to the four basic components, the revised version of the CI came to include techniques such as rapport building, focused retrieval and witness-compatible questioning.

Rapport building is an attempt to get to establish a relationship between the interviewer and the interviewee, to put the interviewee at ease and to clarify what the expectations are. An important component of rapport building is for the interviewer to *transfer control* explicitly to the witness by (a) making it clear to the witnesses that they have to do the work and (b) allowing them time to think and respond. This may facilitate the implementation of the instruction to reinstate context, as described above.

Focused retrieval implies that the interviewer facilitates the eyewitnesses' use of focused memory techniques (i.e., concentrating on mental images of the various parts of the event such as the suspect's face and using these images to guide recall). The *imaging* part of the CI usually occurs in the questioning phase of

the interview and assumes that the witness has effectively recreated the context in which an event occurred. The instruction could take the following form: "Concentrate on the picture you have in your mind of the suspect, focus on the face and describe it". In order to effectively engage the witness in focused retrieval, the interviewer needs to speak slowly and clearly, pausing at appropriate points to allow the witness time to create and respond.

Among other things, witness-compatible questioning emphasises that the timing of the interviewer's questions is crucial. Following principles of encoding specificity and feature overlap, questions should be guided by the witness's pattern of recall rather than the interviewer adhering to a rigid protocol. For example, if a witness is describing a suspect's clothing the interviewer should not switch the line of questions to the actions of the suspect (Memon, 1999). Early versions of the CI thus focused primarily on promoting memory retrieval, whereas the revised instructions also emphasise social dynamics, and the communication between the interviewer and the interviewee (Fisher & Geiselman, 1992). The revised cognitive interview is often referred to as the Enhanced Cognitive Interview, which moreover provides a structure that specifies the sub-goals of the beginning, middle and end of the interview. Each phase of the interview is assumed to make a contribution towards ensuring the success of the interview as a whole (Geiselman & Fisher, 1992).

Empirical Findings

Since 1984 a large number of research studies examining the effectiveness of the CI have been conducted. In a meta-analysis Köhnken, Milne, Bull, and Memon and (1999) found that CI elicits more correct information than a comparison interview. However, the CI has also been found sometimes to increase slightly the reporting of incorrect details. The accuracy of the information (the proportion of correct detail relative to the total amount of detail) obtained with cognitive interviews and with comparison interviews is usually almost identical (e.g., average accuracy = 85 percent with the CI and 82 percent with the comparison interview; Köhnken et al., 1999). The increase in correct recall with the CI has been found with different types of interviewees; that is, adults in the general population, adults with learning disabilities (Milne, Clare, & Bull, 1999), the elderly (Mello & Fisher, 1996) and children (Akehurst, Milne, & Köhnken, 2003; Granhag & Spjut, 2001; McCauley & Fisher, 1995; Milne & Bull, 2002; Milne & Bull, 2003).

The Cognitive Interview and Children

Approximately 15 papers have been published where the effectiveness of the CI with children has been investigated and compared to a control interview. In short, only two of these studies have found no effect for the CI (Memon, Cronin, Eaves, & Bull, 1993; Memon, Wark, Holley, Bull, & Köhnken, 1996). However, no study has found the CI to result in fewer details being reported. In two studies (McCauley & Fisher, 1995; Memon et al., 1997) there were significantly more incorrect details reported and in one study more confabulations noted by children interviewed with a CI (Hayes & Delamothe, 1997). Nevertheless, the percentage accuracy of the elicited information from children interviewed with a CI in all research has been found to be high (ranging from 81 to 93 percent).

Memon (1999) identify two main problems in applying the CI with younger children. First, younger children have difficulty in understanding the CI techniques in the form developed for adults. Secondly, the CI interview results may be affected by demand characteristics in that children respond in a way they think may please the interviewer. Accordingly, several researchers have highlighted the importance of adjusting the original CI when interviewing children. Particularly, because younger children may have difficulties in using the change perspective instruction and the change temporal order instruction, these components have been recommended to be omitted when interviewing children (Geiselman & Padilla, 1988; Saywitz, Geiselman, & Bornstein, 1992). To further facilitate children's recall, Geiselman and his colleagues suggested that it may be helpful for children to verbalise out aloud when mentally reinstating context. For example, to describe the room as the picture comes to mind, to describe smells, sounds and other features of the context (Saywitz et al., 1992). Moreover, it has been suggested that children should be *warmed up* before the actual interview. This can be done by letting the child, in detail, talk about an event that s/he is very familiar and comfortable with (Granhag & Spjut, 2001). In sum, when interviewing children with the CI, it is especially important that interviewers are appropriately trained, sensitive to demand characteristics and careful in the questioning phase of the interview. While specific questions may yield additional details, they may also increase errors (Memon, 1998; Memon, 1999). In the following sections, the four empirical studies on which this thesis is based will be summarised.

Summary of Empirical Studies

General Aim and Specific Objectives
The general aim of the empirical studies in this thesis was to examine interviewing techniques for child witnesses. The main research objective of Study I was to investigate how the cognitive interview affects children's recall after a longer retention interval. In Study II it was evaluated whether the reality monitoring technique could be trusted to assess the reliability of statements obtained by the use of a cognitive interview. Study III examined whether the cognitive interview would be improved by physical reinstatement of sensations, and Study IV investigated the self-reported practice of police officers who interview child witnesses in the UK, the Netherlands and Sweden.

Study I

Hypotheses
In study I it was predicted that the children interviewed according to a cognitive interview (CI) would report more correct information, both after a short and a long delay, than the children interviewed according to a Structured Interview (SI). Second, it was predicted that the children interviewed after a long delay would remember less correct information than the children interviewed after a short delay, irrespective of the interview technique used. Third, it was predicted that the children interviewed after a long delay would report more incorrect information and more confabulations than children interviewed after a short delay. Finally, it was hypothesised that there would be no differences in terms of incorrect information and confabulations between the CI and the SI.

Method
In study I 10-11-year-old children, 29 boys and 20 girls, saw a film picturing a performance by a fakir. The children were randomly allocated to one of two interview conditions. Half of the children were interviewed after seven days and the other half after six months. At each test session, half were interviewed according to a cognitive interview (CI), and half according to a structured interview (SI). Three female graduates of psychology conducted the interviews. They all had previous experience in interviewing children. Nevertheless, before conducting the interviews they attended a one-day training programme in cognitive interviewing. The three interviewers conducted both the CIs and

the SIs. The only thing that differed between the CIs and the SIs were the two CI-components *the mental reinstatement of context* and *the report everything instruction*, which were included in the CIs but not in the SIs. The children were interviewed individually, and the interviews were audio tape-recorded and transcribed verbatim for coding. The codings were based on a predefined scoring schedule. In the scoring procedure information was scored as correct, incorrect or confabulated. Information that was mentioned several times was only scored once. It was checked whether the SIs included any of the CI-specific components. No CI-components were found in the SI-interviews.

Results

The results showed that the children in the CI condition reported significantly more correct information than the children in the SI condition. The children interviewed after 7 days reported significantly more correct information than the children interviewed after six months. Moreover, the children interviewed after 6 months reported significantly more confabulations than the children interviewed after 7 days. The percentage accuracy rate refers to the proportion of correct information relative to the total number of details reported. The children in the CI condition gave significantly more accurate statements than the children in the SI condition. In addition, the children interviewed after 7 days reported significantly more accurate statements than the children interviewed after 6 months. The question phase generated significantly more incorrect information and confabulations than the free recall phase.

Study II

Hypotheses

In study II it was predicted that statements based on observed events would contain more perceptual, contextual and affective information compared to statements based on imagined events (Johnson & Raye, 1981). More specifically, and in line with previous research (see Vrij, 2000 for a summary), it was hypothesised that statements based on observed events would be richer in terms of visual, audio, sensory, affective, spatial, and temporal information. Johnson and Raye (1981) argue that statements based on imagined events are likely to contain more cognitive operations. Hence, it was predicted that statements based on imagined events would be richer in terms of cognitive operations when compared to statements based on observed events. Second, Gwyer and Clifford (1997) argue that the CI mnemonic *mental reinstatement* may

increase a statement's vividness. In line with this reasoning, it was predicted that statements based on imagined events obtained from a CI would be richer in terms of the different RM criteria (except for cognitive operations), when compared to statements based on imagined events obtained from a SI.

Two main aims were formulated. First, it was investigated whether the RM technique could be trusted in differentiating between statements based on observed events and statements based on imagined events when these had been obtained from a CI. Second, for children who had imagined an event, it was investigated whether the statements obtained from a cognitive interview differed in terms of RM criteria, compared to statements obtained from a structured interview.

Method

In study II 10-11 year-old boys (n = 31) and girls (n = 27) were randomly allocated to either watch a 15-minute long film about a fakir (n = 19) or to make up a story about a fakir (n = 39). Comparisons were made between the following three conditions: children who watched a film and were interviewed according to a CI (CI-film condition, n = 19), children who made up a story about a fakir and were interviewed according to a CI (CI-imagine condition, n = 21) and children who made up a story about a fakir and were interviewed according to a SI (SI-imagine condition, n = 18). The dependent measures were the following RM criteria: visual, audio, sensory, affective, spatial, and temporal information, as well as cognitive operations. In this study too, three female graduates of psychology who all had previous experience in interviewing children conducted the interviews. Before conducting the interviews they attended a one-day training programme in cognitive interviewing. The three interviewers conducted interviews in all conditions. The only thing that differed between the CIs and the SIs were the two CI-components *the mental reinstatement of context* and *the report everything instruction*, which were included in the CIs but not in the SIs. The children who made up a story about a fakir did so in school. They were encouraged to think freely about a fakir, but were also asked to imagine details about what the fakir did, what objects the fakir used and what the fakir looked like. The children were then randomly allocated to either the CI-imagine condition or to the SI-imagine condition, and were interviewed individually. The children who watched the film also did so in school. After watching the film they were interviewed individually according to the CI. All the interviews were recorded on audiotape and transcribed

verbatim for coding. Two trained raters who were blind with respect to the experimental conditions counted how many visual, audio, sensory, affective, spatial, and temporal information units as well as cognitive operations each of the 58 transcripts contained. After finishing the coding of the RM criteria, the raters checked whether the SIs included any of the CI-specific components. No CI-components were found in the SI-interviews.

Results

The results in study II showed that the two raters agreed significantly regarding the following RM criteria: visual, audio, affective, spatial and temporal information as well as cognitive operations. The average values between the two raters concerning these criteria were thus included in the analyses. In the MANOVAs conducted, significant differences between the CI-statements based on observed events and the CI-statements based on imagined events were exposed. Namely, the CI-statements based on observed events contained more visual, affective, spatial and temporal information compared to CI-statements based on imagined events. The CI-statements based on imagined events did not differ from the SI-statements based on imagined events.

Study III

Hypotheses

In study III, children interviewed according to the CI were hypothesised to report more correct information than the children interviewed according to the SI. In addition, it was predicted that there would be no differences in terms of incorrect information and confabulations between the CI and the SI. Second, it was predicted that the children interviewed according to the CI while physically reinstating the same smell, sound or taste as had been presented to them during the to-be-remembered event, would report more correct information when compared to the children who reinstated these sensations solely mentally. Third, it was hypothesised that the information recalled in the free-recall phases would be more accurate than the information recalled in the question phases.

Method

In study III 6-7-year-old children (38 girls and 37 boys) watched a live event with an actor performing as a pirate. While watching the pirate's performance, the children were presented with an ocean-like smell, a pirate song recorded

beforehand and the taste of liquorice candy coins. Each child was allocated to one of five interview types; the CI, the SI, the CI while physically reinstating either the same smell, sound or taste as was present during the live event. Five female graduates of psychology conducted the interviews. They all had previous experience in interviewing children. Nevertheless, before conducting the interviews they attended a one-day training program in cognitive interviewing. The interviewers conducted interviews in all five conditions. The children were interviewed individually one week after watching the performance. All the interviews were recorded on audiotape and transcribed verbatim for coding. Importantly, the children in the CI-smell condition were, while interviewed, presented with the same ocean-like smell as had been presented to them during the pirate's performance. When the children in the CI-sound condition were interviewed, they were presented with the same pirate song as had been presented to them during the pirate's performance, and when the children in the CI-taste condition were interviewed, they were presented with the same taste of liquorice candy-coin as had been presented to them during the pirate's performance. Moreover, the two CI-components *the mental reinstatement of context* and *the report everything instruction* were included in the CI conditions, but not in the SI condition. The codings were based on a predefined scoring schedule and information was scored as correct, incorrect or confabulated. Repeated information was only scored once. Checks were made so that the SIs did not include any of the CI-specific components. No CI-components were found in the SI-interviews.

Results

The results from study III revealed no significant differences between the interview types (CI, SI, CI-smell, CI-sound, and CI-taste) concerning correct information, incorrect information or confabulations. The children reported more correct information during the question phase than during the free-recall phase. Furthermore, more incorrect information was reported during the question phase, than during the free-recall phase, and the children made more confabulations in the question phase than in the free-recall phase. The percentage accuracy rate, which refers to the proportion of correct information relative to the total number of details reported, was higher during the free recall than during the question phase.

Study IV

Hypotheses

In study IV it is formulated that, based on the level of standardised interview training offered to child witness interviewers in the three countries, UK police officers presumably go through more extensive education and training concerning interviews with child witnesses when compared to Dutch and Swedish police officers. Also, more training seems to be available to Dutch police officers when compared to Swedish police officers. It was therefore predicted that the UK police officers would report that they possess a higher level of interviewing sophistication when compared to the Dutch police officers and the Swedish police officers (Hypothesis 1). Also, it was predicted that Dutch police officers would report that they possess a higher level of interviewing sophistication when compared to Swedish police officers (Hypothesis 2).

Method

A total of 230 police officers from the UK, the Netherlands and Sweden completed and returned a questionnaire on how to interview child witnesses. The sample consisted of 59 police officers from the UK, 48 police officers from the Netherlands and 123 police officers from Sweden. Two experienced Swedish police officers commented on the first draft of the questionnaire and the final version was then developed from their feedback and a further review of relevant literature. In the first part, the participants answered 36 questions based on their experience with child witnesses. The participants were told that, when answering the questions, they should keep in mind what they consider representative in alleged abuse cases against children younger than 15 years of age. For each question, the participants were asked to estimate how often they use the mentioned methods when interviewing child witnesses by circling a response on a forced-choice answer scale with five alternatives; *never*, *seldom*, *sometimes*, *often*, and *always*. The participants also provided details regarding background characteristics, including age, gender, and experience.

Results

A normality test was performed to determine if the data fitted a standard normal distribution. Fisher's skewness and Fisher's kurtosis coefficients were calculated for the 36 items. Although traditionally in this research field parametric statistics are used, both parametric and non-parametric statistics are presented because the majority of the items (35 of 36 items) were not normally dis-

tributed. Using parametric statistics (ANOVA), the UK, the Netherlands, and Sweden were found to differ significantly regarding 24 items. One of these 24 items was not significant in the non-parametric analysis. Hence, this item was excluded from further analyses. Using non-parametric statistics (Kruskal Wallis), the three countries were found to differ significantly regarding 25 items. Two of these 25 items were not significant in the parametric analysis. Hence, these were excluded from further analyses. Thus, taken together, the UK, the Netherlands, and Sweden were found to differ significantly regarding 23 items in both the ANOVA's and the Kruskal Wallis-tests. Parametric post-hoc tests (Scheffe) as well as non-parametric post-hoc tests (Mann Whitney) were carried out for those items where significant results were found in the ANOVA's and in the Kruskal Wallis-tests. Adjusted Bonferroni comparisons were made for the Mann Whitney post-hoc tests. The same differences between the three countries were revealed in both parametric and non-parametric post-hoc tests regarding 16 items.

Discussion

Study I

The first prediction in study I, that children interviewed with a CI would report more correct information than children interviewed with a SI, was confirmed. Importantly, this finding held for both the short delay and the long delay. The second prediction, that children interviewed after the shorter delay would remember more correct information than children interviewed after the longer, was also supported. The third prediction, that more incorrect information and more confabulations would be reported after 6 months than after a week, was however only partially confirmed. The children interviewed after 6 months showed a non-significant increase in incorrect information. Further, and in support of the prediction, the children interviewed after 6 months were found to report significantly more confabulations than the children interviewed after 7 days. Finally, the fourth prediction, that there would be no differences between the interview techniques in terms of incorrect information and confabulations, was confirmed. The question phase was moreover found to generate significantly more incorrect information and confabulations compared to the free-recall phase. This result is well in line with previous research showing that as interviewers move from free recall to open-ended questions (or, for that matter, from open-ended questions to closed), the number of incorrectly reported items tends to increase (Dent & Stephenson, 1979).

Study II

In study II, when a frequency measure was used to capture the presence of the RM criteria, support was found for the first hypothesis. That is, the CI statements based on observed events were richer in terms of visual, affective, spatial and temporal information compared to CI statements based on imagined events. Statements based on imagined events were poorer in terms cognitive operations, when compared to statements based on observed events. Hence the second hypothesis was not supported. Expanding on the findings of previous research, the present study found certain RM criteria (i.e., visual, affective, spatial and temporal information) to have a potential in assessing the reliability of children's CI statements. However, because statements based on observed events have been reported to be more extensive than statements based on imagined events, analyses controlled for the length of the statements were also con-

ducted. Then, only three criteria (spatial, affective and temporal information) discriminated between CI statements based on observed events and SI statements based on imagined events, and only two criteria (affective and temporal information) discriminated between CI statements based on observed events and CI statements based on imagined events. In sum, the original contribution of study II is that a sub-set of RM criteria (i.e., visual, affective, spatial, and temporal information) can be useful when assessing the reliability of children's statements obtained by a CI. However, when accounting for differences in the length of the statements, the RM technique might loose considerable discriminative power.

Study III

The hypothesis that the children in study III would report more correct information when compared to the children interviewed according to a SI was not supported. There may be various explanations for this finding. Perhaps younger children, when compared to older, benefit more from the child-friendly modifications of the interviews than from the actual mnemonics in the CI. Moreover, the differences concerning memory performance between the children were found to be considerably large; the children's recall of correct information ranged from 8 to 48 items in the CI condition. This may be one of the reasons why no differences between the groups, (i.e., between the CI and SI) were found. Hence, it may be more applicable to employ a design that allows for within-subjects comparisons, rather than using between-subjects comparisons when testing the effectiveness of the CI with younger children. In addition, the presence of the sensations in the event might not only have facilitated the recall for the children in the CI conditions, but it possibly also left the children in the SI condition with helpful cues when recalling the event. Consequently, the children in the SI condition may have, due to the relatively extensive presence of the sensations, mentally reinstated the event without being explicitly instructed to do so. As predicted, no differences between the CI and the SI were found in terms of incorrect information and confabulations. Furthermore, the children who physically reinstated the sensations in the CI did not differ in terms of correct information when compared to the children who solely reinstated the sensations mentally. The second hypothesis was thus not supported. This finding may be due to a variety of factors. First, the children's recall of correct information was possibly equally improved by physical reinstatement as it was by mental reinstatement. Second, there may be certain shortcomings

related to the design. Due to the choice of design, the individual effect of each of the sensations was not possible to isolate. Moreover, the design made it impossible to calculate an accurate picture of the overall effect of the sensations. Hence, in order to thoroughly examine the effect of the sensations, it might be beneficial to consider altering the design. This can be done for example by including all three sensations during both the event and the interviews, or by arranging separate events for each of the sensations and, as was done here, employing separate interview types for all sensations. The third prediction stating that the free-recall phase would generate more accurate information than the question phase was supported.

Study IV

The main aim of the present study was to investigate the self-reported practice of UK, Dutch, and Swedish police officers who interview child witnesses. Overall, the participating police officers reported that they use most of the methods mentioned *often* or *always*. This indicates that all the officers, regardless of what country they come from, report to possess a relatively high level of interviewing sophistication. Though some of the results were in line with our hypothesis that countries with higher level of training would present a higher interviewing sophistication, the three countries did not differ as much as one would have expected. That is, overall, the police officers in the three countries seem to resemble one another regarding some dimensions of interviewing sophistication. There may be numerous explanations to this finding. For example, this might be due to certain elements in, and/or the level of, the police officers' experience. We controlled for and found no effect of experience (i.e., for how long the police officers had been working), but these measures may have been too indistinguishable and hence there may be other dimensions of experience that possibly affect the police officers' self-reported practice. A more relevant experience estimator might for example be the total number of interviews with children in alleged abused cases. Some important limitations of the present study should be kept in mind. First, the number of participating police officers differed with regard to what country they represent. Twice as many Swedish police officers participated when compared to UK and Dutch participants. This was due to methodological issues during the data collection and may explain some of the findings. Second, it is important to bear in mind that differences is likely to exist between what officers report to happen in interviews and what actually happens (Lamb et al., 2000; Robson, 2002). It was

predicted that the UK police officers would report that they possess a higher level of interviewing sophistication when compared to the Swedish police officers. This was confirmed concerning six items. This result might indicate that the UK training is supreme over the Swedish. Contrary to the first hypothesis, the Swedish police officers reported to use two items more frequently than did the UK police officers. This indicates that something in the Swedish model might be favourable over that of the UK. The hypothesis that the UK police officers would report that they possess a higher level of interviewing sophistication when compared to the Dutch police officers was confirmed regarding eight items. Again, this can be seen as a positive result of the UK interview training. Contrary to this hypothesis, the Dutch police officers reported to use seven items more frequently than did the UK police officers. The second prediction that Dutch police officers would report to possess a higher level of interviewing sophistication when compared to Swedish police officers was confirmed regarding four items. Contrary to this hypothesis, the Swedish police officers reported to use seven items more frequently than did the Dutch police officers. In sum, these results suggest that the three countries indeed might resemble one another more than was predicted. Hence, possible similarities and dissimilarities might be worth to investigate further. For example, because the training offered to police officers who interview child witnesses in the UK, the Netherlands, and Sweden probably differ in aspects that were not controlled for, future research is recommended to in greater detail control for such discrepancies when exploring the training given to police officers who interview children. However, despite possible discrepancies between actual and self-reported practice, the results from the present study provide insights into police officers' practice and support previous research that highlight the importance of adequate training of practitioners.

Although the results from the above mentioned studies are based on relatively small sample sizes, the conclusions to be drawn are of importance to practitioners who interview children. It was confirmed in study I and III that the significant part of the incorrect information and confabulations recalled stemmed from the question phase. Many researchers support the idea that interviewees should be encouraged to give a free recall. Studies mapping real life interviews do however show that many interviewers never allow for a free recall, but instead ask a high number of specific questions (Fisher, Geiselman, & Raymond, 1987). This exemplifies the importance of considering systematic examinations of real life interviews when formulating guidelines for practitioners who

face the task of conducting forensic interviews with children. Moreover, it was established in study I that the superiority of a cognitive interview held after a rather long delay. Importantly, the use of a cognitive interview was found to increase the children's recall of correct information without causing an increase in incorrect information and confabulations. In study II, it was demonstrated that considerable developmental work is needed to turn the reality monitoring technique into a trustworthy reliability assessment technique. This technique should thus far not be used in its present form by practitioners in field settings. In study III, the cognitive interview could not be improved by allowing for physical reinstatement of sensations. Nevertheless, it is suggested that it would be beneficial to further explore if the mental reinstatement works just as well with or without the presence of sensations. To date no studies have evaluated the effectiveness of the cognitive interview with a target event that include only little or no context related information or sensations. Additionally, more research is needed to investigate the effectiveness of the CI with younger children in more naturalistic settings. There is an apparent lack of field examinations of the cognitive interview with children. It is urged that future research considers employing within-subjects designs and using individually experienced target events of a more stressful character when investigating interviewing techniques for child witnesses.

Concluding Remarks

This thesis examined interviewing techniques for child witnesses. The results demonstrate that the cognitive interview can be used successfully with children, both after shorter and longer delays. Also, it is confirmed that children's recall is sensitive to interviewer interference. Therefore, it is crucial that interviewers do not contaminate the child's report with own beliefs and expectations. Instead, interviewers should allow children to recall events as freely as possible and take advantage of strategies and techniques that help and motivate children to be informative. Moreover, the complexity of assessing the reliability in children's statements was confirmed. It is emphasised that more research is required before any strong recommendations regarding such assessments are made. In addition, this thesis supports the idea that adequate training is crucial for practitioners who interview children. Also, practitioners and researchers are urged to work together to increase the benefits of future research on forensic interviews with children.

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Appendix

I   Larsson, A. S., Granhag, P. A., & Spjut, E. (2003). Children's recall and the Cognitive Interview: Do the positive effects hold over time? *Applied Cognitive Psychology*, *17*, 203-214.

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