

AN ABSTRACT OF THE THESIS OF

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This study investigated how perpetrator characteristics and eyewitnesses' gender and gender-role attitudes influenced what children recalled about a theft after a seven-week delay. A total of 104 participants (ages 6 to 8.5 years) were shown one of four theft versions (i.e., male consistent, male inconsistent, female consistent, and female inconsistent perpetrator) and asked to provide testimony immediately and again seven weeks later. Central features of the theft were recalled better than peripherally related features, especially during the immediate interview. Overall recall was less accurate after seven weeks than initially. Girls recalled peripherally related features more accurately, especially with the female-inconsistent perpetrator, than did boys, who in turn, recalled core features more accurately than did girls after seven weeks. Over time, girls also recalled peripheral information more accurately for the female-inconsistent rather than the female-consistent film version. Witnesses' recall for the perpetrator became worse over time. Although a same-sex bias was not found, children attended more to the male thief than to the female thief. Moreover, recall about the perpetrator contained more errors for boys than for girls. Children who watched the gender inconsistent versions produced more gender stereotyped transformations than gender astereotyped transformations. After seven weeks, children who viewed the gender inconsistent versions had worse recall for the perpetrator than those who viewed the gender consistent versions. Unlike previous investigations, children's stereotypes did not influence recall. Future researchers are advised to evaluate the proportion of central and peripheral features recalled and to consider how the witnesses' sex may influence accuracy in testimony. This study also demonstrated

that children's memory for a theft event was affected when witnesses' viewed characters portraying astereotypical information. Because there has been little information about this phenomenon in eyewitness literature, researchers should conduct future investigations to determine the extent to which gender affects eyewitness reports.

THE EFFECTS OF GENDER AND GENDER STEREOTYPED ATTITUDES
ON CHILDREN'S RECALL OF AN EYEWITNESSED EVENT

A Thesis

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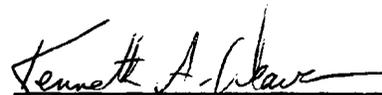
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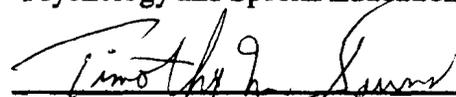
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TABLE OF CONTENTS

ACKNOWLEDGMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
<u>CHAPTER</u>	
1	INTRODUCTION..... 1
	Event Schemas2
	Gender Schemas4
	The Effects of Schemas on Memory.....5
	The Influence of Event Schemas on Memory5
	The Influence of Gender Schemas on Memory6
	Same-Sex Bias in Recall8
	The Influence of an Extended Delay on Memory 10
	Present Investigation 12
	Hypotheses 13
2	METHOD..... 15
	Participants 15
	Materials 15
	Videotape 15
	Children's Occupations, Activities, and Traits Attitude Measure 16
	Scoring..... 16
	Gender-Stereotyped Attitude 16
	Memory Scores 17
	Gender-Distortion Scores..... 18
	Same-Sex Bias Score..... 18

	Procedure	21
3	RESULTS	25
	Long-Term Memory	25
	Same-Sex Bias	29
	Gender Distortion	30
4	DISCUSSION	35
	Long-Term Memory	35
	Same-Sex Bias	37
	Gender Distortion	38
	Conclusions	39
	REFERENCES	41
	APPENDICES	48
	Appendix A: Male Consistent Coding Scheme	46
	Appendix B: Memory Interview Questions	59
	Appendix C: Parental Background Information	69
	Appendix D: Posttest Final Interview	70
	Appendix E: Children's Occupations, Activities, and Traits Attitude Measure	71

LIST OF TABLES

Table 1. Core and Peripheral Features.....	19
Table 2. Perpetrator Actions and Characteristics for Same-Sex Bias Analysis	20
Table 3. Eight Manipulated Features	24
Table 4. Mean Proportions (and Standard Deviations)for Correct Memory by Sex, Condition, and Feature.....	26
Table 5. Mean Proportions (and Standard Deviations)for Correct Memory by Time, Condition, and Feature.....	27
Table 6. Mean Proportions (and Standard Deviations)for Correct Memory by Sex, Time, and Feature	28

LIST OF FIGURES

Figure 1. Gender Distortion Score: Gender Distortion by Film Version	32
Figure 2. Gender Distortion Score: Time by Sex.....	33
Figure 3. Same Sex Bias Errors: Film Version by Time	34

CHAPTER 1

INTRODUCTION

Eyewitnesses serve as a critical part of legal strategy because they provide evidence that leads to the arrest and prosecution of defendants. However, both researchers and the general public have questioned the accuracy of eyewitness testimony. Many years of investigation have revealed that, although recall for events is generally accurate, memories for events can be distorted under certain conditions (see Ceci & Bruck, 1993 for a review). Thus, jurors and judges should be cautious about ruling on a case that is based solely on eyewitness testimony. It is also important to note that researchers have not yet examined all of the factors that contribute to memory distortion, such as gender and gender stereotyped attitudes, both of which affect the perception and memory of an event.

To provide accurate eyewitness testimony, people must be able to talk about what transpired, as well as to describe the people involved in an incident. Unfortunately, one's perception of such details may be distorted by cognitive schemas (i.e., mental representations that help people to organize and to interpret their experiences). The focus of this investigation was to determine how children's cognitive schemas influenced their event recall. The court's view of children is that they are less capable than adults in providing accurate recall. In fact, research supports this contention because children differ from adults in the amount of information they report about an event (Ceci & Bruck, 1993). Additionally, young children (ages 6- to 8-years old) are in the process of developing their perceptions of gender-typed information (Golombok & Fivush, 1994). This process may make children's recall of gender-typed information especially vulnerable to distortion. In order to examine children's recall of an event, I will first define and then describe the role of two types of schemas, event schemas and gender schemas, commonly used to perceive and recall information. Next, I will review research examining the effect of the passage of time on recall. Finally, the proposed research will be discussed.

Event Schemas

Courtroom testimony relies on the witnesses' ability to accurately describe what they saw during a specific incident. Although children are able to provide some details about what they witnessed, their ability to discuss specific episodes develops with age. Event schemas (i.e., mental representations of activities) develop during early childhood and serve to organize one's knowledge about what typically happens in a given situation, as well as assisting in providing a framework for recalling particular experiences (Nelson, 1986). Young children develop event schemas as a result of their concrete experiences with a situation. Thus, before children can provide a schematic report of a particular experience, they must first have participated in the event at least one time (Fivush & Slackman, 1986; Nelson, 1986). By age 3, children are able to provide reports about events that they are familiar with, but they have difficulty providing reports about unfamiliar events. Children also find it easier to remember typical events rather than atypical episodes (Hudson & Nelson, 1986). That is, when children are asked to recall routine events, they provide more details than when asked to recall specific instances of the same episode. By middle childhood (ages 6- to 11-years-old), children are better able to talk about personal experiences; however, their recall continues to be limited by their familiarity with the event and by the complexity of the specific incident (Hudson & Shapiro, 1991). This suggests that children are better at using their event schemas to provide general knowledge about events than they are at describing their personal experiences.

According to Nelson (1986), when children relate their knowledge about an incident, their reports tend to be temporally organized around a goal and follow the same order that occurs during a typical experience. Even young children are able to give verbal reports about what usually happens in a situation (i.e., general knowledge) or what happens during a particular episode of an event (i.e., personal experiences). Reports that reflect one's general knowledge use second person pronouns, present tense, and general

terms. Information is consistent over time and the report resembles other people's accounts of the same event. The following vignette demonstrates such a report:

Adult: Tell me what happens when you eat in a restaurant.

Child: Well, you go with your Mom and Dad in the car to a place to eat.

And then when you get there, someone comes over to you and the person wants to know where you want to sit, and you sit. And then you choose whatever you want to eat as long as it's not too much money. Then your mom orders for you. And you wait until the food comes and then you eat.

When children use event schemas to relate a personal experience, the structure of the narrative changes to reflect what is unique to them. The report is delivered using first person pronouns in the past tense. Unlike reports based on one's knowledge, personal experiences are not consistent across reports by different individuals because children's perceptions or experiences vary with an event. However, reports by the same person for a particular event will be similar, except for minor variations due to the audience and the type of questions used to elicit the information (Nelson, 1986). The following vignette demonstrates such a report:

Adult: Tell me what happened when you ate one time in a restaurant.

Child: Well, I once went to my Aunt's restaurant. We had to wait a long time to sit down because so many other people wanted to eat there, too. I ordered a hamburger and french fries. When I finished my hamburger, I also got to order some strawberry ice cream and it was good. After my parents drank coffee, we went home.

As previously mentioned, children's ability to provide complete reports of a witnessed event is influenced by their knowledge about a various events. However, children must also understand when and why people's characteristics and behaviors are appropriate for any given situation. Gender schemas are used to help children learn which behaviors and interactions are typical or "appropriate" for women and men.

Gender Schemas

The ability to classify information by gender is a dynamic process that is developed throughout childhood. Golombok and Fivush (1994) explain children's gender categorization as a process consisting of several stages. In Stage 1, starting at age 2, children develop gender identity which allows them to label themselves and others as "female" or "male." The foundation of such categorization is based solely on physical characteristics (e.g., people who have long hair and wear skirts are "women" and people who have mustaches and wear ties are "men"). As is characteristic of this stage, children have difficulty understanding that a person's gender is stable across time and situation. Between ages 3 and 4, however, children develop Stage 2 thinking, called gender stability. In this stage, children begin to understand that gender is stable across time. They learn that little girls will grow up to become mothers and little boys will grow up to become fathers. In Stage 3 thinking, adopted by children between ages 5 and 6, they learn that gender is also stable across situations. This stage is called gender constancy because children develop the understanding that a person's sex does not change even though the activities that the person engages in or the clothes that the person wears are not consistent with traditional gender stereotypes. For example, children understand that a person is a girl even though she wears pants instead of a dress. However, children's ideas about women's and men's gender roles (e.g., occupation) remain extremely rigid at this stage, which make it difficult for them to conceptualize a man in a woman's role and vice versa. It is not until middle childhood that children also become more accepting of trans-gender roles (Berk, 1997).

As children develop an understanding of gender, they use their ideas to form gender schemas. Gender schemas allow people to organize information to aid in their perception and recall of gender-related information (Bem, 1981). Gender schemas are multidimensional; that is, some categories are viewed as gender-schematic, whereas other categories are not. For example, Golombok and Fivush (1994) suggest that people may

possess gender schematic ideas for people's behaviors but not for roles, occupations, or traits. I will now describe how schemas affect recall.

The Effects of Schemas on Memory

When children recall the details of a specific event, a number of factors can affect their memory (Baker-Ward, Gordon, Ornstein, Larus, & Clubb, 1993; Brainerd & Ornstein, 1991). Distortion occurs because as children forget details about an event over time, they revert to their schemas to fill in the information they cannot recall. Children also refer to their schemas to provide information they never knew so that their reports do not have gaps or inconsistencies. In this manner, knowledge functions as a framework for remembering and helps people to focus on particular aspects of an event for later recall (Ornstein, Merritt, Baker-Ward, Furtado, Gordon, & Principe, 1998). In addition, children's gender role attitudes will affect how they perceive the actors in an event and what they remember about the characters' behaviors. The following sections consider the role each of these factors play in the accuracy of eyewitness testimony.

Influence of event schemas on memory. Research has demonstrated that if people believe an event generally happens in a particular way, then their recall of a particular episode is likely to reflect their expectations (Bartlett, 1932). Bartlett was one of the first researchers to test this idea in his well-known "War of the Ghosts" experiment. Adult participants read a short story based on an Indian fable and afterwards repeated the anecdote over several trials. With each successive trial, the retold story became shorter and more informal. In addition, participants replaced less familiar words with more common terminology. Bartlett found that people omitted or altered information that did not fit with their prior expectations of how stories were told. Based on these findings, Bartlett determined that schemas influenced the recall of stored information.

Additional support for Bartlett's schema theory was found by Harris, Lee, Hensley, and Schoen (1988). Harris and colleagues examined the effect of cultural-specific schemas on memory for stories about people performing routine activities.

Subjects read stories that were either consistent or inconsistent with their own culture and were later asked to verify the truth of several statements about the passages. Results showed that people recalled information to be consistent with events in their own culture. These findings suggest that recall of events is influenced by what is most familiar to the reader. Specifically, people will convert aspects of the event to make it more consistent with their expectations of typical experiences.

Shapiro, Clubb, and Ornstein (1994) also found that young children rely on their schemas when recalling information about an event. Their investigation compared children's general knowledge of a doctor's examination with children's recall for an actual doctor examination. The researchers re-analyzed data from two studies. In the first study (i.e., the Memory Sample) 5-year-olds recalled the details of a doctor's visit six weeks after the appointment (Baker-Ward et al., 1993). In the second study, (i.e., the Knowledge Sample), 5-year-olds reported their typical experiences with a physical examination. The researchers compared children's memory reports and, using a knowledge criterion, found that the majority of accounts consisted of information that was based on their general knowledge about a doctor's examination. The researchers also found that children recalled typical features better than atypical features after a six-week delay. Results from this study suggest that children's schemas served as a framework to enhance recall over time.

The influence of gender schemas on memory. Many researchers have examined the relationship between gender stereotypes and recall. A study by Signorella and Liben (1984) examined how children's gender stereotypes affected their memory for pictures. The researchers showed a group of school children picture cards that were either consistent with traditional gender stereotypes (e.g., a woman sewing), pictures inconsistent with gender stereotypes (e.g., a man sewing), or neutral pictures (e.g., a woman reading a book). After viewing the pictures, the children were shown another set of cards. Half of the pictures in the second set were identical to those in the previous deck, whereas half of

the pictures were altered by changing the sex of the actor. The children were asked to confirm or deny previously viewing the pictures in the second set of cards immediately and again after 1 -1.5 months. Signorella and Liben found that children distorted information that did not fit their ideas about how women and men typically behaved. For example, children who saw the picture of a man sewing would incorrectly relate that they saw a picture of a woman sewing. Signorella and Liben concluded that when children recalled information, they sometimes reconstructed the information to fit their gender schemas. Moreover, higher stereotyped children demonstrated this type of memory distortion more than lesser stereotyped children.

In partial replication, Liben and Signorella (1993) gave half of the children stimulus labels to simplify the encoding task. Once again, they found that when recalling pictures that were inconsistent with gender stereotypes, children converted information to make it consistent with stereotypical beliefs. Because some of the children were supplied with the correct stimulus label at the acquisition stage, the researchers concluded that gender-biased recall was not related to an inability to encode the original stimulus. These results demonstrated that children's gender stereotypes influence their memory for information that is inconsistent with their gender stereotyped beliefs. In particular, children may resort to their ideas about what a person should be doing to recall information that they saw. Moreover, children with more rigid stereotyped beliefs may be more susceptible to the influence of gender stereotypes when recalling information than lesser stereotyped children.

Similar findings were found by Koblinsky, Cruse, and Sugawara (1978). In this study, fifth-grade students read two experimental stories featuring both a boy and a girl character who exhibited both stereotypic and astereotypic behaviors. After reading the stories, children were presented with a distractor task, followed by a forced-choice-recognition test about each story. Information that was consistent with traditional gender stereotypes was remembered significantly better than information that was inconsistent with the children's gender stereotypes. Thus, children's use of gender stereotypes helped

them to recall information, but hindered their ability to recall details of an event when there was information that was inconsistent with gender schemas.

List, Collins, and Westby (1983) supported Koblinsky et al's. (1978) findings that children's rigid stereotypes affect recall. List and her colleagues examined third-graders' memory of consistent and inconsistent gender role portrayals of television characters. The researchers found that children with relatively high or medium stereotyped attitudes recalled more gender-consistent than gender-inconsistent information. In contrast, children who were relatively low in stereotyped attitudes recalled gender-consistent and gender-inconsistent information equally well. The results of this study indicated that the degree to which children hold stereotyped ideas influenced their recall for stereotypical information. Specifically, children with higher stereotyped beliefs provided more gender-schematic information than children with lesser stereotyped beliefs.

Halpern (1985) asked high school students to recall information based on a short story that was read individually by each participant. She found that female participants relied more on gender stereotypes when answering questions about the male character, while males relied more on gender stereotypes to answer questions about the female character. Also, students correctly answered significantly more questions about the same-sex character than the opposite sex character. The importance of these findings are twofold. First, the results suggest that people may resort more to their gender stereotypes when recalling information that is less familiar to them (i.e., information about the opposite-sex activities). Second, this study demonstrates that children display a same-sex bias when recalling information. That is, girls remember more information about other girls while boys will remember more information about other boys. The latter idea will be explored further in the next section.

Same-sex bias in recall. Recall may be adversely affected by the perceived importance of information. For example, if a person believes that the actions of a man are more important than the actions of a woman, then the individual is likely to be attuned more

to the man's role when reporting information. Clearly, when the individual is later questioned about the less salient material (i.e., the role of the woman), the individual will have difficulty recalling the correct answer. Will these recall differences also emerge in a courtroom situation?

Results from Halpern (1985) suggest that eyewitness testimony will be negatively impaired by a same-sex bias. Specifically, Halpern found that people displayed a same-sex bias when recalling information. This suggests that children's recall is influenced, not only by their gender schemas, but by their ability to identify with the perpetrator. Nadelman (1974) displayed pictures of feminine and masculine items to 5- and 8-year-old children. After viewing the pictures, the children were asked to recall as many of the items as they could. Nadelman found that girls remembered more feminine items and boys remembered more masculine items. A same-sex bias was also found by McArthur and Eisen (1975) who read preschool children a story presenting achievement behavior by either a male or a female character. The researchers found that both sexes manifested a same-sex bias. Also, girls were significantly more likely than boys to recall the female character's behavior.

Same-sex bias may result because one's ability to identify with a character increases the character's salience. This conclusion, however, is somewhat mixed in the literature. In a study conducted by Bauer (1993), a group of toddlers (mean age 25 months, 10 days) viewed an experimenter performing either female stereotypical activities (e.g., changing a diaper), male stereotypical activities (e.g., shaving a teddy bear), or gender-neutral activities (e.g., having a birthday party). After each demonstration the experimenter gave the props to the child and asked him or her to imitate the experimenter's behavior. Two weeks after the original demonstration, the child returned to the laboratory, was given the props again, and was asked to recall the acts that the experimenter previously demonstrated. Bauer found that boys remembered more of the male stereotypical behaviors than female stereotypical behaviors, while girls remembered both female and male stereotypical behaviors equally. Bryan and Luria (1978, exp. 2) also found boys were

more susceptible than girls to a same-sex bias in recall. Children's (9- and 10-years-old) ability to recall scenes from sex-typed picture slides was assessed through a series of questions. Boys remembered more information about the actions by a male character rather than those by a female character, whereas girls equally remembered actions by both a female and a male character.

These studies demonstrated that children's recall is differentially affected by gender. Overall, studies examining a same-sex bias in recall demonstrate unequivocally that boys recall more information about boys than girls. In contrast, girls, sometimes show a same-sex bias, but their attention may be more egalitarian in response to male and female characters. The reason for this discrepancy is unclear and deserves further exploration. The role of time in remembering is now considered.

The Influence of an Extended Delay on Memory

The passage of time poses an important area to be considered when assessing the effects on eyewitness recall. Research in this area demonstrates that children's recall is generally accurate for 6 weeks after a specific event, although the reports of an experience tend to become less detailed over time (Baker-Ward et al., 1993; Cassel & Bjorklund, 1995). Cassel and Bjorklund (1995) examined children's recall of a filmed bicycle theft. Participants' (6- and 8-years-old and adult college students) memory was assessed immediately after viewing the film, one week later, and one month later. The investigators found that while answers to open-ended questions (i.e., questions that do not attempt to elicit particular details about an event) were stable across the three interviews, children needed additional prompting to elicit information as time passed, suggesting that forgetting occurred. Also, children remembered more information for core features (i.e., features of main importance to the film), whereas incorrect recall of peripheral features (i.e., features that were of secondary importance in the film) decreased over time. This study suggested that eyewitness recall will remain stable for up to four weeks after an event, although the eyewitness may need additional prompts to remember specific details as time passes. Also,

eyewitness memory will be most accurate for the main features in an event rather than for less important features. Baker-Ward and her colleagues (1993) investigated children's (3-, 5-, and 7-years-old) memory for a doctor's examination. Participants were interviewed either immediately after the exam and after a delay (either 1, 3, or 6 weeks), or only interviewed after 3 weeks. The researcher found that children's memory for the doctor's examination remained highly accurate for all conditions, even after six weeks.

Additional research has demonstrated that after delays of 6 weeks, children's recall for what happened during an event will significantly decrease. Shapiro, Blackford, Brooks, and Chen (1997) examined children's (3- to 5-years-old and 6- to 8-years-old) recall of a birthday party. Half of the participants were randomly assigned to a single interview group (i.e., recalled the events of the party only once after seven weeks), while the other half of the participants were assigned to a repeated interview group (i.e., recalled the events of the party one week and seven weeks later). The researchers found that children in the repeated interview group remembered more details about the birthday party than did children in the single interview group. In contrast, the participants in the single interview group needed specific cues to elicit recall and were more likely to provide erroneous information. The results demonstrated that the seven-week delay negatively affected children's ability to recall information. However, if children were given an additional opportunity to recall the theft, their recall was better than if they only related event details one time. Thus, the additional interview helped to alleviate the effects of forgetting over the extended delay.

Even longer delays between the event and its recall have been investigated. Ornstein et al. (1998) examined children's memory for an event after a 12-week delay. Children (4- and 6-years-old) underwent a mock doctor's examination consisting of typical and atypical features that would happen during a physical. The researchers interviewed the participants immediately after the examination and again after a 12-week delay (i.e., Repeated Interview group) or only once, after the 12-week delay (i.e., Control group). Ornstein and his

colleagues found that children's recall diminished over time in both groups. However, the children in the Repeated Interview group provided more correct information at the seven-week interview than did the children in the Control group. The researchers also found that children demonstrated a greater amount of correct recall for typical features rather than atypical features, suggesting that typical features, which are presumably better embedded in children's knowledge about a doctor's examination, were more resistant to forgetting.

Dow and Ellis (1998) examined preschool children's recall of modeled events. An experimenter demonstrated four events and then encouraged the children to reenact the activities immediately and again 5 - 7 days later. After nine months, parents discussed two of the four events with their child. Soon afterwards, children's memory for all four of the episodes was assessed. Children had worse memory for the events that were not previously discussed. Research by Shapiro et al. (1997), Ornstein et al. (1998), and by Dow and Ellis (1998) demonstrated that memories for an event will weaken over time. However, providing children with additional opportunities to relate the event more than once over long delays (i.e., over six weeks) will substantially lessen the deterioration of one's recall.

Present Investigation

Because eyewitness testimony is crucial in many court cases, it is important that researchers begin to synthesize the results of forensic, cognitive and developmental studies. If the wrong perpetrators are convicted of a crime, their personal liberty is sabotaged. Likewise, failing to convict criminals decreases the safety of society. Why would a witness accuse the wrong person of a crime? Research demonstrates that people use event schemas to help them frame experiences of a specific episode. Familiar and well understood events are likely to be recalled more accurately than those that are atypical or complex. As time passes, memories for events fade and people complete missing information about a specific episode with their ideas about how events usually happen. When this occurs, one's memory for a specific episode becomes distorted. Unfortunately,

witnesses often must wait several weeks before talking with a police officer and several months before testifying in court. Moreover, gender schemas also influence recall because witnesses are affected by how the perpetrator looked and acted. When the characteristics of a perpetrator contradict an individual's schematic beliefs, the witness is likely to distort the conflictual material to make it more consistent with his or her ideas. Witnesses may also focus on same-sex characters in an event which will affect their recall of how people acted.

All of these factors, especially gender, gender-stereotypes, and time-delays, have profound consequences for courtroom testimony. Unfortunately, merging the results of past studies to gender and gender-role research is difficult. First, investigators have typically used pictures and stories to determine recall. However, this method may not be as advantageous as event sequences, which provide a more "real-life" experience. Secondly, past research frequently tested recall only immediately after the stimulus presentation. However, in an eyewitness situation, the witness is often asked to describe the events of a crime after a long delay, when children are more likely to rely on their schemas to supply missing information.

To investigate the effects of event and gender schemas on recall, I assessed children's memory for a filmed bike theft. Children watched a film that featured either a female or a male perpetrator who displayed characteristics and actions that were consistent or inconsistent with gender stereotypes. To examine the influence of time on recall, children were interviewed about the theft immediately after watching the film and again after a seven-week delay. Children's level of gender stereotyped beliefs was assessed at the end of the seven-week interview.

The first question in this study asked, "How did the perpetrator's characteristics and eyewitnesses' gender affect children's long-term memory for a witnessed event?" Hypothesis 1a predicted that there would be a higher proportion of peripheral information reported inaccurately at the seven-week interview than at the immediate interview. Hypothesis 1b was that there would be a lower proportion of peripheral information

reported accurately at the seven-week interview than at the immediate interview.

Hypothesis 1c proposed that there would be no difference in the proportion of core information recalled correctly or incorrectly at the immediate or seven-week interview.

Hypothesis 1d was that there would be a higher proportion of core and peripheral information reported inaccurately for the inconsistent film versions than for the consistent film versions. Hypothesis 1e was that there would be a higher proportion of core and peripheral information reported accurately for the consistent film versions than for the inconsistent film versions.

A second issue of concern was "What do children perceive and remember about the perpetrator in a witnessed event?" The next set of hypotheses are consistent with the literature indicating that girls and boys perceive event information differently. Hypothesis 2a was that girls would recall accurately more information about the female perpetrator's characteristics and actions than would boys. Hypothesis 2b was that boys would recall accurately more information about the male perpetrator's characteristics and actions than would girls.

The third issue of concern was "How do the perpetrator's characteristics and the eyewitnesses' gender and gender stereotyped attitudes affect the eyewitnesses' perception and long-term memory for different types of event information?" Hypothesis 3a was based on Bartlett's schema theory that children who viewed the inconsistent film versions would have more inaccurate recall (i.e., more gender distortion) than those who viewed the consistent film versions. Hypothesis 3b was that children's recall was expected to be inaccurate because they would change gender inconsistent or gender-neutral information into information that was congruent with gender stereotypical beliefs. This distortion would be stronger for recall reported during the second interview than during the first interview and for children who scored at or above the median on the gender stereotype measure (i.e., higher stereotyped children) than those who scored below the median (i.e., lower stereotyped children).

CHAPTER 2

METHOD

Participants

A total of 104 children, ages 6.0 to 8.5 years-old ($M = 7.1$ years), participated in this investigation. The researcher randomly assigned the participants into one of four groups. Each group had the same number of participants (i.e., 26 per group) with an equal number of girls and boys. Congruent with the demographics of the area, the participants resided in predominately middle-class households (22 lower-class, 49 middle-class, 33 higher-class). 82% of the children were Caucasian. All participants were treated in accordance with the Ethical Principles of Psychologists (American Psychological Association, 1992).

Materials

Videotape. A VHS videotape portraying the theft of a bicycle was developed and used as the stimulus for recall in this project. The videotape was 12 minutes long and featured female twins who visited the Kansas City Zoo. At the beginning of the film, the twins witnessed a scene in which a teenager attempted to borrow a younger child's bike, but was repeatedly denied permission. The teenager left the scene momentarily, then sneaked back and stole the bicycle. Four versions of the film were made. Each video portrayed information that was either congruent or incongruent with gender-stereotypical behaviors and characteristics. That is, in the male-consistent (MC) version an older male took a younger female's bike. The boy looked and acted according to stereotypically masculine characteristics and behaviors (e.g., had short hair, punched the girl in the arm). In contrast, an older male perpetrator in the male-inconsistent (MI) video looked and acted according to stereotypically feminine characteristics and behaviors (e.g., had long hair, patted the girl on the head). However, in the female-consistent (FC) and the female-inconsistent (FI) versions, a female perpetrator stole a younger boy's bicycle. The perpetrator in the female-consistent version displayed the same physical characteristics and

actions as in the male-inconsistent version, whereas the perpetrator in the female-inconsistent version displayed the same features as the male-consistent version. All of the actors were Caucasian. Eight features were manipulated in each film to portray either gender consistent or gender inconsistent information (see Table 1).

Children's Occupations, Activities, and Traits Attitude Measure. The Children's Occupations, Activities, and Traits Attitude Measure (COAT-AM; Bigler, Liben, Lobliner, & Yekel, 1997) was used to assess children's gender-role attitudes. The scale was comprised of 75 questions that measured children's attitudes regarding who should hold certain occupations, engage in particular activities, and have certain traits. A set of four black and white figures depicting a woman to represent "only women," a man to represent "only men," a woman and a man to represent "both women and men," and a woman and a man with a line drawn through it to represent "neither women nor men" were used to elicit children's responses. Assessment of this measure is described in the Scoring section.

Bigler, Liben, Lobliner, and Yekel (1997) report test-retest reliability scores for feminine occupations, activities, and traits are .76, .79, and .75, respectively; whereas test-retest reliability scores for masculine occupations, activities, and traits are .78, .79, and .73, respectively. Cronbach-alpha scores representing validity for feminine occupations, activities, and traits are .81, .83, and .84, respectively. Cronbach alpha scores for masculine occupations, activities, and traits are .83, .87, and .85, respectively. Guttman split-half reliability scores for feminine occupations, activities, and traits are .79, .79, and .79, respectively; whereas Guttman split-half reliability scores for feminine occupations, activities, and traits are .85, .85, and .81, respectively. Thus, this scale demonstrated acceptable levels of reliability and validity.

Scoring

Gender Stereotyped Attitude. The gender stereotyped attitudes score was devised by computing the proportion of "only women" and "only men" responses provided during the COAT-AM. After all of the participants' answers were tabulated, a median score of

stereotyped responses (i.e., “only women” and “only men”) was .50. This number served as the cut-off for higher and lower stereotyped attitudes. Children who provided stereotyped responses that fell below the median were considered to hold a “lower” level of stereotyped attitudes whereas children who provided stereotyped responses that fell at or above the median were considered to hold a “higher” level of stereotyped attitudes.

Memory Scores. The memory scores measured the overall amount of correct and incorrect information that children provided in their reports. A total of 34 features were identified and rated by 5 lab members using a Likert scale ranging from 1 (very core) to 4 (very peripheral). Using the averaged scores, six features were dropped because they received scores of 3.5 or higher, leaving 28 features constituting 13 core features (i.e., information central to the event and to the characters; rated from 1 to 2.24) and 15 peripheral features (i.e., nonessential details; rated from 2.25 to 3.49).

Correct memory represented the information portrayed in the film, whereas incorrect memory consisted of both confabulations (i.e., spontaneously produced inaccurate information) and false alarms (i.e., accepting suggestive information as factual). Both types of memory were calculated in the same way using a three-step process that was a modification of one recommend by Baker-Ward, Ornstein, Gordon, Follmer, and Clubb (1995). First, responses were coded for how completely the child answered the questions. Children who furnished a partial answer (provided some information, but not the complete response) received 1 point, a full answer (provided the complete response) received 2 points, or an elaborated answer (provided the complete response plus additional information) received 3 points. Strict guidelines were set as to what compromised a partial, full, or elaborated response to promote interrater reliability (see Appendix A).

Second, answers were scored according to the level at which the participant provided the information. Children could provide information in response to general open-ended, specific open-ended, leading or misleading questions. Responses were scored in a hierarchical manner with general open-ended questions earning four points, specific open-

ended questions earning two points, and a leading or misleading question earning one point. For example, if a child recalled that “The bike was black” at the general open-ended level, the answer was given more weight (i.e., 4 points) than if the child provided the same information at the specific open-ended level (i.e., 2 points). A more detailed explanation of the questioning process is described in the Procedure section.

The third step involved creating four memory scores used for analysis, specifically correct core, correct peripheral, incorrect core, and incorrect peripheral. For each feature, the number of points earned for completeness was multiplied by the level of response (weight) score. For example, a full answer (2 points) given at the specific open-ended level (2 points) received a score of four points (i.e., 2×2 points). Next, the total number of points for all 13 core and all 15 peripheral features were tallied separately (see Table 1). To obtain each proportion, the total score was divided by the total number of possible points (i.e., 140 points for correct core features, 172 points for correct peripheral features, 144 for error core features, and 172 for error peripheral features).

Same-Sex Bias Score. The gender bias score was divided into correct and erroneous responses. Participants’ answers to 12 questions regarding the perpetrator’s actions and characteristics were evaluated (see Table 2). Points for the gender-bias score were calculated using the same method as the memory score (i.e., the total points were determined by the completeness of the response and the question level at which the answer was given). To obtain a proportion of correct and error scores, raw scores were divided by the total score of 120 for the correct responses or by 116 for erroneous responses.

Gender Distortion Score. The interview consisted of 15 questions that elicited either gender consistent or gender inconsistent responses. Seven of these questions included the manipulated features that varied between the consistent and inconsistent film versions. Because children did not interpret the epitaph as sex-typed, this item was not included in the analysis. Children’s statements were analyzed for four types of distortions that could be made. First, neutral information could be converted into “feminine”

Table 1

Core and Peripheral Features

Core Features	Peripheral Features
1. The bike is stolen by the perpetrator.	1. The victim moves the bike.
2. The children argue over the bike.	2. The victim is sitting on a bench and singing.
3. The victim is the owner of the bike.	3. The perpetrator's action when denied permission to use the bike.
4. The perpetrator's name.	4. The victim's name (not mentioned).
5. The perpetrator's shirt.	5. The victim's hair is blond.
6. The perpetrator's hair is brown.	6. The victim wears jeans.
7. The perpetrator's hair length.	7. The victim wears sneakers.
8. The perpetrator's sex.	8. The perpetrator's shoes.
9. The perpetrator is older than the victim.	9. The perpetrator's watch style.
10. The perpetrator is taller than the victim.	10. The perpetrator touches the bike.
11. A mountain bike is stolen.	11. The perpetrator touches the victim.
12. The bike is black.	12. The name the perpetrator calls the victim.
13. The children struggle over the bike.	13. The victim becomes angry when the bike is stolen.
	14. The father approaches the victim after the bike is stolen.
	15. The father's hair is brown.

Table 2

Perpetrator Actions and Characteristics for Same-Sex Bias Analysis

Male Consistent/Female Inconsistent**Female Consistent/Male Inconsistent**

1. The perpetrator wears a black shirt.
2. The perpetrator wears hiking boots.
3. The perpetrator wears a watch.
4. The watch is big and black.
5. The perpetrator wears short hair.
6. The perpetrator is named Frankie.
7. The perpetrator calls victim "a stupid jerk."
8. The perpetrator punches victim's arm to convince victim to do something.
9. The perpetrator uses finger to pretend to slit throat when disappointed.
10. The perpetrator steals bike when denied permission to use it.
11. The perpetrator's hair is brown.
12. The sex of the perpetrator.
(Girl: Female Inconsistent,
Boy: Male Consistent)

1. The perpetrator wears a pink shirt.
 2. The perpetrator wears sandals.
 3. The perpetrator wears a watch.
 4. The watch is small and gold.
 5. The perpetrator wears long hair in a pony-tail.
 6. The perpetrator is named Ashley.
 7. The perpetrator calls victim "a dumb baby."
 8. The perpetrator pats victim's head to convince victim to do something.
 9. The perpetrator sticks tongue out when disappointed.
 10. The perpetrator steals bike when denied permission to use it.
 11. The perpetrator's hair is brown.
 12. The sex of the perpetrator.
(Girl: Female Consistent,
Boy: Male Inconsistent)
-

information. For example, if the female victim was wearing a pink shirt (feminine item) a child may say that she was wearing a white shirt (neutral item). Second, neutral information could be converted into “masculine” information. For example, if the male victim was wearing boots (masculine item) a child may claim that he was wearing white tennis shoes (neutral item). Third, feminine information could be converted into masculine information. For example, if the male perpetrator had short hair a child may say that he had a long pony-tail. Fourth, masculine information could be converted into feminine information. For example, if the female perpetrator was wearing sandals a child may say that she was wearing hiking boots.

Responses that turned gender inconsistent information or gender-neutral information into gender consistent information were labeled as “stereotypical distortions.” whereas responses that turned gender consistent information or gender-neutral information into gender inconsistent information were labeled as “astereotypical distortions.” One point was given for each type of distortion, regardless of the question level at which the answer was provided. Guidelines for what entailed a stereotypical or astereotypical gender-role distortions were established and interrater reliability of over 90% was established.

Procedure

Participants were obtained through three sources. A parental consent letter was distributed to all kindergarten, first, and second grade classes within Emporia, Reading, Admire, and Americus, KS. Teachers distributed the permission slips to students and instructed them to return the letters with their parent’s signature. Second, parents who worked at the University were asked through the use of a similar informational letter to volunteer their children. Finally, advertisements requesting participants were shown on a local television station and placed on flyers posted throughout the community. Those parents who indicated that their children could participate (i.e., by returning a signed permission slip to the researcher) were called and an interview was scheduled.

Before the experiment began, the researcher obtained verbal permission from the children to participate in the study. Each child viewed the film with an experimenter under the pretense the interviewer needed to finish some work. Children were given two interviews about the bike theft by an experimenter who was not present during the movie. For a sample, see Appendix B for the list of questions asked during the Male Consistent interview. Interviews were videotape recorded. The first interview took place immediately after the film ended and the second interview occurred approximately seven weeks following the first appointment (-2/+3 days). Both interviews consisted of different types of questions which varied by the degree of prompting they supplied. The first question was a general open-ended question (OE1) followed by a temporal open-ended question (TOE1). Specifically, the OE1 question asked "What happened to the bike? whereas the TOE1 question asked "What was the first thing that happened to the bike?". The interviewer then asked children specific open-ended questions (OE3) for features not previously mentioned, such as "What color was the bike?". If the child still did not provide an answer, the experimenter asked both correct leading questions (e.g., "Was the bike black?") and misleading questions (e.g., "Was the bike red?"). The structure of this interview process was used to elicit as much information as possible about the event. While the children participated in the experiment, parents completed background information to assess their socioeconomic status (see Appendix C).

During the second interview, a memory interview, identical to the memory interview previously described, was conducted upon the participant's arrival to the laboratory. At the end of the memory interview, the children were asked three short questions to determine how the theft event made them feel, whether they thought it was right for the perpetrator to take the bike, and if anything had ever been stolen from them or someone they knew (see Appendix D). The purpose of this task was to determine whether the child understood the gravity of the bike theft and whether the child could empathize with the victim. Eighty-four of the children reported that watching the theft made them feel

sad, bad, or mad. Fifty-one of the children reported that they, or someone they knew, had be the victim of a theft.

The researcher then instructed participants how to use the COAT-AM picture selection. Questions from the COAT-AM were read aloud to the children by the experimenter (see Appendix E). Children responded to the COAT-AM by pointing to one of the black and white pictures. Participants completed up to 10 practice questions until they reach the preferred criterion (i.e., selecting each of three possible responses at least one time). For the first 50 questions (occupations and activities) children selected from 3 responses (i.e., “only women,” “only men,” and “both women and men”). For the trait section, children selected from four responses (i.e., “only women,” “only men,” “both women and men,” and “neither women nor men”). A fourth section was added as a check on the manipulations made in the film (see Table 3). The experimenter asked the participants questions about what women and men usually do or wear based on the manipulated features shown in the films. Children responded to the questions according to the above procedure, using the selections of “only women,” “only men,” and “both women and men.” The majority of children agreed that the manipulated features were sex-typed with the exception of the name the perpetrator called the victim.

Table 3

Eight Manipulated Features

Male-consistent/Female-inconsistent	Female-consistent/Male-inconsistent
1. Perpetrator wears a black shirt.	1. Perpetrator wears a pink shirt.
2. Perpetrator wears hiking boots .	2. Perpetrator wears sandals.
3. Perpetrator wears a big, black watch.	3. Perpetrator wears a small, gold watch.
4. Perpetrator has short hair.	4. Perpetrator has long hair in a pony-tail
5. Perpetrator is named Frankie.	5. Perpetrator is named Ashley.
6. Perpetrator calls victim "a stupid jerk."	6. Perpetrator calls victim "a dumb baby."
7. Perpetrator punches victim on arm to convince victim to do something.	7. Perpetrator pats victim on head to convince victim to do something.
8. Perpetrator uses finger to pretend to slit throat when disappointed.	8. Perpetrator sticks tongue out when disappointed.

CHAPTER 3

RESULTS

Long-Term Memory

The first set of analyses addressed long-term memory. Correct memory scores were analyzed using a 2 (Sex of Participant: Girl or Boy) x 4 (Condition: Male Consistent, Male Inconsistent, Female Consistent or Female Inconsistent) x 2 (Time: Immediate or Seven-week) x 2 (Feature: Core or Peripheral) mixed model analysis of variance. Sex and condition served as the between-subjects factors, whereas time and feature served as the within-subjects factors. Tukey post-hoc tests were performed on all significant interactions ($p < .05$). A significant main effect for feature, $F(1, 96) = 517.57, p < .001$, and a two-way interaction of Condition x Feature, $F(3, 96) = 4.74, p < .01$, were interpreted within a significant Sex x Condition x Feature interaction, $F(3, 96) = 3.17, p < .05$, and a Time x Condition x Feature interaction, $F(3, 96) = 2.91, p < .05$. Table 4 shows the mean proportions and standard deviations of correct memory by sex, condition, and feature. Regardless of sex and condition children recalled more core features than peripheral features. Girls who viewed the Female Inconsistent version recalled more correct peripheral features than did boys. Girls who viewed the Female Inconsistent version also recalled more correct peripheral features than girls who viewed the Female Consistent version. No other differences were significant.

Table 5 shows the mean proportions and standard deviations of correct memory by time, condition, and feature. Not surprisingly, children's recall of core features was more accurate than peripheral features for both interviews, regardless of condition. During the second interview, children reported more peripheral information for the Female Inconsistent version than for the other three versions. No other differences were significant.

There was also a significant Sex x Time x Feature interaction, $F(1, 96) = 5.08, p < .05$. Table 6 shows the mean proportions and standard deviations of correct memory

Table 4

Mean Proportions and Standard Deviations of Correct Memory by Sex, Condition, and Feature

	Type of Feature			
	Core		Peripheral	
	Girls	Boys	Girls	Boys
Male				
Consistent	.38 (.12)	.42 (.08)	.27 (.09)	.25 (.05)
Inconsistent	.40 (.09)	.41 (.11)	.26 (.08)	.25 (.06)
Female				
Consistent	.43 (.08)	.39 (.08)	.24 (.06)	.25 (.06)
Inconsistent	.41 (.08)	.38 (.09)	.32 (.09)	.26 (.06)

Table 5

Mean Proportions and Standard Deviations of Correct Memory by Time, Condition, and Feature

	Initial Interview		Seven-Week Interview	
	Core	Peripheral	Core	Peripheral
Male				
Consistent	.40 (.11)	.27 (.08)	.40 (.09)	.25 (.06)
Inconsistent	.42 (.09)	.27 (.07)	.39 (.11)	.24 (.07)
Female				
Consistent	.42 (.07)	.25 (.05)	.41 (.10)	.25 (.07)
Inconsistent	.40 (.06)	.27 (.08)	.39 (.10)	.32 (.08)

Table 6

Mean Proportions and Standard Deviations of Correct Memory by Sex, Time, and Feature

	Initial Interview		7-Week Interview	
	Core	Peripheral	Core	Peripheral
Girl	.41 (.09)	.28 (.09)	.41 (.10)	.27 (.09)
Boy	.42 (.08)	.25 (.05)	.39 (.10)	.26 (.06)

by sex, time, and feature. These data revealed that both girls and boys remembered more core features at the initial interview than at the seven-week interview. In addition, girls recalled more peripheral information from the theft event than boys, but only at the initial interview.

Error memory scores were analyzed using a separate 2 (Sex of Participant: Girl or Boy) x 4 (Condition: Male Consistent, Male Inconsistent, Female Consistent or Female Inconsistent) x 2 (Time: Immediate or Seven-week) x 2 (Feature: Core or Peripheral) mixed model analysis of variance. Sex and condition served as the between-subjects factors, whereas time and feature served as the within-subjects factors. Tukey post-hoc tests were performed on all significant interactions, ($p < .05$). Main effects for condition, $F(3, 96) = 6.71$, $p < .000$, time, $F(1, 96) = 29.25$, $p < .001$, and feature, $F(1, 96) = 10.12$, $p < .01$, were found. A higher proportion of error memory was produced by children who viewed the Male Inconsistent ($M = .08$, $SD = .06$), Female Inconsistent ($M = .08$, $SD = .05$), and Female Consistent ($M = .08$, $SD = .05$) versions than the Male Consistent version ($M = .06$, $SD = .04$). As predicted, children's error memory was greater in the delayed ($M = .05$, $SD = .05$) rather than the immediate interview ($M = .04$, $SD = .04$). Not surprisingly, children made more errors when recalling peripheral ($M = .09$, $SD = .04$) rather than core information about the theft ($M = .07$, $SD = .05$).

In summary, children were more likely to recall information inaccurately when the information was not central to the theft itself and when a substantial amount of time had lapsed between the original event and its recall. Moreover, children may have difficulty accurately recalling information when viewing a theft not performed by a gender-stereotypical male perpetrator.

Same-Sex Bias

The second set of analysis focuses on same-sex bias. Two separate 2 (Sex of Participant: Girl or Boy) x 2 (Gender of Perpetrator: Female or Male) x 2 (Time:

Immediate or Seven-week) mixed model analyses of variance were used to examine children's same-sex correct and error scores. For same-sex bias correct score, a main effect of Sex of Perpetrator, $F(1,100) = 13.71$, $p < .001$, indicated that children recalled information more accurately about the male perpetrator ($M = .35$, $SD = .07$) than about the female perpetrator ($M = .30$, $SD = .08$). There was also a main effect of Time, $F(1,100) = 5.26$, $p < .05$, indicating that children recalled the perpetrator's actions and characteristics more accurately in the immediate interview ($M = .33$, $SD = .07$) than in the delayed interview ($M = .31$, $SD = .08$). Although the Sex of Participant x Gender of Perpetrator was not significant, $F(1,100) = .175$, $p < .68$. the means were consistent with a same-sex bias for boys. For the same-sex bias error score, there were main effects for Sex of Participant, $F(1,100) = 5.04$, $p < .05$, Gender of Perpetrator, $F(1,100) = 7.92$, $p < .01$, and Time, $F(1,100) = 7.24$, $p < .01$. Boys were more likely to make mistakes about the perpetrator's characteristics and actions ($M = .13$, $SD = .06$) than were girls ($M = .12$, $SD = .06$). Same sex bias errors were greater for recall of the female perpetrator ($M = .14$, $SD = .07$) than for the male perpetrator ($M = .11$, $SD = .06$). Children also produced more mistakes about the perpetrator's characteristics and actions in the seven-week interview ($M = .13$, $SD = .06$) than in the immediate interview ($M = .11$, $SD = .06$).

These analyses showed that children's memory for perpetrator characteristics and actions were better for the male perpetrator and that recall faded over time. Moreover, boys were more likely to remember perpetrator information incorrectly than were girls.

Gender-Distortion Score

The third set of analyses focused on the types of distortions children made when recalling gender-related information from the theft scene. The Gender Distortion score was subjected to a 2 (Sex of Participant: Girl or Boy) x 2 (Film Version: Gender Consistent or Gender Inconsistent) x 2 (Stereotyped Attitude: High or Low) x 2 (Type of Gender Distortion: Stereotypical or Astereotypical) x 2 (Time: Immediate or Seven-Week) mixed model analysis of variance. Sex of Participant, Film Version, and Stereotyped attitude

served as the between-subject factors, whereas both type of Gender Distortion and Time served as the within-subject factors. Simple effects post-hoc tests (t -test, $p < .05$) were performed on all significant interactions. A significant main effect of Type of Gender Distortion, $F(1,96) = 38.54$, $p < .001$, was interpreted within a Type of Gender Distortion x Film Version interaction, $F(1,96) = 10.77$, $p < .001$. As shown in Figure 1, children were more likely to distort items into gender stereotypical information than to convert it into gender astereotypical information when shown a gender inconsistent theft version. A significant main effect of Time, $F(1,96) = 18.20$, $p < .001$, was interpreted within a Sex of Participant x Time interaction, $F(1,96) = 4.92$, $p < .05$. As shown in Figure 2, girls were more likely to distort information during the seven-week interview than during the initial interview.

One additional post-hoc analysis was performed to examine the type of errors children made when recalling information about perpetrator characteristics and actions. A 2 (Sex of Participant) x 2 (Film Version) x 2 (Time) mixed model analysis of variance was conducted with Sex of Participant and Film Version as the between-subjects factors and Time as the within-subject factor. Simple effects post-hoc analyses (t -tests) were performed on significant interactions. A significant Film Version x Time interaction, $F(1,100) = 8.57$, $p < .001$, is shown in Figure 3. Children who watched the gender inconsistent films made more errors in the seven-week interview than in the initial interview. Also, reports from the seven-week interview contained more errors when children had viewed the gender inconsistent films than when they watched the gender consistent films.

The results demonstrate that when girls watched the gender inconsistent film versions, they were more likely to make gender-incongruent information consistent with traditional gender stereotypes, particularly over time. Children incorrectly recalled information about the perpetrator's characteristics after a long delay when she or he did not fit traditional gender stereotypes.

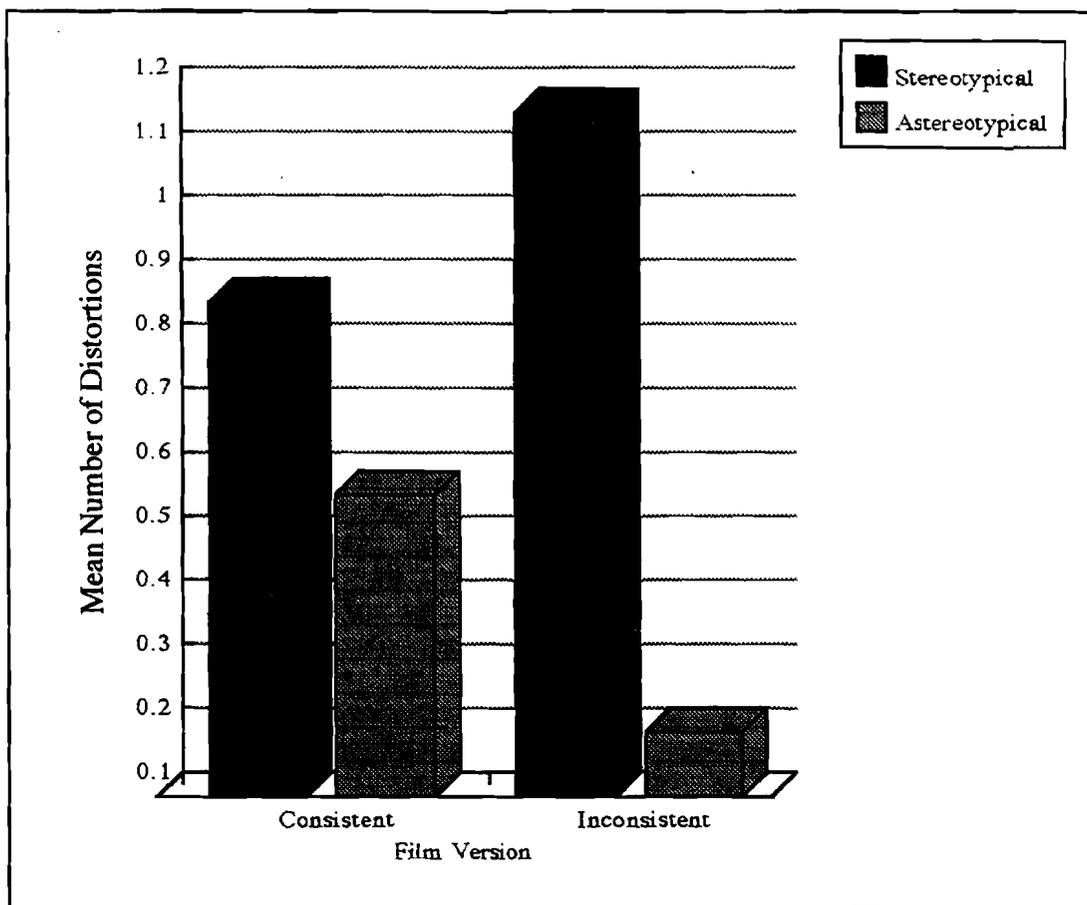


Figure: Mean Number of Distortions by Type and Film Version

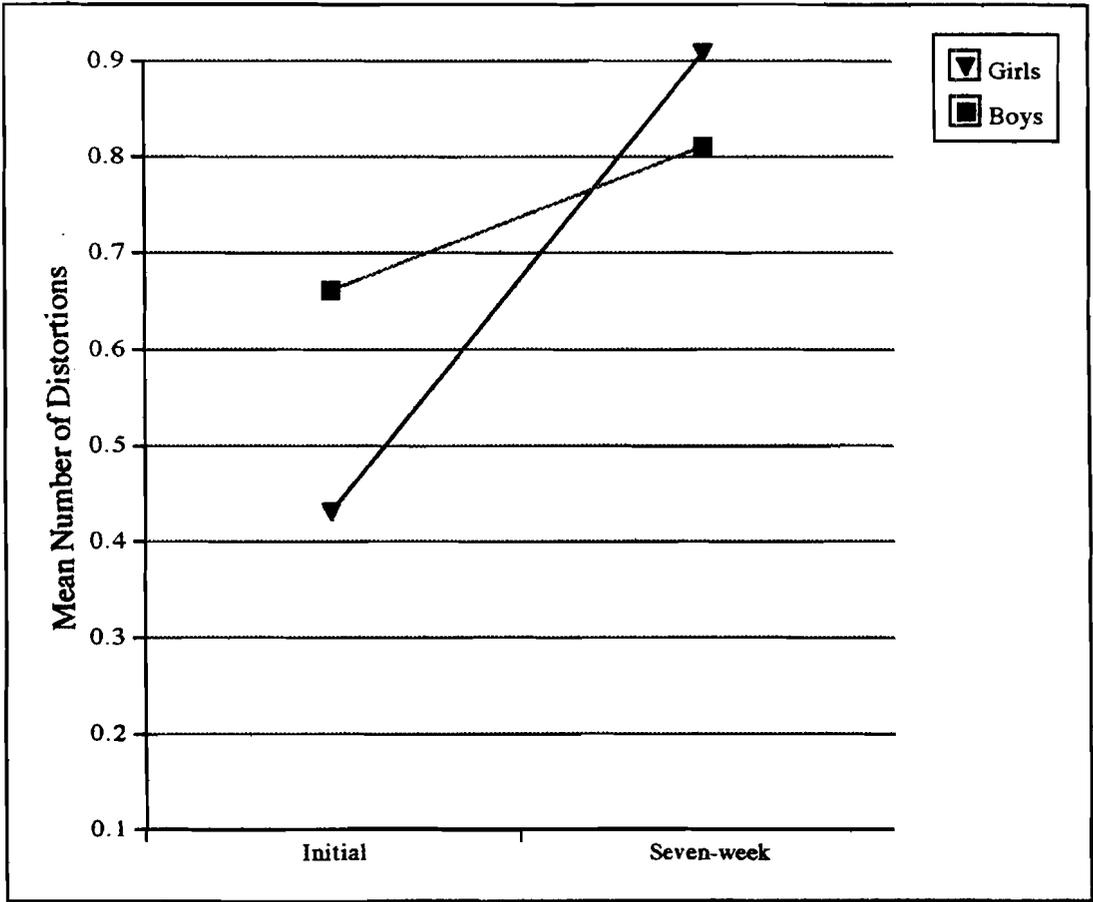


Figure: Mean Number of Distortions by Time and Sex of Witness

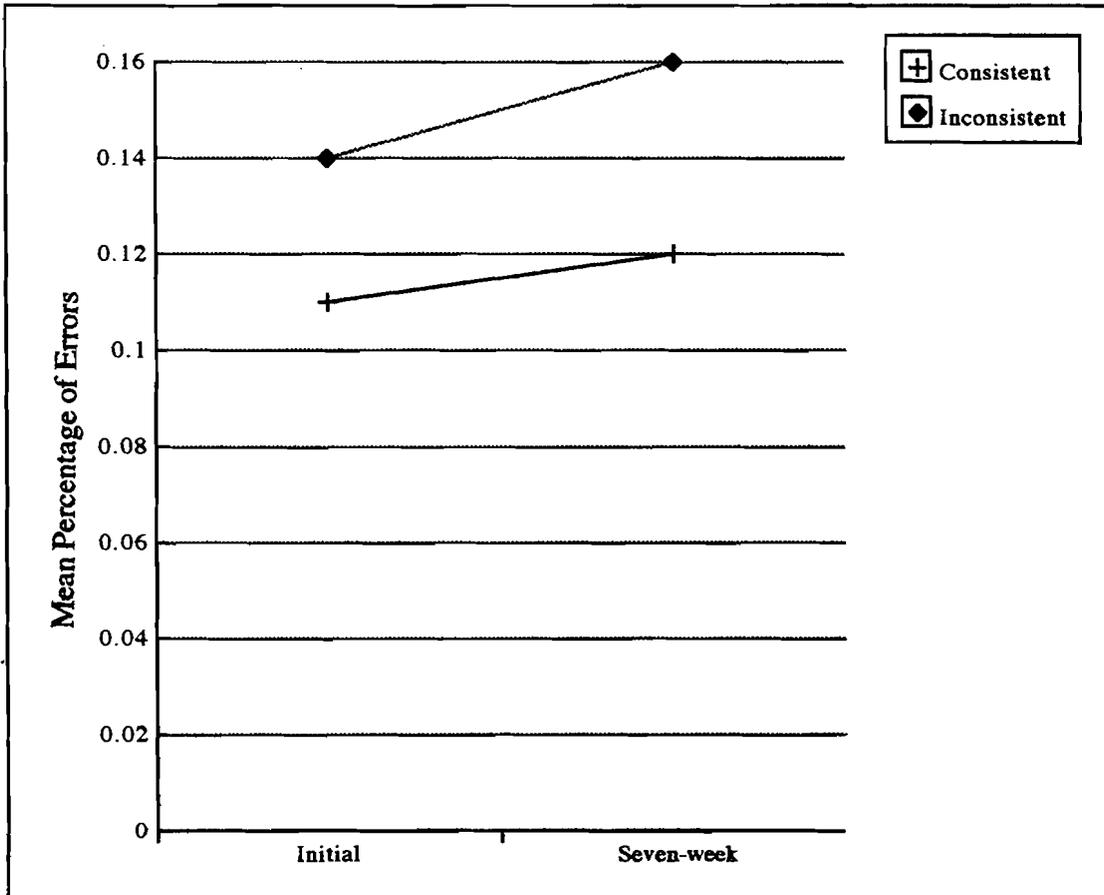


Figure: Mean Proportion of Same-Sex Bias Errors by Time and Film Version

CHAPTER 4

DISCUSSION

The purpose of the present study was to explore children's eyewitness testimony and the factors that affect accuracy over time. In particular, this study sought to investigate how perpetrator characteristics and witnesses' gender and gender-role attitudes influenced what was recalled about a theft over a period of seven weeks. The findings are discussed first in terms of long-term memory, then the effects of same-sex bias for perpetrator characteristics and actions are considered, and lastly, gender distortions are explained.

Long-Term Memory

The first question posed was "How did the perpetrator's characteristics and eyewitnesses' gender affect children's long-term memory for a witnessed event?" Congruent with past research, children recalled information that was central to the theft more accurately than information that was peripherally related (Cassel & Bjorklund, 1995, Clifford & Scott, 1978; Parker, Haverfield, & Baker-Thomas, 1986). Cassel and Bjorklund found that children's recall for central features of a bicycle theft, such as the ownership of the bike, showed virtually no forgetting up to one month after witnessing the event. Unlike information considered to be highly relevant to a crime, peripherally related information was not recalled as accurately by the witnesses.

Not surprisingly, children's recall was less accurate after the seven-week interview than in the immediate interview. Other investigators have indicated that as the delay between witnessing an event and recalling the event increased, the amount of accurate information reported decreased (Dent & Stephenson, 1979; Lipton, 1977; Ornstein, Shapiro, Clubb, Follmer, & Baker-Ward, 1997). However, this effect was mediated by the type of feature recalled, as well as by the gender of the person who recalled the information. Central features were recalled better initially than over the seven-week period. Congruent with Marks (1972), girls were more accurate than boys in recalling details of the theft scene.

Children were more likely to recall information incorrectly when the perpetrator did not fit their expectations. These findings may be explained by cognitive theory about stereotyping. That is, most crimes are committed by men rather than by women or by “feminized” male culprits. Yarmey (1981) proposed that people’s recall of an assailant is based on their “person-perceptions.” Person-perception is a cognitive process about people in which select information is attended to and classified to fit dichotomous categories (e.g., female-male). Similar to stereotypes, this process results in errors because of a loss of individual differences as the perceiver focuses on only a particular aspect of an individual. Consequently, in situations such as a theft event, incongruent behaviors may be ignored while other stimulus information becomes more salient to an observer. The results indicate that when the perpetrator of a crime is not consistent with witnesses’ stereotypes, people will be more likely to distort information about the event, perhaps to make the information resemble their conceptions of criminal assailants. As a result of these distortions, children would make more errors in recall (Taylor & Crocker, 1978).

Witness gender had an effect on what was remembered about the crime and the perpetrator. Girls provided more peripheral information than did boys when the perpetrator was female, but had stereotypical male characteristics. Over time, girls also recalled peripheral information (i.e., victim characteristics and interactions with the perpetrator) more when the “masculinized” rather than the stereotypical female teenager committed the crime. Cognitive theory about stereotyping and development of gender schemas may explain this finding. First, girls are more willing than boys to accept “trans-gender behaviors” (e.g., girls performing traditionally masculine behaviors) because they have more flexible gender beliefs (Golombok & Fivush, 1984). Also, it is more acceptable in our society for women to engage in trans-gender activities than for men (Golombok & Fivush, 1984). Second, society’s criminal stereotypes dictate that men usually perpetrate a crime (Yarmey, 1981). However, it may be more believable that a woman with masculine traits would be an assailant than a woman with feminine traits. In contrast, girls may not

be capable of making similar inferences about how a “feminine” male perpetrator would act. Martin and her colleagues (Martin, Wood, & Little, 1990) have shown that children begin to make complex inferences about actions of same-gender characters by age 6, but are less capable of making predictions about the other gender’s behavior until age 8. Thus, the interaction of perpetrator and gender stereotypes allows girls to report more detailed information for the nontraditional female assailant than for the traditional female assailant.

Same-Sex Bias

The second question posed was, “What do children perceive and remember about the perpetrator in a witnessed event?” Consistent with other investigations (White, Leichtman, & Ceci, 1997), witnesses’ recall for perpetrator characteristics and actions became worse over time. Hence, the police may be more confident of the accuracy of witnesses’ testimony about the assailant when information is collected shortly after the crime is committed rather than after a substantial period of time.

Although a same-sex bias was not found, children’s focus on the male and female perpetrators differed. Slaby and Frey (1975) indicated that children attended more to a male model than to a female model performing similar activities, suggesting that men are perceived as “more powerful and reinforcing” than are women. According to Golombok and Fivush (1994), behaviors and activities performed by men, particularly traditional ones, are considered more valuable by our culture than are behaviors and activities performed by women.

Interestingly, information about the perpetrator was differentially recalled by female and male witnesses. In general, boys’ recall about the perpetrator was more erroneous as compared with that of girls. Researchers investigating identification of perpetrators have also indicated that female witnesses were more accurate than male witnesses (Cross, Cross, & Daly, 1971; Ellis, Shepherd, & Bruce, 1973; Goldstein & Chance, 1971). Moreover, girls know more about gender than do boys (Signorella, Bigler, & Liben, 1993) and many of the perpetrator characteristics were gender-relevant.

Why was a same-sex bias not found? It may be that this study used a more complex and salient stimuli (i.e., a movie portraying a theft) than has been used in the past (e.g., slides, picture cards of women and men engaged in mundane activities). More research using events as the stimuli is needed to better understand the same-sex phenomenon. Another possible reason that a same-sex bias was not found may be that the children had a difficult time relating to the perpetrator. Specifically, when the perpetrator did not conform to the children's expectations about how a theft looked of acted, they could not identify with the character.

Gender Distortion

The final question posed was, "How do the perpetrator's characteristics and the eyewitnesses' gender and gender stereotyped attitudes affect the eyewitnesses' perception and long-term memory for different types of event information?" Congruent with the hypotheses, recall was affected by the perpetrator's characteristics. Children who watched the gender inconsistent versions produced more gender stereotypical transformations than gender astereotypical transformations. This finding is consistent with past research showing that children exposed to gender incongruent information will reconstruct information to make it fit their gender-schematic beliefs (Liben & Signorella, 1993; Signorella & Liben, 1984). Children's recall of perpetrator characteristics was also affected by which film version they saw. After a long delay, children who viewed the gender inconsistent version had worse recall for perpetrator actions and characteristics than those who viewed the gender consistent versions. Thus, congruent with Bartlett's Schema Theory, children's recall was hindered when information contradicted their expectations (Signorella & Liben, 1984).

Although boys and girls did differ in the amount of distortions created, girls made more gender distortions in the seven-week interview than in the Initial interview. Bartlett (1932) reported that people were likely to distort information to fit their schemas after a long delay. That is, people "fill in" forgotten information with stereotypical details in order

to provide a sensible story. It was not clear, however, why only girls produced gender distortions differentially over time.

Unlike previous investigations, this study did not find variations in children's stereotyped attitudes (Berk, 1997; Liben & Signorella, 1980). It is possible that the COAT-AM is a better scale for assessing gender attitudes in children who are older than those used in this study. Other researchers have drawn similar conclusions. For example, Templeton (1999) only used the Activity subscale as a measure of gender stereotype for her sample of 6- and 7-year olds. A second possible reason this study failed to find variations in children's stereotyped attitudes is because the COAT-AM was normed on children residing in the Eastern United States. Perhaps the failure to see significant differences was due to response variations by Midwestern and Eastern children.

Conclusions

This study was important because it demonstrated that, although eyewitnesses may have difficulty remembering some details about a crime, information that is key to an event can be retrieved for several weeks after the initial episode. In contrast, many of the eyewitness testimony researchers report the proportion of an event that is recalled or forgotten, but do not specify whether witnesses are remembering or forgetting core or peripheral event features. Therefore, it is unclear whether witnesses' memory for salient aspects of other types of events or crimes remains intact over extended time delays, allowing law enforcement and court officials to unerringly prosecute criminal suspects. It is also possible that information forgotten over time may be only peripherally related to the crime, which would not impair the witnesses' credibility or the district attorney's ability to prosecute the case. Future research should specify the type of features about an event that are recalled, as well as what is commonly forgotten after varying periods of time.

This research also demonstrated that the sex of the witness influenced what information was recalled about an eyewitnessed event. In particular, girls may be better at recalling details about an event initially, but not over time. Additionally, boys may also be

prone to producing errors about the perpetrator's characteristics and actions. Previous memory investigators have not focused on sex differences in recall. Future research should explore how female and male witnesses differ in their recall of events.

Lastly, it was demonstrated that children's memory for a theft event was affected when participants viewed characters portraying astereotypical information. This study showed that the gender-role of the perpetrator does influence eyewitness testimony in children. Because there has been little information about this phenomenon in eyewitness literature, it is imperative that researchers conduct future investigations to determine the extent to which eyewitness reports differ due to the gender-role of the perpetrator.

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APPENDIX A

CODING SCHEME

MALE CONSISTENT FILM VERSION

The Child Study Team members will score the correct and erroneous information on individual coding sheets. The information elicited from the children will be given two scores, which will be multiplied together to ascertain a total correct or error score. The first value will reflect the completeness of the answer. The response will then be coded based upon the prompt level at which the information is given (i.e., OE-1, TOE-1, OE-3, and LQ). After the two point values are assigned the coder multiplies the scores to ascertain a total correct or erroneous score for each feature.

The first numeric score will indicate how completely the children answered the question. The coding for correct point values will be assigned at all open-ended levels as follows: Elaborated credit (3 points) will be given when the children gives correct information with details (e.g., curly brown hair) and/or dialogue, Full credit (2 points) will be given when the children gives correct information alone, and Partial credit (1 point) will be given when they give some correct information (e.g., detail or correct dialogue). Credit for elaboration is given for information provided in any part of the interview. That is, elaboration does not have to be given at the time the correct response is given. For example, children can provide this information at the OE-1, OE-3, or even in response to an NLQ in the specific interview. The point value of 0 will be assigned when the children do not respond with an answer, or if they indicate they do not know the answer.

The second numeric score will reflect the weight for the level (i.e., OE-1, TOE-1, or LQ) at which the children responds correctly. For example, if they correctly respond at

the open-ended level (OE-1 or TOE-1) the weighted point value assigned will be 4. In addition, the OE-3 prompt level weighted point value assigned will be 2. Finally, if the correct response is supplied at the LQ level the weighted point value assigned will be 1. The prompt level point value will reflect the level at which the correct information is given, not based on the level the elaboration is given. For example, should the children give correct dialogue at the OE-1 level, but not give the correct answer until the OE-3 level the weighted point value assigned will be 2 points reflecting the level where the correct information was obtained. However, if the correct response is not given at all the children will still receive credit for the elaborated response and assigned a weighted point value based reflective of the level at which the elaboration is given. The point values are weighted to reflect the difficulty of the task. The error score sheet will be coded in a like manner.

The first and second scores will then be multiplied to reveal a total correct or error score for each question. For example, if a child gives a partial credit answer at the OE-1 level the child would receive 1 point for the partial credit answer multiplied by 4 points for weight because the question was answered at the OE-1 level for a total of 4 points. The features are subdivided into four categories regarding the bike, the children's actions, physical characteristics, and clothing. Each category will indicate a subtotal of points for the aforementioned features.

Special cases

1.) If children initially give the wrong answer but later, during the interview, correct themselves, it is considered a spontaneous correction and will be coded as if the wrong answer had not been given. For example, when a child provides the correct

information when asked about another feature. Another example is when a child responds affirmatively to both the PLQ and the NLQ and is subsequently asked to choose which one is the correct response and he or she correctly responds that the answer is the PLQ. In contrast, if the children give the correct response and later give erroneous information spontaneously, then code the information as error only.

2.) Both the gist dialogue and the verbatim statement will be scored as elaboration whether it is given as a direct quote or given indirectly. For example, it is not necessary for the children to remember the exactly wording of “Get back here, stop, stop, that’s my bike, come back, come back,” it would be acceptable for children to state that the girl yelled to come back, or to state “She said, come back with my bike.”

3.) In all cases, the children will be given the maximum number of points. For example, if a child gives correct dialogue at the OE-1 level, but does not receive credit for the specific feature until the LQ level the coder will figure the score both ways and allow the child the maximum point value. However, if no information is provided for a feature due to an experimenter/interviewer error (IE) no credit will be given unless the correct response is given prior to the error. Further, if the child provides information at the OE-1 or TOE-1 level, but the interviewer mistakenly asks for information for the same feature at the OE-3 or LQ level, coders should ignore the OE-3 or LQ level response.

General interview scoring

A.) Open-ended responses: See pages 6 to 13 to score OE-1, TOE-1, and OE-3 responses.

B.) For the leading questions use the following chart to assign numeric scores.

Positive LQ	Negative LQ	Score	Specific Terms
IDK	No	1C point	Correct Denial

IDK	Yes	1E point	False Alarm
No	IDK	1E point	Miss
Yes	IDK	1C point	Hit
No	No	1E/1C	Miss + Corr. Denial
Yes	Yes	1C/1E	Hit + False Alarm
Yes	No	2C points	Hit & Correct Denial
No	Yes	2E points	Miss & False Alarm

Open-ended scoring - Use the following to score OE-1, TOE-1, and OE-3 responses.

FEATURE BIKE

3. Owner

Full credit: Girl or her bike or girl's bike 2 points

ERROR

Error full credit: Boy or Dad or anyone else. 2 points

4. Color Of The Bike

Elab: Black bike with...Trek written on it 3 points

Full credit: Black 2 points

Partial credit: dark or blackish blue or purple 1 point

ERROR

Error partial credit: incorrect detail 1 point

Error full credit: red or any other color not listed above 2 points

Elab error credit: Incorrect color and incorrect detail 3 points

5. Model Of The Bike

Full credit: Mountain bike, or straight handlebars or other correct features 2 points

Partial credit: 15 speed or for both girls and boys 1 point

ERROR

Error partial credit: incorrect feature of bike 1 point

Error full credit: 10 speed or curved handlebars or for boys or girls 2 points

Elab error credit: 10 speed and an incorrect feature 3 points

FEATURE ACTIONS

6. What Was The Victim Doing Prior To The Perp's Arrival

6a. Response A. Sitting

Elab: Sitting on a bench or at a table 3 points

Full credit: Sitting 2 points

Partial credit: In a picnic area or the bike was next to her	1 point
ERROR	
Error partial credit: incorrect detail	1 point
Error full credit: swinging, or any other answer not listed	2 points
Elab error credit: Incorrect answer and incorrect detail	3 points
6b. Response B Singing	
Elab: Singing a song and ...clapping	3 points
Full credit: Singing a song	2 points
Partial credit: Rhymes or clapping	1 point
ERROR	
Error full credit: eating crackers or anything other than listed	2 points
Elab error credit: 2 or more incorrect answers	3 points
7. Songs	
7a. Response A First Song	
Elab: Bingo AND she clapped (DO NOT count 2x) or gives serial position (1 st song) or she only sang part of the song	3 points
Full credit: Bingo, B-I-N-G-O, or sings the song.	2 points
Partial credit: Something about a farmer AND a dog	1 point
ERROR	
Error full credit: any other song that is not Bingo.	2 points
Elab error credit: Incorrect song and indicates incorrect serial position or action	3 points
7b. Response B Second Song	
Elab: Correct song AND gives serial position (2nd song)	3 points
Full credit: Row, Row, Row; Row, Row your boat; or sings it.	2 points
Partial credit: Something about a boat	1 point
ERROR	
Error full credit: any other song	2 points
Elab error credit: Incorrect song and indicates incorrect serial position or action	3 points
8. Perp First Sees Bike	
Elab: Touches it and...tells where (seat, breaks) or looked at tires	3 points
Full credit: Touches it, grabs it, wheels away, tried to take it away, or plays with the handlebars or brakes	2 points
ERROR	
Error full credit: Walked up to the bike or kicked the bike	2 points
9. What Were They Arguing About	
Elab: Use of bike AND Dialogue on why she said no	3 points

Full credit: The use of the bike or an implication of wanting to take it.	2 points
ERROR	
Error partial credit: incorrect dialogue	1 point
Error full credit: She wanted the boy to sit somewhere else.	2 points
Elab error credit: Incorrect answer and incorrect dialogue	3 points
10. Did The Boy Touch The Girl	
Elab: Punched her in the left arm or with right hand	3 points
Full credit: punched her in the arm,	2 points
Partial credit: punched, slugged or hit her	1 point
ERROR	
Error full credit: hit her anywhere else other than the arm, pushed her.	2 points
11. Victim's Response When Boy First Tried To Take Bike	
11a. Response A: Struggled	
Elab: Struggled and ...Some form of the dialogue	3 points
Full credit: Struggle, wrestle, grabbed bike away, tried to take the bike	2 points
Partial credit: Stood in front of it, pulling on bike, took it back	1 point
ERROR	
Error partial credit: incorrect dialogue	1 point
Error full credit: anything that does not include a struggle	2 points
Elab error credit: Incorrect answer and incorrect dialogue	3 points
11b. Response B: Moved Bike	
Elab: Moved the bike to the ...Right side of the bench	3 points
Full credit: Moved bike to the other side of her (bench)	2 points
Partial credit: Moved Bike	1 point
ERROR	
Error partial credit: incorrect dialogue	1 point
Error full credit: anything that does not include moving the bike	2 points
Elab error credit: Incorrect answer and incorrect dialogue	3 points
12. Perp Response When She Wouldn't Let Him Use It	
12a. Response A: Slit Throat	
Full credit: Slit throat, by verbal response or action	2 points
ERROR	
Error full credit: Anything that does not include that specific action	2 points

12b. Response B: Took Bike

Elab: Rode off...to the right side of the screen
or gives dialogue 3 points

or sneaks up from behind

Full credit: Grabbed bike and rode away or stole or took bike 2 points

Partial credit: Used bike or borrowed bike or dialogue 1 point

or sneaks up

ERROR

Error partial credit: incorrect dialogue 1 point

Error full credit: Gave the bike back 2 points

or other incorrect information

Elab error credit: Incorrect answer and incorrect dialogue 3 points

13. Boy Call Girl A Name

Full credit: Stupid jerk 2 points

Partial credit: stupid or jerk 1 point

ERROR

Error partial credit: incorrect dialogue 1 point

Error full credit: Any other name 2 points

Elab error credit: Incorrect answer and incorrect dialogue 3 points

14. Victim's Reaction When The Boy Took The Bike**14a. Response A: Victim's Emotional Response**

Elab: Angry and ...Gives dialogue 3 points

Full credit: Angry, mad 2 points

Partial credit: Upset or gives dialogue 1 point

ERROR

Error partial credit: incorrect dialogue 1 point

Error full credit: Sad or anything that does not imply anger 2 points

Elab error credit: Incorrect answer and incorrect dialogue 3 points

14b. Response B: Victim's Behavioral Response

Elab: Stomps foot and...Shakes fist or gives dialogue 3 points

(DO NOT score 2x)

Full credit: Stomps foot, kicks the ground 2 points

ERROR

Error partial credit: incorrect dialogue 1 point

Error full credit: anything that does not imply 2 points

a kicking motion

Elab error credit: Incorrect answer and incorrect dialogue 3 points

15. Who Came Up To The Girl

Elab: father andgives dialogue 3 points

Full credit: father, dad 2 points

Partial credit: A man 1 point

ERROR

Error partial credit: incorrect dialogue	1 point
Error full credit: Any other person than as described above	2 points
Elab error credit: Incorrect answer and incorrect dialogue	3 points

16. Father's Reaction

Elab: Hand on shoulder and gives dialogue (Do not score 2X), or they went to look for the bike	3 points
Full credit: Hand on her shoulder, around her, hand on her back	2 points
Partial credit: Comforted her or correct dialogue	1 point

ERROR

Error partial credit: Incorrect dialogue	1 point
Error full credit: Hugged her or ran after the boy	2 points
Elab error credit: Incorrect answer and incorrect dialogue	3 points

FEATURE**PHYSICAL CHARACTERISTICS**

****ONLY GIVE ELABORATION POINTS IF IT HELPS CODE THE ANSWERS OR IT ASSISTS THE INVESTIGATOR IN THE IDENTIFICATION OF THE PERP.**

17. Perp's Name

Full credit: Frankie, Frank	2 points
ERROR:	
Error full credit: ANY other name	2 points

18. Perp's Hair Color

Full credit: Dark Brown, Brown, Black	2 points
Partial credit: dark	1 point
ERROR	
Error full credit: Blonde or light anything	2 points

19. Perp's Hair Length

Elab: Gives length and ...Bangs, or curled around face, wavy	3 points
Full credit: Short, shows length to the bottom of the chin, states like mine (and it falls within the parameters)	2 points
ERROR:	
Error full credit: Any length implied that falls beneath the chin	2 points
Elab error credit: Long and in a ponytail	3 points

19a. Response A Ponytail/Long

No points are scored for the Male Consistent interview

20. Victim's Name

Full credit: Sport, kid, didn't say the name, 2 points

Partial credit: Correct denial of Ashley AND Frankie or
Correct denial and IDK 1 point

ERROR:

Error full credit: Ashley, Frankie, or any other name 2 points

21. Victim's Hair Color

Elab: Blonde and ...gives length, wavy, or bangs 3 points

Full credit: Blonde, light blonde, blondish, yellow 2 points

Partial credit: light, blondish brown or gives length 1 point

ERROR

Error partial credit: incorrect detail 1 point

Error full credit: Incorrect color 2 points

Elab error credit: Incorrect color and incorrect detail 3 points

22. Which Child Taller

Elab: Boy and...specify by 6-10 inches 3 points

Full credit: boy 2 points

ERROR

Error full credit: girl 2 points

Elab error credit: Incorrect gender and incorrect detail 3 points

23. Which Child Older

Elab: Boy and...specify age range for boy 13-15 or girl 8-10. 3 points

Full credit: boy 2 points

ERROR

Error full credit: girl 2 points

Elab error credit: Incorrect gender and incorrect detail 3 points

24. Father's Hair Color

Elab: Color and...Receding hairline, mustache,
short hair, glasses 3 points

Full credit: Black, Dark brown, Brown 2 points

Partial credit: Dark or any other correct feature 1 point

ERROR

Error partial credit: Incorrect feature of dad 1 point

Error full credit: Incorrect color 2 points

Elab error credit: Incorrect color and incorrect feature 3 points

FEATURE**CLOTHING****25. Perp's Clothing****25a. Response A Perp's Shirt**

Elab: Black and ...with white lettering, wore jeans 3 points

Full credit: Black Shirt	2 points
Partial credit: Dark, wore jeans, or white letters on shirt	1 point
ERROR	
Error partial credit: One incorrect item	1 point
Error credit: any other color or incorrect items	2 points
Elab error credit: two or more incorrect items	3 points

25b. Response B Perp's Shoes

Elab: Hiking boots and...brown	3 points
Full credit: Boots, Hiking boots	2 points
Partial credit: Brown Shoes	1 point
ERROR	
Error partial credit: Incorrect color of shoes	1 point
Error credit: any other type of shoes	2 points
Elab error credit: Incorrect type and color of shoes	3 points

26. Victim's Clothing

26a. Response A Victim's Pants

Elab: Wore jeans...and white t-shirt	3 points
Full credit: Jeans, blue jeans	2 points
Partial credit: Pants or slacks or a white t-shirt	1 point
ERROR	
Error partial credit: Wrong color of shirt or an incorrect item	1 point
Error full credit: Wore shorts	2 points
Elab error credit: Incorrect type of pants and an incorrect item	3 points

26b. Response B Victim's Shoes

Elab: Sneakers and...White	3 points
Full credit: Sneakers, Tennis Shoes, Tenny Runners	2 points
Partial credit: White shoes	1 point
ERROR	
Error partial credit: Incorrect color	1 point
Error credit: Any other type of shoe	2 points
Elab error credit: Incorrect type and color of shoes	3 points

27. Watch

Elab: Boy's AND big AND black	3 points
Full credit: Boy's AND big OR black	2 points
Partial credit: Boy's OR big OR black	1 point
ERROR	
Error partial credit: girl's, dad's or describes as small or gold	1 point
Error full credit: Girl's or dad's AND small gold watch	2 points

28. Father's Clothing

Elab: Mentions two or more correct items 3 points

Full credit: Mentions one correct item 2 points

Partial credit: White shirt 1 point

ERROR

Error full credit: One incorrect item 2 points

Elab error credit: Two or more incorrect items 3 points

29. Sex of Perp

Full credit: Boy 2 points

ERROR

Error full credit: Girl 2 points

CORRECT FEATURES**Boy**

Frankie

Brown/ black short hair

Black shirt w/ white lettering

Jeans

Brown/black hiking boots

Big, black watch

Ring on fourth finger

Punched w/ right hand in left arm

Slit throat action

Girl

Sport or kid

Blonde short hair

White t-shirt

Jeans

White sneakers

No watch

No jewelry

No action

No action

Bike

Black

Mountain bike

"Trek" on the bike

"Antelope" on the bike

Water bottle

Brakes on the handlebars

Black seat

Father

Brown/ black hair

Receding Hairline

Brown/black boots

White blue-striped shirt

Jeans

APPENDIX B

Memory Interview Questions Male Consistent (N-P Version)

Instructions to children for introducing experimenters:

Hello. My name is _____ and this is _____. S/he is going to talk to you later. S/he is almost finished with his/her work.

Instructions to children for watching the movie: **Your parents told me that you like watching movies. I'm going to show you a short home movie that someone took when my friends went to the zoo. Then go to the room with the child and say, I want you to watch the movie--while I do my work. But, please don't talk to me about it because I won't be able to get my work done, OK? Any questions? Good. Enjoy the film.**

Instructions to children to go with interviewers: *After the film ends, the interviewer will enter the room and ask each child to follow him/her to another room for the next phase of the experiment (i.e., the memory interview).*

Guidelines for Obtaining Child Consent: *Note to interviewers: It is absolutely mandatory that each child, regardless of age, be given the opportunity to decline participation in the research. The following script provides a suggested way to obtain verbal consent from the children. Of course, this suggested procedure must be used with flexibility to accommodate the characteristics of children's styles of interaction. However, each child must be explicitly asked whether or not he or she wishes to take part in the interviews. Moreover, if the child does not want to continue, he or she may quit. The child's wishes must be respected.*

Hello _____. My name is _____. Your mommy/daddy said it would be okay if we talk for a little while in a nearby room. I'll tell you a little more about it when we get there, OK?

>>if the child says, 'yes': Good. Let's go there. [skip to p. 3]

>>if the child hesitates, but does not decline or indicates he or she is not sure, then say: It's OK if you want to think about it before you tell me. I'll be talking to lots of children your age. Would it be OK if we go and talk?

>>if the child needs reassurance from the parents, then take the child to the waiting room and let him or her see the parents. Parents will be told not to pressure the children. After a couple of minutes, then say: OK. Do you feel better now? Are you ready to go and talk in the other room? Your parents will wait here while we talk.

>>if the child declines participation, then say: That's OK. Sometimes children don't feel like talking. Thanks for coming. Have a good day.

Interactions with the child during the interview process: **>>During the interview, a child who asks to stop may be told: We are almost done, let's just finish these last few questions, OK?**

>>If the interview is not near completion, the interviewer may say: This doesn't take too long. It would help me if you could talk to me a little more. If you want, we could take a little break and get a drink of water or something.

>>After the break: **Are you ready to talk to me some more?**

>>If the child resists continuing after a couple of attempts to regain involvement, the interview should be terminated. The interviewer should say, **That's OK. Sometimes children don't feel like talking. Thanks for coming. Have a good day.**

>>At the end of the interview, the child will be praised for his or her performance and thanked for helping.

**General Memory Interview Questions
Male: Male Consistent (N-P version)**

Instructions: Be certain to start with questions #1 and #2. Write down the features on the checklist as they are mentioned. For Q#1, ask the children to elaborate on each feature that is mentioned after they list all features (e.g., Tell me more about ____). For Q#2 and the specific questions, follow up with elaboration immediately. For most items listed on the checklist, there is a corresponding question in the Specific Questions section. Write down OE answers next to the appropriate item (i.e., in response to question #1 or #2). If mentioned at the Open-ended level, **DO NOT** ask the corresponding Specific Questions. The number of the Specific Question is located to the right of the checked item. Write "Y" for yes and "N" for no to represent child's response to leading questions.

Instructions to children for the memory interview: [Turn on camcorder]

I am going to put on this camera to help me remember everything you say. ____ (child's name) everybody who works with me gets a special number, and yours is ____ (subject number)

Sometimes something happens to people and they need to call the police to get some help. The police officers' job is to find out more information. So they go around asking if anyone saw what happened. If people know any information, they are supposed to tell the police what they saw. You just saw a movie about twins who went to the zoo. I was told that the twins saw something happen to a bike. So if the police asked them about that, they would have to tell everything they saw. My job is also important because I want to find out how much children can remember about activities that they see.

Initial Interview: Read this paragraph if first interview

I don't know what happened in the movie because I didn't watch it. So I want you to tell me everything you REALLY REALLY remember about what happened to the bike. But, I don't need to know anything about what the twins did at the zoo. I will be asking you lots of questions. If you don't understand a question, just say, "I don't understand what you mean." Also, if I ask a question and you don't remember or you are not sure about your answer, just tell me, "I don't know." I'm going to write down everything you say so try not to talk too fast. OK, are you ready?

Follow up Interview: Read this paragraph if second interview

Last time you were here, we talked about the movie of the twins at the zoo. That was a long time ago, wasn't it? Well, today I want to see how much you can remember about what happened to the bike in the movie after this very long time. Remember I didn't watch the movie so I don't know what happened. I will be asking you lots of questions about what happened. If you don't understand a question, just say, "I don't understand what you mean." Also, if I ask a question and you don't remember or you are not sure about your answer, just tell me, "I don't know." OK, are you ready?

General Questions

1. Tell me about what happened to the bike. OE1

[Let the child list all the features before you go back through the list to ask for elaboration.] What else happened with the bike? [ask until list is completed.]

[When the child's list seems exhausted, ask]

Was there anything else that happened to the bike?

For each feature mentioned, but not elaborated, ask:

You said _____. Tell me more about _____. [ELAB]

EX: Tell me more about the bike.

If the child says "Took it" then ask clarification question:

What did the boy do when he took the bike (how did he take it)?

2. Good Job. You told me some (a bunch of) things I needed to know. Now I want you to think about what happened with the boy and the girl again. But this time, I want you to start from the beginning and go all the way to the end. Try not to leave anything out.

[Remember to follow up IMMEDIATELY on any NEW features]

What was the first thing that happened? TOE1

If the child says IDK, I don't remember, or I already told you, then you may respond:

a). **Think about all the things you told me about. Which one happened first? OR**

b). **You told me a lot of things. Think about which one was the first thing.**

What happened next (after that)? [repeat as often as necessary.]

For each feature mentioned, but not elaborated, ask:

You said _____. Tell me more about _____. [ELAB]

EX: Tell me more about the bike.

If the child says "Took it" for the 1st time, then ask clarification question:

What did the boy do when he took the bike (how did he take it)?

[When the child seems finished, ask]

Is that the last thing that happened?

When the child has told you all that she or he can, proceed to Leading Questions and ask about those items not already mentioned.

You did a good job. I have some more questions for you. I want you think about what happened with the bike again.

Go to Leading questions if you have your checklist complete, else say:

I just need a minute to check my notes.

On the checklist, mark an X next to LQ child has already provided at the OE level-- do not ask those questions.

Leading Questions

NLQ = negative leading question; PLQ = positive leading questions

On the checklist--write down answers to OE3 questions on the line provided. If you need to ask the follow-up questions, write down Y for yes, N for no, and IDK for I don't know or remember next to each one.

For these questions, I need you to tell me only what you REALLY REALLY remember. If you don't remember or you are not sure about your answer, just tell me, "I don't know."

** Only ask these questions if the answers were NOT mentioned in response to the General Questions.*

Even if the child provides the Wrong Answer at OE1 level, ask OE3 question FOR ACTIONS ONLY.

** Also, if kids just nod or shake their head, tell them "It is really important that you tell me your answers in words."*

** Also, if kids are responding with "I think" or "Maybe" then remind them, "It is really important that you only tell me what you really really remember about what happened In the movie." Don't let kids infer information, have them report ONLY what they saw. Be sure to ask them if they remember _____ happened or not, by saying, "Do you remember ____?"*

** If child is asked first LQ question and gives a spontaneous response before you can ask the second LQ question, then say: "So, ..." and then state the question.*

** If a child does not respond, or answers, "I don't know" to the OE3 question, ask both the positive and negative leading questions that follow.*

** IF THE CHILD SAYS, "YES" to both the NLQ and PLQ, repeat both options and then ask the child to choose ONE: "Which one was it?"*

Bicycle

I need to know more about the bike that was taken.

3. Tell me whose bike it was. OE3

If the child does not understand the question, ask the Alternative question.
Who did it belong to?

If the child tells you boy or girl, skip to #4.

• IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. **Did the bike belong to the boy?**

PLQ: b. **Did the bike belong to the girl?**

Be sure to get clarification if child responds YES to both a & b.

4. Tell me the color of the bike. OE3

• IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. **Was the bike red?**

PLQ: b. **Was the bike black?**

Be sure to get clarification if child responds YES to both a & b.

5. Tell me what type of bike it was. OE3

• If the child tells you some type (even the wrong one) skip to #6.

- *If the child tells you it was a ten speed, ask C1 and C2.*
- *IF the child responds I don't know or doesn't respond, then ask*
 NLQ: a. **Was it a ten speed bike?**
 PLQ: b. **Was it a mountain bike?**
Be sure to get clarification if child responds YES to both a & b.
- *IF the child responds IDK to A or B, or YES to ten speed, ask:*
 NLQ c1.) **Was it a bike only for boys?**
 PLQ c2.) **Was it a bike for both boys and girls?**
Be sure to get clarification if child responds YES to both a & b.
- *IF the child responds NO to A or B, go to #6.*

Actions

I need to know a little more about what happened between the girl and the boy.

- 6. Tell me what the girl was doing when the boy first came up to her. OE3**
You may accept sitting (without bench) and singing (without songs) as correct responses (in these cases, don't ask LQ),
Go to #7.

If the child provided partial answer during OE1/TOE1, ask the Alternative question. You may repeat the question, if necessary, before going on to ask the leading questions.

You told me _____, what else was the girl was doing when the boy first came up to her?

For each NEW feature mentioned, but not elaborated, ask:

You said _____. Tell me more about _____.

- *IF the child provides answers for only one pair at the OE3 level, ask the alternative before asking the second leading question pair.*
- *IF the child responds nothing, I don't know or doesn't respond, ask:*
 A. NLQ: 1. **Was she swinging on a swing?**
 PLQ: 2. **Was she sitting on a bench?**
Be sure to get clarification if child responds YES to both a & b.
- B. NLQ: 1. **Was the girl eating crackers?**
 PLQ: 2. **Was the girl singing songs?**
Be sure to get clarification if child responds YES to both a & b.

- 7. What songs did someone sing in the movie? OE3**
If child says the correct songs, skip to #8.
-

- If child only mentions one song, ask the alternative question and repeat as necessary:

You said ___ sang ____, can you tell me if ____ sang another song?

If the child says, YES:

What other song did she sing?

- If child can not remember the name of the other song, ask leading questions for set containing other song.

If the child responds *nothing*, *I don't know* or *doesn't respond*, ask leading questions for both set A and set B.

A. NLQ 1. Did someone sing 'Itsy Bitsy Spider'?

PLQ 2. Did someone sing 'Bingo'?

Be sure to get clarification if child responds YES to both a & b.

B. NLQ 1. Did someone sing 'Mary Had a Little Lamb'?

PLQ 2. Did someone sing 'Row Row Row Your Boat'?

Be sure to get clarification if child responds YES to both a & b.

- If the child claims not to know the songs mentioned, just say, "That's OK."

8. Tell me what the boy did when he first saw the bike? OE3

If child says touch it, skip to #9.

If the child mentions look or took it, then ask alternative question:

You said the boy ___ when he first saw the bike, did he do anything else?

For each NEW feature mentioned, but not elaborated, ask:

You said _____. Tell me more about _____.

You told me ___ when the boy first saw the bike. Did he do anything else?

- If child responds "Nothing", "I don't know" or doesn't respond; or says "look" or "took it," then ask:

NLQ: a. Did the boy kick it with his foot?

PLQ: b. Did the boy touch it with his hand?

Be sure to get clarification if child responds YES to both a & b.

9. Tell me, did the boy and the girl argue about anything? OE3

- If the child responds, yes, then ask elaboration question:

Tell me what they argued about.

- If it is not clear that the child did not want the older one to use the bike, then ask the leading questions:

- IF child responds no, I don't know or doesn't respond, then ask:

NLQ: a. Did the girl want the boy to sit somewhere else?

PLQ: b. Did the girl want the boy to leave the bike alone?

Be sure to get clarification if child responds YES to both a & b.

10. Tell me, did the boy touch the girl? OE3

- If child says yes, ask elaboration question,

Tell me how the boy touched the girl (what did he do).

IF the child responds no, I don't know or doesn't respond, then ask:

NLQ: a. **Did the boy pat the girl's head?**

PLQ: b. **Did the boy punch the girl's arm?**

Be sure to get clarification if child responds YES to both a & b.

11. Tell me what the girl did when the boy first tried to walk off with the bike. OE3

If the child tells you one feature, then ask alternative:

- **You said the girl _____, tell me what else the girl did when the boy first tried to walk off with the bike.**

** If the child provides answers for only one pair, then ask the other leading question pair.*

** IF the child responds nothing, I don't know or doesn't respond, then ask both set A & B of the leading questions:*

A. NLQ: 1. **Did the girl kick over the bench?**

PLQ: 2. **Did the girl struggle over the bike?**

Be sure to get clarification if child responds YES to both a & b.

B. NLQ: 1. **Did the girl push the bike under the bench?**

PLQ: 2. **Did the girl move the bike to the other side of the bench?**

Be sure to get clarification if child responds YES to both a & b.

12. Tell me what the boy did when the girl wouldn't let him use the bike. OE3

IF the child says one feature, ask the alternative question:

You told me the boy _____, tell me what else the boy did when the girl wouldn't let him use the bike.

If the child says "Took it" then ask clarification question:

What did the boy do when he took the bike (how did he take it)?

-
- *IF the child provides answers for only one pair, then ask the other leading question pair.*

- *IF the child responds nothing, I don't know or doesn't respond, then ask both leading questions:*

A. NLQ: 1. **Did the boy stick out his tongue at the girl?**

PLQ: 2. **Did the boy pretend to slit his throat with his finger?**

Be sure to get clarification if child responds YES to both a & b.

B. NLQ: 1. **Did the boy knock the bike down and walk away?**

PLQ: 2. **Did the boy grab the bike and ride away?**

Be sure to get clarification if child responds YES to both a & b.

13. Tell me, did the boy call the girl a name? OE3

If the child responds, YES, ask:

Tell me the name he called her.

If the child tells you a name, even the wrong one, or says "jerk" or "baby", go to #14.

- *IF the child responds NO, I don't know or doesn't respond, then ask:*

NLQ: a. Did he call her " a dumb baby?"

PLQ: b. Did he call her " a stupid jerk?"

Be sure to get clarification if child responds YES to both a & b.

14. Tell me, did the girl do anything when the boy rode away on the bike?

OE3

ALT: You told me the girl _____, did the girl do anything else when the boy rode away on the bike?

If the child answers YES, then ask:

- "Tell me what she did."

- *IF the child responds no, I don't know or doesn't respond, then ask:*

A. NLQ: 1. Did the girl get sad?

PLQ: 2. Did the girl get angry?

Be sure to get clarification if child responds YES to both a & b.

B. NLQ 1. Did the girl begin to cry?

PLQ: 2. Did the girl stomp her foot?

Be sure to get clarification if child responds YES to both a & b.

15. Tell me who came up to the girl when she was upset. OE3

If the child responds, Dad, then skip to #16.

- *IF the child responds nobody, I don't know or doesn't respond, then ask:*

NLQ: a. Did her mother come up to her?

PLQ: b. Did her father come up to her?

Be sure to get clarification if child responds YES to both a & b.

16. Tell me what the girl's father/mother did when s/he saw the girl was upset. OE3

For this question, refer to #15 above. Use 'mother' if the child indicated the mother comforted the victim. If the child indicates the father comforted the victim, or the child does not know, use the word "father." If the child indicates mother, then say 'she,' whereas you should use 'he' for the father.

For each NEW feature mentioned, but not elaborated, ask:

You said _____. Tell me more about _____.

- *If the child says, " arm around shoulder" skip to #17.*

- *IF the child responds nothing, I don't know or doesn't respond, then ask:*

NLQ: a. Did s/he go running after the boy?

PLQ: b. Did s/he put a hand on the girl's shoulder?

Be sure to get clarification if child responds YES to both a & b.

Physical Characteristics

I need to know a little more about the boy.

17. Tell me the boy's name. OE3

IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. Was the boy's name Ashley?

PLQ: b. Was the boy's name Frankie?

Be sure to get clarification if child responds YES to both a & b.

18. Tell me, what color was the boy's hair?. OE3

IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. Was the boy's hair light blonde?

PLQ: b. Was the boy's hair dark brown?

Be sure to get clarification if child responds YES to both a & b.

19. Tell me, how did the boy wear his hair? OE3

Modify if child said medium or long at OE1/TOE1 level,

"You told me the boy had medium (long) hair. Can you tell/show me how he wore it?"

If necessary, use the alternative question:

Tell/show me what length (how long) it was?

• If child responds I don't know or doesn't respond, then ask:

NLQ: a. Did he wear it long?

PLQ: b. Did he wear it short?

Be sure to get clarification if child responds YES to both a & b.

• If the child responds "short" or No to A, then skip to #20.

• If the child responds "medium" or "long," I don't know, or doesn't respond, then ask:

NLQ: 1. Did he wear it down?

NLQ: 2. Did he wear it in a pony-tail?

Be sure to get clarification if child responds YES to both a & b.

Now I need to know about the girl.

20. Tell me the girl's name. OE3

If the child says, kid or sport or we never learn it, then skip to #21

• IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. Was the girl's name Frankie?

NLQ: b. Was the girl's name Ashley?

Be sure to get clarification if child responds YES to both a & b.

21. Tell me, what color was the girl's hair? OE3

If the child tells you a color, skip to #22.

• IF the child responds I don't know or doesn't respond, then ask:

NLQ: a. Was her hair dark brown?

PLQ: b. Was her hair light blonde?

Be sure to get clarification if child responds YES to both a & b.

22. Tell me which child was taller. OE3

If the child doesn't understand, then ask the alternative:

Which of the children was taller (when they were both standing).

- *IF the child responds I don't know or doesn't respond, then ask:*

NLQ: a. **Was the girl taller?**

PLQ: b. **Was the boy taller?**

Be sure to get clarification if child responds YES to both a & b.

23. Tell me which child was older. OE3

If the child doesn't understand, then ask the alternative:

Which of the children was older?

- *IF the child responds I don't know or doesn't respond, then ask:*

NLQ: a. **Was the girl a few years older than the boy?**

PLQ: b. **Was the boy a few years older than the girl?**

Be sure to get clarification if child responds YES to both a & b.

Now let's talk about the father.

24 a. Tell me what the father looked like. OE3

- *IF the child answers the question, use elaboration questions after each NEW feature, such as "Tell me more about ____"*

b. **Tell me, what color hair did the father have?**

(ask if not answered in A)

- *IF the child responds I don't know or doesn't respond, then ask:*

NLQ: 1. **Was the father's hair light blonde?**

PLQ: 2. **Was the father's hair dark brown?**

Be sure to get clarification if child responds YES to both a & b.

Clothing

Now I need to know about the clothes the children were wearing.

25. Tell me everything the boy was wearing. OE3

If the child mentioned clothes already, then ask the alternative question as often as necessary before asking leading questions.

"You said the boy was wearing _____. Can you tell me what else he was wearing?"

"Was he wearing anything else?"

IF the child answers the question, use elaboration questions after each NEW feature, such as "

Tell me more about _____"

DO NOT ASK the leading question pair that the child has already answered (either correctly or incorrectly).

- *IF the child responds I don't know or doesn't respond, then ask:*

NLQ: 1. **Was he wearing a pink shirt?**

PLQ: 2. **Was he wearing a black shirt?**

Be sure to get clarification if child responds YES to both a & b.

26. What type of shoes was he wearing?

- *If the child responds I don't know or doesn't respond, then ask:*

NLQ: 1. Was he wearing sandals?

PLQ: 2. Was he wearing hiking boots?

Be sure to get clarification if child responds YES to both a & b.

27. Tell me what the girl was wearing. OE3

If the child mentioned clothes already, then ask the alternative question as often as necessary before asking leading questions.

"You said the girl was wearing _____. Can you tell me what else she was wearing?"

Was she wearing anything else?"

IF the child answers the question, use elaboration questions after each NEW feature, such as "

Tell me more about _____"

- *IF the child answers the question, use elaboration questions after each NEW feature, such as*
- **DO NOT ASK** the leading question pair that the child has already answered (either correctly or incorrectly).

- *IF the child responds I don't know or doesn't respond, then ask:*

A. NLQ 1. Was she wearing shorts?

PLQ 2. Was she wearing jeans?

Be sure to get clarification if child responds YES to both a & b.

B. NLQ 1. Was she wearing sandals?

PLQ 2. Was she wearing sneakers?

Be sure to get clarification if child responds YES to both a & b.

28. Tell me, who was wearing a watch? OE3

- *IF the child answers the question, use elaboration questions after each NEW feature, such as "Tell me more about _____"*

- *IF the child responds no one, father, I don't know or doesn't respond, then ask*

A. NLQ 1. Was the girl wearing a watch?

PLQ 2. Was the boy wearing a watch?

Be sure to get clarification if child responds YES to both a & b.

B. IF Yes, I don't know or doesn't respond for BOY, then ask:

NLQ 1. Was it a small gold watch?

PLQ 2. Was it a big black watch?

Be sure to get clarification if child responds YES to both a & b.

Thank you for helping me. You did a great job.

APPENDIX C

Parental Background Information

Instructions: *In order to interpret children's memory performance, it would be very helpful for you to provide us with some background information. Of course, you are under no obligation to fill in every question, but we would appreciate it if you would complete the form.*

Please provide the following information.

Child's name: _____ Gender: _____

Age: _____ years _____ months Date of Birth: _____

Number of hours per day child watches educational t.v. _____

Your relationship to the child:

____ mother ____ father ____ grandparent ____ guardian
 ____ Other (specify _____)

Mother's Occupation: _____

Years of Education (indicate highest level):

- ____ completed graduate degree
- ____ college graduate
- ____ some college, no degree
- ____ high school graduate or vocational school graduate
- ____ partial high school (more than 9th grade)
- ____ junior high school (completed 7th through 9th grade)
- ____ less than seven years of school

Father's Occupation: _____

Years of Education (indicate highest level):

- ____ completed graduate degree
- ____ college graduate
- ____ some college, no degree
- ____ high school graduate or vocational school graduate
- ____ partial high school (more than 9th grade)
- ____ junior high school (completed 7th through 9th grade)
- ____ less than seven years of school

Family Income:

Less than \$10,000 ____ \$10,000-20000 ____ \$21000-30000 ____
 \$31000-40000 ____ \$41000-50000 ____ \$51000-60000 ____
 \$61000-70000 ____ More than \$70000 ____

Do you have other children in your family? ____ If so, please indicate the date of birth, sex, and name of each child below.

<u>Date of Birth</u>	<u>Sex of child</u>	<u>Name</u>
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APPENDIX D

POSTTEST INTERVIEW

[At the end of the second interview before the gender questions]

You have been very helpful. I was wondering about what you thought about the situation in the movie.

1. How did it make you feel when the boy took the bike? Tell me why.
(ask the child to describe a feeling) ALT: How did it make you feel inside?

2. a.) Do you think the boy should have taken the bike? *(check one)*

YES _____ NO _____ IDK _____

b.) Why or why not? *(regardless of response, ask the child to give you a reason why s/he believes this-if the child says IDK, ask, How come?)*

3. Has someone ever taken something from you or from your friend or family when you or your friend or family didn't want the person to?

If child says yes, ask: a.) Tell me about it. b.) How did it make you/your friend/your family feel?

If says no, then ask: How you would feel if someone did take something from you when you told them not to?

(if they say IDK, ask): Would you feel the same way the girl in the movie felt?

APPENDIX E

Children's Occupations, Activities, And Traits Attitude Measure

I am going to ask you some questions about what people do and how people act. You will point to the picture that you think best answers the question. There are no right or wrong answers. I just want to know what you think.

Here are the pictures. (*display gender portraits*)

This is a picture of a woman (*point to picture*). If you want to answer that only women should do certain things or act in certain ways, then point to this picture. OK, so this picture means only women.

This is a picture of a man (*point to picture*). If you want to answer that only men should do certain things or act in certain ways, then point to this picture. OK, so this picture means only men.

And this is a picture of both a woman and a man (*point to picture*). If you want to answer that both women and men should do certain things or act in certain ways, then point to this picture. OK, so this picture means both women and men.

Let's see if you remember what each picture means. (*point to each picture and wait for the child to label it. If the label is incorrect, tell the child the correct label. If the labels are correct, continue by reading the examples.*)

Let me give you some examples.

If somebody asked me "Who should wear a skirt?" I would point to the picture of the woman, (*point to woman*) because I think only women should wear skirts."

If somebody asked me "Who can wear a mustache?" I would point to the man, (*point to man*) because I think only men can wear mustaches."

Now, if someone asked me, "Who should eat breakfast?" I would point to the picture of the woman and the man (*point to picture*) because I think both women and men should eat breakfast."

Introducing the Neither category

Now I'm going to add another choice. (*Show neither women nor men category*) This means that neither women nor men should act in a certain way. For example, if somebody asked me, "Who should spit," I would point to this picture, because I don't think women or men should spit. Okay, any questions?

WHO SHOULD DO THESE JOBS?

WHO SHOULD...	Only Men	Only Women	Both Men & Women
1. Be a dishwasher in a restaurant (washes the dirty dishes)	1	2	3
2. Be a supermarket check-out clerk (tells you what your food costs at the cash register)	1	2	3
3. Be an artist (Makes decorations)	1	2	3
4. Be a house cleaner (cleans the house)	1	2	3
5. Be a telephone operator (helps you make a telephone call)	1	2	3
6. Be a school principal (boss of the school)	1	2	3
7. Be a librarian (puts away/checks out your books)	1	2	3
8. Be a cook in a restaurant (makes the food)	1	2	3
9. Be a babysitter (cares for the children when the children's parents are away)	1	2	3
10. Be a secretary (types letters/answers the phone for the boss)	1	2	3
11. Be a plumber (fixes the pipes/leaking faucets)	1	2	3
12. Be a nurse (helps the doctor care for sick people)	1	2	3
13. Be a factory owner (owns the place where things are made)	1	2	3
14. Be a hair stylist (cuts hair)	1	2	3

WHO SHOULD DO THESE JOBS? (continued)

WHO SHOULD...		Only Men	Only Women	Both Men & Women
15.	Be a scientist (makes discoveries/finds new planets)	1	2	3
16.	Be a baker (cooks breads and cakes)	1	2	3
17.	Be a police officer (catches bad people and puts them in jail)	1	2	3
18.	Be a computer builder (makes computers)	1	2	3
19.	Be an architect (draws buildings/houses)	1	2	3
20.	Be a dentist (fixes teeth)	1	2	3
21.	Be a comedian (tells jokes to make you laugh)	1	2	3
22.	Be a dental assistant (helps the dentist/cleans teeth)	1	2	3
23.	Be a ship captain (steers the boat)	1	2	3
24.	Be a spy (finds out secrets)	1	2	3
25.	Be a florist (arranges and sells flowers)	1	2	3

COAT-AM (Short)

Bigler, Liben, Lobliner, & Yekel (1997)

WHO SHOULD DO THESE ACTIVITIES?

WHO SHOULD...		Only Men	Only Women	Both Men & Women
1.	Fly a model plane	1	2	3
2.	Iron clothes	1	2	3
3.	Sew clothes from a pattern	1	2	3
4.	Vacuum a house	1	2	3
5.	Go to the beach	1	2	3
6.	Go horseback riding	1	2	3
7.	Wash clothes	1	2	3
8.	Build with tools	1	2	3
9.	Play cards	1	2	3
10.	Play pool	1	2	3
11.	Set the table for dinner	1	2	3
12.	Fix bicycles	1	2	3
13.	Play darts	1	2	3
14.	Do gymnastics	1	2	3
15.	Play hide and seek	1	2	3
16.	Babysit	1	2	3
17.	Play video games	1	2	3
18.	Draw buildings	1	2	3
19.	Bake cookies	1	2	3
20.	Sketch (or design) clothes	1	2	3
21.	Grocery shop	1	2	3
22.	Draw (or design) cars/rockets	1	2	3
23.	Play basketball	1	2	3

WHO SHOULD DO THESE ACTIVITIES (continued)

WHO SHOULD...		Only Men	Only Women	Both Men & Women
24.	Build model airplanes	1	2	3
25.	Do crossword puzzles	1	2	3

COAT.AM (Short)

Bigler, Liben, Lobliner, & Yekel (1997)

WHO SHOULD BE THIS WAY ?

WHO SHOULD...		Only Men	Only Women	Both Men & Women	Neither Men nor Women
1.	Be affectionate (shows feelings)	1	2	3	4
2.	Misbehave (act naughty)	1	2	3	4
3.	Be confident (sure of themselves)	1	2	3	4
4.	Be logical (have a reason for doing something/plans ahead)	1	2	3	4
5.	Be gentle (is kind and tender)	1	2	3	4
6.	Enjoy geography (likes to learn about other countries/parts of the world)	1	2	3	4
7.	Complain (never likes anything)	1	2	3	4
8.	Be dominant (in control/makes the decisions)	1	2	3	4
9.	Be charming (sweet person who is nice to be around)	1	2	3	4
10.	Brag a lot (often tells how wonderful they are)	1	2	3	4
11.	Be loud (makes a lot of noise)	1	2	3	4
12.	Be loving (makes you feel special)	1	2	3	4
13.	Have good manners (always says please and thank you)	1	2	3	4

WHO SHOULD BE THIS WAY? (continued)

		Only Men	Only Women	Both Men & Women	Neither Men nor Women
WHO SHOULD...					
14.	Be neat (puts things in there place)	1	2	3	4
15.	Be good in art (good at making decorations)	1	2	3	4
16.	Enjoy art (likes learning about making decorations)	1	2	3	4
17.	Act as a leader (the boss)	1	2	3	4
18.	Try to look good (look pretty)	1	2	3	4
19.	Be helpful (makes it easier for other people to do things)	1	2	3	4
20.	Be competitive (always likes to win)	1	2	3	4
21.	Be creative (thinks of new ideas)	1	2	3	4
22.	Enjoy music (listening/learning songs)	1	2	3	4
23.	Study hard (likes to learn about things)	1	2	3	4
24.	Follow directions (does what they're told)	1	2	3	4
25.	Be smart (good thinker/knows a lot)	1	2	3	4

COAT-AM (Short)

Bigler, Liben, Lobliner, & Yekel (1997)

Additional Gender Measure

Now I want you to think about how people usually act.

	Only Men	Only Women	Both Men & Women	Neither Men nor Women
WHO USUALLY...				
1. Wears a pink shirt	1	2	3	4
2. Wears a black shirt	1	2	3	4
3. Wears hiking boots	1	2	3	4
4. Wears sandals	1	2	3	4
5. Wears their hair short	1	2	3	4
6. Wears their hair long	1	2	3	4
7. Wears a small, gold watch	1	2	3	4
8. Wears a big, black watch	1	2	3	4
9. Punches you in the arm to convince you to do something	1	2	3	4
10. Pats you on the head to convince you to do something	1	2	3	4
11. Calls you a dumb baby when they are upset	1	2	3	4
12. Calls you a stupid jerk when they are upset	1	2	3	4
13. Uses their finger to slit their throat when they are disappointed	1	2	3	4
14. Sticks out their tongue at you when they are disappointed	1	2	3	4
15. Is named Ashley	1	2	3	4
16. Is named Frankie	1	2	3	4

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Elizabeth M. Brooks

Signature of Author

8.27.99

Date

**The Effects of Gender and Gender
Stereotyped Attitudes on Children's
Recall of an Eyewitness Event**

Title of Thesis

Dorey Cooper

Signature of Graduate Office Staff
Member

August 26, 1999

Date

original