

THE ROLE OF RACE IN PERCEPTIONS OF CHILD CREDIBILITY

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ABSTRACT

With the increased number of children providing testimony in Court and the growth of visible minorities in Canada, it is important to understand the role of race in perceptions of child credibility. In this study, children from three racial backgrounds (Caucasian, Asian, and First Nations) participated in a play session and were interviewed about their experience on videotape. Caucasian and Asian adults watched the videotaped interview and rated the credibility of the child along a number of dimensions and completed a measure of covert racism. Results show that Caucasian adults judged Caucasian children to be more honest than Asian children, and more cognitively competent than both Asian and First Nations children, whereas Asian adults rated all children as equally credible. Ratings of covert racism did not account for any of the variability in credibility scores. Results and potential future directions are discussed.

Keywords: Child Credibility; Race; Prejudice

Subject Terms: Psychology and Law

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INTRODUCTION

In recent decades, children have increasingly been called upon to provide evidence in the criminal justice system (Bala, 1999). Children may provide evidence as alleged victims of physical or sexual abuse, or as victims of neglect. In 1998, an extensive survey was conducted to estimate the incidence of child abuse and neglect in Canada during that year. It was found that there were 61,201 cases of child abuse and neglect that were investigated and substantiated, and another 29,668 cases that were investigated and suspected (Trocmé, Tourigny, & MacLaurin, 2003). Surveys examining the rates of child sexual abuse (CSA) in Canada have found that 53 % of women and 31 % of men reported being sexually abused when they were children (Badgley, 1984). Estimates of CSA in Canada vary greatly depending on how CSA is defined (for a comparison of the different definitions used and how this impacts prevalence rates, see Painter, 1986). The rates, however, are likely underestimates because they rely on victims reporting the abuse or neglect and there are a number of reasons why children and adults would not disclose that information (London, Bruck, Ceci, & Shuman, 2005). It is possible, however, that prevalence rates are overestimates, for instance, because definitions of CSA can be broad and over inclusive. Regardless, it is clear that many children are victims of abuse and are, therefore, likely to provide evidence in court.

A child may be the only individual available to provide evidence about a crime and thus the believability of the allegation rests on the perceived credibility of the child (Myers, 1998). Evaluating a child's credibility can happen at numerous points in the criminal justice system starting with the person to whom the allegation is made and ending with the judge's or jury's decision. If the person to whom the allegation is made does not deem the child credible, a formal complaint may not be filed. Similarly, the prosecutor may decide that a child is not credible and the complaint may not proceed to trial. A child's credibility is influenced not only by the content of the child's testimony, but also by the child's characteristics and the trier of facts pretrial attitudes. One important variable that has received little attention in the literature is the effect of the child's race on perceptions of credibility. I will discuss the concept of credibility and then examine some of the factors that have been shown to influence perceptions of credibility.

Perceived Credibility

It has been argued that a child's perceived credibility is composed of two factors: honesty and cognitive competence (Bottoms, 1993; Ross, Dunning, & Toglia, 1990; Ross, Jurden, Lindsay, & Keeney, 2003). Ross et al. (2003) tested this 2-factor model by having jury eligible participants watch a videotaped re-creation of a sexual abuse trial and then indicate whether they believed the defendant was guilty or not and the credibility of the child witness on a number of dimensions. These dimensions included: suggestibility, honesty, believability, truthfulness, accuracy, consistency, and intelligence. A factor analysis of

participants' responses revealed a two-factor model of witness credibility where the factors were defined as perceived cognitive competence and perceived honesty.

Credibility has been discussed at least since Aristotle's examination of *ethos* which is now more commonly referred to as source credibility (Rieh & Donielson, 2007). Credibility has also been studied both in a number of areas within psychology (for example, clinical interviewing (Colwell, Hiscock, & Memon, 2002)) and across a number of disciplines (for example, marketing, philosophy, communication, information science, psychology, law, and epistemology (Rieh & Donielson, 2007)). What is interesting in comparing the concept of credibility across disciplines is that credibility is conceptualized as having a very similar theoretical structure. For example, within epistemology, the theory of cognitive authority argues that credibility is comprised of trustworthiness and competence (Wilson, 1983).

Although the factors of credibility are fairly consistent across domains, Fogg (2003) suggests that depending on the context, there are four means to assess credibility. The four means are presumed, reputed, surface, and experienced. *Presumed* credibility is based on general assumptions that the perceiver believes to be true. For example, the assumption that medical doctors are trustworthy or that individuals from certain racial backgrounds cannot be trusted. *Reputed* credibility refers to how much the perceiver believes someone because of what third parties have reported. For example, a friend telling you that a particular person is credible. *Surface* credibility refers to a first impression

based on a superficial assessment of the source. For instance, evaluating credibility based on an individual's confidence. Lastly, *experienced* credibility is based on first-hand experience that comes with extended exposure to the source.

In a courtroom, one would hope that triers of fact rely on experienced credibility assessments to make accurate judgments about a witness. However, people have a tendency to rely on heuristics (Johnson, Driskell, & Salas, 1997) and make surface credibility assessments which can be influenced by a number of factors that are unrelated to the facts of the case, such as the child's age, verbal ability, attractiveness, and race.

Age

In terms of the 2-factor model of credibility, younger children are generally perceived to be more honest than older children, and older children are perceived to be more cognitively competent than younger children. Therefore, in cases where perceived honesty is more salient, such as in CSA cases, younger children are perceived to be more credible than older children. Similarly, in cases where a child's perceived cognitive competence is more salient, such as being a witness to a motor vehicle accident, older children are perceived to be more credible than younger children (Bottoms, 1993). Thus, a child's age is one factor that can influence perceptions of credibility. It is thought that at approximately age 12-years, children are no longer perceived to be sexually naïve and innately honest and have roughly comparable cognitive abilities as adults to provide testimony in court. Therefore, when honesty is more salient, children under the

age of 12-years are perceived as more credible than children over 12-years or adults (Bottoms & Goodman, 1994).

Verbal Ability

Related to a child's age is the notion that children's credibility is influenced by the way they speak. Ruva and Bryant (2004) examined how a trier of facts' expectation for how a child will speak influences their perceptions of the child's credibility. They proposed that if a child is expected to use language that is below their age level, but rather speaks at their age level, they will be perceived as highly credible. Conversely, if a child is expected to use language that is above their age level, but rather speaks at their age level, they will be seen as less credible than an average child. The implication of this is that jurors sometimes tend to rate the credibility of each witness according to their expectation for that witness. Although the authors discuss the expectation for the child in terms of the child's verbal ability relative to their respective age cohort, an individual's expectation for how a child will speak and behave may be biased by pre-existing attitudes and prejudices. In other words, if a child is expected to be intelligent because the stereotype of their racial group is that they are smart, but rather the child speaks at an average level, they may be perceived as less credible than average. Conversely, if a child is expected to be unintelligent but rather speaks at an average level, they may be perceived as more credible than average.

Children's Accuracy

One might expect that a child's accuracy is one of the strongest predictors of credibility, however, adults are largely unable to discriminate between accurate and inaccurate children. In one study, undergraduate students were asked to evaluate children's statements about whether their parent stole a book. Some of the statements were true in that children correctly asserted that their parent had stolen a book, whereas other statements were false in that children falsely accused the researcher of stealing the book to defend their parent. When undergraduates were asked to evaluate the veracity of the children's statements, they were only able to discriminate accurate from inaccurate statements at a rate slightly above chance (Tye, Amato, Honts, Devitt, & Peters, 1999). In other studies, participants have not been able to discriminate as well. For example, Goodman et al. (2002) examined whether social workers and undergraduate students were able to discriminate between children's true and false memory reports of a previously experienced event. They found that neither group was able to correctly identify the accurate from the inaccurate statements. In addition, Leach and colleagues (2004) conducted a similar study where police officers, customs officers, and undergraduate students were asked to discriminate between children who lied or told the truth about a transgression. All three groups were unable to correctly identify truthful children.

There are other studies that have shown that actual accuracy has a paradoxical effect on perceptions of credibility. In one study, three children's narratives of varying accuracy were shown to legal and psychology professionals for them to rate the child's accuracy. Overall, judges evaluated the inaccurate

child as highly credible and the accurate child as not very credible (Leichtman & Ceci, 1995). Given the equivocal nature of these results, there is no persuasive evidence that adults can reliably discriminate between children's accurate and inaccurate reports.

Attractiveness

A child's perceived honesty and cognitive competence may be influenced by their physical appearance. It has been well established in the social psychology literature that physically attractive individuals are perceived to have a number of positive traits (for example, see Wade, Fuller, Bresnan, Schaefer, & Mlynarski, 2007). This is known as the halo effect. In essence, individuals who possess one positive trait are thought to possess a number of positive traits (Zebrowitz, Voinescu & Collins, 1996). If a child is physically attractive, they may be perceived as more cognitively competent and more honest. Thus, it is important to consider that differences in credibility may in part be the result of the child's attractiveness.

Race

In the decade between 1991 and 2001, over 1.8 million people immigrated to Canada, of which 17% were children (Statistics Canada, 2001). It has been shown that children of immigrant families are at a heightened risk of being victims of abuse (Clark & Wilkinson, 2003; Fontes, 2002; Molnar, Buka, Brennan, Holton & Earls, 2003; Rhee, Chang & Youn, 2006), yet there is scant research on the effects of race on perceptions of credibility.

Of particular relevance to the concept of credibility and race is stereotyping. Generally, stereotypes are fixed ways of thinking about people that do not allow for individual variation (Schneider, 2004). The exception is when an individual disconfirms a perceiver's stereotype. In such a case, the perceiver can either subtype or subgroup that individual. Subtyping is the process of making an exception to a stereotype and placing the individual into a separate subcategory, thereby maintaining the perceiver's stereotypes. Subgrouping is the process of creating subgroups, or clusters, and differentiating the stereotype based on observed similarities and differences to other group members (Richards & Hewstone, 2001). In the absence of subgrouping or subtyping, the general rigidity of stereotypes, however, may undermine the normal process of evaluating credibility such that perceived honesty and cognitive competence for a particular child may be influenced by racial attitudes. For instance, if the case is such that a child's perceived honesty is more salient than their cognitive competence in determining credibility (e.g. CSA case), the perceived credibility of the child's testimony may be prejudiced if the child belongs to a racial group with a stereotype of being dishonest. Similarly, if a child belongs to a racial group that is stereotypically intelligent, they may be seen as highly credible in cases where cognitive competence is salient (e.g. witness to a motor vehicle accident).

Stereotypes can be thought of as cognitive "short-cuts" which allow for fast judgments in situations where making a judgment can be difficult, such as ambiguous situations (Dijker & Koomen, 1996). Thus, it would seem likely that stereotypes are prone to being used when making credibility judgments where

there is little corroborating evidence (such as in CSA cases) and without prolonged exposure to the individual being evaluated (such as listening to unknown children's testimony). The speed and ease of using stereotypes makes them preferable over more time consuming judgments (Pendry & Macrae, 1994), however, stereotypes may also inhibit thought and lead to surface credibility judgments.

Historically, negative stereotypes based on the belief in racial superiority were expressed much more openly than they are today (Franzoi, 2003). The newer form of racism, called "modern racism," is much more subtle and covert than "old-fashioned" racism because society has little tolerance for blatantly racist attitudes and behaviour (McConahay, 1986). Modern racism theory rests on four underlying assumptions. The first assumption is that individuals who hold modern racist attitudes believe that racial discrimination does not occur any more because members of racial minorities have the freedom to compete with the majority in the marketplace and enjoy the same privileges as the majority. The second assumption is that individuals high in modern racism believe that members of racial minorities push too hard to get what they want. Third, members of minorities use unfair tactics and strategies to gain power. The last assumption is that members of racial minorities have made unfair gains and their increasing social status is undeserved (McConahay, 1986). One can see how individuals who hold such beliefs do not necessarily consider themselves racist despite holding covertly racist attitudes. Such racism may manifest itself in situations where race is an issue.

It has been argued by Bottoms et al. (2004) that CSA cases are precisely the type of situation where modern racism could influence jurors' beliefs and perceptions because there is little concrete or persuasive evidence on which to base a judgment. Bottoms et al. (2004) conducted a study to examine whether covert racism, as measured by the Modern Racism Scale, was related to perceptions of credibility. In their study, participants read a scenario in which a 12-year-old girl claimed to have been sexually assaulted by her White male teacher. The young girl was White, Black, or Hispanic. The researchers predicted that high-prejudiced mock-jurors would be more likely than low-prejudiced mock-jurors to make racially biased credibility judgments and judicial decisions. Results, however, showed that prejudice level was unrelated to perceptions of credibility, guilt judgments, and victim responsibility. A careful examination of the questionnaire used in this study, however, reveals that items are actually quite overt in terms of asking about prejudicial attitudes, rather than being covert and sensitive to implicit prejudicial attitudes (for example, "Blacks are getting too demanding in their push for equal rights"). Having a relatively explicit measure of prejudice may lead participants to be aware of and control their responses and answer in a socially desirable way.

The Bottoms et al. study involved a child victim. There is little question that race is an important factor in jury trials (Reynolds, 1996) involving adult victims. In 2005, Mitchell and colleagues conducted a comprehensive meta-analysis on the role of race in mock-juror decision-making. The results of their analysis showed that mock-jurors were significantly more likely to render guilty

judgment and to recommend longer sentences for other-race defendants than defendants of their own race (Mitchell, Haw, Pfeifer, & Meissner, 2005). In other words, mock-jurors discriminated against members of their respective outgroup (an outgroup is any group of which an individual is not a member). These effects are consistent with theories of racial discrimination. Discrimination is defined as the negative *action* towards members of a specific group, whereas prejudice is the negative *attitude* towards members of a specific group (Brewer & Brown, 1998). There is growing evidence that people may harbor prejudices even without being aware of them (Brendl, Markman, & Messner, 2001; Dovidio, 2001), thus there is both explicit and implicit prejudice. It is thought that in some situations prejudice underlies discrimination, although prejudice does not always lead to discrimination, nor does prejudice have to be present for discrimination to occur, such as in institutional discrimination (Franzoi, 2003).

There is little research on whether adults' prejudicial attitudes towards other adults based on race extend to include children. Of the literature that does exist, there are disparate findings. In one study, psychology graduate students and social workers evaluated the credibility of children who alleged, in the context of a custody dispute, that they had been physically abused. The results showed that adult's credibility ratings were not influenced by children's racial backgrounds (McDonald, 2001). In another study, Downey and Pribesh (2004) examined whether teachers were biased in their evaluations of students' classroom behaviour. They found that White teachers rated Black children as having worse classroom behaviour than did Black teachers, even after controlling

for the possibility that Black children may act out more with a White teacher than a Black teacher.

In terms of whether a child's race influences perceptions of credibility in jury decision-making, there is insufficient research to draw any conclusions. In one of the few studies that exist, Bottoms and colleagues (2004) had a group of racially diverse undergraduate psychology students read an ambiguous summary of a CSA case where victim race (Black or White) and defendant race (Black or White) were manipulated. Victim race did not influence jurors' perceptions of the child's credibility. However, when jurors and victims were of the same race, jurors were less likely to find the other-race defendant credible and more likely to find him guilty thereby demonstrating in-group allegiance with the victim. In other words, racial bias was not present in ratings of the child's credibility, however, when the child was of the same racial background as the mock-jurors, the mock-jurors were more confident in their degree-of-guilt judgments and rated the other-race defendant as less credible than when the jurors and victims were of different races.

The Present Study

With the increasing number of child witnesses in the criminal justice system, the increase in visible minorities in Canada, and the likely presence of covert prejudice in CSA cases, it is important to examine whether race influences children's perceived credibility, as a child's testimony may be the determinant factor in a criminal trial. As previously noted, a child's credibility plays a role from the point an allegation is made through to a judge or jury's final decision. The

present study examines the role of race in adults' perceptions of the credibility of children's memory reports. It is hypothesized that (1) adults will rate First Nations children as least credible because of their social status within society. (2) Adults will rate Asian children as most credible because the stereotype of Asian children is that they are smart and honest. (3) When adults are separated by race, they will show ingroup favouritism by rating same race children as more credible than other race children. (4) Lastly, it is hypothesized that scores on a covert racism scale will predict the relationship between race and perceptions of credibility.

The present study has two parts. The first part involves having children participate in a standardized play session and then talk about the play session on videotape. The videotapes which meet criteria for inclusion then serve as the stimuli for the second part of the study which examines the aforementioned hypotheses. In other words, the purpose of the first part is to generate stimuli for the Experiment.

STIMULI CREATION

Method

Participants

A total of 28 children between the ages of 7 and 9 ($M_{age} = 7.96$, $SD = 1.01$) were recruited from after-school programs and summer camps to participate in this study. This age range was chosen for three reasons. First, in the current study, it was necessary that the children be able to independently construct a narrative and it has been shown that children over the age of 7 have that ability (Vance, Stackhouse & Wells, 2005). Second, children must be of an age that would reasonably be expected to provide courtroom testimony. Third, children at this age are consistently seen as more honest and less cognitively competent than older children or adults. The racial background of the children was restricted to Caucasian ($n = 12$), Asian ($n = 11$), or First Nations ($n = 5$). Caucasian children were chosen because they belong to the largest racial group in Canada. Asian children were chosen because they belong to the largest group of immigrants to Canada (Canadian Census, 2001) and First Nations children were chosen because they are, arguably, one of the most disadvantaged racial groups in Canada (for example, see Webster, 2006).

Procedure and Materials

Permission to conduct this research was first obtained from the Simon Fraser University Research Ethics Board. Informed consent was then obtained from the director of the respective program, the children's parents and, on test day, assent was obtained from the children themselves. All were fully informed that the purpose of testing children and videotaping them was to create the stimuli for a subsequent study on perceived credibility. Further, parents and children were informed that they were allowed to withdraw from the study at any (see Appendix A for the consent form distributed to parents and Appendix B for the script read to children regarding assent).

Once permission was obtained at all levels, children were taken individually to meet "Professor Science" who was a female, Caucasian, research assistant dressed in a white lab coat, suspenders, bowtie, and thick glasses. Children participated in all parts of the study individually to provide further control and limit distractions. Before starting the experiments, Professor Science engaged the child in a brief conversation to establish rapport and then introduced the child to the activity, three science experiments. The first experiment was to make a magic cloud, the second was to make a Cartesian diver, and the third was to make a fire extinguisher using carbon dioxide. These experiments were chosen as they were likely to be novel to the children and each contained five critical details/steps for the subsequent recall. The five critical details for each experiment were printed on a colourful page with images to provide a guide and to facilitate children's memory encoding (see Appendix C). During the experiments, Professor Science read each step aloud and had the child

participate as actively as possible to further facilitate memory encoding. At the end of each experiment, Professor Science reviewed the five steps for that experiment. After reviewing the third experiment, Professor Science verbally reviewed all three experiments again to help the children learn the details to criterion. Criterion was considered to be at least 75% accurate given the very limited effect of actual accuracy on perceptions of credibility discussed earlier. It was important that the children learn the steps to criterion to have comparable accuracy between groups in recalling the experiments, otherwise, differences between racial groups may be attributed to differences in accuracy, albeit small differences.

After the science experiments, each child was administered the Peabody Picture Vocabulary Test (PPVT-III) (Dunn & Dunn, 1997) to have a measure of each child's verbal ability and as a filler task between memory encoding and retrieval. The PPVT is a measure of receptive language and is commonly used as a screening measure of verbal ability. The test takes approximately 15 minutes and is highly correlated with other measures of verbal ability such as the VIQ component of the Wechsler Intelligence Scale for Children (WISC-III) (Dunn & Dunn, 1997). The PPVT-III used a normative sample that matched the 1994 U.S. Census, including Caucasian, Asian, and First Nations children (Dunn & Dunn, 1997). Additionally, a multicultural panel reviewed the items of the PPVT-III to eliminate items with racial or ethnic biases. The purpose of administering this test was to match on verbal abilities across racial groups.

After the filler task, children were interviewed on videotape by a different researcher that was not present during the science experiments. The camera was set up to focus only on the child and to have a clear view of the child's face and upper body. The interviewer first asked the child about school and their favourite activities to establish rapport and then oriented the child to the topic of the science experiments. The child was instructed to try and remember as much as they could about the science experiments and that it is okay if they forget something, but to try their best. The interviewer then asked open ended and cued recall questions about the experiments (for a script of the questions asked, see Appendix D). Questioning was limited to open ended and cued recall questions to limit the effects of the interviewer on the subsequent evaluation of the videotapes in the Experiment. After the interview, children were debriefed (see Appendix D).

Videos where the child was not in clear view of the camera for more than 85% of the video ($n = 1$), or when the child misbehaved (i.e. made faces to the camera) ($n = 2$), or when the interviewer made a major mistake in following the protocol ($n = 2$) were removed from the sample (total of 5 videos were removed). The remaining 23 videotapes were pilot tested on undergraduate and graduate psychology students ($n = 24$) who were blind to the hypotheses of the study. The purpose of the pilot testing was to ensure that the race of each who was included in the main experiment was salient and to match videotapes, across racial groups, on the following characteristics: comprehensibility, attractiveness, age, narrative length, actual accuracy, PPVT scores, and sex. As discussed in the

introduction, these report characteristics can influence perceptions of credibility and as such could confound the results.

Each participant listened to either 11 or 12 audio clips in a random order and rated the child's comprehensibility and whether they thought the child spoke with a non-North American accent. Each audio clip contained the first 60 seconds of the child's narrative. Between each audio clip, participants completed a simple math question to make judgments more absolute rather than relative to the previous audio clip. The same participants then looked at the full set of 23 still photographs, presented sequentially in a random order, and rated either the child's attractiveness on a scale from 1-4, or the child's race (response choices were Caucasian, Asian, Hispanic, First Nations, and Other). There was no filler task between picture ratings. Participants rated only half of the audio clips and either attractiveness or perceived race for all of the pictures to avoid fatigue effects (see Appendix E for a copy of the rating sheet). Children who were rated as having a non-North American accent by more than 50% of the pilot sample were excluded (2 videos were excluded, 1 Caucasian and 1 Asian). It is worth noting that even some Caucasian children with absolutely no accents were mischaracterized and rated by 3/12 participants to have a non-North American accent, and thus, the threshold for removing children was 6/12, or 50%.

Results and Discussion

Each child's accuracy in recalling critical details from the science experiments was calculated as a proportion correct (i.e. total number of correct critical details reported divided by the total number of critical details that could

have been reported). A research assistant also scored children's accuracy for 30% of the videos to establish inter-rater agreement. Inter-rater agreement was high (91%) and discrepancies were discussed and resolved. In addition, the length of each child's narrative was calculated from the time the child started answering the open-ended question to the end of the cued recall. Lastly, PPVT standard scores were calculated using the Canadian norms from the third edition of the test.

Results of the pilot study showed that participants had a difficult time correctly identifying the racial backgrounds of children in the videos, particularly First Nations children. Therefore, it was decided that racial identity be made explicit in the Experiment so that adult participants are fully aware of each child's race.

Using the above information (attractiveness, comprehensibility, accuracy, narrative length, and PPVT score) as well as the child's gender and age, four matched groups were created. Each matched group had one Caucasian child, one Asian child, and one First Nations child such that there was minimal within group variance and that the child's race was the only substantial difference between children within a group. For example, the first group had three girls with an age range of 20 months and similar attractiveness scores. Their narratives were within 78 seconds of each other, their actual accuracy was within 3 points and their PPVT standard scores were within 4 points. The substantive difference between the three girls was their racial backgrounds. The reason for making four matched groups was to reduce the effects of any one child's individual

characteristics. With more children being evaluated in each condition, one can be more certain that differences between racial groups are the result of the independent variable rather than an idiosyncratic characteristic of the child who is representing the entire group (similar methodology has been used in other credibility studies, such as Luus, Wells & Turtle, 1995).

For all 12 children who were matched into groups (4 Caucasian, 4 Asian, and 4 First Nations), detailed descriptives for each child and means for each racial group are presented in Table 1. Across racial groups, there were no significant differences in age, $F(2,9) = 0.03, p = .98$, narrative length, $F(2,9) = 0.60, p = .57$, actual accuracy, $F(2,9) = 0.49, p = .63$, PPVT scores, $F(2,9) = 1.07, p = .38$, and comprehensibility, $F(2,9) = 1.19, p = .35$. In terms of attractiveness, however, on average the Asian children were rated as more attractive than the Caucasian and First Nations children, $F(2,9) = 5.21, p < .05$. Given that attractiveness varied across groups, it will be entered as a covariate in the Experiment.

Table 1:

Descriptive data for each child and mean scores by racial group

Matched Group	Gender	Age (Years)	Attractiveness (Scale = 1 - 4)	Narrative Length (sec.)	Accuracy (/18)	PPVT Score (M = 100, SD = 15)	Comprehens. (/100%)
1	Female	7.6, 8.8, 7.0	3.0, 1.6, 1.7	215, 210, 133	13, 12, 14	105, 109, 106	84, 76, 84
2	Male	8.8, 7.3, 7.6	3.0, 1.3, 1.6	169, 127, 208	16, 15, 15	116, 107, 109	73, 85, 83
3	Female	8.0, 10.3, 9.5	2.9, 2.0, 2.0	119, 182, 170	16, 16, 16	125, 98, 103	89, 81, 88
4	Male	9.3, 7.8, 9.3	1.5, 1.6, 1.6	90, 114, 225	18, 17, 14	106, 120, 102	67, 85, 86
Means		8.4, 8.6, 8.4	2.6, 1.6, 1.7	148, 158, 179	16, 15, 15	113, 109, 105	78, 82, 85
SD		0.8, 1.3, 1.2	0.7, 0.3, 0.2	55, 45, 50	2.1, 2.2, 1.0	9.4, 9.0, 3.2	4.3, 10.0, 2.2

* Data are presented in the order of Asian, Caucasian, & First Nations

EXPERIMENT

Method

Participants

Adult participants were 159 undergraduate university students recruited from introductory psychology classes, the campus newspaper, and the volunteer subject pool (comprised of undergraduate students from many faculties) 27% male, $M_{age} = 20.5$ years, $SD = 3.1$ years). Participants received either a credit towards their psychology class or \$5 for participating. Most participants reported that they were most comfortable speaking English (75%), however, there was a sizable proportion who reported being most comfortable speaking a different language. Fifty-three percent of the participants were born outside of Canada. Of those who were born outside of Canada, the mean number of years that they had been in Canada was 9.49 ($SD = 5.28$).

Participants who scored 5 or less on the manipulation check (described below), or who failed to correctly identify the race of the child in the video were excluded from the analysis. In total, 24 participants were removed from the Asian group, 8 participants were removed from the Caucasian group, and 8 participants were removed from all of the other groups combined. Three participants did not indicate their race and were removed from the sample. With the exclusion criteria in place, there were a total of 54 Asian adults, 44 Caucasian adults, and 18 adults in all of the other groups combined. With these sample sizes, the study

was reduced to only include Asian and Caucasian adults as there were not enough participants to include adults from other racial backgrounds. The total sample was then 98 adults ($M_{age} = 20.56$, $SD = 3.44$, 31% male).

Twelve out of the 44 Caucasian participants were recruited in a second wave of testing to increase the sample size of the Caucasian group. In recruiting for the second wave of testing, however, participants were aware that only Caucasian adults were being asked to participate. To test whether the second wave of participants rated children differently than the first wave, a 2 (wave: 1, 2) x 3 (child race: Asian, Caucasian, First Nations) ANCOVA with attractiveness as the covariate was conducted for the Caucasian adults. There was a significant two-way interaction for perceived cognitive competence, $F(2,38) = 3.64$, $p < .05$, but no interaction for perceived honesty, $F(2,38) = 1.01$, $p > .1$, or perceptions of overall credibility, $F(2,38) = 0.25$, $p > .1$. This suggests that on average, participants in the second wave of participant recruitment may have approached the task differently knowing that only Caucasian participants were being recruited. Therefore, wave 2 participants were excluded from the analysis, leaving the Caucasian sample with 32 participants.

Procedure

Upon arriving to participate in the study, participants were given a consent form to read, ask questions about, and sign (see Appendix G). Participants were then informed that they would be “watching a videotaped interview of a 7/8/9 year old Caucasian/Asian/First Nations boy/girl talking about a play session and then filling out a questionnaire.” Videotapes were selected at random with the aim of

there being an equal number of participants watching each videotape.

Participants took part in the study in varying size groups (range = 1-12). After participants had completed the questionnaire, they were fully debriefed (see Appendix F) and given a chance to ask questions about the study.

Materials

The videotapes used were those collected and matched in the Stimuli Creation phase. The questionnaire that participants completed (see Appendix H) was borrowed from previous credibility studies, such as Connolly, Price, Lavoie, & Gordon (in press) and Ross et al. (2003). Questionnaire items conformed to the aforementioned theoretical foundation that credibility is comprised of two factors, perceived honesty (questions regarding honesty, truthfulness, and likelihood of fabricating their story) and perceived cognitive competence (questions about intelligence, the child's understanding of the event they talked about, and 2 questions about the child's accuracy). Participants rated each of these items along 6-point Likert scales where low scores corresponded to an absence of the trait and high scores corresponded to the possession of the trait (likelihood of fabricating their story was reverse scored). Equally weighted composite credibility scores were computed for each of the two factors based on the aforementioned theoretical foundation. A third composite score was also computed which was comprised of overall perceptions of credibility and believability. This composite score is simply labelled "Credibility." These three composite scores served as the dependent variables.

Adults' perception of the child's attractiveness was assessed again on a 6-point Likert scale. It was previously found in the Stimuli Creation portion of the study to vary between racial groups and a quantitative measurement was needed to enter into the analysis as a covariate.

The second part of the questionnaire assessed whether the participant attended to and understood what the child said in the video by asking 10 specific questions about the content of the child's narrative. For example, participants were asked whether the child said there was a balloon in any of the experiments. Additionally, participants were asked the race of the child in the video to ensure that participants perceived the child as belonging to the appropriate race.

The last part of the questionnaire assessed participants' attitudes towards racial minorities using the Neoracism scale. The scale was borrowed from Tougas et al. (2004) and was designed to assess covert racism as opposed to the more traditional form of overt racism. Overt racism is defined as the "traditional type [of racism] whereby visible minorities are denigrated on the basis of innate characteristics" (Tougas, Desruisseaux, Descrochers, St-Pierre, Perrino, & De La Sablonniere, 2004, p. 177). Covert racism, also known as "neoracism," is defined as "the subtle type [of racism] which incorporates egalitarian values and negative beliefs in the blame of visible minorities for undeserved gains and overall social problems" (p. 177). The scale has high internal consistency (Cronbach alpha = .84) and high test-retest reliability ($r = .86$), although there is little research on its validity.

Results

The design conformed to a 1-way (child race: Asian, Caucasian, First Nations), fully nested, between-subjects analysis of covariance (ANCOVA) with attractiveness as the covariate. A nested design was used to control for the effects of non-independence of errors attributed to having multiple participants view and rate one of 12 videotapes.

To test the first two hypotheses, that adults will rate First Nations children as least credible and Asian children as most credible, both Asian and Caucasian adults' ratings were included in the analysis. Adults' mean ratings are reported in Table 2. The results show that collectively, on average, Asian and Caucasian adults rated Asian, Caucasian, and First Nations children as equally: honest, $F(2,8) = 2.30, p = .16$, cognitively competent, $F(2,8) = 1.36, p = .31$, and overall credible, $F(2,8) = 1.27, p = .33$.

Table 2:

Adults' mean (SD) ratings of children's credibility

Race	Honesty	Cognitive Competence	Overall Credibility
Asian	4.83 (0.29)	3.81 (0.29)	4.16 (0.19)
Caucasian	5.28 (0.11)	3.94 (0.20)	4.41 (0.13)
First Nations	5.15 (0.34)	3.53 (0.33)	4.08 (0.24)

To test the third hypothesis, that adults will rate children of their respective ingroup as more credible than children of their respective outgroup, adults were

divided by race and their ratings were analyzed separately. Asian adults' mean ratings are presented in Table 3. On average, the Asian adults rated all children as equally credible in terms of: honesty, $F(2,8) = 0.16$, $p = .86$, cognitive competence, $F(2,8) = 3.44$, $p = .08$, and overall credibility, $F(2,8) = 0.19$, $p = .83$.

Table 3:

Asian adults' mean (SD) ratings of children's credibility

Race	Honesty	Cognitive Competence	Overall Credibility
Asian	3.78 (0.47)	5.31 (0.28)	4.85 (0.07)
Caucasian	3.54 (0.53)	5.43 (0.34)	4.69 (0.49)
First Nations	3.55 (0.49)	5.40 (0.57)	4.19 (0.80)

The Caucasian adults, however, on average rated children differently in terms of: honesty, $F(2,8) = 7.87$, $p < .05$ and cognitive competence, $F(2,8) = 11.93$, $p < .05$. Differences in ratings of overall credibility approached significance, $F(2,8) = 4.14$, $p = .06$. Caucasian adults' mean ratings are presented in Table 4. Bonferroni posthoc tests revealed that on average, Caucasian adults rated Caucasian children as more honest than Asian children ($p < .05$), and as more cognitively competent than both Asian children ($p < .05$) and First Nations children ($p < .05$).

Table 4:

Caucasian adults' mean (SD) ratings of children's credibility

Race	Honesty	Cognitive Competence	Overall Credibility
Asian	4.50 (0.36)	3.75 (0.17)	3.95 (0.33)
Caucasian	5.71 (0.48)	4.41 (0.27)	4.69 (0.55)
First Nations	5.17 (0.47)	3.91 (0.40)	4.50 (0.79)

To examine whether scores on the Neoracism scale predicted the relationship between race and credibility, a hierarchical linear regression was conducted for the Caucasian adults for each of the three dependent variables. The first block of the regression contained the child's race and ratings of the child's attractiveness (attractiveness was previously found to be a significant covariate). The second block contained scores on the Neoracism scale. For each of the three dependent variables (honesty, cognitive competence, and overall credibility), no additional variability (R^2_{change}) was accounted for by adding Neoracism scores to the model, Honesty: $p = .84$, Cognitive Competence: $p = .37$, Overall Credibility: $p = .77$.

DISCUSSION

In this study, we examined whether children's race affects adults' perceptions of their credibility. Adults (Asian and Caucasian) watched a videotaped interview of a child (Asian, Caucasian, or First Nations) talking about a play session and then rated the child's credibility on a number of dimensions. Participants also answered demographic questions and completed the Neoracism scale. To examine whether stereotypes affected adults' perceptions of children's credibility, ratings from both groups of adults were analyzed together. There were no differences between Asian, Caucasian, and First Nations children in terms of perceived honesty, perceived cognitive competence, and perceived overall credibility. This result shows that the hypothesized negative stereotype of First Nations children and the positive stereotype of Asian children did not affect perceptions of credibility when all adult participants were included in the analysis. The most likely explanation for why no differences were found is that the group of adult participants was heterogeneous and any prejudices that may have been present were washed out by the variability of the sample.

To examine whether adults showed ingroup bias, credibility ratings were analyzed separately by adults' race. As a whole, Asian adults rated all three groups of children as equally credible on all three composite scores of credibility. One possible explanation for this lack of racial bias in Asian participants is that

many of the Asian participants in the study were recent immigrants to Canada and stereotypes are learned during the developmental years (Arhin & Thyer, 2004), presumably when many of these participants were not in Canada. Social learning theory of stereotypes posits that children learn stereotypes by observing and imitating important people in their environment (Arhin & Thyer, 2004). Therefore, children who do not see important others exhibiting discriminatory behaviours, such as those that are targeted in this study, are unlikely to exhibit discriminatory behaviours as adults.

It is also possible that some groups of Asian adults do indeed hold stereotype attitudes towards same race and other race children; however, within the broad category of "Asian" adults, differences may not be observed. For example, some Asian adults may have been in Canada for a long period of time and integrated into Canadian society and therefore have favourable attitudes towards the racial majority (Mattar, 2004). Other Asian adults, however, may not hold such positive attitudes towards the racial majority because they perceive themselves to be members of a community that suffers racial discrimination by society (Beiser & Hou, 2006). Similarly, the category of "Asian" was quite broad and did not provide enough specificity to measure racial prejudice within the group. For example, if Chinese adults rated Chinese children as highly credible and Japanese adults rated Chinese children as not very credible, the overall result would be that Asian adults have no ingroup bias towards Asian children. Also, in regards to perceptions of First Nations children, many Asian adults may have had minimal, if any, exposure to First Nations children, and may therefore

be unfamiliar with typical stereotypes and not hold any specific attitude towards that group. In sum, the apparent absence in differential credibility ratings made by Asian participants between the three groups of children may be attributed to a third variable, such as attitudes towards Canadians, specific racial group, or minimal exposure to a specific racial group.

Examining Caucasian adults' credibility ratings, on average, Caucasian children were perceived to be more honest than Asian children and more cognitively competent than both Asian and First Nations children. Additionally, the Caucasian children were rated as slightly more overall credible than the Asian children, although the difference was not statistically significant. It is interesting that Caucasian adults rated both Asian children and First Nations children as equally cognitively competent given that past literature has indicated these groups to elicit opposite stereotypes (Donakowski & Esses, 1996; Kawai, 2005).

It is somewhat surprising that Caucasian adults rated Caucasian children and First Nations children as equally honest and overall credible. One possible explanation for this is that race was made overtly salient during the study. Modern racism theory suggests that when race is salient, people are motivated to quash their racism and appear non-prejudice. In a study by Sommers and Ellsworth (2000), White mock-jurors were asked to read a trial summary where the defendant's race (White or Black) was either subtle or salient and then evaluate the defendant. There were no differences in how the mock-jurors evaluated the Black and White defendants when race was salient, however,

when race was subtle, mock-jurors rated the Black defendant as more guilty, aggressive, and violent than the White defendant. This finding may help explain why First Nations children were rated as having comparable credibility to the Caucasian children. This begs the question of why the impact of racial salience only affected ratings of First Nations children and not Asian children as well. One could guess that the degree of salience is also affected by the base rate of hearing or seeing that racial group. For example, telling a Caucasian undergraduate research participant that they “will be watching a videotaped interview of an Asian boy...” in the context of a university, where a large proportion of the student population is Asian and the community is racially diverse, would not rouse the same suspicion that the study was about racial attitudes as saying, “you’re going to be watching a videotaped interview of a First Nations boy” given that there are few individuals of First Nations descent at the university and in the local community.

The result of this study, that on average, Caucasian adults discriminate in their credibility ratings of children, supports the notion that race affects perceptions of credibility for both adults and children. This is inconsistent with the finding of Bottoms et al. (2004), although the present study did use different racial groups, which may explain the disparate findings. Alternatively, the difference could be attributed to the context in which participants made credibility judgments. In the Bottoms et al. study, participants evaluated a child alleging sexual abuse and in the present study, participants evaluated a child talking about a play session. Regardless, the present study provides evidence that race

does indeed have a role in perceptions of children's credibility and therefore ought to be investigated further.

The result of this study also provides support for the idea that in ambiguous situations, where there is little corroborating or persuasive evidence, individuals rely on superficial characteristics of the target person to make surface credibility judgments. If participants had relied on the content of the child's narrative, credibility ratings would have been the same across racial groups as factors such as age, sex, and accuracy were controlled.

Looking at whether covert racism scores predicted the relationship between race and perceptions of credibility, there was no empirical support. This is consistent with the finding by Bottoms et al. (2004), however, as Bottoms notes, a more domain specific questionnaire might better explain the relationship between race and perceptions of credibility. It may also be possible that modern racism questionnaires only predict racial discrimination when it is socially acceptable. In a study by Brief et al. (2000), participants completed a measure of modern racism (generally assessing attitudes about the social status of Black people in society) and made employment decisions where applications for a job were either Black or White and a corporate authority figure either supported or did not support racial discrimination. Participant's scores on the modern racism scale were only predictive of discrimination when the authority figure provided a business-related justification for the discrimination. Thus, in the absence of an authority figure supporting racial discrimination, participant's prejudicial attitudes did not manifest into discriminatory behaviour.

The present study provides evidence that, on average, Caucasian adults discriminate in their credibility ratings of same-race and other-race children. There are, however, some limitations to the generalizability of these findings. In this study, adults evaluated children talking about a play session, rather than a criminal incident. Although some research suggests that children's memory for an emotionally arousing event is similar to memory for a benign event (Price & Connolly, in press), whether or not an adult's evaluation of a child talking about an emotionally arousing event versus a benign event differs has not been examined.

It is reasonable to assume that adults who are evaluating testimony in the legal arena will attend more closely to the content of a child's testimony rather than to peripheral details such as the child's overall impression. This is because in real cases, adults on a jury will be more motivated to understand the content of the message. The elaboration likelihood model of persuasion and attitude change suggests two methods of information processing: central and peripheral (Petty & Cacioppo, 1986). Central-route processing occurs when individuals are able and motivated to think carefully about the message content and are influenced by the strength of the arguments. Peripheral-route processing occurs when individuals are less motivated or unable to understand the message and are influenced by cues that are irrelevant to the content of the message (Petty & Cacioppo, 1986). It is possible that participants in this study relied more on the peripheral route of information processing because there was low motivation to understand and process the child's narrative. In a real case, adults may rely

more on the central route of information processing and therefore be less influenced by characteristics of the child (such as race) than in mock cases. It is also possible, however, that race is such a salient and notable characteristic that it influences decision making even in a genuine legal setting, as would be suggested by the adult literature (for example, Bagby, Parker, Rector & Kalemba, 1994).

Another difference between this study and real forensic cases is that participants were not told that they would be taking on the role of a jury member, they did not watch the child being cross examined, nor did participants deliberate before making a judgment, a process which may influence the decision making process (Diamond, 1997). Also, participants watched the child talk on videotape rather than in person which has been shown to influence perceptions of honesty (Landstrom, Granhag & Hartwig, 2005).

A common limitation to most child credibility research is that undergraduate students are different from the full jury eligible population with regards to such variables as age and SES. Sweeney and Haney (1992), however, found no differences between undergraduate mock-jurors and community mock-jurors in research on the effects of race on sentencing. Furthermore, in a meta-analysis by Bornstein (1999), few differences were found in the judgments of undergraduate and community mock-jurors.

In conclusion, this study is an important first step in identifying the role that racial prejudices play in adults' perceptions of child credibility. The present study suggests that racial prejudices do in fact influence adults' perceptions of children.

This line of research should be further investigated as it may have important implications in the legal arena. The findings from this experiment can be used as a platform from which studies employing more ecologically valid methods can stem, for example, having participants take on the role of mock-juror, deliberate in a group, and make a judicial decision. This would add to the literature in the field and possibly have important implications in the courtroom.

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Appendices

Appendix A: Parent Consent

Dear Parent/Guardian

This letter is to request permission to invite your son or daughter (aged 7-9) to participate in a play session in which your child will take part in three, child-friendly, educational science experiments. The child will learn about water, oxygen and carbon dioxide. After the play session, the child will be administered a brief vocabulary measure and interviewed about the play session. Broadly, this research is concerned with how children talk about personally experienced events and how adults evaluate the believability of such memory reports.

In order for your child to participate, both you and your child must consent to taking part in the study. Before the play session, vocabulary test, and interview, we will inform your child that he or she can stop at any time. If you or your child decides not to join us, the decision will have no effect on his or her status at summer camp. The interview will take place immediately following the play session at summer camp and will be videotaped, only with permission.

The videotapes will later be shown to adults to study how and how well adults evaluate the believability of children's reports. We will ensure that adults who participate in this phase do not know the child. Adults will be asked to rate the videotaped interview on a number of dimensions including accuracy and believability. This phase of the research does not require your child to participate further, and is separate from their participation in the play session and subsequent interview.

If you agree to allow your child to participate, and if your child agrees to join us, strict standards of confidentiality will be maintained. All children will be identified with a number and personal information will be stored in a separate location. All information obtained during this study will be kept confidential to the full extent permitted by law. Only averages will be reported, individual results will be strictly confidential. All research materials will be stored in a secure location at Simon Fraser University. Any concerns about this research may be directed to the principal investigator, Mr. Jesse Elterman, 604-675-9514, (jelterma@sfu.ca), the supervisor of the research, Dr. Deb Connolly, 291-3996, (debc@sfu.ca), the Chair of the Department of Psychology, Dr. Dan Weeks, 291-3358, (dweeks@sfu.ca), or the Director, Office of Research Ethics, Dr. Hal Weinberg, 268-6593, (hweinber@sfu.ca).

I sincerely appreciate that you took time from your schedule to consider this request. I hope that you agree this research is important and worthy of the time and effort I am requesting.

Sincerely,

Jesse Elterman
Graduate Student, Simon Fraser University

Permission Form

PART I

Having read the enclosed materials, I, _____ (parent/guardian) (check one)

- Allow my child to participate and to be videotaped.
 Will not allow my child to participate

Researchers from Simon Fraser University will invite my child _____ (name of child), _____ (child's date of birth) to participate in a study that concerns children's memory of personally experienced events. This research will be conducted at a school/summer camp/daycare by Mr. Jesse Elterman under the supervision of Dr. Deb Connolly of Simon Fraser University.

Signature of Parent/Guardian: _____

Date: _____

Telephone Number: _____

Part II

If you would like to receive a summary of the research results, please provide your name and address.

Part III

Would you be willing to have us contact you at a later time for related future research?

- Yes
 No

If yes, please provide us with your name, phone number, email, or address (if not supplied above)

Appendix B: Child Consent

Script to Obtain Child Consent (Following parent/guardian consent)

Hi (*child's name*),

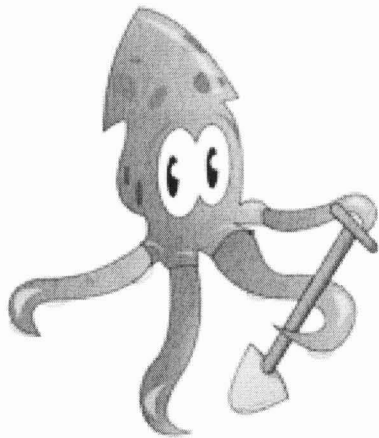
My name is Professor Science and I'm from SFU. I am trying to understand more about kids and was wondering whether you would like to do some fun science experiments with me, answer some questions about words, and then talk about the science experiments on video. You don't have to participate, but if you do, you can stop at any time and I'll bring you back to (*pickup location*). Would you like to do some science experiments with me?

Appendix C: Child Experiments

MR. SCIENCE'S SCIENCE EXPERIMENTS WITH MR. SCIENCE

The Magic Cloud

1. Light a match
2. Blow it out and let the smoke into the bottle
3. Add warm water
4. Shake
5. Squeeze 10 times

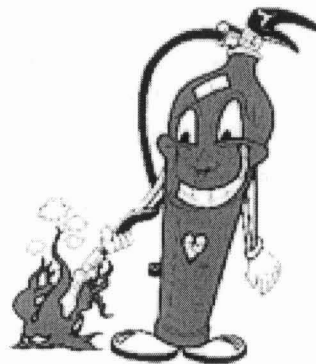


Squidy the Squid

1. Pick a squid
2. Fill the squid with a squeeze of water
3. Put the squid in the bottle
4. Put on the cap
5. Squeeze the bottle and watch Squidy dive

The Fire Extinguisher

1. Pour vinegar into the bottle
2. Put baking soda into the balloon
3. Put the balloon onto the bottle and watch it blow up
4. Take the balloon off the bottle
5. Pour the carbon dioxide onto a candle



Appendix D: Child Interview and Debriefing

Build Rapport

1-2 minutes to get child talking freely - Ask about their summer, school, sports, siblings, age, movies, etc.

Interview

Introduction

“I was hoping to see Mr. Science do some of his experiments earlier but I missed it. Did you get to see the experiments? I want you to tell me everything you can remember about the experiments but I don’t want you to guess. It’s okay if you don’t remember a part of one of the experiments, but I want you to try your best. Okay?”

Section 1 – Open Format

So, tell me about what happened with Mr. Science?

After 7-10 seconds: Is there something else you remember? Nothing after 4-5 seconds, continue w/section 2.

Section 2 – Semi-Free Recall

I heard there were 3 science experiments;

Tell me about the first one, the Magic Cloud?

What happened before/after ____?

Tell me more about the one with the squid?

What happened before/after ____?

Tell me more about the one like a fire extinguisher?

What happened before/after ____?

Debrief

So, today we did these science experiments with you because we are interested in how kids remember things, and how they talk about what they remember. We did this because we want to see what adults think about the way kids remember. We also wanted to see if the way a kid talks changes what adults think about the kid. So, for example, what do adults think about kids who talk with an accent compared to kids who talk without an accent? Those are the kinds of things we are interested in. Do you have any questions for me? Do you have any questions for Mr. Science? Thank you.

Appendix E: Pilot Study Ratings

What race is the child in the picture?

1 = Caucasian

2 = Asian

3 = First Nations

4 = Hispanic

5 = Other

	1	2	3	4	5
Picture 105	O	O	O	O	O
	1	2	3	4	5
Picture 121	O	O	O	O	O
	1	2	3	4	5
Picture 109	O	O	O	O	O
	1	2	3	4	5
Picture 114	O	O	O	O	O
	1	2	3	4	5
Picture 108	O	O	O	O	O
	1	2	3	4	5
Picture 107	O	O	O	O	O
	1	2	3	4	5
Picture 115	O	O	O	O	O
	1	2	3	4	5
Picture 112	O	O	O	O	O
	1	2	3	4	5
Picture 123	O	O	O	O	O
	1	2	3	4	5
Picture 118	O	O	O	O	O
	1	2	3	4	5
Picture 102	O	O	O	O	O
	1	2	3	4	5
Picture 106	O	O	O	O	O

	1	2	3	4	5
Picture 119	O	O	O	O	O
	1	2	3	4	5
Picture 113	O	O	O	O	O
	1	2	3	4	5
Picture 101	O	O	O	O	O
	1	2	3	4	5
Picture 120	O	O	O	O	O
	1	2	3	4	5
Picture 110	O	O	O	O	O
	1	2	3	4	5
Picture 111	O	O	O	O	O
	1	2	3	4	5
Picture 117	O	O	O	O	O
	1	2	3	4	5
Picture 122	O	O	O	O	O
	1	2	3	4	5
Picture 116	O	O	O	O	O
	1	2	3	4	5
Picture 103	O	O	O	O	O
	1	2	3	4	5
Picture 104	O	O	O	O	O

Audio Ratings

In terms of comprehensibility, how much of what the child said in the recording can you understand? (e.g. child's clarity of speech, pronunciation, syntax, background noise, volume level, etc.)

0% meaning nothing at all, and 100% meaning you understood everything the child said.

If the child speaks with an accent, put a "Y" in the appropriate box and specify what type of accent you think it is.

		Accent? Y/N	If yes, please specify
Audio #10	%		
$(4 \times 4) - 2 = \underline{\hspace{2cm}}$			
Audio #7	%		
$(20 \times 3) + 3 = \underline{\hspace{2cm}}$			
Audio #12	%		
$44 - 1 + 7 = \underline{\hspace{2cm}}$			
Audio #2	%		
$9 - (2 \times 3) = \underline{\hspace{2cm}}$			
Audio #3	%		
$39 - 2 + 8 = \underline{\hspace{2cm}}$			
Audio #9	%		
$(4 \times 5) - 17 = \underline{\hspace{2cm}}$			
Audio #11	%		
$(2 \times 8) + 2 = \underline{\hspace{2cm}}$			
Audio #6	%		
$4 + 17 - 4 = \underline{\hspace{2cm}}$			
Audio #5	%		
$(2 \times 12) + 3 = \underline{\hspace{2cm}}$			
Audio #1	%		
$(4 \times 25) + 2 = \underline{\hspace{2cm}}$			
Audio #8	%		
$(16 \times 2) - 4 = \underline{\hspace{2cm}}$			
Audio #4	%		

Appendix F: Participant Debriefing

Participant Debriefing

Thank you for participating.

I would like to talk to you briefly about the reasons we conducted this study. It has been well established that perceptions of an individual's memory report can be influenced by a number of factors. Of interest to us is how an individual's race might affect how credible adults perceive their memory reports to be. Among adults, racial attitudes have been shown to influence perceptions of credibility. In this study, however, we are interested in whether racial attitudes also influence adults' perceptions of children's credibility. It is important to note that we are not interested in whether you have a particular attitude toward certain racial groups, but rather whether adults, as members of society, have learned certain racial attitudes which extend to their perceptions of children. I remind you that your responses are completely anonymous and confidential and that in no way can your data be linked to you.

Do you have any questions about this study?

If any questions or concerns, you may contact myself at jelterma@sfu.ca, or the supervisor of this research, Dr. Deb Connolly, 291-3996, (debc@sfu.ca), the Chair of the Department of Psychology, Dr. Dan Weeks, 291-3358, (dweeks@sfu.ca), or the Director of the Office of Research Ethics, Dr. Hal Weinberg, 268-6593, (hweinber@sfu.ca).

Thank you for participating.

Appendix G: Participant Consent

Perceptions of Children's Memory Reports

You are invited to participate in a study that examines adults' perceptions of children's memory reports. The purpose of this research is to better understand the factors which contribute to how adults perceive the memory reports of children. This research is being conducted under permission of the Simon Fraser Research Ethics Board.

The procedure involves watching a videotaped interview of a child talking about a play session and then answering questions on a questionnaire. Your participation in this study will take less than 30 minutes. As a way to compensate you for any inconvenience related to your participation and to acknowledge the educational value of your participation, you will be given 1 research credit. It is important for you to know that it is unethical to provide undue compensation or inducements to research participants and, if you agree to be a participant in this study, this form of compensation must not be coercive. Your participation in this study must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. If you do withdraw from the study your data will not be used for analysis.

To protect your privacy, your data will be assigned a number at the beginning of the session and all of the data for you will be coded under this number. Thus, all data will be associated with the assigned number and not with your identity. In addition to referring to each piece of data by assigned number, only the principle investigator (Jesse Elterman) and his supervisor (Dr. Connolly) will have access to the data collected. The data will be stored in locked filing cabinets. The completely anonymous data will be retained by the principle investigator for four years from the completion of the study.

The results of this study may be reported in scholarly presentation, publications and my Master's thesis. However, only averages will be reported and individual results will be strictly confidential.

Any concerns about this research may be directed to the principal investigator, Mr. Jesse Elterman, 604-675-9514, (jelterma@sfu.ca), the supervisor of the research, Dr. Deb Connolly, 291-3996, (debc@sfu.ca), the Chair of the Department of Psychology, Dr. Dan Weeks, 291-3358, (dweeks@sfu.ca), or the Director of the Office of Research Ethics, Dr. Hal Weinberg, 268-6593, (hweinber@sfu.ca).

Your signature below indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researcher.

Print Name

Signature

Date

Date of Birth

Appendix H: Participant Questionnaire

Participant Questionnaire

P#: _____

C#: _____

Please answer all of the following questions based on your memory of the child's report.

1. How **intelligent** do you think the child was?

Not at all intelligent	1	2	3	4	5	6	Very intelligent
------------------------	---	---	---	---	---	---	------------------

2. How **honest** do you think the child was?

Very dishonest	1	2	3	4	5	6	Very honest
----------------	---	---	---	---	---	---	-------------

3. How **accurately** do you think the child recalled the event?

Very inaccurately	1	2	3	4	5	6	Very accurately
-------------------	---	---	---	---	---	---	-----------------

4. How **believable** was the child?

Not at all believable	1	2	3	4	5	6	Very believable
-----------------------	---	---	---	---	---	---	-----------------

5. How well did the child **understand** the events she described?

Not at all understood	1	2	3	4	5	6	Fullv
-----------------------	---	---	---	---	---	---	-------

6. How **truthful** was the child?

Not at all truthful	1	2	3	4	5	6	Very
---------------------	---	---	---	---	---	---	------

7. If the child was asked 6 specific questions about the event, how many questions do you think the child would answer **accurately**?

	1	2	3	4	5	6
--	---	---	---	---	---	---

8. How likely is it that the child **fabricated** the event?

Not at all likely	1	2	3	4	5	6	Very likely
-------------------	---	---	---	---	---	---	-------------

9. Overall, how **credible** was the child?

Not at all credible	1	2	3	4	5	6	Very credible
---------------------	---	---	---	---	---	---	---------------

10. How **attractive** was the child?

Not at all attractive	1	2	3	4	5	6	Very attractive
-----------------------	---	---	---	---	---	---	-----------------

11. How **comprehensible** (easy to understand) was the child?

Easily comprehensible	1	2	3	4	5	6	Incomprehensible
-----------------------	---	---	---	---	---	---	------------------

1. How many experiments did the child talk about? _____
2. Did the child flatten a pop can by stepping on it? _____
3. Was there a balloon in any of the experiments? _____
4. Was there food colouring in any of the experiments? _____
5. Was there fire in any of the experiments? _____
6. What was the name of the squid? _____
7. Did any of the experiments make a loud sound? _____
8. Was there salt in any of the experiments? _____
9. Did the child shake anything? _____
10. Did a liquid change temperature in one of the experiments? _____

In the past 2 months, how often have you had contact with children age 7-9? (please circle)

None	1-3 times per month	1-3 times per week	1-3 times
------	---------------------	--------------------	-----------

1. How old are you? _____
2. What is your sex? _____
3. What language are you most comfortable speaking? _____
4. What language do you speak with most of your friends? _____
5. What language do you speak with your family? _____
6. How many years have you lived in Canada? _____
- 6b. Where did you live before that? _____
7. Where was your mother born? _____
8. Where was your father born? _____
9. With which country do you most closely identify? _____
10. What race was the child in the video? (place a check mark)
 - Asian _____
 - Caucasian _____
 - East Indian _____
 - First Nations _____
 - Hispanic _____
 - Other _____

please specify _____

In your opinion...

- 1) Visible minorities will make progress by being patient and not pushing too hard.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 2) Over the past few years, visible minorities have obtained more from the Government than they deserve.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 3) Due to social pressures, managers frequently must hire under qualified people from visible minorities.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 4) It is difficult to comment on visible minorities without being referred to as a racist.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 5) Culturally speaking, Canada has been enriched by the arrival of visible minorities.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 6) Visible minorities have values that do not conform with Canada's culture

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 7) Visible minorities coming to Canada should change their values and customs to conform with those of individuals of Canadian ancestry.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 8) The identity of people of Canadian ancestry has been enriched by the arrival of visible minorities.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 9) Upon arrival in Canada, visible minorities really try to integrate.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 10) Visible minorities try their best to adapt to the Canadian way of life.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 11) If members of visible minorities are unhappy with their situation, they should return to their own country.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 12) Economically speaking, Canada has benefited from the arrival of visible minorities.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

- 13) High unemployment has nothing to do with the presence of visible minorities.

Not at all	1	2	3	4	5	6	7	Absolutelv
------------	---	---	---	---	---	---	---	------------

What is your racial background? (place a check mark)

Asian _____

Caucasian _____

East Indian _____

First Nations _____

Hispanic _____

Other _____ please specify _____