# New Research Shows Children Less Prone to False Memories than Adults, Challenging Assumptions About Eyewitness Testimony.

April 30, 2007

In the 1980's, a spate of high profile child abuse convictions gave way to heightened concern about false memory reports given by children. Take, for example, the case of Kelly Michaels, a preschool teacher who was convicted on 115 counts of sexual abuse based on the testimony of 20 of her pupils. After serving seven years of her 47 year sentence, Michaels' conviction was overturned after the techniques used to interview the children were shown to be coercive and highly suggestive.

Since then, a sizeable literature on children's false memories has accumulated and until recently, the picture that had emerged was quite consistent: false memories of events were found to decrease with age throughout childhood and adolescence. In other words, as we grow into adulthood, our memory accuracy improves.

However, psychologists Charles Brainerd and Valerie Reyna of Cornell University believe that the relationship between age and memory accuracy may not be so simple. Drawing upon fuzzy-trace theory — the popular psychological theory that humans encode information on a continuum from verbatim to "fuzzy" traces that convey a general meaning — Brainerd and Reyna predicted that false memories may actually *increase* with age under certain circumstances. In other words, adults would have *less* accurate memories than children.

Brainerd and Reyna set out to examine a common form of false memory that occurs frequently in our everyday lives. This particular brand happens when humans blur the lines between separate but closely related events. For instance, if you go to a baseball game and see fellow fans drinking only Coke, Mountain Dew, and Dr. Pepper, you are very likely to concede seeing that someone was also drinking Pepsi if asked after the fact.

In a study published in the May issue of *Psychological Science*, a journal of the Association for Psychological Science, Brainerd and Reyna presented a list of words for groups of first, fifth and ninth graders. Many of the words from this "study list" were related to each other (by belonging to certain categories such as animals, furniture, men's names) while others were unrelated "filler" words.

After a short break, the students were presented with a new "test list" composed of study list words, new words belonging to the aforementioned categories (animals, furniture, etc.), and distracter words that were new and entirely unrelated to the categories or the study list. Their task was to identify whether they had previously heard a word or not.

As predicted, if the test list provided a new word with a closely related meaning (a "semantic relation") to a word from the study list, older children were more likely to assert that they had heard it before.

Simply put, the older children had more false memories in this case than younger children.

“These trends are important,” write the authors “because they reveal …, disturbingly, increasing errors for false memories that are likely to resemble those is real life — namely, false memories that are pursuant to everyday meaning making.”

The reasoning behind this phenomenon is straightforward: Because children lack a sophisticated ability to connect the meanings of words or events compared to adolescents and adults, they are buffered from making the semantic relation memory mistake.

This age reversal may have significant implications for the credibility of child testimony according to the authors. Brainerd and Reyna write “because these situations are so frequent in real life, the law’s policy of regarding children’s testimony as being inherently more prone to false memories than adolescents’ or adults’ is no longer scientifically tenable.”