



## Long-term stability of young children's eyewitness accuracy, suggestibility, and resistance to misinformation

Elyse Brauch Lehman<sup>\*</sup>, Marcia J. McKinley<sup>1</sup>, David W. Thompson<sup>2</sup>, Ann Marie Leonard, Julie I. Liebman, Danielle D. Rothrock

Department of Psychology (MSN-3F5), George Mason University, 4400 University Drive, Fairfax, VA 22030, USA

### ARTICLE INFO

#### Article history:

Received 9 September 2005  
Received in revised form 22 October 2009  
Accepted 22 November 2009  
Available online 20 January 2010

#### Keywords:

Eyewitness accuracy  
Suggestibility  
Resistance efficacy  
Fuzzy trace theory  
Individual differences

### ABSTRACT

Forty 4-year-olds and 39 6-year-olds participated in a modified misinformation-effects paradigm. At time 1 they reviewed a story and some of the children were asked questions about it in either recall or recognition format. Three weeks later they were given misinformation about some of the story events. The following week they were asked the original questions. Two years later the procedure was repeated with a different story for 31 of the children. Although 4-year-olds overtly disagreed more times than the older children did when misinformation was initially presented, this resistance did not affect their accuracy or suggestibility scores. The 6-year-olds became more resistant to the suggestive effects of misinformation when they were given an immediate recall test or when given the opportunity to disagree with misinformation. Significant test–retest correlations occurred over a two year period for both story accuracy and one of the suggestibility scores.

© 2009 Elsevier Inc. All rights reserved.

### Introduction

It has been well established that young children's, especially preschoolers', accounts of an event are more likely than older children's and adults' accounts to be affected by false information that is explicitly suggested to them (Bruck & Ceci, 1999; Howe, 2000). For example, if after witnessing an event young children are given misinformation about it (e.g., "Remember when the doctor examined your eyes?"), their subsequent reports of the event are more likely to include the (mis)information that the "doctor examined my eyes" when, in fact, he did not.

Nevertheless, although there are consistent age group differences in suggestibility, clinicians and researchers alike have observed that some very young children are capable of providing accurate accounts of events even in the face of suggestive questioning, whereas some older children are not (Baxter, 1990; Bruck & Ceci, 1999; Geddie, Fradin, & Beer, 2000). If one goal of research is to be able to predict which children will succumb to suggestions and which will not, then this individual variation within a given age group needs to be better understood.

### Individual-difference predictors of children's suggestibility

Although the study of individual-difference predictors of children's suggestibility has increased dramatically in the last 10 years, general conclusions about the characteristics of children whose reports are likely to be influenced by suggestive interviewing have been difficult to draw. To a certain extent, the source of the difficulty is both conceptual and methodological. Suggestibility is multidimensional (Ceci & Bruck, 1993), and various components of suggestibility have been investigated including: (1) *interrogative suggestibility* (assenting to misleading questions), (2) *misinformation effects* (incorporating misinformation into later reports), (3) *source misattribution* (failing to remember the source of the misinformation), and (4) *false-event creation* (constructing a narrative of an event that never occurred) (Bruck & Melnyk, 2004; Ornstein & Elischberger, 2004). Because these components differ in many ways, including the type and timing of suggestions (Lee, 2004), the predictors of suggestibility may vary across components. For example, Bruck and Melnyk (2004) proposed that psycho-social factors may predict interrogative suggestibility and cognitive factors predict misinformation effects and source misattribution. Likewise, suggestibility may be due to different mechanisms at different ages (Bruck & Melnyk, 2004; Chae & Ceci, 2005; Holliday, Reyna, & Hayes, 2002). Source-monitoring skills, for example, may play a larger role in young children's suggestibility whereas resolution of conflicting information, insight into a questioner's motives, and self-efficacy may be more involved in the suggestibility of older children (Bruck & Melnyk, 2004; Mazzoni, 1998).

<sup>\*</sup> Corresponding author. Fax: +1 703 993 1359.

E-mail address: elehman@gmu.edu (E.B. Lehman).

<sup>1</sup> Current address: Department of Psychology, Mount Saint Mary's University, 16300 Old Emmitsburg Road, Emmitsburg, MD 21727, USA.

<sup>2</sup> Current address: Fairfax County Public Schools, Westfield High School, 4700 Stonecroft Blvd., Chantilly, VA 20151-1716, USA.

In 2004 Bruck and Melnyk published a review of the literature on individual differences in suggestibility. Across 69 studies they looked for evidence of relationships between all four components of suggestibility and three categories of possible predictors: (1) *demographic* (socioeconomic status and sex), (2) *cognitive* (intelligence, language, memory, theory of mind, executive functioning, distractibility, and creativity), and (3) *psycho-social* (social engagement, self-concept/self-efficacy, stress/emotional arousal/state anxiety, maternal attachment styles, parent–child relationship, parenting styles, temperament, and mental health). For some of the variables no relationship with suggestibility could be found. For others, the results were inconsistent. The most promising predictors appeared to be creativity, language ability, self-concept/self-efficacy, the parent–child relationship, and maternal romantic attachment. Children who were at risk for being suggestible were more imaginative (e.g., Clarke-Stewart, Malloy, & Allhusen, 2004) and had less advanced language skills (e.g., Clarke-Stewart et al., 2004), poorer self-concept/self-efficacy (e.g., Davis & Bottoms, 2002), less supportive relationships with fathers or mothers (e.g., Clarke-Stewart et al., 2004), and mothers who were insecurely attached in their romantic relationships (e.g., Goodman, Quas, Batterman-Faunce, Riddlesberger, & Kuhn, 1997; Quas et al., 1999).

#### *Resistance to misleading questions as a predictor of misinformation effects*

The present studies focused on children's initial responses to an experimenter's presentation of misinformation as a potential source of individual differences in suggestibility as assessed by children's incorporation of the misinformation into later reports. In the standard misinformation effects paradigm, participants experience an event, subsequently receive misleading information, and are then tested for their memory of the event at a later date (Loftus, Donders, Hoffman, & Schooler, 1989). Misinformation is typically presented by incorporating it into subsidiary clauses of questions about non-critical aspects of the event in order to discourage participants from questioning the veracity of the information (Lee, 2004). For example, in our study, after children have heard a story about a girl named Casey who read books about butterflies to her stuffed animals, misinformation is introduced during subsequent questioning in the following way: "Remember when Casey read books to her mother... Well, when Casey read books to her mother, was her favorite book about birds?" We were especially interested in those children who disagreed with the misinformation by saying "No, she didn't read to her mother" out loud, stating the correct information, or shaking their heads "no." Would they be more or less likely to incorporate the misinformation into the later test session? This type of response has been called denial (Gilstrap & Papierno, 2004), disagreement (Hunt & Borgida, 2001), and resistance (Davis & Bottoms, 2002; Zaragoza, Payment, Ackil, Drivdahl, & Beck, 2001).

In spite of a methodology that was designed specifically to minimize disagreements (see Lee, 2004), we expected that there would be enough variability in children's resistance to misinformation to warrant its consideration as a predictor of suggestibility. Although the incidence of explicit disagreement is typically not reported in misinformation effects paradigms, perhaps because it is assumed to be small, it has been evaluated in studies of children's responses to forensic interviewers' contradictions of children's earlier statements (a form of suggestive questioning called *modifications*). In these studies child witnesses have been found to challenge the incorrect statements about one third of the time: 36% (Hunt & Borgida, 2001), 36% (Roberts & Lamb, 1999), and 21% (Walker & Hunt, 1998). Hunt and Borgida found no difference in the incidence of disagreements between preschoolers (3–5 years of age) and elementary school children (9–11 years of age).

Consistent with Lee and Bussey (1999), we also expected that children would be less likely to incorporate resisted suggestions into their later reports. This hypothesis is based partly on the fact that several cognitive and psycho-social underpinnings of disagreement are known to be related to suggestibility. Presumably memory and metacognitive monitoring skills such as remembering and differentiating correct and incorrect information (Schooler and Loftus' (1993) *discrepancy detection*) as well as perceived self-efficacy for resisting an interviewer's suggestions (Davis and Bottoms's (2002) *resistance efficacy*) are involved. One of the most consistent findings in the suggestibility literature is that children with better memory for an event show less suggestibility for that specific event (Bruck & Melnyk, 2004). Furthermore, Davis and Bottoms (2002) found that 7-year-old, but not 6-year-old, children who felt confident about telling an interviewer that the interviewer was wrong succumbed to fewer misleading questions. Resistance efficacy in the Davis and Bottoms' study was measured with a separate Resistance Efficacy Scale (e.g., "What if Rich (the interviewer) is wrong about something that happened, and you know he's wrong. How easy or hard will it be for you to tell him he's wrong?").

Studies that have investigated overt disagreement within the actual interview have found that disagreement when misinformation is first presented leads to lower levels of later suggestibility for adults (Liebman et al. (2002) in the misinformation effects paradigm used in the present study; Zaragoza et al. (2001) in a study in which undergraduates were forced to provide misinformation about the events they had seen). The only developmental study to investigate this hypothesis found that interviewers' contradictions of children's earlier statements were less likely to be included in the later reports of preschoolers who had disagreed with the modifications than in the reports of preschoolers who had not resisted (Hunt & Borgida, 2001). Because the elementary school children in Hunt and Borgida's study rarely incorporated information from interviewers' modifications, the relation could not be evaluated in this age group.

#### *Test–retest reliability*

Two years after we had studied children in a resistance to misinformation paradigm, there was an opportunity to retest some of the children who had participated in the first study. This allowed us to investigate the stability of memory accuracy and suggestibility. The goal of predicting which children will succumb to suggestions and which will not in fact assumes that there is at least some minimum level of stability over time. Based on the findings of the Munich Longitudinal Study on the Genesis of Individual Differences (LOGIC) which assessed children's memory performance through a 10-year period, we expected relatively high correlations for accuracy in our recall task over the 2-year period (Schneider & Weinert, 1995). Unfortunately, perhaps because American psychologists have focused on the situational determinants of suggestibility, there is little discussion in this literature about the long-term stability of suggestibility (Endres, 1997). Some evidence for stability exists in the form of test–retest reliability for instruments developed to measure suggestibility within the European individual difference tradition. For example, test–retest reliability for several suggestibility scores on parallel forms of the Gudjonsson Suggestibility Scale (GSS; Gudjonsson, 1997) over a 1-week to 8-month period ranged from .55 to .83 (Gudjonsson, 1997; Merckelbach, Muris, Wessel, & van Koppen, 1998). Roebbers and Schneider (2002) found similarly high test–retest correlations for 6- to 10-year-old children's responses to misleading questions given to different events presented 3 weeks apart. Nevertheless, because the GSS measures suggestibility within a single session, a procedure that is believed to assess *immediate misinformation acceptance* (Schooler & Loftus, 1993), we still do not know about the stability of suggestibility that is measured in a paradigm that is more likely to assess *delayed misinformation retrieval*, i.e., one in

Download English Version:

<https://daneshyari.com/en/article/359971>

Download Persian Version:

<https://daneshyari.com/article/359971>

[Daneshyari.com](https://daneshyari.com)