

Moral Suggestibility: The Complex Interaction of Developmental, Cultural and Contextual Factors

HERBERT SALTZSTEIN^{1*}, MARIA DA G. DIAS²
and MARI MILLERY¹

¹Graduate School of the City University of New York, USA
²Federal University of Pernambuco, Brazil

SUMMARY

In Study 1, 193 children, half in New York City and half in Recife, Brazil, heard hypothetical dilemmas about whether to keep a promise or tell the truth. An adult interviewer suggested the alternative to the child's initial choice. Younger children (5 to 8 year olds) were more suggestible than older children (10 to 12 year olds), US more than Brazilian children; and suggestibility occurred more frequently from promise to truth than *vice versa*. In Study 2, children in each country were interviewed either by an older adult or by a 'teenager'. Suggestibility was greater when the interviewer was an adult than a teenager in the US, but not in Brazil. Findings are discussed in terms of developmental trajectories, from *heteronomy* to *autonomy*, and authority relations within cultures. Copyright © 2004 John Wiley & Sons, Ltd.

The study of suggestibility has a long history, but it was not until the early part of the last century that the scientific study of suggestibility came into prominence with persistent and intermittently successful searches for developmental and individual regularities (e.g. Stern, 1910; Whipple, 1912). The original and subsequent research found that under some conditions, developmental and individual regularities exist, with younger children reported to be more suggestible than older children, and some individuals more susceptible to suggestions than others. In recent years, interest has been renewed because of controversies surrounding children's eyewitness testimony and, as such, there have been many studies of child memory and suggestibility (reviewed by Ceci & Bruck, 1995).

While controversies remain, many of these studies report that younger children, especially those 4 years old and under, are generally more suggestible than older children. As Ceci and Bruck (1995) have noted, this developmental trend is probably due to differences in social acquiescence as well as in memory capacity. However, exceptions to this generalization have been reported (e.g. Goodman & Clarke-Stewart, 1991). Also,

*Correspondence to: Dr H. Saltzstein, Department of Psychology, Graduate School of the City University of New York, 365 Fifth Avenue, New York, NY 10016, USA. E-mail: Hsaltzstein@gc.cuny.edu

Contract/grant sponsors: Research Foundation of the City University of New York; National Council for Scientific and Technological Development, Brazilian federal government; New York City.

since most studies have focused on memory for events, any findings should be replicated in other domains before generalizations can be accepted as valid.

Our aim here is to report research on suggestibility in a different domain, namely moral judgment. The appropriateness of the moral domain as a site for studying suggestibility has been demonstrated by experimental studies of peer/experimenter influence on moral judgments and reasoning (e.g. Berkowitz & Gibbs, 1995) and demographic studies of how delinquency appears sometimes to be clustered around peer groups (e.g. Harris, 1995), as well as in fiction (e.g. *Oliver Twist*), all of which suggest that moral decisions are not impervious to the operation of suggestibility. Furthermore, testing suggestibility in social judgment tasks reduces the possibility that age differences are primarily due to differences in memory capacity, as might be the case in suggestibility studies of eyewitness testimony. We will attempt to demonstrate how the findings obtained have led us from simple to complex hypotheses involving the contextual factors embodied in development, task, and culture.

DEVELOPMENTAL-AGE CONTEXT

Traditional cognitive-developmental studies of children's moral judgments provide an opportunity to study suggestibility in the moral domain because the standard Piagetian procedure for studying children's judgment and reasoning, moral and other, termed *method clinique*, has built-in a strong suggestibility component. Beginning with his early studies of children's cognitive development, non-social and social/moral, Piaget recommended that the interviewer suggest the alternative response to the one the child initially offered. That is, regardless of which response the child initially gave, the interviewer would suggest the opposite. Piaget recommended this practice as a means for assessing the stability of the child's cognitive attainment, and it may be termed *counter-probing*. Viewed through a different lens, counter-probing provides an opportunity to test the child's suggestibility.

Our interest in this practice and phenomenon was raised by the possibility that in the moral domain, an age-related change would also be found. Namely, younger children would be more suggestible than older children. The rationale for this hypothesis lay in Piaget's twin concepts of *heteronomy-autonomy*. The former term, which he adopted from Kant (1964/1797), refers to the hypothesized tendency for young children to confuse duty with obedience to adult authority. Autonomy refers to independence of moral thinking from non-moral factors, such as obedience. The problem that this hypothesis has encountered is that young children do not always appeal to adult authority to justify their moral decisions, i.e. in their moral reasoning (e.g. Turiel, 1983). However, if the counter-probing part of his *method clinique* is viewed as assessing the child's suggestibility to an adult interviewer, then one would predict that suggestibility would be more pronounced at least in younger children, ensconced in a *heteronomous* mode of thinking, than in older children, who have adopted a more *autonomous* mode of thinking (Piaget, 1965/1932). In a sense, the heteronomy-to-autonomy hypothesis has been translated from an internal mental mode to an interpersonal mode. Thus, the first formulation of our hypothesis was that *younger children, whose thinking in the moral domain is heteronomous, would be more suggestible to an adult interviewer than would older children*. The age of transition would vary with socio-cultural setting, but roughly the age range of 5 to 10 would seem to be a critical transition phase because, as Piaget claimed, this is the period when the child's moral thought changes from *heteronomous* to *autonomous*.

The basic method was to present children in these two age groups with moral dilemmas involving a choice between telling the truth and keeping a promise, where both duties were incompatible. The particular dilemmas are described in the Methods section and appear in Appendix A. After the interviewer confirmed that the child understood the story in which the dilemma was embedded, the child was asked what the protagonist in the story should do, thus forcing the child to choose between telling the truth and keeping a promise. If the child had initially chosen telling the truth, the interviewer suggested that keeping the promise might be the better course of action, and if the child had initially chosen keeping the promise, the interviewer suggested that telling the truth might be the better course. We hypothesized that the younger, 5 to 8 year olds would change their decision or moral choice¹ in the direction of the interviewer's probe more frequently than older, 10–12 year old children.

DEVELOPMENTAL-TASK CONTEXT

We believed that it was necessary also to consider whether suggestibility varies with the developmental status of the task.² Suggestibility is expected to depend on whether the moral judgment is a response to a recently attained and consolidated moral orientation. Thus, suggestibility might be greater when the initial choice was a recently attained solution to the dilemma. There is empirical evidence that the concept of keeping a promise is a particularly cognitively and linguistically difficult concept for young children to understand (Astington, 1988; Maas & Abbeduto, 1998, 2001). Astington performed a detailed linguistic analysis of the concept of promise, revealing its complicated structure, and found that young children frequently misunderstood it. Maas and Abbeduto largely confirmed the developmental shift in children's understanding of promise, which they, in part, attributed to a gradual differentiating of promise from outcome. Whether their account provides the whole explanation,³ our own results (below) support this assumption by demonstrating that truth-telling is chosen over promise-keeping by the younger but not the older children, who more often choose promise.

CULTURAL CONTEXT

In order to test the hypothesized generality of this developmental change, we sought to investigate children's suggestibility in another cultural setting. A cultural setting was needed in which (1) the standard tasks (dilemmas) and procedures (interviewing) would be sufficiently familiar to ensure their appropriateness, and (2) the values of the culture,

¹The studies reported here focus on social influence on moral choice, sometimes referred to as content, not on change in reasoning, usually termed structure. Both studies of change in content and in structure are important, although content is sometimes dismissed as less important by those advocating a cognitive-structural approach. However, we note that real moral choices include choices of content as well as use of structure (reasoning).

²We thank Elliot Turiel for offering this general suggestion.

³It also can be argued on an *a priori* basis that an understanding of the contractual nature of promise requires what Flavell (1968) termed *recursive perspective-taking*, wherein each party recursively incorporates the other's perspective in his/her own, as in 'you know that I expect you to keep the promise, and I know that you know that'. Flavell and his colleagues found that this recursive operation does not occur until about the sixth or seventh grades, roughly, 11–12 years of age. In our view, truth-telling does not require the same level of cognitive complexity, and since it is also emphasized by parents, has a stronger pull on younger children than does promise.

particularly regarding authority and morality, would be substantially different from North American culture. The northeast section of Brazil offered such a venue. First, Brazil is a large, modern country with strong regional differences, and its northeast region is generally viewed as the more traditional part of the country (e.g. Page, 1995). This view has also been supported in research on moral judgments (e.g. Haidt, Koller, & Dias, 1993; Nucci, 1997). These research studies revealed a more traditional and authority-centered morality in Brazil. Also, Brazil has had a recent history of authoritarian rule, with military dictatorship ending only in the late 1980s. Nonetheless, past studies (Haidt et al., 1993; Nucci, 1997) have demonstrated that standard research procedures can be used there. Thus, it provides an appropriate comparison with New York City (NYC). Our purpose, then, was to test whether the hypothesized age-related decline in suggestibility would be obtained in both cultural settings. Our initial hypothesis, a weak one, was that suggestibility would be somewhat greater in northeast Brazil than in the northeast US.

STUDY 1

Method

Participants

Data were obtained from samples of children from the US and from Brazil. The US group consisted of 95 children. The initial set of interviews was with 65 children, who were recruited from the spring semester and summer programme of a university-affiliated elementary school in NYC. Thirty-three children were 5 to 8 years of age and 32 children were 10 to 12 years of age.⁴ Because admittance to the school is based on a stringent test, the school children are generally high academic achievers. Consistent with school policy, they come from ethnically diverse backgrounds. An additional sample of 30 young children (5 to 8 year olds) was recruited from a parochial school in one of New York's outer boroughs to help establish the generalizability of the findings.

The Brazilian group was recruited from a number of private schools in Recife, a large city in the state of Pernambuco in northeast Brazil. In total, there were 98 Brazilian children, 48 5 to 8 year olds and 50 10 to 12 year olds. Like the children in the US, they were generally from middle-class backgrounds.

Moral judgment task

The dilemmas, labelled *cheating* and *teasing*,⁵ were read to each child, one at a time (see the first two dilemmas in Appendix A; the third was added for the second study, below). In both stories, a fictive child is faced with the choice of whether to tell the truth when doing so would result in breaking a promise or to keep a promise when that would involve lying. In the *cheating* story, the protagonist promises to keep a friend's secret, that the friend

⁴This choice of an age range was partly based on our pilot testing, which showed that children below the age of 5 had trouble remembering significant details of the dilemma. Exact ages in both studies were incomplete and therefore are not included.

⁵A third story was included for some, but not all, of the US and Brazilian children. It involved a child's hiding from parents, confiding in his/her sibling and eliciting a promise not to tell their parents. The data for this story were not included in the overall analysis for two reasons: (1) Not all of the children in all the samples (below) received this story, and (2) it could be argued that the dilemma embedded in the story involved issues of prudence (e.g. was hiding safe) rather than strict morality. However, it should be noted that earlier analyses showed strong age effects for this dilemma, with suggestibility declining with increasing age. Thus, including this story would have augmented, not attenuated, some of our findings.

cheated on a test, from their teacher. In the *teasing* story, the protagonist promises to back up a new friend who is being teased by other children and has lied to the other children in an effort to stop the teasing. The gender of the story characters matched the gender of the participants.

The two stories were designed to sample different contexts for dilemmas between keeping a promise and telling the truth, and thus differed in certain significant features. In the cheating dilemma, the protagonist must lie to an adult, whereas in the teasing story, the child's lie is to peers. The two stories also differed in the motive for lying, which initiates the dilemma: cheating on a school exam in one story and self-protective exaggeration in the other story. One might designate the precipitating transgression as non-exculpable breaking of a concrete (school) rule in the cheating dilemma, and as exculpable in the teasing dilemma, lying to protect oneself from being teased. In other words, keeping the promise protects a friend from being detected after a relatively non-exculpable act of cheating in one vignette, whereas in the other vignette, promise-keeping protects a friend who lies in order to avoid being teased. For this reason, and because of the different patterns of findings for the two stories, the data for the cheating and teasing dilemmas were analysed separately.

Procedure

Story order was randomized for presentation and had no systematic effect on shifting. The interviewers were undergraduate and graduate students (including the third author), and the first author, an older faculty member. In Brazil, the interviewers were undergraduate and graduate students, and an older female clinical psychologist.

The procedure was as follows: each child was sent from their classroom to an unoccupied room where he or she was greeted by the interviewer, who introduced the research and interview, stressing its confidentiality. Except as noted, all interviews were recorded and later transcribed. The story was read to the child, who was asked to *repeat the story in your own words*, in order to check for the child's comprehension. If necessary, the story was reread to the child. The interviewer next asked the child to choose between the two courses of action (keeping the promise or telling the truth) and to provide a justification for that choice. The interviewer then introduced the counter-probe, which challenged the child's initial choice. The counter-probes were: *how about the fact that he/she lied to the teacher [or] . . . broke a promise to his/her friend? Ok, but are you sure that [protagonist] should lie to the teacher [or] . . . break a promise to his/her friend.*⁶

After the counter-probing, the children were asked how they thought an adult would answer the initial question. These are termed *adult-attributed* judgments and their inclusion is a continuation of past research on differences between children's own judgments and those they attribute to others (e.g. Saltzstein, Dias, & Millery, 1998; Saltzstein, Roazzi, & Dias, 2003; Saltzstein, Weiner, Munk, Supraner, & Schwarz, 1987). These data have been reported separately (Saltzstein et al., 1998). At the end of the interview, the children were debriefed by asking what they thought of the stories, and whether anything like that had happened to them. They were also reassured about confidentiality and asked not to talk with other children at school about the interview.

For data collection in Recife, the interviews were translated into Brazilian Portuguese and adapted to the regional dialect of the northeast. Interviews were held in empty

⁶Initially, these two different counter-probes were used to define a stronger and a weaker type of counter-probe. However, no differences were obtained between these two conditions and the data were accordingly combined.

classrooms. The procedures were substantially the same as in the US, except because of the unavailability of tape recorders during the first set of interviews in Brazil (approximately half the number), one research assistant interviewed the individual child while the other transcribed the child's answers during the interview. The second set of interviews in Brazil were conducted by one interviewer, tape-recorded and transcribed, as in the US.

Data analysis

The critical dependent variables were (1) the choice each child made between alternatives (keeping the promise or telling the truth) in each of the moral dilemmas, (2) the reasons offered to justify that choice, (3) the change or shift in choices after counter-probing, and (4) changes in the reasons after counter-probing. A shift in choice was defined as a change from *truth to promise* or *vice-versa*, or from *truth* or *promise* to a compromise position. The overwhelming number of shifts (>95%) were fully from promise to truth or vice versa. Logistic regression, which permits multivariate analysis of categorical data, was the statistical method used to analyse frequency of shifting or changing moral choices.

The reasons used to justify the initial choice of *truth/promise* were coded by assigning them to non-mutually exclusive categories: reference to authority figures (parent, teacher), friendship/empathy with another child in the vignette, promise/trust, and social consequences to the protagonist (e.g. your friends won't like you anymore). To control for volume, only the first reason was counted unless it was unelaborated or miscellaneous, such as, *it's the right thing to do* or *it's wrong to lie*, in which case the next specific reason was counted. In addition, because of our special interest in authority/heteronomy, any reference to authority or punishment was counted separately. Separate coding was carried out for each dilemma before and after the probe. Inter-coder reliability (per cent agreement), based on 20% of the first sample of interviews, was acceptable, ranging from 82% to 98% for the pre-probe, and 89% to 100% for changing moral choice and post-probe reasons.

Results

Initial choice

The distribution of initial choices (% choosing promise) is presented in Tables 1a and b by age and culture. Logistic regression reveals that both age and country are significant ($p < 0.05$ or better) for both moral tasks, with older children choosing promise more often than younger children, as expected (see Table 1c). The magnitude of the difference appears greater for the cheating than for the teasing dilemmas, particularly in Brazil. In contrast, the effects of culture vary for the two dilemmas. For the teasing dilemma, a larger proportion of the North American than Brazilian children choose promise. However, for the cheating dilemma, a substantially larger proportion of the Brazilian children choose

Table 1a. Initial choice: Teasing dilemma (number and percentage choosing promise) by culture and age (Study 1)

	US ($n = 91$)	Brazil ($n = 96$)	Total ($N = 187$)
Young ($n = 107$)	33 (55%)	19 (40%)	52 (49%)
Old ($n = 80$)	22 (71%)	27 (55%)	49 (61%)
Total ($N = 187$)	55 (60%)	46 (48%)	101 (54%)

Table 1b. Initial choice: Cheating dilemma (number and percentage choosing promise) by culture and age (Study 1)

	US ($n = 95$)	Brazil ($n = 98$)	Total ($N = 193$)
Young ($n = 111$)	10 (16%)	13 (27%)	23 (21%)
Old ($n = 82$)	8 (25%)	31 (62%)	39 (48%)
Total ($n = 193$)	18 (19%)	44 (45%)	62 (32%)

Table 1c. Logistic regression results for initial choice of promise (Study 1)

Variable	Beta	SE beta	Significance
Teasing story ($N = 187$)*			
Step 1			
Culture (US) [‡]	0.628	0.307	0.041
Child's age (younger) [‡]	-0.636	0.311	0.041
Step 2			
Culture	0.588	0.395	0.136
Child's age	-0.693	0.473	0.143
Culture \times age group	0.101	0.628	0.873
Cheating story ($N = 193$) [†]			
Step 1			
Culture	-1.125	0.342	0.001
Child's age	-1.122	0.332	0.001
Step 2			
Culture	-0.677	0.474	0.153
Child's Age	-0.596	0.534	0.566
Culture \times child's age	-0.911	0.690	0.402

*Cox and Snell R -square for model: 0.038.[†]Cox and Snell R -square for model: 0.138.[‡]Group in parentheses indicates reference group.

promise. These findings figure into our interpretation of the suggestibility findings and are discussed later.

Suggestibility

The suggestibility (shifting) data are presented by age of child, culture, and initial choice in Tables 2a and b. Here again, findings from logistic regression analyses depend on the moral task (dilemma; see Table 2c). For the (exculpatory) *teasing* dilemma, age and culture had significant effects, with more of the younger children in both cultures exhibiting suggestibility than older children ($p < 0.05$) and independently, more US children were suggestible than Brazilian children ($p < 0.005$). The suggestibility pattern is partly similar and partly different for the *cheating* dilemma. Here, the culture contrast remains significant, with more North American than Brazilian children being suggestible ($p < 0.01$), but age having no significant effect. Initial choice also had a strong effect, with children who initially chose promise much more susceptible to suggestion than children who initially chose truth ($p < 0.01$).

Table 2a. Number and percentage shifting: Teasing dilemma by culture, children's age, and initial choice (Study 1)

Initial choice	US		Brazil	
	Young (<i>n</i> = 60)	Old (<i>n</i> = 31)	Young (<i>n</i> = 47)	Old (<i>n</i> = 49)
Truth (<i>n</i> = 86)	12 (44%)	3 (33%)	5 (18%)	1 (5%)
Promise (<i>n</i> = 101)	12 (39%)	5 (23%)	4 (21%)	3 (12%)
Total (<i>N</i> = 187)	24 (41%)	8 (26%)	9 (19%)	4 (8%)

Table 2b. Number and percentage shifting: Cheating dilemma by culture, children's age, and initial choice (Study 1)

Initial choice	US		Brazil	
	Young (<i>n</i> = 63)	Old (<i>n</i> = 32)	Young (<i>n</i> = 48)	Old (<i>n</i> = 50)
Truth (<i>n</i> = 131)	13 (25%)	3 (13%)	2 (6%)	1 (5%)
Promise (<i>n</i> = 62)	7 (70%)	4 (50%)	5 (39%)	12 (39%)
Total (<i>N</i> = 193)	20 (32%)	7 (22%)	7 (15%)	13 (26%)

Reasons

Cultural differences in reasons justifying the initial choice (summing across the dilemmas) were found in themes of authority and of social consequences. Both were less frequent in the reasoning of the Brazilian children than of the North American children (authority themes, $\chi^2 [1, 187] = 11.25, p < 0.004$ and for social consequences themes, $\chi^2 [1, 187] = 25.98, p < 0.0001$). Unelaborated or non-specific reasons were also more common among the US children, $\chi^2 (1, 183) = 9.90, p < 0.007$. There were no significant differences between the two cultural groups in the frequency of friendship/empathy and promise/trust, the next two most common kinds of reasons in both cultures.

Changes in justifying reasons after the counter-probe were also examined. The distributions of specific reasons before and after the counter-probe did not reveal any systematic differences in types of reasons between the younger and the older children. The pattern of changes in kinds of reasons shows that change appears to be appropriate to the specific choice on a specific dilemma. Thus, for example, there is no general increase or decrease in the tendency to justify choices by authority/punishment or by promise/truth. Rather, a new reason appears to justify the switch to a *specific* choice for that dilemma.

When we turn to the frequency of changing reasons by the US and Brazilian children, the pattern, in general, parallels the results for the change in choice (truth/promise). Significantly fewer Brazilian children changed reasons than either group of North American children, $\chi^2 (2, 100) = 8.38, p < 0.025$; and $\chi^2 (1, 95) = 6.86, p < 0.05$, for the cheating and the teasing stories, respectively.

Discussion

The three major findings for suggestibility were: (1) suggestibility declined with age on the teasing story; (2) suggestibility was more pronounced when the initial choice was keeping a promise than when it was telling the truth on the cheating story; and (3) suggestibility was greater for the North American than the Brazilian children for both

Table 2c. Logistic regression results for shifting (Study 1)

Variable	Beta	SE beta	Significance
Teasing story ($n = 187$)*			
Step 1			
Culture (US) [‡]	-1.180	0.381	0.002
Child's age (younger) [‡]	-0.795	0.393	0.043
Initial choice (promise) [‡]	0.040	0.368	0.913
Step 2			
Culture	-0.695	0.606	0.252
Child's age	-0.617	0.576	0.284
Initial choice	0.344	0.508	0.498
Country \times child's age	-0.364	0.820	0.657
Country \times initial choice	-0.759	0.769	0.324
Child's age \times initial choice	-0.104	0.816	0.898
Step 3			
Culture	-0.862	0.673	0.200
Child's age	-0.764	0.628	0.224
Initial choice	0.236	0.535	0.658
Culture \times child's age	0.049	1.043	0.962
Culture \times initial choice	-0.441	0.920	0.632
Child's age \times initial choice	0.294	1.022	0.773
Culture \times age \times initial choice	-1.098	1.741	0.528
Cheating story ($n = 193$) [†]			
Step 1			
Culture (US) [‡]	-1.113	0.424	0.009
Child's age (younger) [‡]	-0.428	0.400	0.284
Initial choice (promise) [‡]	-2.150	0.438	0.000
Step 2			
Culture	-1.282	0.783	0.102
Child's age	-0.804	0.837	0.336
Initial choice	-1.946	0.692	0.005
Culture \times child's age	0.795	0.918	0.387
Culture \times initial choice	-0.395	0.918	0.667
Child's age \times initial choice	-0.039	0.920	0.966
Step 3			
Culture	-1.317	0.895	0.141
Child's age	-0.847	0.988	0.391
Initial choice	-1.971	0.760	0.010
Culture \times child's age	0.858	1.199	0.474
Culture \times initial choice	-0.331	1.198	0.782
Child's age \times initial choice	0.025	1.208	0.983
Culture \times child's age \times initial choice	-0.154	1.873	0.935

*Cox and Snell R -square for model: 0.096.

[†]Cox and Snell R -square for model: 0.151.

[‡]Group in parenthesis indicates the reference group.

dilemmas. New post-hoc analyses were performed to test our interpretations of these findings.

The first finding concerns age and suggestibility and whether this is explained at all by the concept of *heteronomy*. In order to see whether the heteronomy-autonomy distinction had any more specific explanatory power, we examined whether shifts in choices were accompanied by changes in reasons. Our rationale was that *heteronomous* (younger) children would not see a need for justifying (i.e. give a reason for) a change in choice other than that an adult interviewer told them to change, but that *autonomous* (older) children

would see a need for an independent justification (reason) for changing moral judgments. While it is true that the change in choice (truth/promise) might occur first and the change in reason follow to justify that change in choice, at the very least the autonomous children would see the need to justify the change with a new reason, whereas the *heteronomous* children might not.

The measure of *heteronomous-autonomous* change was operationalized as follows: among those children who had initially given a specific justifying reason, we determined whether they accompanied their shift in choice with a *new* justifying reason. We contrasted (a) those who did not justify the shift by a specific new reason, but rather gave an unelaborated reason or the same general kind of reason as they had before shifting with (b) those who gave a new reason to justify their shift. Group (a) was labelled *heteronomous*, and group (b), *autonomous*. For the handful of cases where a child gave a *heteronomous* response for one dilemma but an *autonomous* for another, they were counted as *heteronomous*. This decision was made prior to examining the distribution of frequencies.

Twenty-three children (21 younger and two older) exhibited the heteronomous pattern. All were children from the US. None of the Brazilian children showed this pattern. Therefore, the contrasting *autonomous* group was also chosen from among the US children. The comparison group was the 20 children (seven younger and 13 older) who shifted and changed from one to another specific reason, defined as an autonomous pattern. Table 3 shows the contrasting patterns by age. This comparison reached significance at the 0.04 level (one tail) by the Exact Test in support of the *heteronomy-autonomy* hypothesis.

The distinction between these two processes is well captured by the phrases, *the argument of authority* and *the authority of argument* (from S. Jovchelovitch, paper presented at the Conference on Social Representations: Introductions and Explorations, New York, 1998). The critical difference in outcome of these two processes rests on whether the individual does or does not see a need to justify changing her mind, other than being *ordered* to do so by someone in authority. Thus, the distinction is similar to many distinctions between different kinds and levels of social influence: *yielding in action vs. yielding in judgment* (Asch, 1952); *compliance vs. internalization* (Kelman, 1961), *peripheral vs. central processing* (e.g. Petty, Priester, & Wagner, 1994), *heuristic vs. systematic processing* (e.g. Chaiken, 1980), as well as to Piaget's distinction between *suggested conviction vs. liberated conviction* (Piaget, 1979/1929).

The second issue to be discussed concerns why greater suggestibility was evident from promise to truth than vice versa for the cheating dilemma. One explanation has already been offered in the Introduction. That explanation rests on the assumption that promise is a complex concept that the children have relatively recently attained. Supporting this assumption is the finding that younger children initially chose truth more often than promise, whereas older children did the reverse. However, the pattern might also be related to another finding, that when these same children were asked to attribute judgments to

Table 3. Number of autonomous vs. heteronomous shifts by age

Age (years)	Autonomous*	Heteronomous†
Younger (5–8)	13	21
Older (10–12)	7	2

$p < 0.04$ by Fisher Exact Test (one tail).

*Autonomous is defined as giving a new specific reason after shifting choice.

†Heteronomous is defined as giving the same specific reason or an unelaborated (non-specific) reason after shifting, as before.

adults, both the Brazilian and US children overwhelmingly attributed a choice of truth to adults on this story (reported in Saltzstein et al., 1998; and replicated in Saltzstein et al., 2003).

All three findings: (a) greater suggestibility from an initial choice of *promise* than from an initial choice of *truth*, (b) more frequent attribution of a choice of *truth* than *promise* to adults, and (c) the general tendency for younger children to choose *truth* more often and the older children to choose *promise*, are understandable within the theoretical framework outlined above. That is, since *promise* may be a more complex and newly attained moral concept, as such, it may be abandoned in the face of a challenge from an authority. Hence, children who have recently developed a preference for *promise*, but believe that adults would choose *truth*, revert from a choice of *promise* to *truth*, when challenged by the adult authority conducting the interview. It is worth noting that these results work in opposite directions, i.e. young children are more likely to initially choose *truth* rather than *promise*, but a choice of *truth* is likely to render them *less* susceptible to interviewer influence. Thus, the effects of initial choice and of age on shifting are clearly *not* confounds of one another.

The third issue concerns the ubiquitous, but unanticipated cultural difference. Indeed, as noted in the Introduction, our expectation—based on the idea that northeastern Brazilian culture is more ‘traditional’ than US culture (e.g. Nucci, 1997; Page, 1995)—was the opposite, namely that suggestibility would be greater in Brazil than in the US. This finding is particularly striking because the Brazilian children are more likely to choose *promise* initially at least on the cheating dilemma, which should render them *more* suggestible on that dilemma, and yet they are *less* suggestible. Thus again, the two effects on suggestibility, culture and initial choice, work in opposite directions.

The answer may lie in the different kinds of relationships (1) between teachers and children in Brazilian schools, and (2) between peers. (1) As Freire (1998), the Brazilian education reformer, argued in his critique of schooling in Brazil, teachers’ relationship to their young charges is more affective and affectionate and less authoritative than in many other societies. For example, young children in Brazil call teachers *tia*, or *auntie*, and teachers frequently physically express affection towards them. Freire’s concern was that children’s education is severely circumscribed and even crippled by the role of teacher as ‘maid’ or ‘nanny’. We would argue that teachers in Brazil might not have as high authority status as teachers in the US. If we assume that the children view the female researchers as another type of school authority, like a teacher, not requiring special deference or respect, they would feel less need to acquiesce to their suggestions (counter-probes). In this view, an explanation of the differences would not be found in the individual children or the culture as a whole, but rather in the nature of the typical adult authority-child relationship in schools in Brazil, compared to that typical of schools in the US. Also consistent with this is the finding that fewer Brazilian than US children offered reasons based on authority to justify their choices, and none showed the heteronomous pattern of change in choice and justifying reason, as described above.

Furthermore, it is possible that peer relations, while strong in both cultures, are especially strong in Brazil. Supporting this is the finding for initial judgments (above). The Brazilian children were more likely to choose keeping a promise in the cheating story, where the dilemma is whether to tell the truth to the teacher or keep a promise to a friend, but less likely to choose keeping a promise in the teasing dilemma, where the promise is to a friend, but lying would be to peers. Therefore, we believe that the key to the lower suggestibility on the part of the Brazilian children is in their lower deference, to school authorities, and greater orientation to peers.

Support for this dual hypothesis is found in a follow-up study in which the interviews were conducted either by an older adult researcher or by a young teenage high school student.

STUDY 2

The hypothesis motivating this follow-up study was that there would be greater suggestibility when the interviewer was an adult than when she was a 'teenager' in the US than in Brazil, where smaller interviewer differences were expected.

Method

Participants

Twenty-four children (12 aged 6 to 8 years and 12 aged 10 to 12) in Recife, Brazil and 24 in NYC (16 aged 6 to 8 years and 8 aged 10 to 12) were individually interviewed by either an older adult (a middle-age female in Brazil and an older female or male adult [the first author] in the US) who introduced her-/himself as a teacher/professor and researcher *or* by a young woman (one of two) who introduced herself as a high school student. The latter were, at the time, older teenagers or in their early 20s, but looked quite young, and could easily present themselves as high school students. It should be noted that, although one of the adult interviewers in NYC was a male (whereas the adult interviewers in Recife were both females), the rates of suggestibility elicited by the male and female adult interviewers in the US were very similar. Thus, gender did not appear to be a significant factor in the cultural differences.

Moral judgment tasks

The *cheating* and *teasing* stories, described above, were included in the protocol. In addition, a third dilemma (Appendix A) was included, which featured a choice between promise and truth about cheating in a non-school context, without the presence of an adult authority. In this story, the cheating occurred in a game played with peers. This third dilemma was included to see whether the different results obtained in the first study with the *cheating* story could be traced to the nature of the initiating act, cheating, or the setting (school) and presence of an adult authority (teacher in the dilemma).

Procedure

The interview procedure was changed somewhat. The main differences were that counter-probes were introduced at two points in the interview for each dilemma, and the story was reread to the child before the second probe if the child had not changed his/her moral choice after the first counter-probe. Rereading the story was introduced to provide both an opportunity to change one's interpretation of the story and an excuse for changing judgments. The first counter-probe was very similar to that used in the first study, *what do you think of the fact that X would be lying/breaking a promise?* However, if the child did not change his/her moral choice, then the interviewer said, *keeping the promise/telling the truth is a possible choice. But, I would like you to listen to the story again.* After rereading the story to the respondent, the interviewer said, *So, do you still think that it is right for X to lie/break the promise to Y... Don't you think that X should tell the truth/keep*

the promise? This modification in procedures was designed to heighten the level of suggestibility.⁷

Data analysis

Shifting choice was again assessed as a binary measure of suggestibility, and again, logistic regression was used as the statistical method. Culture, age of respondent, and age of interviewer were introduced individually as predictor variables and, critical to the hypothesis, interactions among these three were also tested. The hypothesized interaction was between age of interviewer and country, i.e. that adult interviewers would elicit more suggestibility than teenage interviewers in the US, but not in Brazil, where no or little difference was anticipated.

Results

Tables 4a–c show the frequencies of shifting choice by country and age-of-interviewer condition for each dilemma. As is apparent, the predicted pattern of shifting holds for the *teasing* and *cheating in game* dilemmas, but not for the *cheating in school* dilemma.⁸ Table 4d shows the results of the regression analyses for the *teasing* and *cheating in game stories*. The interaction of culture and age of interviewer is significant ($p < 0.01$) for the *teasing* story and marginally so ($p = 0.085$) for the *game* story.⁹ The pattern was similar for the *cheating in school* story, but did not approach significance.

Thus, this pattern lends support to our interpretation of the cultural difference. For the US children, the pattern was for the adult interviewer to elicit more suggestibility than the ‘teenage’ interviewer, as predicted. However, for the Brazilian children, the reverse tendency appeared, i.e. suggestibility was non-significantly greater in the ‘teenage’ than in the adult interviewer condition.

Table 4a. Shifting by culture and age of interviewer: Teasing story (Study 2)

Culture	Shifting	Age of interviewer		
		Teen	Adult	Total
Brazil	No	3	7	10
	Yes	9	4	13
	Total	12	11	23
US	No	11	4	15
	Yes	2	7	9
	Total	13	11	24

⁷We wish to thank Antonio Roazzi for suggesting this modification of the procedure.

⁸Different words are used (in Brazilian Portuguese) for cheating, in the northeast section of Brazil, *filando*, for cheating in schools and *roubando* (literally, robbing) for cheating in games with peers. (The word, *colando*, is used for cheating in school in other areas of Brazil.)

⁹Although the distribution by age was not comparable in the two cultural groups, this collinearity is not a problem when testing for interaction as long as the cell sizes are roughly equal in the relevant variables (here, culture and condition). We thank our colleagues David Rindskopf and Gary Winkel for this observation and their advice.

Table 4b. Shifting by culture and age of interviewer: Game-cheating story (Study 2)

Culture	Shifting	Age of interviewer		
		Teen	Adult	Total
Brazil	No	3	6	9
	Yes	8	6	12
	Total	11	12	21
US	No	8	3	11
	Yes	5	7	12
	Total	13	10	23

Table 4c. Shifting by culture and age of interviewer: school cheating story (Study 2)

Culture	Shifting	Age of interviewer		
		Teen	Adult	Total
Brazil	No	8	8	9
	Yes	4	4	8
	Total	12	12	24
US	No	11	7	18
	Yes	2	4	6
	Total	13	11	24

Discussion

Although the results of the two studies generally support our hypotheses, there is an apparent anomaly in the findings. On one hand, the argument has been advanced that adult interviewers elicit less suggestibility in northeast Brazil (Recife) than in northeast US (NYC). On the other hand, there was less suggestibility on the *cheating in school* vignette, which features adult school authority, than the other two vignettes, which do not, in both cultures. We do not have a definitive resolution of this apparent contradiction. However, we offer the following as a possible explanation of the apparent inconsistency. Children in Brazil are not unresponsive to adult authority, even school authorities, so that they recognize the deviant nature of cheating in school and do feel compelled to repair such a transgression (although less so in Brazil than in the US), but at the same time feel themselves less susceptible to teachers and adult school authorities, as to matters of opinion in face-to-face interactions. In other words, cultural differences in attitudes towards authorities may not be uniform, but sensitive to context, e.g. face-to-face vs. represented in a story, and over what the authority is exercised, overt behaviour (e.g. cheating) vs. matters of opinion (moral judgments).

GENERAL DISCUSSION AND CONCLUSION

Our overall conclusion is that suggestibility is likely to be related to age and culture in complex ways. Fundamentally, as noted above, this is because suggestibility, like social influence in general, is not a single process, but is composed of several processes that

Table 4d. Logistic regression results for shifting (Study 2)

Variable	Beta	SE beta	Significance
Teasing story ($N = 47$)*			
Step 1			
Interviewer's age (younger) [‡]	0.219	0.605	0.718
Culture (Brazil) [‡]	-0.923	0.626	0.140
Child's age (younger) [‡]	-0.683	0.635	0.282
Step 2			
Interviewer age	-4.406	3.184	0.167
Culture	-6.396	3.036	0.035
Child's age	0.582	2.960	0.844
Child's age \times interviewer age	-0.663	1.405	0.637
Interviewer age \times culture	3.752	1.392	0.007
Child's age \times culture	-0.144	1.412	0.919
Step 3			
Interviewer age	-10.683	6.966	0.125
Culture	-13.071	7.330	0.075
Child's age	-6.001	7.019	0.393
Child's age \times interviewer age	3.609	4.324	0.404
Interviewer age \times culture	8.039	4.430	0.070
Child's age \times culture	4.456	4.596	0.332
Child's age \times interviewer age \times culture	-2.980	2.845	0.295
Game story ($N = 46$) [†]			
Step 1			
Interviewer age (younger) [‡]	0.138	0.606	0.820
Culture (Brazil) [‡]	-0.439	0.618	0.477
Child's age (younger)	-0.514	0.629	0.414
Step 2			
Interviewer age	-3.446	3.115	0.269
Culture	-4.095	2.974	0.168
Child's age	-0.931	3.194	0.771
Child's age \times interviewer age	0.134	1.353	0.921
Interviewer age \times culture	2.272	1.320	0.085
Child's age \times culture	0.225	1.357	0.869
Step 3			
Interviewer age	-8.440	6.595	0.201
Culture	-9.056	6.512	0.164
Child's age group	-6.125	6.782	0.366
Child's age \times interviewer age	3.612	4.183	0.388
Interviewer age \times culture	5.627	4.074	0.167
Child's age \times culture	3.717	4.195	0.376
Child's age \times interv. age \times culture	-2.408	2.720	0.376

*Cox and Snell R -square for model: 0.253.

[†]Cox and Snell R -square for model: 0.105.

[‡]Group in parenthesis indicates reference group.

relate to development in different ways. In other words, researchers should expect complex relationships because different situations, procedures, and individuals elicit different suggestibility processes at different ages.

Our findings indicate that the decline in suggestibility occurs between approximately 9 and 11 years, whereas the eyewitness literature has generally reported declines between 4 and 5. One possibility is that, as suggested earlier, suggestibility on eyewitness tasks is due to two sets of factors: limited memory (for events) and acquiescence to an authority, what are sometimes referred to as *cognitive* and *social* factors. In studies of suggestibility on

moral and other social judgment tasks, once the child comprehends the task (dilemma), suggestibility is not likely to reflect age differences in memory capacity.

Within a broader framework, the strategy we have adopted assumes, as Lewin (1951) argued, that phenomena in change may reveal more than phenomena at rest. In much past research, the focus has been on cognitive stabilities, such as stages that are characteristic of the individual child. In recent years, there has been a rejection of this view in the face of stage inconsistency across tasks and performance inconsistency across task conditions. Nonetheless, we do not want to lose sight of the fact that children think and respond differently from adults. Perhaps, we should conceive of some of these mental states (stages, orientations, etc.) as characteristics of the child's thinking in particular contexts and revealed by how they change in these social contexts. Suggestibility provides an important means for studying these changes.

As to social implications of the findings reported here, it may be concluded that when young children face moral *dilemmas*, i.e. moral tasks involving two conflicting moral duties, they are highly suggestible, but that the degree of suggestibility is a complex reflection of the specific nature of the dilemma (task), who is doing the suggesting (adult or older child, and by extension, peer) and cultural background. Simple conclusions, such as younger children are more suggestible than older children, do not reflect the complexity of the phenomenon.

ACKNOWLEDGEMENTS

Saltzstein is a professor of developmental and social psychology at the Graduate School of the City University of New York; Dias is a professor of psychology at the Federal University of Pernambuco in Recife; and, Millery is an Associate Research Scientist at the School of Public Health, Columbia University. This research was supported by PSC-CUNY grants from the Research Foundation of the City University of New York to Saltzstein, and financial support from the Conselho Nacional de Desenvolvimento Científico e Tecnológico (National Council for Scientific and Technological Development) of the Brazilian federal government to Dias and for funding travel by Saltzstein to Recife and Dias to NYC. We gratefully acknowledge their support in making this research across two continents possible. We wish to thank a number of students who participated in and contributed to the research: Vienna Messina, Sarah Henseler, Jennifer Hill, Doug Katz, Nina Patti, Stefanie Perkins, Nechama Presler, Amanda Salomon, Juraci da Silva, and Jon Zerolnik in New York, and Rosa Cardoso, Elba Fernandes, and Marcelle Santos in Recife. We also thank the students, teachers, and staff of the Hunter Elementary School and St Demetrios School in NYC as well as numerous schools in Recife for their splendid cooperation.

We also gratefully acknowledge the help of our colleague David O'Brien for facilitating communication between the two research teams in the initial stages of the research, and for sharing his insights with us, to Melanie Killen for her participation in the early stages of the research, and to Bruce Dorval, Marta Laupa, Vienna Messina, Martin Ruck, Ana Lucia Schliemann and Maja Turniski for critically reading an earlier draft of the paper. We are especially indebted to Gary Winkel for his generous help in analysing the data.

An earlier version of this paper, based on a portion of the data, appeared in Saltzstein, Dias, Millery, and O'Brien (1997).

REFERENCES

- Asch, S. (1952). *Social psychology*. Englewood Cliffs, NJ: Prentice-Hall.
- Astington, J. (1988). Children's understanding of the speech act of promising. *Journal of Children's Language*, 15, 157–173.
- Berkowitz, M., & Gibbs, J. (1995). The process of conflict resolution and moral development. *New Directions for Child Development*, 29, 71–84.
- Ceci, S. J., & Bruck, M. (1995). *Jeopardy in the courtroom: A scientific analysis of children's testimony*. Washington, DC: American Psychological Association.
- Chaiken, S. (1980). Heuristic and systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39, 752–766.
- Flavell, J. H. (1968). *The development of role-taking and communication skills in children*. New York: Wiley.
- Freire, P. (1998). *Teachers as cultural workers*. Boulder, CO: Westview Press.
- Goodman, G. S., & Clarke-Stewart, A. (1991). Suggestibility in children's testimony: implications for child sexual abuse investigations. In J. L. Doris (Ed.), *The suggestibility of children's recollections* (pp. 92–105). Washington, DC: American Psychological Association.
- Haidt, J., Koller, S., & Dias, M. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, 65, 613–628.
- Harris, J. (1995). Where is the child's environment? A group socialization theory of development. *Psychological Review*, 102, 458–489.
- Kant, I. (1964/1797). *The metaphysics of morals*. New York: Bobbs-Merrill.
- Kelman, H. C. (1961). Processes of opinion change. *Public Opinion Quarterly*, 26, 57–78.
- Lewin, K. (1951). In D. Cartwright (Ed.), *Field theory in social science*. New York: Harper.
- Maas, F. K., & Abbeduto, L. (1998). Young children's understanding of promising: methodological considerations. *Journal of Child Language*, 25, 203–214.
- Maas, F. K., & Abbeduto, L. (2001). Children's judgments about intentionally and unintentionally broken promises. *Journal of Child Language*, 28, 517–529.
- Nucci, L. (1997). Culture, universals, and the personal. In H. D. Saltzstein (Ed.), *Culture as a context for moral development: New perspectives on the particular and the universal*. *New Directions for Child Development*, No. 76 (pp. 5–22). San Francisco: Jossey-Bass.
- Page, J. (1995). *The Brazilians*. Reading, MA: Addison-Wesley.
- Petty, R. E., Priester, J. R., & Wagener, D. T. (1994). Cognitive processes in attitude change. In R. S. Wyer, & T. K. Srull (Eds.), *Handbook of social cognition: Applications* (2nd ed., Vol. 2, pp. 69–142). Hillsdale, NJ: Erlbaum.
- Piaget, J. (1965/1932). *The moral judgment of the child* M. Gabain, trans. New York: Free Press. (Originally published, 1932.)
- Piaget, J. (1979/1929). *The child's conception of the world*. J. & A. Tomlinson, trans. New York: International Universities Press.
- Saltzstein, H. D., Weiner, A., Munk, J. J., Supraner, A. B., & Schwarz, R. (1987). Comparisons between children's own moral judgments and those they attribute to adults. *Merrill-Palmer Quarterly*, 33, 33–51.
- Saltzstein, H. D., Dias, M. de G., Millery, M., & O'Brien, D. (1997). Moral heteronomy in context: interviewer influence in New York City and Recife, Brazil. In H. D. Saltzstein (Ed.), *Culture as a context for moral development: New perspectives on the particular and the universal*. *New Directions for Child Development*, #76. San Francisco: Jossey Bass.
- Saltzstein, H. D., Dias, M., & Millery, M. (1998). Children's own moral judgements and those they attribute to adults/parents. Poster presented at the Meeting of the Jean Piaget Society, Chicago, June 1998.
- Saltzstein, H. D., Roazzi, A., & Dias, M. (2003). The moral choices children attribute to adults and to peers: implications for moral acquisition. *European Journal of the Psychology of Education*, 18, 295–307.
- Stern, L. W. (1910). Abstracts of lectures on the psychology of testimony on the study of individuality. *American Journal of Psychology*, 21, 270–282.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge, UK: Cambridge University Press.
- Whipple, G. M. (1912). Psychology of testimony and report. *Psychological Bulletin*, 9, 264–269.

APPENDIX A: MORAL JUDGMENT DILEMMAS

1. *Teasing Story:*

All the kids are always making fun of Pat, who's a new kid in the school. Chris is Pat's friend and feels sorry for him/her, and promises to back Pat up whatever he/she says. Pat is really upset and says to the other kids, 'I won a big prize at my other school.' The other kids start laughing and they ask Chris, 'Did Pat really win a prize, Chris?' Chris knows that Pat never won a prize at the old school. What should Chris do? Why?

2. *Cheating at School Story:*

Nicki tells his/her best friend Shawn that he/she is afraid that he/she was going to fail the test, which they just took, and so he/she cheated on the test. Nicki asks Shawn not to tell anyone, and Shawn promises not to tell. The next day, the teacher suspects that Nicki cheated and asks Shawn if Nicki cheated. What should Shawn do? Why?

3. *Cheating at Game Story:*

Jamie told his/her friend Alex that he/she had cheated in a card game with the other guys/girls because he/she was afraid that he/she would come in last and be embarrassed. She asked Alex to promise not to tell anyone about his/her cheating, and Alex promises. Some of the other guys/girls got suspicious and asked Alex whether Jamie had cheated in the card game. What should Alex do? Why?

Note: Different appropriately Brazilian names were used in Brazil.

Copyright of Applied Cognitive Psychology is the property of John Wiley & Sons Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.