

# The role of cultural knowledge in distorting recall for stories

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The role of culturally based knowledge on the recall of stories was examined. Subjects read three stories about people performing everyday script-based activities. The stories were either consistent or inconsistent with the subjects' own cultural knowledge about those activities. Either ½ h or 2 days later, subjects received a copy of each story with certain words and phrases deleted and were asked to fill in the blanks as best they remembered. There were fewer correct recalls after 2 days than after ½ h, but recall did not differ for the consistent and inconsistent story. However, the recall of the inconsistent story after 2 days showed a substantial increase in the number of errors that reflected the intrusion of the subjects' own cultural knowledge. The results confirmed findings from similar studies using a modified recognition-memory measure.

Many common activities that we perform are heavily culturally based. Even for such a simple activity as ordering a meal in a restaurant (Abelson, 1981; Bower, Black & Turner, 1979; Schank & Abelson, 1977), there are characteristically American ways of doing it. These activities may be different in other cultures, where, for example, the check may not be given until it is requested, or empty plates may be brought first to the table and food brought later on separate platters. The knowledge that we have of such activities is often in the form of schemas or scripts (Alba & Hasher, 1983; Brewer & Nakamura, 1984; Graesser & Nakamura, 1982; Thorndyke, 1984), which vary across cultures. When this schema-based knowledge is brought to bear in a comprehension situation, it interacts with incoming information as the comprehender constructs a meaning to be stored in memory (Kintsch & Greene, 1978; Pohl, Colonius, & Thuring, 1985).

Harris, Schoen, and Lee (1986) had North American subjects read a story about a couple eating dinner in a restaurant. The two versions of the story were consistent with either a North American or a Brazilian restaurant script. The subjects' task was to rate the truth of statements about information in the story, and then their memory was tested either immediately after reading the story or 1 week later. Results showed that American subjects brought their own cultural knowledge to bear in interpreting the Brazilian story and that this occurred more strongly after a week's delay. This interesting effect was replicated for four different stories by Harris, Lee, Hensley, and Schoen (in press). This impact of one's cultural script knowledge on memory has also been demonstrated

in a cross-cultural study using monocultural American and Mexican subjects reading stories consistent with either Mexican or American scripts (Harris, Hensley, & Schoen, in press).

All of the previous research has used some sort of modified recognition measure. The present study used a type of cued recall rather than a recognition task. The subjects read stories that were either consistent or inconsistent with their own cultural knowledge and afterward performed a cloze task in which they received copies of the stories with certain key words and phrases deleted. The subjects were asked to fill in these blanks. Responses indicated (1) whether or not they remembered the story, and (2) whether or not their own cultural knowledge distorted memory for the stories.

## METHOD

Three pairs of stories of 97-132 words each were written about people performing some very simple activities that are culturally specific in nature. The three stories were Evening Out (planning a date), Work Day (midday break from working), and School Day (first day of university classes). These events were chosen because they are common across different cultures but have clear cultural differences. Each pair of stories told of one or two persons performing the activity in a particular situation. The two versions of each story were identical, except that one version was consistent with the relevant knowledge in American culture and the other was inconsistent with that knowledge; in fact, the inconsistent versions were taken from Harris, Hensley, and Schoen (in press) and were consistent with Mexican culture. In each story the Mexican version differed from the American version in certain ways that were intended to violate the script of that activity that was familiar to American students (e.g., John's older sister went as a chaperone on John's date in the Mexican version but not in the American version), and the reverse was true for the American version.

The subjects were 91 undergraduate psychology students from Kansas State University who participated for course credit. The subjects were tested in groups of 10-25 and were told that this was an experiment in memory for stories. They were told that they would read three stories and later that day or in a later session would be tested on their memory for those stories. No mention was made that any of the stories might be "foreign" or "unusual." Each subject read either the three American stories or the three Mexican stories. Each subject read only

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one of the two versions of each story. All subjects read the stories in the same order: Evening Out, Work Day, and School Day. Immediately after reading the stories, the subjects performed an unrelated intervening task. Either ½ h or 2 days later, they received the single answer sheet with the skeleton version of each story and were asked to fill in the blanks at their own speed. The response task consisted of filling in the blanks in the written version of each story. The skeleton versions of the stories presented to the subjects were written in such a way as to be equally consistent with both the Mexican and the American versions of each story. The subjects were told to fill in the blanks with the correct information and were cautioned that the words of the story on the answer sheet might not be exactly the same words that they had read, but that the meaning, not the exact wording, was the point of concern.

## RESULTS AND DISCUSSION

Responses were scored as (1) correct, either verbatim or reasonable paraphrase; (2) omitted, line left blank; (3) cultural shift, recalled information consistent with the other culture; or (4) other error. The mean number of each type of response appears in Table 1. The only category with sufficient responses in all cells for statistical analysis was correct responses. A two-way analysis of variance was performed on these data with between-subjects variables of story (Mexican or American) and delay (½ h or 2 day). The only significant effect was the main effect of delay [ $F(1,88) = 88.49$ ,  $MSe = 11.97$ ,  $p < .001$ ], which was due entirely to the greater number of correct responses at the ½-h delay interval.

Although small in number overall, the large majority of the omissions occurred at the 2-day delay interval. The only response category to differ across the two story versions was the cultural shift category. Practically all of the shifts (3.35 out of 3.62 total) occurred in the group that read the Mexican story and was tested after 2 days. Shift responses indicated that subjects remembered the Mexican story to have been more like the American story than it in fact had been, whereas subjects reading the American version never falsely recalled material consistent with the Mexican schema. Thus the appropriate cultural

schemas were clearly operating here, most likely in the sense of directing retrieval processes.

The present study used a new measure to provide additional evidence for the findings of Harris et al. (1986), Harris, Hensley, and Schoen (in press), and Harris, Lee, Hensley, and Schoen (in press), showing that subjects' cultural knowledge increasingly affects memory at longer delays. That effect is clearly not an artifact of the particular truth-judgment procedure used in the other studies. In the present study, intrusions from subjects' own culture were quite prevalent after 2 days, but intrusions from the unfamiliar culture never occurred. In comparison with the recognition procedures previously used, the recall task did not show much effect of cultural script intrusions at a short interval but showed a large effect after the 2-day delay.

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Table 3

Response Type	Story and Delay Condition			
	½ h		2 Day	
	Mexican	American	Mexican	American
Correct	22.38	20.89	14.82	14.79
Omissions	.77	.69	2.30	2.42
Cultural Shifts	.27	.00	3.35	.00