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Remembering in Cultural Context

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The purpose of this chapter is to discuss the necessity of understanding the cultural context of remembering. We begin with accounts provided by two 9-year-old children from different cultural communities when they were asked to retell a just-so story that they had heard 5 minutes before to a local adult. The story was based on a legend from the Mayan community which was no longer being told to children; some details in the story were adjusted for the U.S. children to make them more culturally appropriate in that setting.

Alright. There once was a buzzard and he was an angel in Heaven and God sent him down to . . . to take all the dead animals and um, and so the buzzard sent down/ the buzzard went down and he ate the animals and then he

was so full he couldn't get back up to heaven and so he waited another day and then he flew back up to heaven and God said, "You're not an angel anymore," and he goes, "Why?" And . . . and he said that "you . . . you ate the raw meat and now you're a buzzard and you'll have and . . . and you'll have to eat the arbage" and . . . and he goes "I didn't eat anything" and God said, "Open your mouth and let's see," and then he opened his mouth and there was all the raw meat and he goes "It's true I did eat, I did eat the meat" and God goes, "That's . . . that's why you're the buzzard now," and the . . . and . . . and so the buzzard flew down and he, um, then he ate all the trash and everything.

—a middle-class Salt Lake City child

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When the angel came, cha [so I have been told], from Heaven, well, when the angel came, he came to see the Flood. . . . (The adult listener prompts: What else?) He ate the flesh of the people. . . . (And then?) He didn't return right away, cha. . . . (What else?) That's all. He threw up, cha, he threw up, cha, the flesh. "I liked the flesh," he said, cha. . . . (What else?) "Now you're going to become a buzzard," they told him, cha. . . . (with further prompts, the retelling continued similarly)

—*a Guatemalan Mayan child*

These two retellings are clearly quite different, and without an understanding of the cultural context, it would be tempting (though, we argue, incorrect) to regard the second child's account as indicating a less accurate memory. In this chapter, we consider alternative ways to understand the relation between an individual's memory efforts and the sociocultural context in which the remembering occurs. Later in the chapter we discuss the findings from the study in which these two children participated.

We elaborate the theme that remembering skills develop for the purpose of solving practical problems and that they are tied to the familiar tasks and practices in which remembering takes place. Thus, in order to understand the process of remembering in cultural context we need to examine the practices of people as they go about their usual activities that call upon the need to remember.

We begin the chapter by contrasting our contextual perspective with the more traditional view that memory is a context-free skill. We elaborate what we mean when we say that culture is meshed with, rather than separate from, development, and we contrast this with cross-cultural research that treats memory and culture as separate variables. We illustrate these notions with examples of cross-cultural research.

THEORETICAL PERSPECTIVES ON THE SOCIOCULTURAL CONTEXT OF REMEMBERING

We take the theoretical perspective that remembering is integrally related to the social and cultural contexts in which it is practiced. Our approach builds on the writings of Sir Frederick Bartlett, a pioneer in research on memory, the Laboratory of

Comparative Human Cognition (1983), and Vygotsky (1978).

Memory as Context-free Skill vs. Remembering as an Activity

Half a century ago, Bartlett (1932) argued that memory is a social phenomenon and cannot be studied as a "pure" process. He emphasized that "both the manner and the matter of recall are often predominantly determined by social influences" (p.244). While Bartlett's work generated great interest in studying the influence of previous knowledge and background experience, within traditional theories of memory, the role of prior experience or interest has still been viewed simply as an amplifier of a "pure" process of memory which operates separately from experience and cultural patterns.

In explaining different approaches to cognition, the Laboratory of Comparative Human Cognition (1983) made a distinction between a central-processor model and a distributed-processor model. The central-processor model assumes that there is a central-processor that consists of context-free skills (such as memory, reasoning, perception abilities) that are called upon whenever an individual faces a cognitive task. Individuals faced with particular tasks would make use of the relevant skill contained in the central processor to perform the task, regardless of the nature of the task.

In contrast, the distributed-processing approach emphasizes that skills are closely tied to the context of practice, because individuals develop skills in particular tasks through experience. Skills are customized to the task. This perspective is supported by cross-cultural research. Memory does not involve context-free skills that may be applied indiscriminantly across widely different problems or tasks, but rather involves skills tied to somewhat specific activities in context.

Culture and Memory as Separate Variables vs. as Enmeshed Processes

Cross-cultural research that assumes memory is a context-free skill tends to treat culture as a separate influence on memory. Such studies tend to use tasks derived from laboratory studies done in the United States and other Western countries to examine whether people in other cultures perform in a similar manner. For example, in the typical "free-recall"

task individuals hear a list of words or see a series of pictures and are then asked to recall these words or pictures. The usual finding on such tasks has been that non-Western individuals do not perform as well as Western individuals (see reviews by Cole & Scribner, 1977; Rogoff, 1981). Often the lists contain items from several categories, e.g. coat, apple, dog, banana, pant, cat, shirt, cow. Individuals from the United States and other Western countries typically group or chunk items into categories (clothes, food, animals) to help in remembering or use some other mnemonic strategy, such as verbal rehearsal (repeating the words to memorize). When non-Western subjects do not perform as well as Western subjects, "culture" in terms of some specific aspect of background experience that varies between the groups (e.g. formal schooling) is used to explain the difference.

In contrast to the view that culture and memory are separate, we assume that culture and memory are enmeshed processes. If we think of memory as the "activity of remembering," rather than as a con-

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text-free skill, then it becomes easier to understand how culture is enmeshed in every aspect of remembering. An activity involves goals, materials, and procedures for how the activity is to be carried out, which are usually learned through practice and interaction with more experienced people. Culture comes into play in a remembering activity through all of these aspects of the activity. Remembering is an activity that is defined in terms of the meaning of a task and its materials to the people remembering, and in terms of its function in the social and cultural system. In the following sections we present examples from cross-cultural research that illustrate how culture is enmeshed with all aspects of the remembering activity.

**MEANINGFULLY
ORGANIZED CONTEXT
RELATING THE MATERIALS**

The majority of remembering tasks faced by modern and traditional people alike in their day to day life involve material which is organized in a complex yet meaningful fashion. For example, we generally can remember the arrangement of the top of a desk, because despite outward appearances, there is usually some conceptual order to the array which helps the user of the desk remember where specific objects are located.

However, Western literate people have special demands and opportunities to develop the use of memory aids that are useful for remembering lists of isolated pieces of information, especially through their experience with school. In day to day life there is usually no need to remember lists of unrelated material, but in school pupils often have to use strategies to ensure recall of materials that they have not understood and that are not organized by meaningful schemas. They get practice in the activity of remembering unrelated bits of information, such as lists of words, or series of pictures (the very same types of tasks used in most laboratory studies of memory). They learn strategies to organize these words or pictures in ways that make them easier to remember, and they learn rehearsal strategies (e.g. repeating the words/pictures as they see them). For example, when asked to remember a list of words, they may group them into relevant categories (food, clothes, vehicles) to ease remembering, because they have learned such organizational strategies to link words that are not otherwise linked in any meaningful way.

To determine if cross-cultural differences disappear when meaningfully organized materials are used, Rogoff and Waddell (1982) examined the performance of Mayan and U.S. children on the reconstruction of contextually organized three-dimensional miniature scenes. Each child watched as a local experimenter placed 20 miniature objects such as cars, animals, furniture, people, and household items into a panorama model of a town, containing a mountain, lake, road, houses, and some trees. Care was taken to ensure that both groups of children were familiar with the objects being used in the task. The 20 objects were removed from the panorama and mixed into a pool of 80 objects from which they had been drawn. After a delay of minutes, the child was asked to reconstruct the scene.

While the Mayan sample had not remembered as much as the U.S. children on a free recall task in a previous study, they performed just as well if not slightly better than the U.S. children on the test using contextually organized materials. In fact, the reason the Mayan children did somewhat better may have been that some U.S. children tried to use a rehearsal strategy as they studied the objects in the panorama. Rehearsing the names of items is an effective strategy for remembering lists of words (as in a free recall task), but would not work as well for reconstructing a contextually organized array.

Non-Western people have also been observed to remember impressive amounts of information in other activities in which information is contextually organized. For example, nonliterate bards in certain communities demonstrate exceptional memory for narrative material (Cole & Scribner, 1977). The rhythm of the song or chant and the verse structure often serve as aids to recall the long songs and stories that are remembered by these bards and storytellers. Similarly, expert Micronesian navigators use complex story mnemonics to organize their memory for the layout of the ocean and stars (Price-Williams, 1981). Often legends and stories that explain the formation and movement of constellations become aids in remembering the layout of the stars.

Meaningful Purpose for Remembering

In many instances of outstanding memory performance by non-Western people, remembering is accomplished in the service of a culturally important goal, with remembering a *means* rather than the *goal* of the activity. For example, this is true for remembering spatial information to avoid getting lost while navigating, and for remembering verbal material in narrating stories to entertain. It is also the case for the preservation of oral history by specialists in Africa (D'Azevedo, 1982) and by Iatmul elders in New Guinea (Bateson, 1982) whose phenomenal memory for lines of descent and history is required to resolve debates over claims to property by conflicting clans. In all of these examples a culturally important purpose integrates the act of remembering in meaningful activity.

Sir Frederick Bartlett (1932) describes the prodigious retentive capacity of Swazi herdsman to recall the individual characteristics of their cattle. He relates the case of a Swazi herdsman who was able to

remember details of all the cattle that his owner had bought a year ago. Bartlett argues that this was not surprising since Swazi culture revolves around the possession and care of cattle, and anything to do with cattle is of tremendous social importance. When the purpose of remembering did not have such social or economic importance then recall capacity was not so impressive. His experiments on the recall of a message of 25 words revealed that the recall of Swazi youth was not any better than that of typical European boys.

Individuals who are unfamiliar with performing solely for the evaluation of a teacher or an experimenter (such as young or nonschooled children) are likely to find the purpose of remembering items in a memory test obscure. This may give Western children a performance advantage when compared with non-Western, especially nonschooled, children. For schooled children, tests may not be a comfortable situation, but at least the children are familiar with what is expected of them and they have had some practice remembering for no other practical purpose than showing their proficiency in remembering. They have background knowledge in the social script for participating in a test which nonschooled subjects lack.

THE SOCIAL INTERACTIONAL CONTEXT OF MEMORY PRACTICE

The immediate social interactional context of learning and remembering also relates to an individual's remembering. Social interaction structures individual activity, especially because we learn about the mnemonic tools and practices of our society through interaction with more experienced members of our society.

Social aspects of experimental situations are unfamiliar to some groups. For example, the relationship between experimenter and subject may be rapidly grasped by Western children familiar with testing in school, but may be highly discrepant from familiar adult-child interactions for non-Western children and adults. Schooled people are more familiar with an interview or testing situation in which a high-status adult, who already knows the answer to the question, requests information of a lower-status person, such as a child (Irvine, 1978). Nonschooled children, having less experience with a testing situation, may be concerned with showing

respectful behavior to the tester and trying to figure out the tester rather than to figure out the problem.

An example of how conventions for social interaction can influence memory performance is provided by a study on story recall (Rogoff & Wadell, see Rogoff & Mistry, 1985). Even though story recall involves memory for material embedded in a meaningful context, in this study 9-year-old Guatemalan Mayan children remembered far less of the stories than did U.S. children. This was despite extensive efforts to make the task culturally appropriate for the Mayan children. The stories were adapted from the Mayan oral literature, told to the children by a familiar teenager speaking the local Mayan dialect in a familiar room. In the effort to make story recall more like telling the story rather than being tested by the same person who had just told it to them, the children told the stories to another local person (an older woman with whom they were familiar and comfortable) who had not been present when the teenager told them the story. With such efforts to make the task culturally appropriate to the Mayan children, why then was their performance so poor compared with Western children?

While not obvious from the outset, there were important social features of the test situation that made the Mayan children very uncomfortable. It is culturally inappropriate for Mayan children to speak freely to an adult. When carrying messages to adults, they must politely add the word "Cha" ("so I have been told") in order to avoid conveying a lack of respect by impertinently claiming greater knowledge than the adult. Though the Mayan children heard stories told by their elders, and talked freely among peers, it was a strange and uncomfortable experience for them to attempt to tell a story to an adult—no matter how comfortable they were with the content of the story, the testing situation, and the adult.

Far from school-style narrative being a natural mature form of discourse, it develops in the context of school and middle-class U.S. culture.

INSTITUTIONAL AND CULTURAL PRACTICES IN REMEMBERING

In addition to structuring relationships between people, cultural practices also provide tools and procedures involved in socially appropriate solu-

tions to problems (e.g. using story mnemonics to remember the position of the stars, grouping items into categories to remember unrelated lists of items, using an abacus for mathematical operations).

However, practice in the use of these cultural or institutional tools does not result in an increased generalized skill or ability. Scribner and Cole (1981) designed a memory task which used the same incremental method of learning that is used by people literate in Arabic to learn the long verses of the *Q'uran*—learning a string of words in order and adding one word to the series on each attempt. They gave a variety of memory tasks to three groups of Vai people who were involved with different types of literacy—Arabic literacy through *Q'uranic* school, Vai literacy through practical correspondence, and English literacy through Western style schools. The Arabic literates did much better than the other groups on recall tasks that called for the preservation of word order, probably because they were well versed in that strategy of remembering. However, they did not do any better than the other groups on recall tasks where word order was not important.

Similarly, cultural tools for mathematical operations also hold a specific functional role for remembering information that is related to their use. Japanese abacus experts apparently represent the abacus mentally, calculating without an abacus as accurately as calculating with one, and often faster (Hatano, 1982). Abacus experts can recall a series of 15 digits either forward or backward, but the special processes involved in their impressive mental abacus operations are tailored to the activities in which they were practiced. Their memory span for the Roman alphabet and for fruit names is not different from the usual 7 ± 2 units found for most adults in memory span tasks. In a memory span task individuals are asked to immediately repeat a series of unrelated bits of information that they hear or see, such as a series of numbers or letters. Most adults can remember up to 7 ± 2 bits or units of information (such as a 5–9 digit number) on such tasks.

Thus, if remembering is viewed as an activity rather than as a context-free skill, then it becomes easier to understand how culture is enmeshed with every aspect of remembering. Culture is involved in the remembering process through the practical goals of activities which make it worthwhile to remember, through the meaningful context that provides a natural organization of the material to be

remembered, through familiarity with the material to be remembered and with the social interactional context of the activity, and through the cultural tools and practices related to the activity of remembering.

REFERENCES

- Bartlett, F. C. (1932). *Remembering*. Cambridge: Cambridge University Press.
- Bateson, G. (1982). Totemic knowledge in New Guinea. In U. Neisser (Ed.), *Memory observed: Remembering in natural contexts*. San Francisco, CA: W. H. Freeman.
- Cole, M. & Scribner, S. (1977). Cross-cultural studies of memory and cognition. In R. V. Kail, & J. W. Hagen (Eds.), *Perspectives on the development of memory and cognition*. Hillsdale, NJ: LEA.
- D'Azevedo, W. A. (1982). Tribal history in Liberia. In W. Neisser (Eds.), *Memory observed: Remembering in natural contexts*. San Francisco, CA: W. H. Freeman.
- Hatano, G. (1982). Cognitive consequences of practice in culture specific procedural skills. *The Quarterly Newsletter of the Laboratory of Comparative Human Cognition* 4, 15-17.
- Irvine, J. T. (1978). Wolof "magical thinking": Culture and conservation revisited. *Journal of Cross-Cultural Psychology*, 9, 300-310.
- Laboratory of Comparative Human Cognition, (1983). Culture and cognitive development. In J. H. Flavell & E. M. Markman (Eds.), *Handbook of child psychology: Vol. III. Cognitive development*. New York: Wiley.
- Price-Williams, D. R. (1981). Culture, intelligence, and metacognition. Presented at the meetings of the American Psychological Association, Los Angeles.
- Rogoff, B. (1981). Schooling and the development of cognitive skills. In H. C. Triandis & A. Heron (Eds.), *Handbook of cross-cultural psychology*. (Vol. 4). Boston: Allyn & Bacon.
- Rogoff, B. & Mistry, J. (1985). Memory development in cultural context. In M. Pressley & C. Brainerd (Eds.), *The cognitive side of memory development*. N.Y.: Springer-Verlag.
- Rogoff, B. & Waddell, K. J. (1982). Memory for information organized in a scene by children from two cultures. *Child Development*, 53, 1224-1228.
- Scribner, S. & Cole, M. (1981). *The psychology of literacy*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. (1978). *Mind in Society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.