

# Cultural Effects of Human Memory

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## ABSTRACT

Memory is a process in which the human brain encodes, stores, and extracts the information input from the outside world. At the beginning of memory research, memory was considered culturally universal as a fundamental human cognitive process. With the development of cross-cultural research, memory is also culturally different; people in different cultures show other memory processes. Based on sorting out the influence of culture on memory, this paper summarizes three differences in memory in culture. In terms of memorizing content, westerners are better at remembering the characteristics of specific objects; Orientals are better at remembering background information about objects. And the serial location effect in memory also seems to have a cultural impact. Regarding memorizing development trends, individuals in primitive societies seem to have better memory capacity than civilized societies. Respect for the elderly in eastern cultures seems to slow the decline in memory with age. In terms of autobiographical memory, westerners have earlier memory and tend to remember the contents related to individuals. Easterners have later memory and remember things about relationships and group activities. In a word, memory as a fundamental human cognitive process is also influenced by culture.

**Keywords:** *Memory, Culture, Memory content, Memory development, Autobiographical memory*

## 1. INTRODUCTION

Memory is the mental process of accumulating and preserving individual experiences in the human mind. According to the viewpoint of information processing, memory is the process of encoding, storing, and extracting the input information of the human brain; it is the brain's memory, retention, reproduction, or recognition of experience things. Memory is the basis of advanced mental activities such as thinking and imagination. At the beginning of memory research, scholars believed that memory was culturally universal and that people in different cultures had roughly similar memory processes. With cross-cultural studies, researchers found that culture affects the cognitive process of memory, and people in different cultures show different memory abilities, memory contents, and memory development trends.

## 2. CULTURE AND MEMORY

### 2.1 Culture and memory content

Culture influences the content of human memory. Studies show that westerners are good at analytical processing, are better at remembering the features of a

particular object, pay more attention to visual details of objects in memory. Orientals are better at remembering the background information; when the object is removed from the original background and presented alone or in a different background, orientals are not like westerners to accurately identify the details of the object [1]. It may be due to the difference in attention between the East and the West. Westerners focus on objects while Easterners concentrate on the background.

Initially, the serial position effect in memory was thought to be culturally universal. However, the study of Cole and Scribner (1974) showed that the sequence position effect disappeared in the Kpelle indigenous tribesmen of Libya, Africa. Kpelle's recall accuracy was independent of the location of the material [2]. Meanwhile, some people think that the serial position effect is related to education, not culture. The primacy effect in the serial position effect depends on the repetition of the material learned earlier, and only school-educated people have this memory strategy. The researcher found that compared with the children who did not go to school, the children who attended school had a more significant primacy effect of memory [3]. A similar study by Scribner (1974) compared educated and uneducated Africans and found that educated African

participants showed similar recall trends as American participants, while uneducated African participants recalled fewer words [4]. So is it culture or education that affects the sequential position effect? Further discussion is needed.

## **2.2 Culture and memory development**

Culture influences the development of human memory. At the beginning of the 20<sup>th</sup> century, some people proposed that individuals in primitive societies had better memory capacity than civilized societies [5]. The reason is that people in primitive society could not read and write, they could not use external tools such as writing to reduce the memory burden, and they could only memorize information through the brain. Ross and Millson(1970) selected American and Ghanaian to compare their ability to remember meaningful stories [6]. The study results showed that the memory performance of Ghana was significantly better than Americans. However, Cole et al.(1971) used words instead of meaningful stories to conduct repeated validation experiments and found that the memory performance of African participants without literacy was not significantly better than American participants [7]. The result suggests that differences in memory ability between civilized and uncivilized societies may be limited to remembering meaningful material.

Meanwhile, studies also have shown that the trend of human memory declines with age is culturally different. Levy and Langer (1994) conducted non-verbal memory tests on the elderly and young adults in mainland China and the United States [8]. The results show that the Chinese elderly's performance is almost the same as the China young adults and better than the United States elderly. The performance of the United States elderly is significantly worse than the United States young adults. It may be due to the tradition of respecting the elderly in Chinese culture, and Chinese people tend to form more positive stereotypes about the elderly. For example, older people are more intelligent, and this stereotype effect seems to delay the trend of memory decline in the elderly.

Subsequent studies have shown that threats posed by aging stereotypes such as forgetfulness and dementia can affect memory performance in older adults. Under the aging stereotype threat, the elderly could only perform simple recognition of the memory materials and lacked a vivid and rich detailed recall [9]. In the free recall test, compared to the older adults who were not threatened by the aging stereotype, those under the aging stereotype performed worse [10]. Compared with the aging stereotype threat that occurred before the coding stage, the threat that occurred before the retrieval stage had a more significant effect on the memory performance of the elderly [11].

## **2.3 Culture and autobiographical memory**

Culture influences human autobiographical memory. Autobiographical memory refers to recalling personal information or life events experienced by individuals. It contains a series of complex processes like perceptual experience, episodic memory, semantic memory, self-representation, and so on; it is the core part of the self-memory system [12]. It is found that the cultural differences of autobiographical memory are mainly reflected in the earliest memory age and memory content. In terms of earliest memory age, the average age of European adults who could recall the early childhood events is three and a half years old. The average age of Asian adults who could recall the early childhood events is about six to seventeen months later than European adults [13][14][15]. Another three-nation study showed that the order of age about earliest memory is American, Chinese, and Korean children [16].

In terms of memory content, Wang et al.(2004) selected American, British, and Chinese as participants asked them to recall events before five years old as much as possible within 5 minutes [17]. The study found that Americans recalled the most childhood events (M=12.24), followed by the British (M=9.83) and the Chinese (M=5.68). American participants described early and recent memories in more detail than Asian participants (including adults and children) [18]; they used more words and statements when they recalled [19]. These studies showed that American participants provided longer memory content than Asian participants [20]; American participants seem to have a higher memory capacity.

Meanwhile, Whether the early or recent memory, American adults and children scored higher on memory concreteness than Asian adults and children, and the difference became more significant with age. European-Americans often reported memories related to their own experiences and often accompanied by descriptions of emotions and self-consciousness. Chinese and Asian-Americans often reported memories related to group activities and interpersonal relationships. This difference can also be observed in preschoolers. American children report more detailed, emotional, self-focused personal experiences than their Asian peers [21][22][23].

This difference may be related to self-constructs under different cultures. Western self-constructs are independent, and autobiographical memory is a core part of their self-constructs. So they are more interested in remembering personal experiences that can distinguish them from others. However, Easterners' self-constructs are interdependent and rely more on social networks. So they are more interested in remembering group activities related to social tradition and interpersonal relationships [24].

Meanwhile, another opinion suggests that children's

early speech experience causes this difference. By comparing the daily conversations between mothers and children in the United States and South Korea, Mullen and Yi(1995) found that the average number of American mothers guiding their children to describe their own experiences in words is three times as often as Korean mothers [25]. This talking about past events may influence the development of autobiographical memory because it teaches children that memories related to personal experiences are valuable, making American children more likely to remember experiences about themselves.

### 3. CONCLUSION

In a word, memory as a fundamental human cognitive process is also influenced by culture. The collective culture of the East and the individual culture of the West are also reflected in memory, especially the effect of culture on autobiographical memory. In recent years, scholars have further put forward the concept of cultural memory, which has changed the individualistic tradition of memory research for a long time and opened up a new way to study memory problems from the perspective of sociology. The emergence of the "cultural memory" theory extends the study about memory to the interdisciplinary scope of history, philosophy, and social culture. "Cultural memory" has the construction function of collective (national) identity. The mechanism is that people can answer the question "what should we remember" or "what should we never forget" with the help of "cultural memory" [26]. Such the answer implies a collective understanding of the world and rules we live in together. These show that the influence of culture on people exists from birth, which is reflected in the external level of behavior and reflected in the internal cognitive process. Culture affects not only the individual but also the group. It has great value to study and discuss the power of culture.

### REFERENCES

- [1] Wang, H. , Masuda, T. , Ito, K. , & Rashid, M. . (2012). How much information? East Asian and North American cultural products and information search performance. *Personality & Social Psychology Bulletin*, 38(12), 1539-1551.
- [2] Cole, M., & Scribner, S. (1974). *Culture and thought: A psychological introduction*. New York: Wiley.
- [3] Wagner, D. A. (1980). Culture and memory development. In H. Triandis & A. Heron (Eds.), *Handbook of cross-cultural psychology: Vol. 4. Developmental psychology* (pp. 187–232). Boston: Allyn & Bacon.
- [4] Scribner, S. (1974). Developmental aspects of categorized recall in a West African society. *Cognitive Psychology*, 6(4), 475–494.
- [5] Bartlett, F. C. (1932). *Remembering*. Cambridge, UK: Cambridge University Press.
- [6] Ross, B. M., & Millson, C. (1970). Repeated memory of oral prose in Ghana and New York. *International Journal of Psychology*, 5, 173–181.
- [7] Cole, M., Gay, J., Glick, J. A., & Sharp, D. W. (1971). *The cultural context of learning and thinking: An exploration in experimental anthropology*. New York: Basic Books.
- [8] Levy, B., & Langer, E. (1994). Aging free from negative stereotypes: Successful memory in China and among the American deaf. *Journal of Personality and Social Psychology*, 66(6), 989–997.
- [9] Mazerolle, M., Régner, I., Rigalleau, F., & Huguet, P. (2015). Stereotype threat alters the subjective experience of memory. *Experimental Psychology*, 62(6), 395–402.
- [10] Hess, T. M., Auman, C., Colcombe, S., & Rahhal, T. A. (2003). The impact of stereotype threat on age differences in memory performance. *Journals of Gerontology, SeriesB: Psychological Sciences and Social Sciences*, 58(1), 3–11.
- [11] Krendl, A. C., Ambady, N., & Kensinger, E. A. (2015). The dissociable effects of stereotype threat on older adults' memory encoding and retrieval. *Journal of Applied Research in Memory and Cognition*, 4, 103–109.
- [12] Conway M A, Pleydell-Pearce C W. (2000). The construction of autobiographical memory in the self-memory system. *Psychological Review*, 107(2), 261-288.
- [13] MacDonald, S., Uesiliana, K., & Hayne, H. (2000). Cross-cultural and gender differences in childhood amnesia. *Memory*, 8, 365–376.
- [14] Mullen, M. K. (1994). Earliest recollections of childhood: A demographic analysis. *Cognition*, 52, 55–79.
- [15] Wang, Q. (2001a). Cultural effects on adults' earliest childhood recollection and self-description: Implications for the relation between memory and the self. *Journal of Personality and Social Psychology*, 81, 220–233.
- [16] Han J J, Leichtman M D, Wang Qi. (1998). Autobiographical Memory in Korean, Chinese, and American Children. *Developmental Psychology*, 34 (4), 701-713.

- [17] Wang, Q., Conway, M. A., & Hou, Y. (2004). Infantile amnesia: A cross-cultural investigation. *Cognitive Sciences, 1*, 123–135.
- [18] Han J J, Leichtman M D, Wang Qi. (1998). Autobiographical Memory in Korean, Chinese, and American Children. *Developmental Psychology, 34* (4), 701-713.
- [19] Wang Q. (2004). The Emergence of Cultural Self-Constructs: Autobiographical Memory and Self-Description in European American and Chinese Children. *Developmental Psychology, 40* (1), 3-15.
- [20] Wang Q. (2001). Cultural effects on adults' earliest childhood recollection and self-description: Implications for the relation between memory and the self. *Journal of Personality and Social Psychology, 81*(2), 220-233.
- [21] Han, J. J., Leichtman, M. D., & Wang, Q. (1998). Autobiographical memory in Korean, Chinese, and American children. *Developmental Psychology, 34*, 701–713.
- [22] Wang, Q. (2004a). The emergence of cultural self-construct: Autobiographical memory and self-description in American and Chinese children. *Developmental Psychology, 40*, 3–15.
- [23] Wang, Q., & Leichtman, M. D. (2000). Same beginnings, different stories: A comparison of American and Chinese children's narratives. *Child Development, 71*, 1329–1346.
- [24] Wang Q. (2004). The Emergence of Cultural Self-Constructs: Autobiographical Memory and Self-Description in European American and Chinese Children. *Developmental Psychology, 40* (1), 3~15.
- [25] Mullen, M. K., & Yi, S. . (1995). The cultural context of talk about the past: implications for the development of autobiographical memory. *Cognitive Development, 10*(3), 407-419.
- [26] Sheng-bo Wu. (2021). The Evolution of Cultural Memory Theory and Its Practical Significance. *Foreign language research, 223*(6), 123-126.