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The effect of cultural priming on object location memory

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Introduction

A person's culture may affect the way they think, depending on whether that culture is considered traditionally individualistic (eg, North America) or more collectivistic (eg, East Asia). The emphasis of certain values in a particular culture influences what one will attend to in the environment, and what will later be remembered.

Previous research has suggested that each person has both an individualistic and collectivistic self-concept; therefore, it is possible to prime an individual to alter their cultural mindset (Trafimow et al. 1991: the two-basket theory). In two previous studies, (Kühnen & Oyserman, 2002; Oyserman, Sorensen, Reber & Chen, 2009) young people in the collectivistic priming condition showed significantly better memory for the location of objects in an array than did those in the individualistic priming condition.

Mammarella and Fairfield (2012) showed that in older adults, a larger amount of collectivistic priming increased performance on an object-location memory task.

We attempted to replicate these results in younger adults, by increasing the priming "dose", following Mammarella and Fairfield's protocol. Each participant was given a task to prime them to think in either an individualistic or collectivistic manner, followed by the object-location memory test. If memory for the locations of objects is better in the collectivistic condition than the individualistic condition, it would provide new insight into the influence of one's processing style on their attention and memory.

Methodology

- Participants included 101 undergraduate students, 13 males and 88 females, recruited through the ISPR system.
- 50 were randomly assigned to the individualistic condition and 51 to the collectivistic condition.
- Participants first completed several questionnaires, including a demographic questionnaire, health questionnaire, mood survey, and sleep quality survey.
- Participants were then asked to complete a word search that involved circling pronouns that were either all singular (individualistic condition) or plural (collectivistic condition).
- Next, they were given 1.5 minutes to study an array of objects, shown in Fig. 1
- They were then asked to remember as many objects in their correct locations as possible

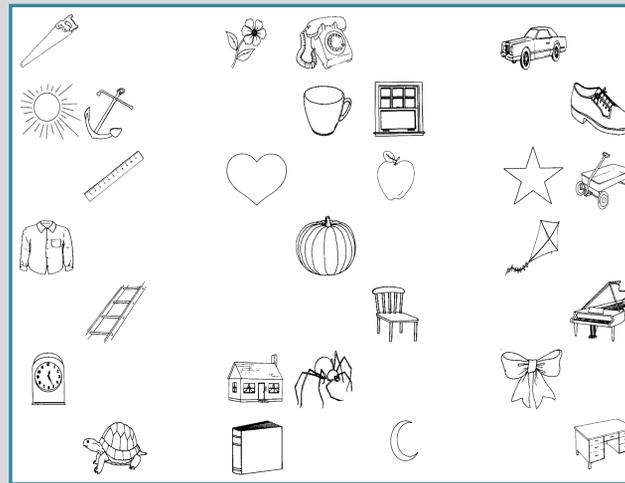


Figure 1. Participants were given 1.5 minutes to study this array of objects before being asked to recall what they had seen by writing the names of the objects in their correct location on a grid.

Results

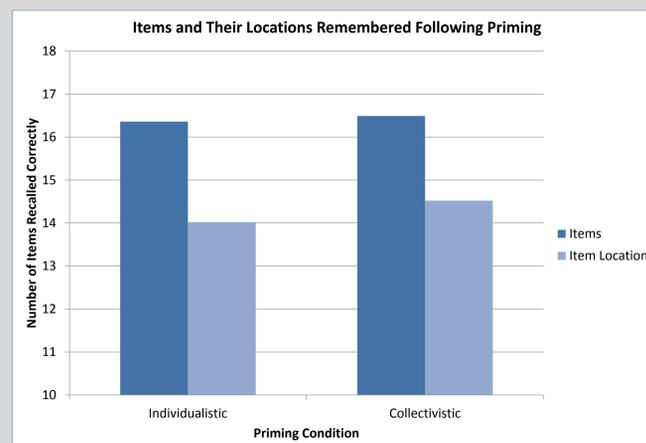


Figure 2. Participants in the collectivistic condition performed slightly better on the memory test, but these results were not statistically significant.

Two independent samples t-tests were conducted to determine the effect of priming condition on the number of items and their locations recalled correctly. The analysis showed a non-significant effect of priming; therefore, there was found to be no difference between the participants in the individualistic and collectivistic condition following priming. This was the case when considering the raw number of items that were remembered ($t(99)=-.188, p>.05$) as well as the number of correct locations recalled ($t(99)=.503, p>.05$). Furthermore, there were no significant interactions found between experimental condition and gender, scores on the depression scale, or sleep quality.

Conclusion

Our data analyses revealed that there was no effect on young adults' ability to remember objects in their correct locations following a priming task. We were therefore unable to replicate previous findings, which found that memory for the location of objects was improved by being primed to think in a collectivistic manner. Studies have shown this effect in both younger and older adults; therefore, our inability to replicate these results may be attributable to some other factor.

When asked if they had employed any strategies to remember the objects, participants described tactics such as categorization, relating the objects to themselves, creating stories, and making patterns. It is possible that the use of these strategies was overriding the priming effect. University students in particular may be more likely to employ these methods because they are accustomed to an academic environment where using strategies to study and remember information is beneficial. We are therefore unable to say whether the priming would have had a significant effect in the absence of these strategies.

Because so many people face difficulties with memory loss, improving episodic memory is very important. Specifically, being able to accurately recall objects' locations can be of great use on a day to day basis. For this reason, further research is needed in this area to determine whether a cultural priming task can improve an individual's memory, and for who this method could be used.

Selected References

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Kühnen, U., Oyserman, D. (2002). Thinking about the self influences thinking in general: cognitive consequences of salient self-concept. *Journal of Experimental Social Psychology, 38*, 492-499. doi: 10.1016/S0022-1031(02)00011-2

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