Proceedings of the 4th International Conference on Educational Innovation and Philosophical Inquiries
DOI: 10.54254/2753-7064/7/20230760

A Proposal of Body-Specificity Hypothesis in Chinese Culture: Does Mandarin Have Different Metaphors in Handedness?

Xuanchen Liu[1,a,*],Xingtong Chen[2,b]

[1]Department of Science and Technology, Beijing Normal University-Hong Kong Baptist University United International College, Zhuhai, 519087, China
[2]DEPU Foreign Language School, Beijing, 400055, China
a. p930016030@mail.uic.edu.cn, b. anita_05129@qq.com
**corresponding author*

Abstract: This paper shows the different results of the Body-Specificity Hypothesis in Chinese culture. Chinese have other metaphors on the left and suitable compared to western countries, which may affect their choice of the "dominant hand side as the positive side." In this paper, we settle an experiment, and the results show that culture will influence people. A Chinese person, even a right-handed person, will think that the left side symbolizes the positive side (And different ages will have different degrees of cultural influence). Chinese participants show the opposite result due to their diverse culture from western countries.

Keywords: body-specific analysis, handedness, dominant hand, Chinese culture

A Proposal of Body-Specificity Hypothesis in Chinese Culture: Does Mandarin Have Different Metaphors in Handedness?

1. Introduction

People in most cultures and languages associate their spacial left side with wrong and right side with good. These implicit associations between left-right and spatial cognition are because right-handed people dominate handedness. Casasanto proposed the body-specificity hypothesis, which emphasizes that people with different bodies interact with the environment differently and should form related concepts and word meanings [1]. However, previous experiments are based solely on Latin and English-backgrounded languages. Still, character-based languages such as Mandarin, based on semantic understanding, have yet to be explored experimentally. So we designed a BOB test similar to the experiment done by de la Fuente et al. in 2015 [2].

1.1. Specific Aims

Due to the unique examples of metaphors that show left equals good in Chinese, the mind of Mandarin speakers may be influenced by it. The experiment will investigate the different choices of left and right-hand preferences among Mandarin speakers contract to speakers.

People of different ages grow up in different environments and must be influenced by varying levels of their own culture. Metaphors in Mandarin have other influences on their speakers. The

DOI: 10.54254/2753-7064/7/20230760

experiment will investigate the difference in left and right-hand preferences in Mandarin speakers of different age groups.

1.2. Background

People in most cultures and languages associate their spacial left side with wrong and right side with good. These implicit associations between left-right and spatial cognition are because right-handed people dominate handedness. So, left-handed people are inclined to associate "left" with positive ideas but "right" with opposing views. Thus, each group more strongly associates "good" with their dominant facets, which is suggested in the body-specificity hypothesis [1]. Similar results have been found in the politicians' gestures and the 5-year-old children [3-5].

1.3. Linguistic and Cultural Explanations

The associations of left with "negative" and right with "positive" revealed by the neuropsychologist are also incarnate in the daily language expressions. Some Latin words have left and proper meanings, like sinister and dexter, which are the roots of the English words "evil" and "skillful." In German and French, the words for right are Recht (German) and Drive (French), which means privileged power. However, the terms related to the left are links (German) and uncomfortable (French), which means "clumsy" and "distasteful." In non-linguistic conventions, these idioms are also in evidence. For example, Ghanaian society prohibits people from pointing at others with their left hand. In the meantime, the left hand is used to do the dirty work, but the right hand is used for having a meal, according to Islamic doctrine.

1.4. Linguistic, Cultural, and Perceptuomotor Fluency Explanations

Why does the meaning of left and right across cultures and languages have a conventional opposite interpretation? One possible explanation is that the human brain and mind have a traditional property related to innate specific approaches and avoidance systems. Once the natural neurobiological mechanism is established, linguistic and cultural conventions will reinforce the implicit preference for the right.

However, an alternative possibility is that left-right conventions result from body-specific associations between space and valence. Since the human body is imbalanced, which means most people use their right hand as the strong hand, people can interact with the environment more fluently on one side of the body-centered space than on another [6]. Higher perceptuomotor fluency means higher evaluation of their perception on the specific side. In some words, we are all specialists in using our dominant hand. Perhaps during an imbalanced perceptuomotor experience in their lifetime, people will implicitly associate negative things with their non-dominant hand but positive things with their dominant one. Regarding this body-specific hypothesis, the right-handers' majority in the world's population may cause the Good Is Right mapping's seeming universality as evidenced by language and cultural conventions: Conventions in language and culture may evolve by the majority's implicit body-specific mental analogies.

1.5. The Body-specificity Hypothesis

The body-specificity hypothesis was first proposed by Casasanto [1], emphasizing that people with different bodies interact with the environment differently and should form related concepts and word meanings. According to Lakoff and Johnson, metaphorical phrases in English frequently place positive and negative valence at the top and bottom of a vertical spatial continuum: a happy person is "high on life," while a depressed person is "down in the dumps." [7,8] In five separate tests,

DOI: 10.54254/2753-7064/7/20230760

Casasanto found correlations between horizontal space and the mental representation of abstract notions with both positive and negative emotional valence [1]. There were different affiliations for right- and left-handed people. Aside from English, other languages (like Dutch, Spanish, and Arabic) have similar patterns to English. In 2015, de la Fuente et al. replicated and expanded Casasanto's findings in 2009 [2]. They found that Spanish right-handers and left-handers preferred different sides for valenced items, each group choosing their dominant side [1]. If cultural experiences impact this relationship, Arab societies, which tend to value the right more strongly than the left, should have a more robust good-is-right mapping. Contrary to this theory, Moroccan individuals' implicit space-valence connections were identical to those in Spanish and other Western groups.

1.6. How Does Mandarin Perform?

Although there is so much evidence showing that the dominant hand with good and the non-dominant hand with bad, these experiments are based solely on Latin, and English-backgrounded languages, which are made up of 26 letters, each of them has no meaning that is based on phonetic comprehension. However, character-based languages such as Mandarin, based on semantic understanding, have not been explored experimentally.

In Mandarin, most metaphors show that proper means well, but some examples show that left means good. This differs from Spanish and English, which are deeply embedded in Chinese history and culture. There is a proverb in China that almost everyone knows—"Left eye jumps for wealth, and right eye jumps for disaster"(When your left eyelid beats, it means something good will happen in the future; When your right eyelid wins, it means something terrible will happen in the future). Nowadays, most Chinese people know this proverb is not scientific, but everyone is familiar with this sentence; some still believe in it.

Furthermore, in the part of Chinese Feng Shui, the left is a metaphor for luck. In Chinese Feng Shui, we use four animals to represent the environment around one building (left —Green Dragon; right— White Tiger; front— Rosefinch; back —Xuanwu). Feng Shui adherents emphasized that "it is better to have a Green Dragon higher than a White Tiger, "which means we should build a house with a left wall higher than its right wall, or it will have bad Feng Shui (the people who live in this house will have bad luck). This phenomenon can explain by the meaning of the four symbolic animals. The Green dragon is in the east, which belongs to mu (wood; one of the five Chinese elements) and represents vitality; The White tiger is in the West, which belongs to jin (metal; one of the Chinese elements) and means the killing (Xuanwu and Rosefinch are omitted here). Although not everyone who speaks mandarin is a Feng Shui adherent, Feng Shui is a significant part of traditional Chinese culture and influences generation after generation of Chinese people. Reasonably, the implications of Feng Shui have also influenced the thinking of many Chinese people.

These examples all reveal the possibility that Mandarin has different body-specific patterns than English and other languages explored in previous experiments. To test this point, we conduct this study in Chinese culture.

2. Method

2.1. Participants

There would be a Chinese group (30 people) from Beijing Normal University-Hong Kong Baptist University United International College in Zhuhai, Guangdong province in China. They are between (all of them cannot have a big difference in age, so they should go between 18 to 24 years old), and 17 of them are right-handers, other 13 are all left-handers(maybe there are not so many

DOI: 10.54254/2753-7064/7/20230760

left-handers in the same University if this happen, it can get some participants from a similar university), they all live in the city, and do not know another language except Chinese and none of them used to live in other countries(if they have ever go to other countries, they might be influence by the western culture and have a different thought or body potential than the traditional ones who always lives in China).

2.2. Procedure

We would use the body-specificity hypothesis [1], which we would use as the task. It could help us know what the Chinese think when using their left or right hands to link the good and the bad things in a horizontal position. The task would get complete data about the Chinese when they use their hands.

The group A (Chinese group), all the members would get to listen to a story about Bob. The participants are told that there are two animals, the zebra and the panda. Bob is planning to visit the zoo, and he likes the panda but hates the zebra Panda represents good things, and the zebra represents terrible things. Then there were two boxes on the left and the right sides, and the participants were asked to tell the side of the good and bad animals they preferred to place in, the right or the left. All these steps should be used in language to ensure no misleadingness and avoid the figure affecting the result after they are finished. They need to answer some questions to make sure they would not guess the reasons why doing this research and ask them to report their handedness.

Moreover, it moves to the next part; the participants get a blackboard, a pencil, and an eraser; they are asked to write their name and erase it a couple of times. Next, he would throw a small ball with one hand into a bin to make sure the teal hand that the participants are willing to use and to check they do not tell a lie about the hand they use, and let them answer two choose one question at once they are being asked and use their fingers to point out the choice immediately, then watch the hand they use when they answer the question without any consideration. Finally, the data would be recorded compared to other research like this, but the only difference is the students in America. Since the culture of “right” and “left” with “good” and “bad” are in Western culture, we can see the difference and think about it. Including data from this study repeats the body specificity hypothesis Casasanto (2009): left and right-wanderer participants have a different tendency to link them with good and evil in horizontal space. If Chinese participants with a very different culture to western could have a different result or show the same pattern?

3. Conclusions

Although most people would think there would not be any difference between the western and eastern, as the western research shows, the left represents the wrong things, and the right represents the good things. However, it may get the opposite result when testing the Chinese modern Chinese has many words that mention weft with a positive meaning and right with a wrong sense. When the eyelid felt like shaking, the Chinese think that if the left side is stunning, it represents you would get much money which is a good thing. However, if the right side is shaking, it predicts you will get a disaster after some days. Moreover, the ancient Chinese also thought so; they had an idiom: left is better than right; in ancient times, there were two ministers, one representing the left and another representing the right, and it is a fact that the left one had more freedom than the right one. It means the opposite way in western thought. So, it is possible that many Chinese people would think the left represents good things and the right represents terrible things. It is much difference between the western and the eastern. And his study is essential for exploring the cultural differences between East and West in handedness.

DOI: 10.54254/2753-7064/7/20230760

Age is essential to ensure there would not be any effect; it is an excellent choice to divide the participants into a group of similar ages to ensure no impact on the research. For example, we can divide into 15-20; (20-30); (35-50), and (50-70). Because in China, development is speedy, it is a fact that young people have very different ideas from the old. Young people may get influenced by society or technology like the iPhone and change traditions without purpose. Another way that may affect the data is the background of the participants since each of them must have little difference in their environment, like the regions their parents are from, and it is a fact that different areas of China could have a significant influence. There may be many differences, and the parents from two other regions could fusion their thoughts on their child. Furthermore, some people could use both hands to write and paint; the effect should be considered to avoid this. They may randomly differentiate the left and right as good and evil; doing this could affect the data and influence the result of the research.

Acknowledgment

Words cannot express our gratitude to my professor Dr. Daniel Casasanto, and the committee chair enough for their patience and input, which have been helpful. We also appreciate the editing assistance, late-night feedback sessions, and moral support we received from our students and cohort, especially our groupmates. We should remember to acknowledge our family, particularly our parents. Their confidence in us has sustained our enthusiasm and upbeat attitude throughout this process.

References

[1] *Casasanto, Daniel. (2009). "Embodiment of Abstract Concepts: Good and Bad in Right- and Left-Handers." Journal of Experimental Psychology. General, vol. 138, no. 3, pp. 351–67, https://doi.org/10.1037/a0015854.*

[2] *de la Fuente, Juanma, et al. (2015), "Observed Actions Affect Body-Specific Associations Between Space and Valence." Acta Psychologica, vol. 156, pp. 32–36, https://doi.org/10.1016/j.actpsy.2015.01.004.*

[3] *Casasanto, D., & Jasmin, K. (2010). Good and evil in the hands of politicians: Spontaneous gestures during positive and negative speech. PLoS ONE, 5(7), e11805. doi: 10.1371/journal.pone.0011805.*

[4] *Casasanto, D. J. (2011). Different bodies, different minds: The body specificity of language and thought. Current Directions in Psychological Science, 20(6), 378–383.*

[5] *Casasanto, D., & Henetz, T. (2012). Handedness shapes children's abstract concepts. Cognitive Science, 36(2), 359–372.*

[6] *Corballis, M., & Beale, I. (1976). Psychology of left and right. Hillsdale, NJ: Erlbaum.*

[7] *Lakoff, G., & Johnson, M. (1980). The metaphorical structure of the human conceptual system. Cognitive Science, 4, 195–208.*

[8] *Lakoff, G., & Johnson, M. (1999). Philosophy in the flesh: The embodied mind and its challenge to Western thought. Chicago: University of Chicago Press.*