

Language: the Basis of Thought

-a Review of Sapir-Whorf Hypothesis

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Abstract: the idea that language influences the thought and behavior of its speakers was first raised in the first half of the past century by Edward Sapir and his student Benjamin Lee Whorf, being known as Sapir-Whorf hypothesis. This idea has become a major linguistic concern, and it was under heated discussion among scholars of different research areas. However, there is still not a ready answer for the truthfulness of Sapir and Whorf's theory. Through analyzing the empirical researches conducted by scholars during the past century, namely Eric Lenneberg, Bloom, Ervin Trippé, Carroll, J. Casagrande, and Skoyles, this article argues that language does exert a strong influence on the thought and behavior of its speakers. Hopefully, this article may do some help for students of linguistics.

1. Introduction

Is language necessary for thought? Some people claim it is, but sometimes people experience mental images that they cannot verbalize, some animals appear to be thinking, and pre-linguistic infants also appear to be thinking. On the other hand, it seems that language does influence thinking, some of the best examples including the Tversky-Kahneman studies and political language, such as regime and administration. Actually, the relation of language and thought has long been a major linguistic concern during the past century.

2. Different Ideas on Language and Thought

The idea that language influences the cognition process of its users has been the subject of study for anthropological linguistics, psychology, psycholinguistics, linguistic anthropology, cognitive science and many other subjects. The German anthropological linguist Wilhelm Von Humboldt first declared in 1820 that "the diversity of languages is not a diversity of signs and sounds but a diversity of views of the world." (Humboldt 2001) Being inspired by Humboldt, Edward Sapir and Benjamin Lee Whorf proposed an idea in their works that language influences the thought and behavior of its speakers, which has been known as the famous Sapir-Whorf Hypothesis (or Linguistic Relativity). This idea was under heated discussion over the second half of the twentieth century among scholars all over the world.

Many scholars hold the same idea with Sapir and Whorf, including Cooper, Spolsky, Lucy, Lee, and Sampson. George Lackoff appraised linguistic relativity from the perspective of cognitive psychology. He argued that language is often used metaphorically and that different languages use different cultural metaphors that reveal something about how speakers of that language think. However, many scholars do not share the same idea with Sapir and Whorf. Franz Boas was the first one who challenges this view. Through conducting an empirical study on Inuit people in Canada, he suggested that there has not any direct relation between the culture of a tribe and the language they speak. German linguist Eric Lenneberg also criticized Sapir and Whorf, and he holds that languages are principally meant to represent events in the real world and that even though different languages express these ideas in different ways, but the meaning of these expressions are the same, and therefore the thoughts of the speaker are equivalent. American linguist Noam Chomsky was another scholar with a different idea. According to his Universal Grammar which was the dominant paradigm in American linguistics since 1960, all languages share the same underlying structure, that is, linguistic structures are largely innate and that what are perceived as the differences between

specific languages (the knowledge acquired by learning a language) are merely surface phenomena and do not affect the cognitive processes to all human beings. It has been a century since the theory was first proposed, but there is not a conclusion on the truthfulness of Sapir-Whorf Hypothesis in the academic circles. Despite all of these negative voices, I agree with Sapir and Whorf's idea that language influences the thought and behavior of its speakers since its truthfulness can be proved through many empirical researches conducted by different scholars and it was successfully applied in many other subjects.

3. Researches to Support Sapir-Whorf Hypothesis

Over the past century, scholars of various subjects were debating heatedly on the truthfulness of Sapir-Whorf hypothesis, and a lot of empirical researches were being conducted. Personally, the author holds that language influences the thought and behavior of its speakers, which can be proved true through researches made by Sapir and Whorf themselves, Bloom, Ervin Tripp, Carroll and J. Casagrande, and Skoyles.

Edward Sapir was a German born American anthropological linguist, and he was best known for the Sapir-Whorf Hypothesis first inspired from his empirical researches on indigenous languages of the native Americans, including Wishram Chinook, Navajo, Nootka, Paiute, Takelma, and Yana. Benjamin Lee Whorf was the student of Sapir, he was originally educated as a chemical engineer, and then took up an interest in linguistics while studying at Yale University. Whorf also conducted researches on native American languages in the United States and Mexico. Many of his research findings help to support Sapir-Whorf hypothesis.

The idea of language influences the thought and behavior of its users was first formulated in Sapir's works, and it was developed by Sapir's student Whorf. According to Sapir, human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society.... We see and hear and otherwise experience very largely we do because the language habits of our community predispose certain choices of interpretation. (Sapir 1921) Whorf further developed this idea as, we dissect nature along lines laid down by our native language. (Whorf 1956)

Through their over 20 years of empirical research on native American languages, Sapir and Whorf found many classic evidences to support their idea.

The first one was that there is only a world in English for snow but three words to represent snow in Eskimo language. As Whorf commented, "Languages classify items differently. The class corresponding to one word and one thought in language A may be regarded by language B as two or more classes corresponding to two or more words and thoughts." (Whorf 1956) Another typical example was that, in Whorf's study on Hopi language, he found that there is no words, grammatical forms, or expressions refer directly to the concept of time, or to past, present, and future tense. Contrasted between English (a temporal language) and Hopi (a timeless language), what are to English differences of time are to Hopi differences of validity. This example is also a good evidence to support that people speaking different languages think differently. What's more, Hopi grammar simply classifies objects in the world as either animate or inanimate. In Hopi language, verbs and nouns are distinguished according to the time they last. For instance, events like flash, falling star, and smoke only last for a short time, and they can only be verbs. Events like cloud and heavy rain last for a longer time, and they are classified as nouns. Hopis use a single word to represent all flying objects except birds, that is to say, a dragonfly, an airplane, and a pilot are the same concept for them. According to Whorf, the varied thought patterns of an English and a Hopi are reflected from their distinction of the outside world in lexical level. The same case can be also found in Nootka language, there is not the distinction of nouns from verbs. A multifunctional word of Nootka may represent any events or state through inflection. For example, the same concept "a house" may represent different states as "a newly constructed house", "an old house", "a big house", "a small house", "a house under construction", or even "a destroyed house". Whorf also explains how language affects thought from his work experience as a chemical engineer. At that time, he was

employed as an investigator in a fire insurance company, his job was to investigate the causes of industrial fire. Whorf found that the gasoline drums being labeled as “empty” are more dangerous than those being labeled as “full” ones. The reason was that people tend to be careless toward the “empty ones”, they would smoke and toss cigarrate around. The word “empty” may have two meanings: (1) as a virtual synonym of null and void, negative, inert; (2) applied in analysis of situations without regard to, e.g. vapor or liquid vestiges in the container. Whorf concluded that it was thinking of “empty” gasoline drums as “empty” in the first meaning, which led to a fire he investigated. This incident also demonstrated the huge influence of language on people’s thought.

The first real great challenge posed on Sapir and Whorf’s theory was from Berlin and Kay’s researches on color terminology in 1960s. They choose color terms as research subject to test Sapir-Whorf Hypothesis because of that color is objectively measurable in terms of such physical properties as wavelength as well as color space is continuous, without inherent regions or boundaries. Berlin and Kay tested the basic color terms of 20 languages, asking speakers to pick out best exemplars for each color term of their language. The research result was that there was a considerable consistency across languages. It was really a heavy blow to Sapir and Whorf’s theory at that time. Berlin and Kay’s work not only made Sapir-Whorf Hypothesis out of fasion for a decade but also spurred works on linguistic and cultural universals. Although the research on color terminology seems quite successful, many scholars questioned it. Sampson claimed that the validity of their research was in question since the research was conducted on the basis of second-hand materials. He also pointed out some mistakes of Berlin and Kay’s color terminology research. For instance, color saturation was ignored in the color terminology research; moreover, in proving the generation sequence of color terms, Berlin and Kay’s evidences were problematic. Sampson’s conclusion was that since Berlin and Kay’s premise of research is problematic, it is insufficient to disprove language influences the thought and behavior. Besides, there is examples of different language speakers share different color perception ability. For example, what we call blue is divided in Russian into goluboy (lihter blue) and siniy (darker blue). Recent study conducted by Winawer et al asked Russian and English speakers to identify three pictures of blue color with different color saturation, the result was that Russians were faster in identifying the colors while English speakers showed no such effect.

American psychologist Bloom’s research on non-fact sentences also proved that different language speakers think differently. Bloom noticed that Chinese speakers’ thought was different from Indo-European speakers in dealing with some pure assumed questions. Bloom wondered weather it is because the lack of non-fact marks lead to this difference. In order to find the answer, he made an empirical research. Bloom formulated a questionnaire with a number of non-fact linguistic phenomena, and the questionnaire was written in English and Chinese. Then these questionnaires were given to a group of Chinese speakers and English speakers respectively. This research was conducted repeatedly for three times. The reaearch result was that the number of English speakers who can successfully use non-fact induction was much more than Chinese speakers. This research proved Bloom’s assumption that Chinese speakers perform differently from English speakers given non-fact questions. Moreover, Bloom’s research findings also proved Sapir-Whorf Hypothesis in that Chinese speakers and English speakers do think differently.

Another research to support Language influences the thought and behavior of its users was made by Ervin Trippe. Trippe devoted himself in the research of the impact of different languages on people’s thought. His research subject was a group of Janpanese women who immigrated to the United States with their husbands. When asked to use the phrase “I like to read...” to make a sentence, Janpanese speakers tend to make serious sentences like “I like to read sociology” while English speakers are more likely to make casual sentences like “I like to read comedy so as to make myself feel relaxed”. When asked to describe a picture on which there is a man working in the field, a woman standing under a tree, and a girl reading a book, Japanese Speakers’ typical answer would be “the father is working hard, the mother fell ill, and the daughter was wondering weather to attend the university” while a typical English speaker’s answer would be “a student of sociology is doing field research”. Although Trippe’s research is not a complicated one, its finding is obvious and

persuasive that people's thought is closely connected with the language they speak.

Research findings of many other scholars also demonstrated that language do have a strong influence on the thought and behavior of its speakers. Carroll and J. Casagrande conducted a famous research, namely, psychological impact on language acquisition. Carroll and Casagrande claimed that children of Navaho language can distinguish objects earlier than children of English language. They found two groups of children in Navaho areas, of the two groups, one group speak Navaho while the other one speak English. Research result showed that Navaho children would distinguish objects according to the shape, but English children would distinguish objects according to the color. The two groups of children's different approaches to distinguish objects will not change until seven years old. Skoyles' research also supported Sapir and Whorf's idea. His research was conducted on a group of children who were born deaf and mute. Among these children, some of them were brought up by their normal parents, and the others are brought up by deaf and mute parents. When they were growing up, Skoyles found that the children were quite different in their development of cognitive ability. The children with deaf and mute parents are slow in cognition development, especially in the cognition of abstract ideas. Both Carroll and Skoyles' researches can be served as direct evidence of language influences the thought and behavior of its speakers.

4. Application of Sapir-Whorf Hypothesis

Apart from the above mentioned empirical researches conducted by various scholars in different domains, Sapir-Whorf Hypothesis can be also proved since it has been successfully applied in many subjects.

Over the past few decades, Sapir-Whorf Hypothesis has become the basis for many subjects. The most typical one was the so called Critical Linguistics which was developed in Britain in 1970s. Holding the idea that language influences the thought and behavior of its speakers, scholars of Critical Linguistics believed that the outside world was perceived through language by human beings, and as a result, language influences and controls people's thought. In systematic functional grammar, Michael Halliday explains how language reflects people's thought through the metafunction of language, namely ideational function, interpersonal function and textual function. At present, Critical linguistics has steadily raised as a major subject of linguistic concern, and it again proved the truthfulness of Sapir-Whorf Hypothesis. Another subject-Cultural Linguistics developed in China in 1980s also takes the idea that language influences the thought and behavior of its speakers as one of its basic theories. Besides, holding the idea that people of different languages would think differently, Sapir worked devotedly in the project of establishing an international auxiliary language as an effort to mitigate conflicts between different language communities.

5. Conclusion

As a result, although Sapir and Whorf's idea faces many challenges from scholars of different research areas, research findings of Sapir and Whorf themselves, Bloom, Trippe, Carroll, Casagrande, and Skoyles as described in this article are sufficient enough to prove that language do influence the thought and behavior of its speakers.

References

- [1] Berlin, B. and P. Kay. 1996. Basic Color Terms: their universality and evolution [M]. New Brunswick: Transaction Publishers.
- [2] Carroll J. and Casagrande J. 1958. The function of language classification [M]. New York: Holt, Rinehart and Winson.
- [3] Samption, G. 1980. Schools of linguistics [M]. London: Hutchinson.
- [4] Sapir, E. 1921. The state of linguistics as a science [M]. New York: Harcourt and Brace.

[5] Skoyles, J.R. 1998. The sapir-whorf hypothesis: new surprising evidence [M]. Cambridge: Cambridge University Press.

[6] Whorf, Benjamin. 1956. John B Carroll (ed). Language, thought, and reality: selected readings of Benjamin Lee Whorf [M]. Boston: MIT Press.