Relationship Between Language and Thought: Linguistic Determinism, Independence, or Interaction?

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Abstract: The relationship between language and thought has long been a topic of great interest in the field of linguistics, especially in psycholinguistics. Herder, Humboldt, Trendelenbury, Sapir, Whorf, Gui Shichun, Lian Shuneng, and Bao Huinan are some of the well-known scholars who have conducted research on the relationship between language and thought. With regard to the relationship between language and thought, there are three main viewpoints. The first group of scholars, represented by Sapir and Whorf, supports linguistic determinism. Some scholars believe that language and thought are mutually independent. However, others believe that language and thought are inseparable. Beginning from Sapir-Whorf hypothesis and their theory of linguistic determinism and linguistic relativity, this article agrees with the influence of language over thought but refutes the extreme viewpoint of linguistic determinism from several points, proving the independence and mutual influence of language and thought. This article finally concludes that the preferred relationship between language and thought should be that they are independent but interactive.

Keywords: Language; Thought; Linguistic determinism; Interactive; Independent

1. Introduction

The relationship between language and thought has long been taken seriously in varying academic fields from philosophy to psychology and anthropology. In the early 18th century, neo-humanism emerged in Germany. The representatives in the field of linguistics include Johann Gottfried Herder and Wilhelm Von Humboldt. Herder held that how a nation thinks determines how its people speak, and how people speak determines how they think. Humboldt carried forward and developed Herder's idea and later formed a systematic linguistic philosophy. Humboldt believed that a language is the external embodiment of a nation's spirit; a national language reflects the national spirit; each language creates a fence around its nation, thus people are restrained by their mother tongue and its world outlook. In short, Herder and Humboldt held the same view that language determines thought.

Based on Herder's and Humboldt's idea, Sapir and his student Benjamin Lee Whorf raised their viewpoints on the relationship between language and thought – the famous Sapir-Whorf hypothesis. Sapir-Whorf hypothesis embodies linguistic determinism (language determines thought) and linguistic relativity (there is no limit to the structural diversity of languages). Linguistic determinism consists of "strong" determinism and "weak" determinism. Sapir-Whorf hypothesis opened the gates for linguistics and psychologists to further investigate the relationship between language and thought.

After Sapir and Whorf, many linguists and psychologists also devoted themselves to the study of the relationship between language and thought. With their efforts, "strong" determinism and linguistic relativity in Sapir-Whorf hypothesis have been proven to be indefensible. Many scholars have put forward proofs to disprove these extreme views in Sapir-Whorl hypothesis; for example, Eleanor Rosch's categorization in cognitive linguistics, Georges Mounin's translatability in translation, Greenberg's markedness theory, Herriot's and Hockett's codability, as well as Berlin's and Kay's research on people's memory and response to focal colors.

The purpose of this article is to probe into the right relationship between language and thought. By studying relevant theories from various scholars, this article agrees with the influence of language over thought, as indicated by early scholars like Sapir and Whorf, but refutes the extreme viewpoint of language determinism in Sapir-Whorf hypothesis from several points, then proves the independence and mutual influence of language and thinking, and finally concludes that the preferred relationship between language and thought should be that they are independent but interactive.

2. Sapir-Whorf hypothesis

Edward Sapir was an American linguist and anthropologist. He and his disciple Benjamin Lee Whorf put forward their views about the relationship between language and thought – the famous Sapir-Whorf hypothesis. The Sapir-Whorf hypothesis embodies two basic principles: linguistic determinism and linguistic relativity.

Linguistic determinism refers to the concept that the language a person uses determines the way in which the person views and thinks about the world to some extent. Language determines certain nonlinguistic cognitive processes; that is, learning a language changes the way a person thinks. This concept has generally been broken down into two basic components – "strong" determinism and "weak" determinism.

(1) "Strong" determinism refers to the strict view that language determines thought and that language and thought are identical. It holds that the existence of linguistic categories creates cognitive categories. "Strong" determinism is the extreme version of the theory, and there is strong evidence against it, for instance, the possibility of translation between languages.

(2) "Weak" determinism holds that thought is merely affected or influenced by languages. It recognizes that the existence of linguistic categories influences the ease with which various cognitive operations are performed. This version of determinism is widely accepted by scholars today.

Linguistic relativity refers to concept that the distinctions encoded in one language are unique to that language alone; that is, the cognitive processes that are determined are different for different languages. Therefore, speakers of different languages are said to think in different ways.

The reasoning of Sapir-Whorf hypothesis has been revealed in several famous quotes.

"We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds – and this means largely by the linguistic systems in our minds. We cut nature up, organize it into concepts, and ascribe significances as we do largely because we are parties to an agreement to organize it in this way – an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated one, but its terms are absolutely obligatory; we cannot talk at all except by subscribing to the organization and classification of data which the agreement decrees [1]."

"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. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication and reflection [2]."

Whorf provided several examples to prove this hypothesis, among which there is one widely known. According to his work experience, Whorf found that the reasons causing fire include not only objective factors but also people's subjective factors – the understanding of a language.

"Thus, around a storage of what are called 'gasoline drums,' behavior will tend to a certain type, that is, great care will be exercised; while around a storage of what are called 'empty gasoline drums,' it will tend to be different – careless, with little repression of smoking or of tossing cigarette stubs about. Yet the 'empty drums' are perhaps the most dangerous, since they contain explosive vapor. Physically, the situation is hazardous, but the linguistic analysis according to regular analogy must employ the word 'empty,' which inevitably suggests a lack of hazard [1]."

3. Reasonability in Sapir-Whorf hypothesis – language's influence on thought

Setting aside the "strong" version of Sapir-Whorf hypothesis, there is a reasonable factor of this hypothesis – the weak form of the hypothesis – in which thought is affected or influenced by languages to some extent. Language affects the way people understand and remember, and it predisposes people to look at the world in a certain way. This idea will be discussed from two aspects: lexicon and grammar.

3.1. Lexical influences on thought

According to Palmer, a linguistic symbol seems to be like a stair, in which thought climbs the stair and gradually becomes an abstract concept. Language is not only the reflection of thought and feeling, but also exerts influence on them [3]. One example to prove the idea that language influences thought from the perspective of lexicon is that in some European languages, there are plenty of words to describe colors, but in some African languages, only "black" and "white" are used to describe colors; the rich terms representing colors require people who speak these European languages to spend time and energy recognizing and distinguishing all kinds of colors, which ensue an improvement in their ability to identify and distinguish all kinds of colors; however, to some African people, since the terms representing colors are scarce, they pay little attention to the differences of all kinds of colors; as a result, their ability to differentiate colors is lower.

Language can also influence thought by providing new ideas and thoughts to people through new words. With the development of science and technology, many new things including new inventions, new ideas, and new ways of living have emerged, and people have been inventing new words accordingly in various fields, especially in scientific and medical fields. Neologism also injects new ideas to people, thereby affecting, changing, or even inspiring their thoughts.

3.2. Grammatical influences on thought

Carroll and Casagrande compared Navaho and English. In Navaho, the form of a verb is related to the shape of the object that a doer handles. If an object is long and flexible, the verb has a certain form, but if an object is flat and flexible, the verb takes another form. However, in English, the form of a verb has nothing to do with the shape of an object. Carroll and Casagrande carried out a study on Navaho and English children and found that Navaho children grouped objects on the basis of form at an earlier age than English children [4].

From above, it can be appreciated that language can influence thought, both in lexicon and grammar. To this point, Sapir takes the same view.

In short, language can affect thought in terms of both lexical and grammatical levels. A person's cognitive development is inevitably constrained by his or her native language under a certain linguistic environment. The categories of language can influence people's thought by linking their language with their experience and leading a speaker's outlook of the world in a certain way.

4. Refutes on Sapir-Whorf hypothesis

Sapir-Whorf hypothesis has both reasonable and unreasonable factors. Weak determinism (language influences thought) has been proven to be reasonable from many aspects. However, strong determinism and linguistic relativity are supposed to be untenable, and there are many proofs to deny them. Here, we will discuss some of the proofs to disprove strong determinism and linguistic relativity.

4.1. Mutual independence of language and thought

From the perspective of phylogenic development, Lev Vygotsky suggested that language and thought have different genetic roots and the development of language and thought does not reach a parallel but often cross each other [5]. Contemporary cultural-anthropological and psychological research showed that there might exist a pre-linguistic phase in the early human society, where human thought is referred to as behavioral and imagistic thought [6]. Similarly, Vygotsky and Piaget assumed that there exists a pre-intellectual phase in children's verbal language development and a pre-linguistic phase in their intellectual development [6]. Slobin hypothesized that "children begin the language-learning process with a starting set of universally shared meaning" and "all children arrive at the learning stage with a language-making capacity that constructs similar early grammars from all input languages; the surface forms generated by these grammars may vary since the materials provided by the input languages vary; however, the basic notions that first receive grammatical expression remain constant across all early grammars and are independent of the input languages" [7]. Goldin-Meadow suggested that "the components of the motion events that a deaf child conveys in gesture can be inferred to as those of children's pre-linguistic thought" [8]. Therefore, based on the above evidence, some scholars came to the conclusion that thought comes before language, and that language and thought are mutually independent.

Furthermore, studies of cognitive neuroscience on aphasics also concluded that consciousness and thinking do not completely depend on language. Aphasia can only influence the extended consciousness; it does not weaken the core consciousness. Even without the involvement of language, aphasics could still generate some kind of nonverbal conscious activity with images. Therefore, the research on cognitive neuroscience challenges traditional psychological ideas, where consciousness functions can be both, unified and relatively independent.

In short, language and thought are independent to each other, and thus language does not determine thought.

4.2. Overwhelming influence of thought over language

Sapir demonstrated that a linguistic symbol can easily transfer from one kind of organ to another kind of organ and from one kind of technology to another kind of technology. Therefore, only sound is not the basic fact of language. The basic fact of language lies in the classification of concepts, their structure, and their relations. As a structure, the inner side of language is the thought.

The world reflected by the language of different nations is not the same. Different languages reflect different thoughts and thought perspectives of varied nations. For example, in English, Chinese, and Japanese, there are four seasons in a year, whereas in Tagalog, there are only rainy and arid seasons in a year. This is because in the eyes of the Englishmen, the Chinese, and the Japanese, a year has colorful and various seasons, and they view the year and the world through a colorful lens, whereas in the eyes of the

Tagalog, a year is monotonous and lacks vitality, and they view the year and the world from a monotonous perspective. Their languages reflect different understandings of the world, thoughts, and thought perspectives.

How thought influences language can be reflected in the complexity of a nation's language. The more valuable something is to a nation, the more detailed the language is in representing it. Taking the Eskimos as an example, snow matters a lot to the Eskimos since it is closely related to their life and production; therefore, there are many terms that can be used to describe all kinds of snow, such as "falling snow," "slushy snow," "wind-driven flying snow," and so on; these terms are convenient for the Eskimos. On the other hand, since snow is not that important to the Englishmen, there is only one word to represent this natural phenomenon, which is "snow." The more significant something is to a nation, the more people will think about it and pay attention to it, resulting in a more detailed language representing it, and vice versa. In short, thought influences language.

They way that people think and look at the world influences their languages. Noam Chomsky proposed the notion "linguistic universals," which states that people's shared thought influences the characteristics of people's languages [8]. As is known to all, humans have thought universality. There are two ways in which how thought universality leads to linguistic universals.

(1) People come to know and understand the world in the same way, that is, from the basic object level or the basic category to the superordinate level or the subordinate level. Based on this kind of thought universality, people classify different types of animals, vegetables, and other objects into categories and arrange these categories into a hierarchical structure, which forms linguistic universals.

(2) People perceive focal colors in the same way, which is a form of thought universality. This thought universality can result in linguistic universals. The languages describing colors are not arbitrary, and people select the basic terms for colors from only eleven focal colors as shown in **Figure 1** [9].
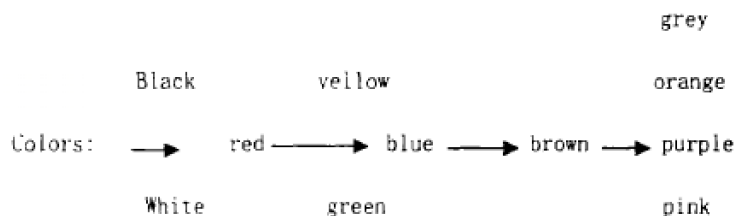
Figure 1. Eleven focal colors

In all kinds of languages, the words representing colors are selected from left to right. If a language has only two terms for colors, the terms must be "black" and "white." If there is a third one, it should be "red." If a language has four terms for colors, they should be "black," "white," "red," and either "yellow" or "green." If a language has five to six terms for colors, they should include "black," "white," "red," "yellow," and "green." Berlin and Kay discovered a remarkable degree of structural universality in color terms as a result of people's thought universality.

Therefore, thought has an overwhelming influence on language, and language, as mentioned before, can also influence thought. At this point, language and thought are interactive and influential to each other.

5. Conclusion

Language and thought are closely related. The relationship between language and thought has raised intense discussions and disputes among scholars since early times. Tracing back from Herder and Humboldt to Sapir and Whorf, and to many other scholars in modern times, their ideas and opinions have evolved and developed. Beginning from Sapir-Whorf hypothesis and their theory of language determinism and language

relativity, this article agrees with the influence of language over thought but refutes the extreme viewpoint of language determinism since language and thought are mutually independent and thought has an overwhelming influence on language. Therefore, the preferred relationship between language and thought should be that they are independent but interactive.

Disclosure statement

The author declares no conflict of interest.

References

[1]   Carroll JB, 1956, Language, Thought and Reality, Wiley, New York, 135, 213-214.

[2]   Sapir E, 1929, The Status of Linguistics as a Science, University of Chicago, USA.

[3]   Palmer F, 1981, Semantics, Cambridge University Press, Cambridge.

[4]   Carroll JB, Casagrande JB, 1958, The Function of Language Classification in Behavior, in Readings in Social Psychology, Holt, New York.

[5]   Gui SC, 2000, Psycholinguistics (New Edition), Shanghai Foreign Language Education Press, Shanghai.

[6]   Dai ZM, 1996, An Introduction to Cultural Linguistics, Language and Culture Press, Beijing.

[7]   Carruthers P, 1998, Language, Thinking in Language? Evolution and A Modularist Possibility, in Language and Thought: Interdisciplinary Issues, Cambridge University Press, Cambridge.

[8]   Chomsky N, 1972, Language and Mind, Harcourt Brace Jovanovich, New York.

[9]   Berlin B, Kay B, 1969, Basic Color Terms: Their University and Evolution, University of California Press, Berkeley.

[10] Carroll DW, 1999, Psychology of Language, Brooks/Cole Publishing Company, USA.

[11] Sapir E, 2002, Language: An Introduction to the Study of Speech, Beijing Foreign Language Teaching and Research Press, Beijing.

[12] Vygotsky LS, 1962, Thought and Language, The M.I.T Press and John Wiley& Sons, Inc., New York and London.

[13] Whorlf BL, 1956, Language, Thought and Reality, The Technology Press of Massachusettes, Massachusettes.

[14] Bao HN, 2001, Cultural Context and Language Translation, China Translation Corporation, China.

[15] Cui XL, 2001, Language Understanding and Cognition, Beijing Language and Culture University Press, Beijing.

[16] Hu ZL, Zhu YS, Zhang DL, et al., 2005, An Introduction to Systemic-Functional Linguistics, Peking University Press, Beijing.