Original Article

Literature Review: How Languages Shape Thought Processes

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Human beings have the ability to converse in several languages, in different ways and contexts. Language forms a central aspect of an individual's experiences and, at a higher level, shapes the way individuals think. In addition, languages often differ phonologically and semantically. However, this view of language has been challenged, for example, based on the perceptions of the shades of colours. The purpose of the paper is to present a case for how languages are different from each other and how those differences change the way we see things around us. Most societies speaking various languages tend to have different words for certain concepts. This is important, as it shows that one does not need to explain the meaning of the words they want to convey. The main conclusion is that from the perception of time, space and even simple grammatical elements, such as, nouns, languages affect one's thought processes.

Keywords: Languages, Thought processes, Linguist, Linguistics, Cognition

Introduction

The influence of spoken and written language goes beyond the capacity to pass on information. Language shapes our thought processes to the extent where it even effects our cultural environment. This paper reviews literature on how languages shape one's thought processes and influence perception. It refers to relevant literature and offers examples in relation to specific languages. This includes the Sapir-Whorf Hypothesis developed in the early 1950's, juxtaposed with Pullum's (1991) view of how language affects thought and perception. The paper seeks to help language learners and teachers better understand the relationship between languages and human thought processes.

Literature Review

Boroditsky (2011) has presented some strong arguments that languages are different from each other at the perceptual level and that these differences shape one's thoughts in different ways:

> Unlike English, the Kuuk Thaayorre language spoken in Pormpuraaw does not use relative spatial terms such as left and right. Rather Kuuk Thaayorre speakers talk in absolute cardinal directions (north, south, east, west, and so forth). Of course, in English we also use cardinal direction terms, but only for large spatial scales.
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> (p. 64)

In other words, this suggests that Kuuk

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Thaayorre speakers and others of such languages, are much better than English speakers in geographical orientation, even in unfamiliar settings, due to their languages. This is because in the Australian tribal language Kuuk Thaayorre, cardinal directions are widely used in all aspects of their lives. Therefore, in their language, they might say "The book is southwest of the bag" or "My brother is standing north of his dog". Those speaking these languages tend to orient their minds more to space than non-indigenous, English-speaking Australians, mainly because the indigenous languages have several elements of spatial deictic (Kroll, Dussias, Bice, et al., 2015). This implies that when they refer to distant objects, they use specific directions like north, south, east, and west. Since they must have a knowledge of direction to correctly arrange their language, they are more likely to pay attention to the cardinal points.

It is clear then that to some extent, languages do limit an individual's ability to perceive the world and how one thinks about the world (Evans, 2015). Individuals tend to focus on perceptions and thoughts which play a significant role in the functioning of their mind (Siegel, 2015).

In addition, strange meanings can be encoded into the same concept in different languages (Sapir, 1921). However, based on the perceptions of color, Sapir's idea was challenged by Boroditsky (2009), who argued that color is dependent upon its position on the light spectrum, but that it is often perceived and linguistically represented categorically. For example, she showed how different languages separate colours categorically and that in some languages, the distinction between these colours is much clearer than in others. This is exemplified in the comparison of Russian and English speakers in their ability to distinguish between different shades of blue. "In Russian there is no single word that covers all the colors that English speakers call "blue." Russian makes an obligatory distinction between light blue (goluboy) and dark blue (siniy)" (Boroditsky, 2009, p. 1).

Furthermore, Evans (2015) interviewed individuals who had the ability to speak various languages and concluded that most of the societies which he examined tend to have different words for certain concepts because of different language cultural experience. Each individual, when speaking a particular language, only uses the vocabulary associated with that person's cultural background and experience related to that language. As such, when two or more individuals are speaking the same language, they do not need to explain the meaning of the concepts or words to each other (Lindquist, MacCormack, & Shablack, 2015). The language they are speaking will shape their minds as to what they want to convey.

Language shapes an individual's perspective of the world and their relationships with others. Lindquist, MacCormack, & Shablack (2015) argue that even the quirks of grammar, such as, the grammatical gender of nouns found in German, Spanish and French, can affect the user's thoughts. This would affect how speakers of those languages perceive noun references. For example, a French artist might draw death as a male, while a Russian counterpart might draw a female. Such grammatical quirks are present in all languages. Study of cognition has led to debates including those related to how people process language (Bracken, 1984). However, others view the idea that language can influence an individual's mind as untestable and that it is in most cases incorrect (Ebert, 2015).

According to Faccione & Gittens (2015), linguistics researchers have attempted to grasp the influence of language on the mind of the individual. Their studies show that there are considerable differences between languages. For example, languages often differ phonologically, with some having ejective consonants (Hanks, 2018). Voiceless consonants pronounced with a glottalic egressive airstream are called ejective consonants. They are common in languages spoken by people living in high mountainous areas. Some of these languages have ejective fricatives, as in Tigrinya (Table 1).

In other cases, the same word in different languages can convey disparate meanings, such as, false cognates between English and Spanish. When learners of Spanish look at unknown words in Spanish, they try to translate it to the nearest equivalent in their own language. Kroll, et al. (2015, p. 380) clarify this phenomenon with the explanatory example '*carpeta*', meaning 'folder', which might be mistaken to mean 'carpet'. Such words are called 'homographs'. They have similar

Table 1   The consonant inventory for Tigrinya

		Bilabial/ Labiodental	Alveolar	Palato - alveolar	Velar Plain	Velar Labialized	Pharyngeal	Glottal
Stop	Voiceless	(p)	t		k	k^w		ʔ
	Voiced	b	d		g	g^w		
	Ejective	(p')	t'		k'	$k^{w'}$		
Fricative/ Affricate	Voiceless	f	s	ʃ (tʃ)			h	h
	Voiced		z	(ʒ) (dʒ)			ʕ	
	Ejective		s'	tʃ'				

(Shosted & Rose, 2011)

lexical form but conflicting meanings across the two languages and they typically interfere in processing a foreign language.

In addition, languages may have different grammatical categories, such as, the evidential, referring to the source of various information within a sentence (Sapir, 1921). It is these linguistic differences that are often considered to cause perceptual differences in the minds of the speakers (Sapir, 1921). People have previously considered words to be just labels and that the only difference between languages was that they ascribed different sound strings to particular objects.

Furthermore, linguists have found that different people perceive the world differently, mainly depending on the language they speak (Siegel, 2015), or even more radically, that individuals tend to perceive only those phenomena for which their language has a word. For example, in Jamaica, due to the geographic location, there is no winter and so Jamaicans have not developed words for variations in types of snow. However, due to the significance of snow in the lives of Inuit (Eskimos), multiple words exist in their languages for such variations.

Another example is the perception of the English word 'color', which according to Bracken (1984) is a more realistic way to test Sapir's (1921) hypothesis. The number of basic terms often used for colors is far smaller than the number of colors the human eye can perceive (Sapir, 1921). For instance, the Dani language in New Guinea has only two basic terms for color, while Russian has 12 referring to the various shades. However, linguists have also found that the Dani can differentiate between different color tones, such as, red, orange and yellow, despite the fact that they label them identically in their language (Hanks, 2018). Since different languages have different perspectives on colors, people speaking different languages tend to have a different understanding of colors. To some extent therefore, Sapir's argument can be considered correct that an individual, speaking different languages, will have different perspectives of the particular word in each language.

Language is a key element of human identity. However, the effects of framing and filtering various words in a language are the main differences in how it influences the thought and perception of its users (Siegel, 2015). Through a schema of interpretation, life patterns and anecdotic events, framing helps a person to

understand and respond to different circumstances. That is, the mind sieves through one's biological and social upbringing to make sense of what is happening. For example, in journalism, how the media presents an issue, the 'frame', can shape the listener's perspectives without changing the factual information. As a result, the subsequent choices made by the individual are influenced to some extent by the way that information was presented, or framed.

According to Lindquist, et al. (2015), specific aspects of a language are either grammaticalised or lexicalised. Sometimes when a language's lexicon is expanding to meet the needs of its users, certain words are often borrowed or coined from other languages in order to refer to specific or new objects (Lupyan & Bergen, 2016). For example, the word 'iPhone' is now commonplace and acceptable in many languages worldwide, adding to their lexicon. Conversely, when certain objects or actions are no longer useful or have become obsolete, the words or terms used to represent them are often abandoned by that culture or language group. A good example of this is the English computer term, floppy disc, which was a medium used to store data. It has become obsolete and therefore meaningless in this era since it has been replaced with more commonly used alternatives, such as, cloud storage or flash drives.

As for the grammatical aspect of the language, Ebert (2015) points out that most of the concepts in the world are often encoded more deeply by languages to a level that they have formed part of the grammars in the language. For example, in Spanish culture, the Spanish way of speaking is based on levels of politeness. Therefore, Spanish grammar uses four different forms of the subject pronoun 'you'. '*Tú*' refers to a close friend or family member; '*Usted*' refers to an adult, older person or someone in authority; '*Vosotro*' and '*Vosotras*' are the second person plural forms of '*Tú*' and '*Ustedes*' is the second person plural forms of '*Usted*'. This simple example shows how the culture is encoded into a language's grammar.

Sapir (1921) suggested that the main purpose of a language is to communicate information about the society and the perception of the speaker. Nevertheless, each language is structured differently and has its own unique form of processing any given information. That is, as discussed earlier, the language frames the experience of the individual. Whorf (1940), went on to further develop this hypothesis and stated that an individual's language can also demonstrate his or her world view. His well-known example is that some Eskimos have about 50 words for 'snow', which indicates the importance of snow in their lives and cultures.

However, Pullum (1991) rebutted Whorf (1940) stating that it does not have any great significance that there exist more words for snow in the Eskimos' languages than in English. His argument is based on appropriately categorising the different kinds of snow in the Eskimo's context. One could argue that this point might be valid, but even if it is, it lacks any deep linguistic analysis. Therefore, the idea proposed by Whorf that the Eskimo's perception of various kinds of snow is as a result of various forms of snow was disproven by Pullum.

However, despite such challenges to Whorf (1940) on this point, some aspects of his hypothesis were considered to be worthy of further analysis. For example, Whorf (1940) suggests that language determines the nature of one's categorisation of things in the surrounding environment, rather than language being a direct influence. An example of this can be seen with many Romance or European languages, such as, Spanish and French. Each language assigns a definite or indefinite article indicating the gender of their nouns, for both animate and inanimate objects. In Spanish, a table would be '*una mesa*' where '*una*', the indefinite article, indicates that table in Spanish is perceived as feminine.

The main point coming from this review is that it is important to be aware of the influence of language on cognition in order to understand the various concepts and traditions of a particular language community, especially if one aims to learn that language.

Conclusion

By way of a review of related literature,

this paper has explained and exemplified how languages can shape the way people perceive and describe the world around them. Due to one's language experiences, linguistic processes inevitably include the subconscious shaping of the human mind and perception of society. People have many kinds of experiences and so use language as a communication tool, to shape the way these experiences are perceived and expressed.

The point was also made that different societies often have different interpretations of a word, mainly influenced by their particular language. Languages play a critical role in shaping the mind and perspective of an individual depending on the language framing and filtering of the different words used in their specific society. Many societies speaking multiple languages tend to have several words for a particular concept. However, the point is that the people within a particular language community do not need to explain the meaning of the words they use. They are implicitly understood. Through their shared experiences, when a word is used, the concept is understood. This explains why people generally do not have a word for everything, but only the ones that are salient or important to their cultures.

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