

Language and thought

“Thought and language” redirects here. For the book, see [Lev Vygotsky](#).

A variety of different authors, theories and fields purport influences between **language and thought**.

Many point out the seemingly common-sense realization that upon introspection we seem to **think** in the **language** we **speak**. A number of writers and theorists have extrapolated upon this idea.

1 Scientific hypotheses

- The **Sapir-Whorf hypothesis** in linguistics states that the grammatical structure of a mother language influences the way adherents to it perceive the world. The hypothesis has been largely abandoned by linguists as it has found at best very limited experimental support, at least in its strong form. For instance, a study showing that speakers of languages lacking a subjunctive mood such as Chinese experience difficulty with hypothetical problems has been discredited. Another study did show that subjects in memory tests are more likely to remember a given color if their mother language includes a word for that color; however, these findings do not necessarily support this hypothesis specifically.
- According to the theory behind **cognitive therapy**, founded by Aaron T. Beck, our emotions and behavior are caused by our internal dialogue. We can change ourselves by learning to challenge and refute our own thoughts, especially a number of specific mistaken thought patterns called "cognitive distortions". Cognitive therapy has been found to be effective by empirical studies.
- In **behavioral economics**, according to experiments said to support the theoretical availability heuristic, people believe events that are more vividly described are more probable than those that are not. Simple experiments that asked people to imagine something led them to believe it to be more likely. The mere exposure effect may also be relevant to propagandistic repetition like the Big Lie. According to prospect theory, people make different economic choices based on how the matter is framed.

2 Examples

2.1 Counting

Different cultures use numbers in different ways. The **Mundurucu** culture for example, has number words only up to five. In addition, they refer to the number 5 as “a hand” and the number 10 as “two hands”. Numbers above 10 are usually referred to as “many”.

Perhaps the most different counting system from that of modern Western civilisation is the “one-two-many” system used by the **Pirahã people**. In this system, quantities larger than two are referred to simply as “many”. In larger quantities, “one” can also mean a small amount and “many” a larger amount. Research was conducted in the Pirahã culture using various matching tasks. These are non-linguistic tasks that were analyzed to see if their counting system or more importantly their language affected their cognitive abilities. The results showed that they perform quite differently from, for example, an English speaking person who has a language with words for numbers more than two. For example, they were able to represent numbers 1 and 2 accurately using their fingers but as the quantities grew larger (up to 10), their accuracy diminished. This phenomenon is also called the “analog estimation”, as numbers get bigger the estimation grows ^[1] Their declined performance is an example of how a language can affect thought and great evidence to support the Sapir-Whorf Hypothesis.

2.2 Orientation

Language also seems to shape how people from different cultures **orient** themselves in space. For instance, people from the Australian Aboriginal community **Pormpuraaw** define space relative to the observer. Instead of referring to location in terms like “left”, “right”, “back” and “forward”, most Aboriginal Nations, such as the **Kuuk Thaayorre**, use cardinal-direction terms – north, south, east and west. For example, speakers from such cultures would say “There is a spider on your northeast leg” or “Pass the ball to the south southwest”. In fact, instead of “hello”, the greeting in such cultures is “Where are you going?” and sometimes even “Where are you coming from?” Such greeting would be followed by a directional answer “To the northeast in the middle distance”. The consequence of using such language is that the speakers need to be constantly oriented in space, or they would not be able to

express themselves properly, or even get past a greeting. Speakers of such languages that rely on absolute reference frames have a much greater navigational ability and spatial knowledge compared to speakers of languages that use relative reference frames (such as English). In comparison with English users, speakers of languages such as Kuuk Thaayorre are also much better at staying oriented even in unfamiliar spaces – and it is in fact their language that enables them to do this.^[2]

2.3 Color

See also: Linguistic relativity and the color naming debate

Language may influence color processing. Having more names for different colors, or different shades of colors, makes it easier both for children and for adults to recognize them.^[3] Research has found that all languages have names for black and white and that the colors defined by each language follow a certain pattern (i.e. a language with three colors also defines red, one with four defines green OR yellow, one with six defines blue, then brown, then other colors.).^[4]

3 Other schools of thought

- **General semantics** is a school of thought founded by engineer Alfred Korzybski in the 1930s and later popularized by S.I. Hayakawa and others, which attempted to make language more precise and objective. It makes many basic observations of the English language, particularly pointing out problems of abstraction and definition. General semantics is presented as both a theoretical and a practical system whose adoption can reliably alter human behavior in the direction of greater sanity. It is considered to be a branch of natural science and includes methods for the stimulation of the activities of the human cerebral cortex, which is generally judged by experimentation. In this theory, semantics refers to the total response to events and actions, not just the words. The neurological, emotional, cognitive, semantic, and behavioral reactions to events determines the semantic response of a situation. This reaction can be referred to as semantic response, evaluative response, or total response.^[5]
- **E-prime** is a constructed language identical to the English language but lacking all forms of "to be". Its proponents claim that dogmatic thinking seems to rely on "to be" language constructs, and so by removing it we may discourage dogmatism.
- **Neuro-linguistic programming**, founded by Richard Bandler and John Grinder, claims that

language "patterns" and other things can affect thought and behavior. It takes ideas from General Semantics and hypnosis, especially that of the famous therapist Milton Erickson. Many do not consider it a credible study, and it has no empirical scientific support.

- Advocates of **non-sexist language** including some feminists say that the English language perpetuates biases against women, such as using male-gendered terms such as "he" and "man" as generic. Many authors including those who write textbooks now conspicuously avoid that practice, in the case of the previous examples using words like "he or she" or "they" and "human race".
- Various other schools of **persuasion** directly suggest using language in certain ways to change the minds of others, including oratory, advertising, debate, sales, and rhetoric. The ancient sophists discussed and listed many figures of speech such as enthymeme and euphemism. The modern public relations term for adding persuasive elements to the interpretation of and commentary on news is called spin.

4 See also

- Embodied cognition
- Inner voice
- Kant and the Platypus: Essays on Language and Cognition by Umberto Eco
- Origin of Language
- Philosophy of Language
- Lev Vygotsky

5 References

- [1] Gordon, P., (2004). Numerical Cognition Without Words: Evidence from Amazonia. *Science*. 306, pp.496-499.
- [2] Boroditsky, L. (2009, June 12). How Does Our Language Shape the Way We Think? . Edge.org. Retrieved March 18, 2013, from http://www.edge.org/3rd_culture/boroditsky09/boroditsky09_boroditsky09_index.html.
- [3] Schacter, Daniel L. (2011). *Psychology Second Edition*. 41 Madison Avenue, New York, NY 10010: Worth Publishers. pp. 360–362. ISBN 978-1-4292-3719-2.
- [4] Berlin, Brent; Kay, Paul (1969). *Basic Color Terms: Their Universality and Evolution*. Berkeley: University of California Press.

- [5] Ward, K. (2012). General Semantics. Retrieved March 31, 2013, from http://www.trans4mind.com/personal_development/KenGenSemantics.htm.

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