How Language Influences Conceptualization: From Whorfianism to Neo-Whorfianism

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ABSTRACT

Do speakers of different languages think alike because of the universality of the experience of being human or do we all think differently because of differences in our languages? The answer to these questions has changed throughout the history of linguistic thought, ranging from observing languages merely as tools for expressing our thoughts to strongly believing that languages shape and even constrain our thoughts. This paper presents an overview of two most important theories that deal with these questions: the "rise and fall" of linguistic determinism (Whorfianism), and the development of its more cautious version – linguistic relativism (Neo-Whorfianism) – advocated today primarily within the framework of cognitive views of language, as well as their criticisms, most commonly within the framework of generative views of language.

Key words: Whorfianism, Sapir-Whorf Hypothesis, linguistic relativism, neo-Whorfianism, linguistic determinism, language and thought, language and culture

Introduction

Language is one of the main features that make us human. It participates in almost every experience of self and our interactions with the world. As Pinker[1] (p. 13) puts it: "Simply by making noises with our mouths, we can reliably cause precise new combinations of ideas to arise in each other's minds. The ability comes so naturally that we are apt to forget what a miracle it is." This miraculous function of language, verbalization of our own thoughts and putting thoughts into each other's minds using it, has sparked an evergrowing interest in the relationship between language and thought. Different answers have been provided to the questions about the nature of this relationship throughout the history of linguistic thought, depending on the popularity of certain paradigms and approaches to language. The answers ranged from seeing languages merely as tools for expressing our thoughts to strong beliefs that languages shape and constrain our thoughts, and even determine our worldview. This question still attracts a lot of attention among linguists, psychologists, anthropologists, and even among the general public.

There are about 7,000 different languages in the world today. These languages differ significantly from one another in terms of how they describe the world and in terms of their sounds, structures, and vocabularies. Do speakers of these languages think alike because of the universality of the experience of being human, or do we all think differently because we speak different languages? If we indeed think alike, what are the universals we all share? If we do think differently, to which extent do these linguistic differences shape our thought? These questions, as crucial as they are, still await the final answers.

The idea of language being not only a conduit that enables message transfer involving a sender, a message, a receiver, and a feedback, but also being a powerful weapon that shapes, enables, and restricts thought, became a part of our collective pop-cultural memory through Orwell's *Newspeak*, which, in his cult novel *1984*, was used to control the thought process. This dystopian language was invented to confine thought by confining language or, as Orwell himself had put it, to narrow the range of thought. If a language contained only those words that corresponded to the worldview and ideology of the creators of that language, any thought that would deviate from such a worldview would be unthinkable.

The Orwellian view of language, i.e. the view of the crucial role of language in shaping thought, has its firm foothold in the history of linguistic thought, primarily in the Sapir-Whorf radical deterministic hypothesis, which

argues that human thought is entirely determined by linguistic categories.

In this paper, we will give an overview of the basic assumptions of linguistic determinism (Whorfianism) and its criticism (primarily within the framework of generative views of language). We will then present the development of its new, weak version, known as linguistic relativity or Neo-Whorfianism (advocated nowadays primarily within the framework of cognitive views of language).

Whorfianism (Linguistic Determinism)

The mention of the idea of linguistic relativity first evokes the notion of the Sapir-Whorf Hypothesis, according to which language shapes and determines thought. The hypothesis became very popular and influential under this name, despite the fact that it is misleading. The two linguists have never actually worked together and, more importantly, they have never formally shaped such strong views into a hypothesis.

The inception of the idea that speaking a different language provides a distinct worldview can, however, be traced back before both Sapir and Whorf. Both the German linguist and philosopher Wilhelm Von Humboldt and the linguistic anthropologist Franz Boas were formulating such ideas. Boas passed on his view to his student, anthropologist Edward Sapir, and then Sapir passed them on to his student Benjamin Lee Whorf.

Sapir was a brilliant linguist famous for his theoretical advances of linguistics, but also for the results of his field studies of Native American languages. He was never "guilty" of extreme deterministic views, on the contrary, he was himself interested in revealing universal traits in linguistic structures if they were empirically well supported (see Matasović[3] for more details). Sapir suggested that man perceives the world principally through language. He was interested in the relationship between language and culture, and believed that language provides an insight into human perceptive and cognitive faculties. He also noted that due to immense differences in what aspects of reality get grammaticalized in certain languages, their speakers have to pay attention to these different aspects more or less to be able to speak their language properly. These observations were then adopted and reinterpreted by his student Whorf.

Linguistic determinism

Whorf was an inspector for the fire insurance company, intrinsically interested in Native American languages. He then studied American Indian languages at Yale with Sapir as his teacher. Studying indigenous languages, he found surprising differences from European languages in terms of how they spoke about reality (e.g. most famously, he was puzzled by how Hopi people conceptualize and talk about time, because, in his understanding, the Hopi language contained no words, grammatical forms, constructions or expressions that refered directly to what we call *time*, but was instead focused on change and the process itself, as well as on the physiological distinction between presently known, mythical, and conjecturally distant, having no interest in dating, chronology, and calendars). He was convinced that these differences encoded a different view of the world or *Weltanschauung.*

Whorf was a talented and complex thinker, and reducing his well-elaborated thoughts to, in principle, quite simple deterministic Whorfian hypothesis, is an incorrect oversimplification. He did sometimes express extreme views of linguistic relativity in the sense that "people's thoughts are determined by the categories made available by their language," like in the following well-known quote:

> 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[2]. (p. 213)

It is because of such strong and memorable statements that Whorf's theory became equated with the concept of linguistic determinism – the idea that language structures limit and determine human thought[4] or, in other words, that our mother tongue shapes and influences our conceptualization, thinking, and interactions with the world, forming a unidirectional relationship between human language and human thinking.

Brown[5] has adequately summarized Whorf's view into two hypotheses: 1) Structural differences between language systems will, in general, be paralleled by nonlinguistic cognitive differences of an unspecified sort; 2) The structure of anyone's native language strongly influences or fully determines the world-view he will acquire as he learns the language. The first of these hypotheses has developed into linguistic relativism, and the second one into linguistic determinism.

Criticism

The Sapir-Whorf hypothesis has gained a lot of attention and became equated with its stronger version, namely linguistic determinism. As such, it has been heavily criticized, and has become one of the most disputed and debated topics in linguistics. The first line of strong criticism involved the fact that Whorf's research proved to be seriously methodologically flawed, sometimes even completely incorrect. The discovery of the real nature of the conceptualization and verbalization of time in Hopi by Malotki[6] proved everything Whorf had claimed about their concept of time to be utterly false. As Pinker[1] (p. 61) put it: "No one is really sure how Whorf came up with his outlandish claims, but his limited, badly analyzed sample of Hopi speech and his long-time leanings toward mysticism must have contributed." In his extensive study, Malotki[6] showed that the Hopi language contains tense, metaphors for time, and many words for units of time,

including days, parts of the day, days of the week, weeks, months, seasons, year, yesterday, tomorrow, etc. Similarly, completely wrong, albeit not invented by him, Whorf's claim about seven different word roots for snow in Eskimo vocabulary became extremely popular, spreading like an urban legend with the number of alleged different Eskimo words for snow growing to several hundred in the end. This strange and incorrect linguistic myth is nowadays known as the Great Eskimo Vocabulary Hoax[7]), and it certainly came in very handy to those (like Pinker[1], p. 62) who ridiculed linguistic determinism.

In addition to this, empirical evidence resulting from work on color categorization spoke against the strong version of the Sapir-Whorf hypothesis, too. It has been shown that speakers of the languages that have a very small set of basic color terms (e.g. Dani from New Guinea, which only has two basic color terms, light/warm and dark/cold in their vocabulary) when shown different kinds of focal colors had no difficulty remembering the range of colors they were exposed to[7–10]. If language truly determined thought, the Dani should not have been able to categorize and remember colors their language lacks basic color terms for[11]. Sridhar[12] gives an exhaustive overview of experimental criticisms of Whorfianism in deterministic sense.

Another line of criticism is more general, and it stems from generative views of language, i.e. universalist and nativist research programs. It is largely based on the fact that linguistic determinism directly undermines the possibility of a universal foundation for human cognition[13] or a prelinguistic cognitive basis for human cognitive faculties[4,14,15]. Chomsky's LAD (Language Acquisition Device) is the best example of this focus shift towards universal components which all languages share[16,4]. Pinker[1] says about Whorfianism:

> But it is wrong, all wrong. The idea that thought is the same thing as language is an example of what can be called a conventional absurdity: a statement that goes against all common sense but that everyone believes because they dimly recall having heard it somewhere and because it is so pregnant with implications.

Whorfianism was interested in the different and the exotic, while generativism was interested primarily in what human beings share, and what allows us to be intelligible to each other and be able to learn a new language.

After being so heavily and rightfully criticized, the Sapir-Whorf Hypothesis became very unpopular, and scholars "have steered clear of relativism," which was "identified with scholarly irresponsibility, fuzzy thinking, lack of rigor, and even immorality", in Lakoff's[17] words. As he further states[17], all too often, arguments against Whorf were taken to be arguments against relativism in general. However, as stated by Fishman[18]:

> Even if (Whorfianism) was to be discarded as untenable, the stimulation that it has provided, both to its erstwhile supporters and its erstwhile detractors (…) will have resulted in permanent gains for the disciplines on either side of the issue that have considered it seriously. This too, should be a lesson to us for the future: the interaction between Zeitgeist in methodology of the social sciences, on the one hand, and Zeitgeist in the sociology of knowledge, on the other – inescapable though it may be – may nevertheless be worthwhile. Every orthodoxy, being simultaneously an orthodoxy in both of the above respects (i.e., in respect to what is known and in respect to how knowledge may be pursued) – whether this be Chomskyism, ethnomethodologism, ethnographism, or natural scientism in the language related disciplines – leads away from certain topics, sensitivities, and questions as well as toward others. If we are lucky the gain may equal or exceed the loss, and if we are wise, no orthodoxy – not even our own – will remain unchallenged for very long[18].

In our view, Kay and Kempton[19] have correctly placed the doctrine of radical linguistic relativity in its historical context, and interpreted it as "a reaction to the denigrating attitude toward unwritten languages that was fostered by the evolutionary view prevalent in anthropology in the 19th century. Subsequently, the research of Boas and his students showed these languages to be as systematic and as logically rich as any European language, and it was perhaps inevitable that the latter finding should spawn a doctrine on non-European languages and cultures antithetical to the evolutionary view". Before Kay and Kempton, Fishman[18] praised Whorf for this same reason, interpreting him as "unabashed Herderian" in this sense:

> For Herder, and for genuine pluralists since Herder, the great creative forces that inspire all humanity do not emerge out of universal civilization but out of the individuality of separate ethnic collectivities – most particularly, out of their very own authentic languages. Only if each collectivity contributes its own thread to the tapestry of world history, and only if each is accepted and respected for making its own contribution, can nationalities finally also be ruled by a sense of reciprocity, learning and benefiting from each other's contributions as well.

Fishman[18] proposed exactly this philosophy to become a new, third Whorfian hypothesis, which he called W3 or "Whorfianism of the third kind". In his view, W3 was much more worth of attention, and more crucially important for linguistics than both relativism (which he called W1) and determinism (W2). Instead on the dichotomy of language and thought, this hypothesis (W3) is based on the trichotomy of culture, language and thought. As its main doctrine Fishman[18] proposes the testing, confirmation and refinement of "Herder-Whorf vision of a better world based upon sharing a multiplicity of little languages and appreciating a variety of little peoples."

Neo-Whorfianism (Linguistic Relativism)

The rise of cognitivism sparked a new interest in Whorfianism along with its reevaluation, which started

with Kay and Kempton[19] providing evidence that linguistic relativity is not to be entirely dismissed after all. Kay and Kempton's reinterpretation of Whorfianism was crucial for the development of the approach widely accepted nowadays, especially within cognitive views of language, which suggests that language influences conceptualization to some extent. The approach that became known under the term linguistic relativism or Neo-Whorfianism – the so-called "weak version" of Whorfianism – states that language does not determine thought, but that it influences it. Kay and Kempton explicitly formulated the idea in their famous paper[19] where they used the term "a more cautious Whorfianism", which was supported by the results reported in the paper: "In this view, we acknowledge that there are constraints on semantic differences between languages, so we accept not an absolute linguistic relativity but a modest version"[19].

Another influential line of researching and reopening the topic of linguistic relativity involved studying untranslatable words and concepts across cultures, most notably in the work of A. Wierzbicka[20], who stated that "one cannot clarify culture-laden words of one language in terms of culture-laden words of another". She examined key words from English, Russian, Polish, German, and Japanese, demonstrating how each language has "key concepts" expressed in "key words" reflecting the core values of that given culture[20].

Wierzbicka's work is often regarded as belonging to the "Whorfianism of the third kind" as mentioned above (see Fishman[18]).

In recent years, research on linguistic relativity has regained popularity, and a large number of experiments provided new evidence to language influencing thought in general domains of space, time, substances, and objects, but also in influencing social and political attitudes. The most widely known research in this respect is a large series of experiments done by Lera Boroditsky's research labs collecting data around the world: from China, Greece, Chile, Indonesia, Russia, to Aboriginal Australia. As she states[21]:

> What we have learned is that people who speak different languages do indeed think differently and that even flukes of grammar can profoundly affect how we see the world. Language is a uniquely human gift, central to our experience of being human. Appreciating its role in constructing our mental lives brings us one step closer to understanding the very nature of humanity[21].

This means that language affects worldview, but does not limit an individual's ability to think or act outside their culture[21]. This new version of linguistic relativity is widely supported by empirical research, which shows how language influences thought, especially in the field of embodied cognition[22–27]. It is important to notice that it is the choice of linguistic means (not the mandatory use of a particular one) that may influence thinking, as exemplified by these studies. This is also manifested by a vast application of the phenomenon of framing.

An intuitive approach to determining whether language influences thought begins with a simple observation that languages vastly differ among themselves. It is clear then, as Sapir noted, that languages require their speakers to constantly pay attention to and code different aspects of the world to use their language properly, not paying attention to others that are not coded in grammar. English speakers have to attend to temporal relations between events, as required by the tense and aspect systems of their language, while this system is missing in part or whole from certain languages, e.g. in Hebrew and Malay. In contrast, some languages require coding whether referents are visible to the speaker (Kwakwala), observed directly or only heard by report (Turkish), or oriented in particular ways (Tzeltal)[28]. The Neo-Whorfianists empirically test these intuitive observations.

The conceptualization of space and time in different languages and cultures

Levinson[28] discovered that the fact that Guguu Yimithirr speakers use cardinal directions to talk about space had profound consequences for non-linguistic tasks. Namely, their ability to calculate their location was significantly better compared to Dutch speakers, who use relative terms to talk about space. According to Levinson[28], this result presented strong evidence for a real Whorfian effect, showing that the nature of spatial representation in language has consequences for the speaker's non-linguistic abilities. One could also claim that it is the other way around: that because they rely on cardinal directions there was no need for relative terms. We address this line of criticism in later.

In a similar broader study, Boroditsky[22] discovered that a small Aboriginal community on the western edge of Cape York in northern Australia (the Kuuk Thaayorre group) uses cardinal or absolute direction terms (north, south, east, and west) to define space instead of using relative direction terms (like left, right, forward and backward), which are commonly used in most world languages. They do this in all possible situations when talking about space, which means they will say sentences as 'The ant is on your southeast leg or Move the cup to the north northwest a little bit'. The obvious consequence of speaking such a language is that you must be well oriented at all times. The usual greeting in Kuuk Thaayorre is 'Where are you going?' and the answer should be something like "Southeast, in the middle distance". If you do not know the sides of the world, you cannot perform even the simplest greeting in this language. Five-year-old and even younger Kuuk Thaayorre speakers can unmistakably orient themselves towards the sides of the world – language forces them to do so. The result is a profound difference in orientation skills and spatial knowledge between speakers who rely primarily on absolute frameworks (such as Kuuk Thaayorre speakers) and speakers of languages that rely on relative frameworks (as shown for Dutch[28]). Moreover, since human thought is metaphorical (e.g. we think of TIME as SPACE), this Aboriginal community that conceptualizes

space differently, conceptualizes also all abstract concepts that are metaphorically related to SPACE in a different manner (primarily TIME, but a vast number of other abstract concepts, too).

When it comes to the notion of time, languages also differ significantly. In Croatian (and in English), we use the horizontal version of the conceptual metaphor TIME IS SPACE (e.g. The best is ahead of us, The worst is behind us), while Mandarin speakers, in addition to horizontal, have also a vertical metaphor of time (e.g. the following month is "month down" and the previous month is "month up"). Kuuk Thayore speakers, who use cardinal directions to talk about space, use cardinal directions to talk about time, too: instead of arranging time from left to right, they arrange it from east to west. Boroditsky[29] investigated whether this difference in lexical concepts for TIME in English and Mandarin would produce a noticeable effect on reaction time in linguistic experiments. Boroditsky[29] found that Mandarin speakers were faster in responding to questions involving the terms "earlier" and "later" when they were primed with the vertical axis. In contrast, English speakers were faster when primed with the horizontal axis, manifesting language-encouraged habits in thought.

Moreover, Boroditsky[29,30] experimentally showed that when we learn a new language, we are not simply learning a new way of talking, but also inadvertently a new way of thinking. In one such study, English speakers were taught to use size metaphors (as in Greek) to describe duration (e.g. *a movie is larger than a sneeze*), or vertical metaphors (as in Mandarin) to describe an event order. Once the English speakers had learned to talk about time in these new ways, their cognitive performance began to resemble that of Greek or Mandarin speakers. This suggests that patterns in a language can indeed play a causal role in constructing how we think.

Other experimental evidence on how language influences conceptualization

Winawer et al.[31] compared the ability of Russian and English speakers to distinguish shades of blue to test whether differences in color language lead to differences in color perception. Unlike English that has only one basic term for the color *blue*, Russian makes a mandatory distinction between *dark blue* (синий) and *light blue* (голубой). The experiment showed that Russian speakers are quicker to distinguish these two shades of blue than English speakers due to the fact that they have two distinct words for them in the Russian language.

In Croatian, we have to know the gender of the noun to be able to use the verb correctly, which is not the case in English. Does this mean we think a little differently about all nouns? Do we experience nouns with female grammatical gender as indeed being female-like even when their gender is completely arbitrary, like in the case of the noun *bridge*? Boroditsky et al.[32] asked German and Spanish speakers to describe objects having opposite gender assignment in those two languages. The descriptions

they gave differed in a way predicted by grammatical gender. When asked to describe a *key* (masculine in German and feminine in Spanish), the German speakers were more likely to use words like *hard, heavy, jagged, metal, serrated*, and *useful*, whereas Spanish speakers were more likely to say *golden, intricate, little, lovely, shiny*, and *tiny*. To describe a *bridge*, which is feminine in German and masculine in Spanish, the German speakers used adjectives *beautiful, elegant, fragile, peaceful, pretty*, and *slender*, and the Spanish speakers *big, dangerous, long, strong, sturdy*, and *towering*. This was true even though all testing was done in English, a language without grammatical gender. The conclusion was[32] that even small flukes of grammar, like the seemingly arbitrary assignment of gender to a noun, can have an effect on people's ideas of concrete objects in the world. These effects of grammatical gender are easily traceable in some well-known examples of personification in art. How abstract entities such as *death, sin, victory*, or *time* take on human form is dependent on the grammatical gender of the word in the artist's mother tongue.

Metaphor and conceptualization

A large number of studies has also shown that metaphors, which pervade all talk about abstract and complex ideas, are not just fancy ways of talking, but that metaphorical framings have real consequences, e.g. for how people reason about complex social problems like crime[33]. There is now a lot of empirical evidence that metaphors are not only related to how we conceptualize the world (especially abstract concepts), but also to how we reason and make decisions on important social issues.

Empirical studies suggest that due to different metaphorical framings people reason differently about time, emotions, electricity, crime, etc.[22,29,33–36]. Moreover, understanding and reasoning about people's views, opinions, and beliefs are influenced by the choice of metaphors we use[33,37–41]. The choice of language affects people's reasoning, judgment, or evaluation of socially relevant concepts like crime[33] or climate change[42] and leads to influencing social and political attitudes, but can also have serious implications for political actions and policymaking[43].

Criticism

Although the weak version of linguistic relativism is compelling, intuitive, and well-evidenced, not everybody is convinced of its true power or relevance. Pinker[1] (p. 63) argues that "the thirty-five years of research from the psychology laboratory is distinguished by how little it has shown. Most of the experiments have tested banal 'weak' versions of the Whorfian hypothesis, namely that words can have some effect on memory or categorization."

Slobin[44] suggested that a specific language (with its grammatical and semantic categories), requires a specific mode of thought, but probably only during on-line speech production. In his view, such cognitive effects are restricted to "thinking for speaking," and have little demonstrable

effect upon thinking in general and upon general processes of attention, memory, and inference. However, a body of experiments presented above convincingly shows that people think in a way that is concordant with language even when not engaged in speaking the language at that moment. Levinson[28] showed that the fact that Guguu Yimithirr speakers use an absolute system and no system of relative description seems to have further effects: speakers must *remember* spatial dispositions in absolute terms that will allow them to later code them in their language, so their coding is absolute in both memory and language.

As regards the research on relative and absolute orientation systems (including gestures and language), the objection that commonly occurs is that it is not the language that drives the cognitive system of absolute spatial cognition, but that it is rather the other way around: it is the cognitive system of absolute spatial conception that drives the language. Levinson[28] addresses this objection with this convincing explanation: "there is no obvious way in which a community-wide cognitive practice of this sort could come to be shared except through its encoding in language and other communicative systems like gesture. It is the need to conform to these communicative systems that requires convergence in cognitive systems, not the other way around."

Despite the fact that there is a large body of research proving pervasiveness of the role of metaphor in thinking, critics[1] argue that not enough work has empirically demonstrated that metaphors in language strongly influence how people think about and solve real-world problems, and that this stance was taken too far. Another line of criticism stems from the fact that major studies, especially the popular embodied cognition ones, failed to be replicated in a number of experiments, which led to skepticism considering the crucial findings in the field of embodied cognition. This is often interpreted in the context of the publication bias (namely the practice of journals selectively publishing only positive findings), which became recognized as harmful to the credibility of many scientific fields[45], along with underpowered studies and all sorts of questionable research practices, undermining the integrity of subsequent meta-analyses and systematic reviews[46].

The Macbeth effect experiment (showing that physical cleaning removes feelings of guilt)[26] was reported not to be replicated[46,47]. Similarly, researchers could not recreate the famous hot cup of coffee experiments[25] showing that brief exposure to warm therapeutic packs induces greater prosocial responding than exposure to cold therapeutic packs[48,49]. Steen et al.[50] performed a follow-up study and a critical view of Thibodeau and Boroditsky[33], and in contrast to the original studies, they consistently found no effects of metaphorical frames on policy preference, and no difference between the two metaphorical frames on the one hand, and the non-metaphorical, neutral frame on the other. However, the replications failures do not deny embodied cognition as such, and this is often stressed out by the authors of the replications studies themselves[46]. E. g. Earp et al.[46] do call for "careful reassessment of the evidence for a real-life 'Macbeth effect' within the realm of moral psychology", but they do not deny the fact that there is a link between physical and moral purity), nor do they dismiss the existence of the Macbeth effect.

As regards the power of metaphorical framing, Pinker[1] states: "The ubiquity of metaphor in language does not mean that all thought is grounded in bodily experience, nor that all ideas are merely rival frames rather than verifiable propositions. Conceptual metaphors can be learned and used only if they are analyzed into more abstract elements like 'cause,' 'goal,' and 'change,' which make up the real currency of thought. And the methodical use of metaphor in science shows that metaphor is a way of adapting language to reality, not the other way around, and that it can capture genuine laws in the world, not just project comfortable images onto it."

Having such an abundance of evidence to the importance of linguistic framing on one side, and criticism claiming that it is not likely that linguistic metaphors *strongly* influence how people think on the other, paired with the replication failures mentioned above, surely calls for additional assessments of the power of framing, especially in real-life situations. However, these arguments do not negate the neo-Whorfian hypothesis. The fact is that the proponents of this hypothesis are very cautious in their claims and moderate in their expression claiming and empirically proving only that linguistic differences may induce nonlinguistic cognitive differences. Therefore, the only criticism targeted specifically to this hypothesis is Pinker's[1] view that this work is simply banal and redundant for enormous research energy invested in stating the obvious, namely that words can have some effect on memory or categorization.

Conclusions

In this paper, we have given an overview of the "rise and fall" of Whorfianism in the deterministic form, and its rebirth in the form of weak linguistic relativism or Neo-Whorfianism. We have briefly presented the most important empirical contributions to the reevaluation of linguistic relativism in today's cognitive views of language.

If we have learned something from decades of praising Whorfianism, then cursing it, and then praising it again, it is that people undoubtedly conceptualize in fundamentally similar ways, regardless of the language they speak, due to shared embodiment and perceptual apparatus. The position adopted in cognitive linguistics is that "there are commonalities in the ways humans experience and perceive the world and in the ways humans think and use language. This means that all humans share a common conceptualizing capacity"[11]. However, fascinating variations across languages (together with differences in environment and experience) influence non-linguistic thought. According to cognitive linguists, "language not only reflects conceptual structure but can also give rise to conceptualization. It appears that the ways in which different languages 'cutup' and 'label' the world can differentially influence non-lin-

guistic thought and action"[11]. These basic doctrines were established in the early 80s by Kay and Kempton[19], who very explicitly stated that 1) languages differ semantically, but not without constraint, and 2) that linguistic differences may induce nonlinguistic cognitive differences, but not so absolutely that universal cognitive processes cannot be recovered under appropriate contextual conditions.

As for the Sapir-Whorf Hypothesis, it will undoubtedly continue to be equated with the extreme deterministic view and often consequently disregarded, even though the writings of both Sapir and Whorf (Sapir particularly) are open to varied interpretations, some of which allow for much more moderate views than the ones they became metonymies for. However, they should unanimously be praised for raising important and interesting questions, and for igniting an immensely fruitful line of empirical research, but even more importantly, as noticed insightfully by Fishman[18] and Kay and Kempton[19], it should be borne in mind that it was precisely the "flawed" Sapir-Whorf Hypothesis in its strong deterministic form that served as a much needed corrective to the ethnocentric and supremacist evolutionism it replaced.

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KAKO JEZIK UTJEČE NA KONCEPTUALIZACIJU: OD WHORFIJANIZMA DO NEOWHORFIJANIZMA

S A Ž E T A K

Razmišljaju li govornici različitih jezika jednako zbog univerzalnosti ljudskoga iskustva ili razmišljamo drukčije zbog razlika u našim jezicima? Odgovor na to pitanje mijenjao se tijekom povijesti lingvističke misli u rasponu od promatranja jezika samo kao alata za izražavanje naših misli do uvjerenja da jezik oblikuje, pa čak i ograničava naše misli. U ovome radu daje se pregled dviju najvažnijih teorija koje se bave tim pitanjima: predstavlja se „uspon i pad" jezičnoga determinizma (whorfijanizma) i razvoj njegove opreznije inačice – jezičnoga relativizma (neowhorfijanizma) – koji se danas zagovara u prvome redu unutar okvira kognitivnih pogleda na jezik. Daje se i pregled najvažnijih kritika obaju pogleda, najčešće iz pozicije generativnih pogleda na jezik.