

Landmark

Why the World Looks Different in Other Languages

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Introduction

Linguists and philosophers have for centuries debated the place of language in how humans think about their world. While there appears to be a general agreement that language is a crucial window to reality, the extent to which it can actually shape our conceptualization of reality has been a contentious issue. One of the debates on this issue centres around the principle of linguistic relativity, also known as the Sapir-Whorf hypothesis, which states that the world looks significantly different in different languages, and that humans understand their world in terms of the conceptual categories made available to them by their languages. While the Sapir-Whorf hypothesis has been generally discredited in mainstream linguistics as a gross overestimation of language, recent developments in cognitive linguistics and cognitive science suggest that cross-linguistic differences must be factored in for a fuller understanding of the language-cognition relationship. The present note seeks to salvage certain elements of linguistic relativity from the widespread rejection that the principle has been subjected to by linguists and philosophers alike. The title of this note has been adapted from Guy Deutscher's popular read on linguistic relativity, *The language glass: Why the world looks different in other languages*. I will begin with a statement of the Sapir-Whorf hypothesis, followed by an overview of the recent empirical

investigations into the cognitive dimension of cross-linguistic diversity, sometimes referred to as Neo-Whorfianism. I will conclude the discussion with some pedagogical implications of this renewed interest in the cognitive underpinnings of language diversity.

Sapir-Whorf Hypothesis

The hypothesis that people understand reality in terms of the linguistic categories made available to them by their languages was born out of the claims of the linguistic anthropologist Edward Sapir and his student Benjamin Lee Whorf, an amateur linguist. Sapir made a comparative study of English and several Amerindian languages, and concluded that the differences between the languages changed the way their users perceived the world. Sapir spoke of "the tyrannical hold" that linguistic form has over our orientation in the world, and noted that speakers of different languages are required to pay attention to different aspects of reality simply to put words together into grammatical sentences. Thus, when English speakers have to decide on whether or not to choose the past tense marker -ed at the end of the verb, they need to pay attention to the relative time of occurrence of the event, vis-à-vis the time of utterance. In contrast, the speakers of Wintu, an Amerindian language with evidential marking need not worry about the event time,

but must pay attention to whether the action talked about was known through direct observation or by hearsay (Sapir, 1921). Sapir (1924) went on to suggest that the incommensurable analysis of experience in different languages makes “very real to us a kind of relativity that is generally hidden from us by our naive acceptance of fixed habits of speech as guides to an objective understanding of the nature of experience. This is the relativity of concepts or, as it might be called, the relativity of the form of thought” (Sapir, 1924: 155).

The differences in the aspects of reality that a speaker has to attend to was taken up by Whorf (1956), who argued that Hopi, one of the languages he studied, had “no words, grammatical forms, constructions or expressions that refer directly to what we call ‘time’.” He also reported that the speakers of Hopi had “no general notion or intuition of time as a smooth flowing continuum in which everything in the universe proceeds at equal rate, out of a future, through the present, into the past...”, and concluded that these linguistic differences lead to conceptual differences. According to Whorf, the Hopi conceptualization of events did not view points or durations as countable things. Rather, they seemed to focus on the process, and on the distinctions between the presently known, conjectured or mythical. In a much-quoted passage, he wrote:

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 (Whorf, 1956: 213).

If it is accepted that linguistic differences trigger different conceptualizations of the world, the next logical step would be to claim that language determines conceptualization. The two steps in the Whorfian argument have since been cast into a binary of the weaker and stronger versions of the Sapir-Whorf hypothesis, also termed as linguistic relativity and linguistic determinism respectively. According to this oversimplified binary, the weaker version of the Sapir-Whorf hypothesis claims that linguistic differences lead to the world being cut up in different ways in terms of the conceptual categories made available by a language. Whereas the stronger version claims that the way a language cuts up the world determines how its speakers conceptualize their world.

Although the Sapir-Whorf hypothesis is known by the names of Edward Sapir and Benjamin Whorf, the principle of linguistic relativity can be traced back to the reflections of Wilhelm von Humboldt on linguistic diversity. Humboldt made a radical departure from the philological ruminations of his predecessors and contemporaries by nurturing unknown European languages (e.g. Basque), which deviated considerably from the Latin mould. Humboldt wrote that the profound dissimilarities among languages were a window into a world that needed to be explored, as language was “the forming organ of thought” (as cited in Deutscher, 2010). In the domain of anthropology, the works of Franz Boas, who argued that there is an indirect relationship between the culture of a tribe and the language that they speak, have had an obvious influence on the formulation of linguistic relativity. It was Boas who drew the

attention of the linguists to the Eskimo snow vocabulary as an evidence of how language and culture were closely intertwined (Boas, 1911). The Sapir-Whorf hypothesis has been invoked very creatively both by its detractors and supporters. The stronger version of the hypothesis has been labelled with pejoratives such as “the great Eskimo vocabulary hoax” (Pullum, 1991), and “a collective suspension of disbelief” (Pinker, 1994), employed to debunk it as an anthropological canard. In an essay bearing this title, Pullum severely criticises the manner in which an incidental observation by Franz Boas about the number of snow words in the language of the Eskimos, has been blown out of proportion. Pullum compares the reference to Eskimo vocabulary to a general tendency among anthropologists reporting on indigenous cultures to overstate their case: “And the alleged lexical extravagance of the Eskimos comports so well with many other facets of their polysynthetic perversity: rubbing noses; lending their wives to strangers; eating raw seal blubber; throwing grandma out to be eaten by polar bears” (Pullum, 1991: 162). Probably the strongest criticism of the hypothesis comes from Pinker (1994), who debunks linguistic determinism “a conventional absurdity”. Pinker writes:

The famous Sapir-Whorf hypothesis of linguistic determinism, stating that people’s thoughts are determined by the categories made available by their language, and its weaker version, linguistic relativity, that differences among languages cause differences in the thoughts of their speakers [...] is wrong, all wrong. The idea that thought is the same as language is an example of what can be called a conventional absurdity (Pinker, 1994: 57).

Despite this skepticism, linguistic determinism has found expression in contemporary social movements organized around language, as well

as in popular culture. The feminist critique of language which looks upon language as a mode of consolidating a patriarchal world order indirectly subscribes to linguistic determinism of some variety. The reformist agenda of the feminist does so even more directly as it rests on the assumption that changing how we talk about women will change how we think about them. Perhaps the most notable statement of linguistic determinism in popular culture comes in the dystopian vision of the Orwellian Newspeak that looks upon language as the ultimate technology for thought control. Orwell’s *Nineteen Eighty Four* is one of the most powerful critiques of historical revisionism of the kind practised by dictatorial regimes, where language is projected as an instrument not only for re-writing the past but also for controlling the present.

Neo-Whorfian Shift in Linguistics

Mainstream linguistic thought in the latter half of twentieth century has been shaped by two tenets: a) universalism and b) modularity. Universalism defines the dominant narrative in linguistics in terms of the theory of universal grammar, pushing cross-linguistic differences to the margins of linguistic inquiry. Modularity dictates that the faculty of language is equated with what is referred to as the computational-representational system or the narrow syntax, while the conceptual-intentional system merely defines the external legibility conditions on the faculty of language (Chomsky, 1995).

With the emergence of cognitive linguistics in early 1990s, the focus of linguistic enquiry appears to be shifting away from these tenets. While universalism continues to occupy an important place in linguistic thought, the universalist narrative has become more inclusive, as the modularity tenet has been seriously questioned by the cognitive linguistic assumptions about the cross-modular nature of

linguistic operations. Thus the new universalism is not about a universal grammar of language, but a universal grammar of linguistic and conceptual systems (Langacker, 1999, 2009). An inevitable consequence of this shift of focus has been the renewed interest in the empirically attested cross-linguistic differences, and how such differences might shape or influence the conceptual structures underpinning language.

Empirical studies investigating the issue of how cross-linguistic differences may give rise to differences in patterns of conceptualization cover a broad spectrum, encompassing linguistic phenomena such as spatial and temporal expressions, mass-count distinction in nominal expressions, semantic versus grammatical gender, causal relations, and several others. The research question common to all these investigations can be stated as follows: Languages differ in the way they describe the world. Do these cross-linguistic differences give rise to differences in the way language users cognize their world? Behavioural studies suggest that language does play a mediating role in the conceptualization of reality. Let us consider some of these studies below.

It is well known that languages differ in how they encode spatial locations such as left-right and spatial relations such as containment and support. Let us take up spatial locations first. Levinson (1996) noted that while most European languages use a relative spatial frames such as left-right and front-back to describe locations of objects, Tzeltal, a Mayan language relies heavily on absolute reference (roughly translatable into the English North-South directional system). In Tzeltal, spatial locations that are north are described as downhill whereas the ones that are south are described as uphill. To investigate whether this difference of linguistic frames employed by a language has cognitive consequences, Levinson (1996) conducted a behavioural experiment with Dutch and Tzeltal speakers over a range of non-

linguistic orientational tasks. The results indicated that the Dutch speakers overwhelmingly employed a relational frame, whereas the Tzeltal speakers relied heavily on absolute reference in their performance on a non-linguistic task. The evidence from non-linguistic behavioural tasks thus indicates that the referential frame and distinctions made available by a language constrain spatial thinking in non-linguistic domains.

Similar results have been reported on tasks involving spatial relations such as containment and support. English and Korean are known to be different in the way they encode the spatial relations of containment and support. English distinguishes between putting things into containers and putting them on surfaces (apple in the bowl/letter in the envelope versus book on the table/picture on the wall). Korean crosscuts this containment versus support distinction by distinguishing between loose and tight containment and support. The language uses the relational term *nehta* for “apple in the bowl” as an example of loose containment and *kitta* for “letter in the envelope” as an example of tight fit. *Kitta* is also used for support as in “magnet on the refrigerator”, which is again an instance of close fit. McDonough, Choi, & Mandler (2003), reported a behavioural experiment involving a non-linguistic spatial relations task to investigate whether English and Korean speakers differed in their cognition of space along the parameters of support versus containment and loose versus close fit. Results showed that the English speakers did not distinguish between the close versus loose fit in picture displays, whereas the Korean speakers did. When given several examples of close fit, together with one of loose fit, the Korean speakers could easily pick the odd man out, whereas the English speakers could not. Behavioural studies have shown that cross-linguistic distinctions in temporal descriptors

have similar consequences for the way speakers of these languages conceptualize time (Boroditsky, 2001).

Another area of investigation in this context is the cross-linguistic differences in the domain of gender encoding. Languages are known to opt for semantic or grammatical encoding of gender on nouns. Both English and Bangla for example, opt for semantic gender in the sense that entities in these languages are either masculine, feminine or neuter as per their semantic category. Hindi, on the other hand, opts for grammatical gender in that the inanimate entities are assigned an arbitrary masculine/feminine gender, which also has a grammatical reflex in agreement marking. Behavioural studies have shown that speakers of languages with grammatical gender tend to categorize objects in non-linguistic tasks as masculine and feminine, depending on how these objects are categorized in their languages, and this gender assignment influences the language users' cognitive representations of these objects. In one such experiment, speakers of Spanish and German (both languages opt for grammatical gender), were asked to give similarity judgments on objects. Both groups rated grammatically feminine objects to be more similar to females and grammatically masculine objects as more similar to males. Speakers assigned masculine or feminine properties to objects depending upon whether the objects had masculine or feminine gender in their respective languages (Boroditsky, Schmidt & Phillips, 2003). In a recent comparative study of Hindi/English and Bangla/Hindi bilinguals, Mukherjee (2018), investigated the issue of the relation between presence versus absence of grammatical gender in a language, and conceptualization of inanimate objects in the Indian context, taking into consideration three languages: Hindi, Bangla, and English. Of these, Bangla and English have semantic gender, whereas Hindi has grammatical gender. The study sought to investigate how the presence

or absence of grammatical gender in these languages impacts object categorization by their bilingual users. The tasks included gender and voice assignment to different inanimate and natural objects. The results indicated that the presence or absence of grammatical gender in the first language of a bilingual user has an impact on the user's object categorization judgment. Furthermore, if the second language of the bilingual user is characterized by the presence of grammatical gender, as in case of Bangla-Hindi bilinguals, then the bilingual users show differential behavior with respect to object characterization, depending on whether they are simultaneous or sequential bilinguals (Mukherjee, 2018).

These and several other studies have shown that speakers of different languages think differently. The results suggest that conceptualization is mediated by language, and what we usually call thinking is actually a complex set of interactions between linguistic and conceptual representations and processes.

Implications for Language Pedagogy

Language teachers have for long been interested in how the similarities and differences between the source and target language may help to predict areas of relative ease and difficulty in language learning. Traditionally, however, ease and difficulty have been defined primarily in terms of structural similarities and differences between the source and target languages. The neo-Whorfian perspective takes the pedagogical interest in linguistic diversity beyond structural similarities and differences. Since the perspective considers language similarities and differences as pointers to the underlying conceptual similarities and differences, it prepares the ground for the language teacher to rethink relative ease and difficulty in terms of conceptual similarities and differences. Thus, the notions of relative ease

and difficulty are not defined in terms of structural similarity and difference, but rather in terms of conceptual congruence and incongruence. Accordingly, areas that are conceptually translatable across languages are likely to emerge as easier to learn than the ones that are conceptually untranslatable. Let us consider an example of what this shift could entail for language pedagogy.

Multiword non-compositional expressions such as idiom chunks—an area often relegated to rote learning—could be approached differently. At the core of most of such expressions is a cross-domain metaphorical mapping. The pedagogical materials need to distinguish between cross-domain mappings that the source and target languages share and others that are different, and focus on mappings that are peculiar to the target language. Thus, while metaphorical mappings that entail conceptual metaphors such as “love is a journey” or “argument is war” would seem to cut across Hindi and English, a mapping such as “shy as a bride” would not. Arbitrary differences in how cross-domain mappings work cross-linguistically would therefore be presented as instances of conceptual incongruence. The untranslatable mappings would be acknowledged as potential areas of difficulty and paid attention to. Similar cross-linguistic studies of linguistic and conceptual incongruence in the areas of space and time, grammatical gender, causal relations, etc., would yield areas that need attention in the teaching/learning situation.

Summing up, the neo-Whorfian perspective on linguistic diversity strikes a natural chord with the language teacher. This approach has two implications for the language classroom: a) bringing the source language back into the classroom, and b) focussing on source language-target language similarities and differences in the conceptual domain, rather than in the structural one. Both of these implications

have a cognitive linguistic imperative in common—language learning is a meaning-centred process, where meaning is equated with conceptualization.

Bibliography

- Boas, F. (1911). Introduction to The Handbook of North American Indians, vol.1, *Bureau of American Ethnology Bulletin* 40, Part 1. Washington D.C.: Smithsonian Institution. (Reprinted in 1963 by Georgetown University Press).
- Boroditsky, L. (2001). Does language shape thought? Mandarin and English speakers' conceptions of time. *Cognitive Psychology*, 43 (1), 1-22.
- Boroditsky, L., Schmidt, L., & Phillips, W. (2003). Sex, syntax, and semantics. In D. Gentner & S. Goldin-Meadow (Eds.), *Language in mind: Advances in the study of language and thought* (pp. 61-78). London: MIT Press.
- Bowerman, M. (1996). The origins of children's spatial semantic categories: Cognitive versus linguistic determinants. In J. Gumperz & S. Levinson (Eds.), *Rethinking linguistic relativity* (pp. 145-176). Cambridge, MA: Cambridge University Press.
- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: The MIT Press.
- Deutscher, G. (2010). *The language glass: Why the world looks different in other languages*. New York: Henry Holt and Company.
- Langacker, R.W. (1999). *Grammar and conceptualization*. Berlin/New York: Mouton de Gruyter.
- Langacker, R.W. (2009). *Investigations in cognitive grammar*. Berlin/New York: Mouton de Gruyter.
- Levinson, S. (1996). Frames of reference and Molyneux's question: crosslinguistic evidence. In P. Bloom and M. Peterson (Eds.), *Language and space*. Cambridge, MA: The MIT Press, pp. 109-169.
- McDonough, L, Choi, S. & Mandler, J. (2003). Understanding spatial relations: Flexible infants, lexical adults. *Cognitive Psychology*, 46, 229-259.

- Mukherjee, S. (2018). Linguistic relativity and grammatical gender: A study of Bangla-Hindi and Hindi-English Bilinguals. *Aabhyantar: SCONLI 12 Special Edition*, 1(6), 152-161.
- Orwell, G. (1949). *Nineteen eighty four*. London, UK: Secker and Warburg.
- Pinker, S. (1994). *The language instinct: The new science of language and mind*. London: Penguin Books.
- Pullum, G. (1991). The great Eskimo vocabulary hoax. In *The great Eskimo vocabulary hoax and other irreverent essays on the study of language*. Chicago, IL: University of Chicago Press, pp. 159-171.
- Sapir, E. (1921). *Language: An introduction to the study of speech*. New York, NJ: Harcourt, Brace and Company.
- Sapir, E. (1924). The grammarian and his language. *The American Mercury* 1. New York: Alfred A. Knopf, pp. 149-155.
- Whorf, B. L. (1956). Science and linguistics. In J.B. Carroll (Ed.), *Language, thought and reality: Selected writings of Benjamin Lee Whorf*. Cambridge, MA: The MIT Press, pp. 207-219.

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