

1 The Sapir-Whorf hypothesis and the bilingual turn in the study of language and cognition

In science ... novelty emerges only with difficulty, manifested by resistance, against a background provided by expectation. Initially, only the anticipated and usual are experienced even under circumstances where anomaly is later to be observed. Further acquaintance, however, does result in awareness of something wrong or does relate the effect to something that has gone wrong before. That awareness of anomaly opens a period in which conceptual categories are adjusted until the initially anomalous has become the anticipated.

Kuhn, [1962] 2012: 64

My approach to writing is also informed by my fascination with history, or rather with our ongoing dialog with the past, where we continuously ask new questions about where we have been and receive new answers that have a bearing on where we go next. The preference for the diachronic over the synchronic also informs this introductory chapter, whose aim is to examine why, until recently, bilingualism played no role in discussions of language and thought and to understand what brought about the change. Yet, despite my love of history, I am not a historian of science – readers interested in the history of ideas about language diversity and thought should consult Allan (2007), Joseph (2002), Koerner (2002), Lucy (1992a), and Leavitt (2011). My own goal is to draw on these and other sources to discuss two lesser-known aspects of the history of what we know as the Sapir-Whorf hypothesis (SWH). To explain what happened to Humboldt’s idea of second-language (L2) learning as a way to transcend the boundaries of the first language (L1), I will depart from the traditional preoccupation of English-language academia with its own history and compare the treatment of Humboldt’s ideas in the US with that in Western Europe, Russia and the USSR. Then I will consider the invention of the SWH tradition in the US and ask how likely is it that Humboldt, Sapir, and Whorf, all of them multilingual and fascinated by language learning and change, believed that language determines thought? And if they did not, who did?

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1.1 The Sapir-Whorf hypothesis: a story of manufactured consent

1.1.1 Humboldt: *Weltansicht* vs *Weltanschauung*

Historiographies of linguistic relativity commonly trace the idea that languages are linked to the worldviews of their speakers to the eighteenth-century Romantic movement that spread from Étienne Bonnot de Condillac (1715–1780) and Jean-Jacques Rousseau (1712–1778) in France to Johann Georg Hamann (1730–1788) and Johann Gottfried von Herder (1744–1803) in Germany. Critics of rationalist and universalist assumptions of the Enlightenment, Hamann and Herder viewed language as the organ of thought and argued that each nation or people (*Volk*) has a unique national spirit (*Volksgeist*) and a distinct way of thinking, reflected in their language:

If it is true that we cannot think without thoughts, and that we learn to think through words, then language gives to the whole of knowledge its limits and contours ... We think in language ... and in ordinary life it is indeed apparent that thinking is almost nothing more than speaking. (Herder, translated in Leavitt, 2011: 78)

While Herder did extol the superiority of German, with its flexible word order, he also opposed those who saw some languages as more evolved than others. The fact that some languages had few, if any, number words, for instance,¹ was interpreted by Herder as indicative of people's needs and lifestyles, rather than any deficiency of language or thought:

How few do most savages have, however rich, excellent, and developed their languages may be! Never more than they needed. (translated by Forster in Herder, 2002: 120)

The implications of these pluralist ideas for cognition and perception were further developed by Prussian diplomat, philosopher, and philologist Wilhelm von Humboldt (1767–1835). An avid language learner, whose languages ranged from Sanskrit to Basque, Humboldt viewed languages as self-contained systems that encoded unique worldviews: “each language draws a circle around the people to whom it adheres” (1836: LXXV, translated in Humboldt, 1963: 294). His notion of *worldview* was not, however, unitary: Humboldt differentiated between *Weltansicht*, the fundamental capacity of the mind to process the world through language and to organize it into concepts, and *Weltanschauung*, an interpretive system or ideology that is subjective and not language-bound. Underhill (2009) emphasizes that the cornerstone of his linguistic philosophy was *Weltansicht*, the largely unconscious way in which we follow the patterns of our language in negotiating daily reality. For Humboldt, these patterns were

¹ For an in-depth discussion of number, see Chapter 3.

neither predetermined nor arbitrary, rather they reflected the ongoing mental activity, in which language, an interactive tool of human cognition, accommodated our evolving needs, and the relationship between the mind, the language, and the world was dynamic and mutually constitutive:

the persistent *work of the mind* in using language has a definite and continuing influence even on the true structure of the language and the actual pattern of its forms; but it is a subtle influence, and sometimes escapes notice at first sight. (translated by Heath in Humboldt, [1836] 1999: 148)

Humboldt was also preoccupied with the ways in which we transcend language boundaries, be it via language refinement and reinvention in literature and especially poetry (which he saw as a major mechanism of language development and change) or via learning of foreign languages:

it is possible for the individual to escape [the language circle] only by stepping into a different one. The learning of a foreign language should therefore mean the gaining of a new standpoint toward one's world-view, and it does this in fact to a considerable degree, because each language contains the entire conceptual web and mental images of a part of humanity. If it is not always purely felt as such, the reason is only that one so frequently projects one's own world-view, in fact one's own speech habits, onto a foreign language. (Humboldt, 1836: LXXV; translated by Cowan in Humboldt, 1963: 294)

This last sentence identifies the phenomenon that in the next century would become one of the cornerstones in the study of bilingualism, the influence of the L1 on the L2. Ironically, Humboldt himself fell victim to this influence – in translation, his distinction between *Weltansicht* and *Weltanschauung* disappeared and language was linked to the all-encompassing *Weltanschauung* or *worldview* (Underhill, 2009). But it was not just *Weltansicht* that was ‘lost in translation’ – so was Humboldt's interest in L2 learning effects.

1.1.2 The many readings of Humboldt: from Moscow to the Hudson

1.1.2.1 *Humboldt in Geneva: la polyglossie est une plaie sociale* The first scholarly study of multilingualism and thought inspired by Humboldt's ideas was Izhac Epstein's (1862–1943) doctoral dissertation *La pensée et la polyglossie* [Thought and multilingualism] (1915), carried out at the University of Lausanne in Switzerland. Following Herder and Humboldt, Epstein (1915) posited that “chaque peuple a une façon particulière et caractéristique de grouper, afin de les nommer, les choses et leurs propriétés, les actes et les rapports” [every nation has a particular and characteristic manner of grouping things and their properties, actions and relations, in order to name them] (p. 115). To examine the implications of this variation for thought – operationalized as different types of mental operations, including inner speech,

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mental translation, and calculation – he conducted a study of school students' perception and memory for foreign language words. Epstein (1915) also collected questionnaire data from 23 multilinguals, with questions addressing perceptions of translation (non-) equivalence in the respondents' languages, cross-linguistic influence, verbal imagery invoked by particular languages, the language of mental calculations, and the language of participants' dreams. The questionnaire also asked: "Pensez-vous quelquefois en langue étrangère et à quelle occasion?" [Do you ever think in a foreign language and when (on what occasion)?] (p. 11).

Based on this data, supplemented with his own introspections and observations of multilingual children and adults, Epstein (1915) concluded that multilinguals associate languages with people, contexts, and domains and spontaneously adjust inner speech, depending on the topic and imagined settings and interlocutors. Mental calculations, he found, are commonly conducted in the L1 or in the language in which mathematical instruction took place. He also pointed to the effects of learning contexts, where languages learned in communicative settings may be linked directly to thought, while languages learned through the grammar-translation method may be linked to translation equivalents and require mental translation.

While Epstein's (1915) view of linguistic thought was not particularly sophisticated, some of his ideas about bilingualism appear quite modern and in sync with our own. His views of the relationship between the L1, the L2 and the conceptual store are reminiscent of later distinctions between coordinate and subordinate bilingualism, his ideas about *une influence négative ou inhibitrice* of the previous language of conversation in the case of an abrupt language change pre-date by almost a century our notions of language activation and inhibition, while his reflections about *l'interférence* and *l'intercalation* invoke our own ideas about language transfer, code-switching, and lexical borrowing. These parallels make the ending of his monumental thesis all the more striking to the present-day reader. Arguing that bilingualism slows down the thought process through activation of alternative options in other languages, Epstein (1915) concludes: "La polyglossie est une plaie sociale" [Multilingualism is a social ill] (p. 210). Since bilingualism could be particularly harmful for young children whose thought processes were still developing, his recommendation was to begin foreign-language instruction in later childhood and to limit it to reading and basic everyday expressions, the only two skills an educated person really needed.

Yet debates about 'language effects' are rarely about language only and sometimes not about language at all: at their core are concerns about political power, nationhood, citizenship, immigrant assimilation, and distribution of economic resources. Epstein's (1915) conclusions need to be understood within the historical context of early-twentieth-century Europe, where Herderian and

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Humboldtian romantic nationalism inspired the emergence of monolingual nation-states from the ashes of multilingual empires. State attempts to ‘manage’ linguistic diversity fueled anxieties in multilingual settings torn by ethno-linguistic conflicts, such as Belgium, Catalonia, Czechoslovakia, Luxembourg, Switzerland, and Wales, giving rise to arguments about the negative consequences of bilingualism (Weinreich, 1953).

In multilingual Switzerland, divisions along ethnolinguistic lines were intensified by World War I: many German speakers sympathized with Germany, while the bulk of French and Italian speakers sided with the allies (Watts, 1999; Widmer, 2004). The demographic balance, however, was quite uneven: in 1910, German speakers represented 73% of the Swiss population, French speakers 22%, Italian speakers 4% and Romansch speakers 1% (Anderson, 1991). Thus, it should not be surprising that a dissertation written in 1915 in a French-medium university would take a strong stance against a perceived threat of potential Germanification.

In Wales, Welsh–English bilinguals (especially in rural areas) were shown to perform worse than monolingual children on a variety of tasks (Saer, 1924; Saer, Smith & Hughes, 1924; Smith, 1923). These findings were explained by the superior “accuracy of thought” of monolingual children (Smith, 1923: 282). What is particularly interesting about this case is that the negative consequences of bilingualism – as an intellectual impediment and a site of a cognitive, linguistic and emotional conflict – were used in defense of both official (English) language instruction and minority (Welsh) language education.

An unfavorable view of bilingualism – at least that of the lower classes – was also expressed by one of the best-known European linguists of the era, Otto Jespersen (1922):

It is, of course, an advantage for a child to be familiar with two languages: but without doubt the advantage may be, and generally is, purchased too dear. First of all the child in question hardly learns either of the two languages as perfectly as he would have done if he had limited himself to one. It may seem, on the surface, as if he talked just like a native, but he does not really command the fine points of the language. Has any bilingual child ever developed into a great artist in speech, a poet, or orator? (p. 148)

This negative view was further developed in Nazi Germany, where bilingualism – associated with Jews, Poles, and other minorities – was regarded as a cause of ‘mercenary relativism’, intellectual deterioration and mental inferiority, and the only exception was made for German children who learned a dialect at home and the standard at school (Henss, 1931; Müller, 1934; Sander, 1934; Schmidt-Rohr, 1933; Weisgerber, 1933). The view of bilingualism as a site of inner conflict was often grounded in the notion of *Weltanschauung*, adopted for a variety of purposes by Neohumboldtian linguists of the Third Reich (Hutton, 1999; Leavitt, 2011; Underhill, 2009). Sander (1934), for instance, argued:

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Bilingualism leads not only to harmless speech errors, but it goes deeper, especially when it is imposed by force in early childhood, and endangers the closed and self-centered wholeness of the developing structure ... Every language establishes, as an articulated system, a very definite, relatively uniform and closed orientation of perception, feeling, and thinking in those who speak it. The consequence [of bilingualism in children] is that the inner attitudes which are conditioned by language will not stand unconnectedly beside one another, but will enter into conflicting tensions in the child's soul ... This functional opposition of two language formations can lead to shake-ups of the structure. (Sander, 1934, translated by Weinreich, 1953: 119–120)

Only after the collapse of the Third Reich would the United Nations (UN) and other international organizations articulate new conceptions of bilingualism and linguistic rights.

1.1.2.2 *Humboldt in Moscow: “the right to think, feel, speak and learn in the native language”* Duchêne's (2008) study of the legal construction of linguistic minorities in the UN shows that the impetus for recognition of linguistic rights came from the representatives of the USSR who criticized Western policies as assimilationist and were opposed by the representatives of ideologically monolingual nation-states, such as France. The Soviet critique was grounded in the distinct reading Humboldt's ideas got in Russia and then in the USSR.

Translated into Russian in 1858, Humboldt's work reached the wider educated public through the book *Mysl' i iazyk* [Thought and language] (1862), authored by a prominent linguist Aleksandr Potebnya (1835–1891). His romantic nationalism found a warm reception among Russian intelligentsia who, in the 1860s, tried to create a new educational system for Russia's emancipated serfs and for its vast non-Russian population. Herder's and Humboldt's ideas inspired Russian linguists – including Polish-Russian linguist Baudouin de Courtenay, the founder of the St. Petersburg school of linguistics, and Fortunatov, the founder of the Moscow school – to prioritize populist goals, such as spelling reforms, language and education policies, and documentation of Russia's languages and dialects (Alpatov, 2005; Dowler, 2001; Hirsch, 2005; Smith, 1998).

Russia's leading educator, Konstantin Ushinskii (1824–1870), also echoed Humboldt when he argued that all children need to begin education in their native tongues because “when a native language disappears, a people is no more!” (Dowler, 2001: 52). His arguments were aimed at Russia's elite, who privileged French over Russian even in the nursery, but they were also taken seriously by educators working with non-Russian speakers. One of them was Nikolai Il'minskii (1822–1891), who pioneered transitional bilingual education for Russia's *inorodtsy* [non-Russians] and documented and standardized several languages (Dowler, 2001). In the era of liberalization and linguistic

tolerance that followed the Russian revolution of 1905, Il'minskii's approach inspired an expansion of native-language schooling (Dowler, 2001) and education conferences affirmed the right of every Russian citizen – with the exception of Belarussians and Ukrainians, who were seen as speakers of Russian dialects – “to think, feel, speak, and learn in the native language” (Smith, 1998: 30–31).

The love of Humboldt and a deep belief in language rights were then inherited by Soviet linguists, who codified more than 40 languages, standardized established languages, transferred written languages from Arabic script (associated with Islam) to the Latin alphabet (associated with internationalization and modernity), and created an unparalleled system of bi- and multilingual education in more than 70 languages (Hirsch, 2005; Pavlenko, 2013; Smith, 1998).

Humboldt's and Potebnia's views on language and thought also influenced Soviet academics, most notably developmental psychologist Lev Vygotsky (e.g., Luria, 2001: 26; Vygotsky, 1986: 240) and literary critic Mikhail Bakhtin (e.g., Bakhtin, 1986: 67, 101), who further developed their ideas about inner speech and language as an activity and a form of thought.²

Vygotsky (1935) also reviewed the arguments about the negative consequences of bilingualism made by Epstein (1915), Saer, Smith & Hughes (1924), and others, and juxtaposed their findings with those of Ronjat (1913) and Pavlovitch (1920), whose case studies highlighted the advantages of bilingual development. He then concluded that the key to positive effects of multilingualism was the proper pedagogical approach and that the complex issue of the relationship between multilingualism and thought required an extensive program of empirical study, which should not be affected by overreliance on standardized testing and assumptions of racial and social inferiority common in Western research. He also pointed out that the non-verbal nature of certain tests should not be seen as evidence of their non-linguistic nature.

Vygotsky's early death precluded him from undertaking such studies and, after his passing, they were not a priority in the country that had already embraced multilingualism and was focused, first, on raising levels of education and literacy and then on recovery from the devastation and damage inflicted by World War II. Yet the interest in the relationship between language and worldview shared by Humboldt, Potebnia, and Vygotsky, and their focus on the word, were maintained in Soviet and post-Soviet linguistics that continued to explore – albeit in an essentialized form – cross-linguistic variation in *kartiny mira* [worldviews] through the prism of lexical categories (e.g., Frumkina, 2001; Karasik et al., 2005; Zalozniak et al., 2005).

² For further discussion of Bakhtin and Vygotsky, see Chapter 6.

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1.1.2.3 *Humboldt on the Hudson*: “We have room for but one language here” In the United States, Herder’s and Humboldt’s views, transmitted via Heymann Steinthal (1823–1899) and William Whitney (1827–1894), found a new life in the work of a German immigrant,³ Franz Boas (1858–1942). Distancing himself from Herderian and Humboldtian essentialism and the affinity between languages and people’s ‘genius’, Boas adopted their pluralism and – like Potebnya and Baudouin de Courtenay – argued that all languages should be systematically investigated and explained on their own terms, without preconceptions about their structure or inferiority, for they offer an important window into the human mind and culture:

In various cultures these classifications may be founded on fundamentally distinct principles ... For instance: it has been observed that colors are classified in quite distinct groups according to their similarities, without any accompanying difference in the ability to distinguish shades of color. What we call green and blue is often combined under a term like “gall-color”, or yellow and green are combined into one concept which may be named “color of young leaves.” (Boas, [1911, 1938] 1965: 190)

Boas’ chief interest was in cross-linguistic variation in obligatory categories – that is, in what the different languages require you to encode – and its implications for mental activities. Yet his comments on color categorization – a subject of heated debate in his time, as we will see in Chapter 2 – show that, in his view, differences in color lexicons did not imply differences in the ability to distinguish colors, just as limited number encoding was not indicative of limited cognitive capacities. Rather, he was intrigued by the ways in which the automatic nature of language use placed these differences below the threshold of awareness, making the categories of one’s native language appear ‘objective’:

the categories of language compel us to see the world arranged in certain definite conceptual groups which, on account of our lack of knowledge of linguistic processes, are taken as objective categories, and which, therefore, impose themselves upon the form of our thoughts. (Boas, [1920] 1966: 289)

Boas’ student at Columbia, Edward Sapir (1884–1939), developed these ideas further and argued that “such categories as number, gender, case, tense, mode, voice, ‘aspect’ ... are not so much discovered in experience as imposed upon it because of the tyrannical hold that linguistic form has upon our orientation in the world” ([1931] 1964: 128). His paper *The status of linguistics as a science* put forth what came to be seen as a manifesto of linguistic relativity:

³ The common treatment of Boas and Sapir as German immigrants is, in fact, oversimplified. Boas, who came in the United States at the age of 29, was a German-speaking Jew who left Germany with its rising anti-semitism, and Sapir, whose family settled in the United States when he was 6, was a child of Yiddish-speaking Lithuanian Jews from Lauenberg, an area of Prussia that now belongs to Poland (Darnell, 1990).

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Language is a guide to ‘social reality’. Though language is not ordinarily thought of as of essential interest to the students of social science, it powerfully conditions all our thinking about social problems and processes. 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 or reflection. The fact of the matter is that the ‘real world’ is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached ... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation. (Sapir, [1929] 1949: 162)

This passage is commonly used to attribute linguistic determinism to Sapir, yet, as Leavitt (2011) justly points out, the standard quotes usually end with “labels attached” or skip a part of the text, between “labels attached” and “We see”, replacing it with the three dots. In the original text, Sapir illustrates his argument with an example of a simple poem, whose understanding requires “a full comprehension of the whole life of the community as it is mirrored in words, or as it is suggested by overtones” ([1929] 1949: 162). This argument, reminiscent of Bakhtinian *heteroglossia*, emphasizes shared perspective, or intersubjectivity, with other speakers of the language in question, and it escapes the attention of those who favor simplistic interpretations. Even Sapir’s hyperbole, “the tyrannical hold”, does not imply an actual constraint on thought – language patterns, for Sapir, are akin to grooves which may be easier to follow automatically yet may be overcome, through poetic expression, linguistic study, or the process of learning a foreign language. His description is reminiscent of that offered earlier by Humboldt:

To pass from one language to another is psychologically parallel to passing from one geometrical system of reference to another. The environing world which is referred to is the same for either language; the world of points is the same in either frame of reference. But the formal method of approach to the expressed item of experience, as to the given point of space, is so different that the resulting feeling of orientation can be the same neither in the two languages nor in the two frames of reference. Entirely distinct, or at least measurably distinct, formal adjustments have to be made and these differences have their psychological correlates. (Sapir, [1924] 1949: 153)

The preoccupation with what is required to speak a foreign language in a target-like manner was shared by Benjamin Lee Whorf (1897–1941), a chemical engineer and amateur linguist who studied with Sapir at Yale. Whorf, too, saw the learning of another language as a way to transcend the categories of one’s own:

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the best approach is through an exotic language, for in its study we are at long last pushed willy-nilly out of our ruts. Then we find that the exotic language is a mirror held up to our own. (Whorf, [1941a] 2012: 178)

Whorf's own research on 'exotic' languages such as Hopi – which he studied with an informant in New York City and then, in 1938, on the Hopi reservation in Arizona – revealed categories unfamiliar to speakers of English and led to his linguistic relativity principle:

users of markedly different grammars are pointed by their grammars towards different types of observations and different evaluations of externally similar acts of observation, and hence are not equivalent as observers but must arrive at somewhat different views of the world. (Whorf, [1940] 2012: 282–283)

This paragraph – arguably one of the most cited in the history of linguistics – is usually interpreted as a deterministic statement, yet in the context of Whorf's other work it becomes an argument "about the seductive force of habit" (Leavitt, 2011: 146). Like Humboldt and Sapir before him, Whorf, too, believed in the plasticity of the human mind and its ability to go beyond the categories of the mother tongue. This belief permeates the poignant plea for 'multilingual awareness' made by the terminally ill Whorf to the world on the brink of World War II:

I believe that those who envision a world speaking only one tongue, whether English, German, Russian, or any other, hold a misguided ideal and would do the evolution of the human mind the greatest disservice. Western culture has made, through language, a provisional analysis of reality and, without correctives, holds resolutely to that analysis as final. The only correctives lie in all those other tongues which by aeons of independent evolution have arrived at different, but equally logical, provisional analyses. ([1941b] 2012: 313)

Whorf's arguments fell on deaf ears, because they were made in a climate significantly less tolerant of linguistic diversity than that of the late imperial Russia and the USSR. In the nineteenth century, large immigrant communities in the US (in particular German speakers) enjoyed access to native-language education, press and theater. The situation began to change during the period often termed the Great Migration (1880–1924), when approximately 24 million new immigrants entered the country (US Bureau of the Census, 1975). The overwhelming influx raised concerns about national unity and the capacity of American society to assimilate such a large body of newcomers. In 1917, when the US entered the European conflict declaring war on Germany, the anti-immigrant sentiments found an outlet in a strong movement against 'the language of the enemy': German books were removed from libraries and destroyed, German-language theaters and publications closed, and German speakers became subject to intimidation and threats (Luebke, 1980; Pavlenko, 2002a; Wiley, 1998).