



The  
**Bilingual**  
Mind

and what it tells us about  
language and thought

ANETA PAVLENKO

CAMBRIDGE

# The Bilingual Mind

*and what it tells us about language and thought*

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## The Bilingual Mind

If languages influence the way we think, do bilinguals think differently in their respective languages? And if languages do not affect thought, why do bilinguals often perceive such influence? For many years these questions remained unanswered because the research on language and thought had focused solely on the monolingual mind. Bilinguals were either excluded from this research as 'unusual' or 'messy' subjects, or treated as representative speakers of their first languages. Only recently did bi- and multilinguals become research participants in their own right.

Pavlenko considers the socio-political circumstances that led to the monolingual status quo and shows how the invisibility of bilingual participants compromised the validity and reliability of findings in the study of language and cognition. She then shifts attention to the bilingual turn in the field and examines its contributions to the understanding of the human mind.

ANETA PAVLENKO is Professor of Applied Linguistics at Temple University (Philadelphia) and President of the American Association of Applied Linguistics (AAAL). Her book *Emotions and Multilingualism* (Cambridge, 2005) won the 2006 Book of the Year Award of the British Association of Applied Linguistics.

## Tables

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1.1 Bi- and multilingualism: key terms and definitions	<i>page</i> 22
1.2 The evolution of symbolic cognition	27
2.1 Bilinguals' color categories	55
2.2 Bilinguals' object categories	75
3.1 Bilinguals' number processing	94
4.1 Motion events in Russian and English	138
4.2 Bilinguals' motion categories	144
4.3 Bilinguals' event construals	162
5.1 Bilingual autobiographical memory	192
5.2 Bilinguals' autobiographical narratives	195
6.1 Bilinguals' inner speech	216
6.2 Bilinguals' interpretive frames	230
7.1 Bilinguals' emotion categories	258
7.2 Affective processing in bilingual speakers	287

## Acknowledgments

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I have always wanted to write this book. In fact, I sent a proposal for a similarly titled book to Andrew Winnard at Cambridge University Press when I was still finishing my dissertation. Fortunately, he never responded. I want to thank Andrew for the wisdom of ignoring that proposal (as a novice writer I was not ready to write this or any other book), for taking the book on, ten years later (when it seemed I was ready), and for his patience, when the writing process took years longer than it was supposed to (it turned out I was not as ready as I thought I was). The key to the transformation of a hesitant writer into a confident one was the quality of the interactions I had, over the years, with many wonderful colleagues, some of whom became close personal friends, and with many books, essays, and articles, some of which also became dear friends.

My favorite books will become obvious when you start reading this one and so I turn to people. For their generous friendship, productive collaboration, inspiration, ongoing dialog and, in some cases, feedback on parts of this book, I am deeply indebted to Panos Athanasopoulos, Ewa Badowska (who introduced me to Eva Hoffman's work), Emanuel Bylund, Jean-Marc Dewaele, Alexandre Duchêne, Marianne Gullberg, Catherine Harris, Scott Jarvis, Michèle Koven, Barbara Malt, Viorica Marian, Alexia Panayiotou, Ingrid Piller, Monika Schmid, Robert Schrauf, and Li Wei. For their constructive feedback and criticism, I am very grateful to the anonymous readers, to students in my Bilingual Mind class, and to two graduate students, Rafał Jończyk (the first reader of this book) and Elizabeth Ann Hepford, for the time and effort they put into reading the manuscript and helping me make it more accessible to novice scholars. I am very thankful to Barbara Schmiedtová and Guillaume Thierry, who opened their labs for me and allowed me to take part in their experiments, and to Andrew Pawley and Caleb Everett, who promptly responded to my inquiries. I have also greatly benefitted from sometimes brief, sometimes long but always memorable conversations with Colin Baker, Mary Besemeres, Vivian Cook, Susan Ervin-Tripp, Cliff Goddard, John Gumperz, Steven Kellman, Claire Kramsch, William Labov, John Lucy, Michel Paradis, Gustavo Pérez Firmat, Klaus Scherer, Dan Slobin, Tzvetan Todorov, and Anna Wierzbicka. Special thanks to François Grosjean, whose *Life with Two Languages* inspired

me to study bilingualism, whose insistence led to my first publication in the field, and whose friendship and support over the years meant more to me than I can ever say in any language.

At Temple University, I have the privilege to work in a very supportive academic environment, with wonderful colleagues, great students, and that wonder of the modern academic world, unfailingly supportive administration. For being there when I needed them most and for letting me be myself, I am deeply grateful to Dean James Earl Davis, Associate Dean James Byrnes, and outstanding department chairs Michael Smith and Thomas Walker.

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## Preface

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Let me begin this book by confessing that its title is a misnomer and a misrepresentation. In reality, there is no such thing as *the* bilingual mind: bilinguals vary greatly in linguistic repertoires, histories, and abilities, and *the bilingual mind* appears here as an umbrella term to refer to a variety of speakers, including multilinguals. The modifier *bilingual* is also a problem because languages are not easily identifiable, discrete, and countable entities. A popular source of information on world languages, *Ethnologue*, states upfront that the boundaries between them are blurry and that languages are best seen as continua of features that change across time and geographic space.<sup>1</sup> These continua are nevertheless psychologically real to their speakers and we would be remiss if we did not try to understand their functioning in contexts where speakers see themselves as learning another ‘language’ or speaking more than one ‘language’. Respectful of this psychological and social reality, throughout this book, I will unapologetically use the terms ‘language’, ‘bilingualism’, and ‘multilingualism’, all the while recognizing their discursively constructed, approximate, and interpretive nature.

Yet the biggest oversimplification in the title is arguably the *mind* – we will see that the mind/body dichotomy is illusory and embodiment is central to understanding the bilingual mind. The *mind* also leads the reader to expect an overview of linguistic and cognitive processing in bilingual speakers but this is not my aim. De Groot (2011) and Grosjean and Ping Li (2013) have authored superb introductions to the psycholinguistics of bilingualism and I see no need to cover the same ground. This book will focus exclusively on the interaction between language and cognition or thought<sup>2</sup> and its genre could be defined as an academic quest that seeks answers to four questions: Are we justified in treating ‘language’ and ‘cognition’ as independent entities? If so, what do we mean by linguistic thought, that is, what, if any, aspects of cognition are mediated by language? Is linguistic thought affected by cross-linguistic differences?

<sup>1</sup> [www.ethnologue.com/about/problem-language-identification](http://www.ethnologue.com/about/problem-language-identification)

<sup>2</sup> The two terms will be used interchangeably in order to avoid reifying a distinction encoded in English.



And if so, how do speakers of more than one language resolve ambiguities and accommodate such differences? A decade or two ago, such a project would have been impossible, because the first question had already been answered in the positive, the second and third were – and by some still are – answered in the negative, and the last was – and by many still is – deemed irrelevant. The purpose of this book is to justify its relevance and to capture a passing moment in the ongoing change of scientific paradigms, *the bilingual turn* in the study of language and cognition.

One cannot speak about language and cognition from ‘nowhere in particular’ – my own approach is shaped by my North American context (in Europe, I would have written a very different book), my history of multilingualism and my professional training in linguistics. Now, I have to tell you immediately that I am not ‘a *linguist* linguist’. As perceptively noted by John McWhorter (2001), “regardless of the caliber of his work in another subfield, the linguist who does not display at least token interest in the Chomskian endeavor is not considered ‘a *linguist* linguist’ in the back of the minds of a great many in the field” (p. 282). I, for one, have never had any interest in the shape-shifting theory that dissociates language from human behavior. My academic home is in the fields of bilingualism and applied linguistics and I treat language not as Chomskyans do, with the focus on abstract structures, but as psycholinguists and sociolinguists do, with the focus on people. My treatment is further affected by my idiosyncratic linguistic repertoire that includes English, Russian, Ukrainian, Polish, French, Spanish, and Italian, but, alas, not ancient Greek, Latin, or German, nor any non-Indo-European languages, which means that at times I will be forced to rely on translations and interpretations by others.

I also would like to make transparent the criteria that guided my decisions in the writing process. To begin with the areas of research selected for review, I am fully aware that traditional research on linguistic relativity is limited to the subject matter of Chapters 2 (categorization of colors, objects, and substances), 3 (encoding of time, number, and space), and 4 (event construal) but does not extend to the topics of Chapters 5 (autobiographical memory and narrative thought), 6 (inner speech, interpretive frames, and accomplishment of intersubjectivity) and 7 (emotions). I am also aware that I have omitted some areas that come under the purview of mainstream linguistic relativity research, such as the effects of gender as a grammatical category.

My decision-making in this case was guided by three criteria. The first was the *relevance* of the research area to the understanding of the *bilingual* mind and it functioned as an inclusion criterion leading me to consider topics, such as inner speech, that are not commonly treated in discussions of language and cognition but are extremely relevant to bilingual experience. The exclusion criteria involved *interdisciplinarity*, that is availability of findings from more than one discipline that would allow for triangulation of evidence, and *ecological*

*validity*, that is availability of ethnographic studies and speakers' own testimonies that would link the scholarly issues to everyday lives. The research on gender has failed to pass the second and third test – for now, it is limited to a handful of psycholinguistic studies documenting effects (or lack thereof) in artificial tasks and it is not clear what, if any, implications these findings have for habitual thought. In contrast, studies of autobiographical memory and language emotionality pass all three criteria and reveal aspects of the interaction between language and cognition in the bilingual mind that are invisible in studies with monolingual speakers.

The second instance of decision-making involves the selection of studies reviewed in each chapter. While a reader new to a particular topic may be overwhelmed by the sheer number of studies and references (which is why I included tables summarizing the key studies), a reader familiar with language and cognition research will undoubtedly notice the absence of some personal favorites. Let me assure you that I am fully aware of and very familiar with many more studies than have made their way into this book, yet, like every writer, I face constraints on what is realistic to include and am forced to be selective. My choices have been guided by the following five principles. The first is *impact*, with priority given to studies that made the highest impact as seen in citation records. The second is *replication*: whenever possible, I favored studies whose findings have been replicated by other researchers (but see Chapters 2 and 3 for discussion of prominent cases of non-replication). The third, already discussed above, is *relevance*: despite what the reader may conclude, I do not cite everything I know (really!) and favor studies that move the narrative and the argument forward.

My fourth principle involves *rigor*: in discussion of empirical studies, I have prioritized more rigorous studies and thus studies that appeared in peer-reviewed journals over unpublished manuscripts, dissertations, and studies published as book chapters or conference proceedings. While I do not assume that peer-reviewed journals publish only the strongest work, having spent more than a decade on editorial boards, I have gained great respect for the unsung – and unpaid – heroes of the anonymous peer-review process, which serves to eliminate the weakest work, make mediocre studies stronger and, most importantly, to ensure a degree of transparency with regard to research design and participants. In my experience, empirical studies published in volumes where acceptance is commonly close to 100% (after all, the editors have invited the contributors) do not always pass the rigor standard and may display a variety of shortcomings, from extremely weak design (which prevented the authors from publishing the paper as a peer-reviewed article to begin with) to the lack of transparency with regard to research design and data analysis (which may conceal design weaknesses and threats to validity and generalizability). This is not to say that all studies cited here pass the rigor standard – in many cases

I chose to include studies that, in my view, are biased or flawed, because their biases and flaws also offer us important lessons.

My last principle is *accessibility*: throughout, I have favored journal articles, books, and chapters that are likely to be most accessible to the reader. I have also made three exceptions to this rule. The first involves historic sources, which I deem necessary for proper documentation of the genesis of research problems – in North America every source included here, including Epstein's (1915) dissertation, can be located through the interlibrary loan system. The second involves three recent conference papers, which by the time of the publication of this book will hopefully be available in an article format. The third involves sources in other languages: their use has been limited in the interests of transparency, yet since this is, after all, a book about multilingualism, I felt justified in referring to books and articles in languages other than English.

Now, a few words about my citation practice. My first principle is to avoid second-hand citation. In the case of this book, I have personally read every source and study cited, with the exception of German-language references from the Nazi era – there I go on the authority of Weinreich (1953) and of my German-speaking colleagues who translated some of these articles for me. My second principle is to use direct quotes whenever possible. I rely on direct citation much more than is common in academic literature but not because I lack words of my own. As a fan of Bakhtin's *raznoiazychie* [heteroglossia], I see great value in acknowledging the many voices we are in a dialog with and in giving authors a chance to speak in their own words and the reader an opportunity to see what people actually said, rather than what I think they said. In the spirit of ecological validity, I also appeal to comments by bi- and multilingual speakers and writers, including responses to the Bilingualism and Emotions Questionnaire (BEQ) Jean-Marc Dewaele and I administered through the web to more than 1,800 bi- and multilinguals around the world (Dewaele & Pavlenko, 2001–2003; Dewaele, 2010; Pavlenko, 2005).

My own writing is also characterized by heteroglossia, shaped by my dual citizenship in psycholinguistics and sociolinguistics. Conducting experimental research has taught me healthy respect for the challenges of empirical science, while discourse analysis and postmodernist theories provided the tools necessary for critical evaluation of the scientific enterprise. So here is a fair warning to the unsuspecting reader: in violation of conventions of respectable scholarly writing, I will shift mid-chapter, mid-paragraph, and sometimes even mid-sentence between the 'objective' tone of a positivist who believes in 'validity' and 'reliability' and the 'subjective' tone of a postmodernist who privileges bi- and multilinguals' own accounts and 'discursively constructed selves'. And if I do not treat either epistemological tradition with the deference and respect they undoubtedly deserve, it is because I am irreverent by nature and do not think that a single academic discipline – not even one as revered as North American

psychology – is capable of telling a full story of what being bilingual means to real people like you and me.

Only stories can make things real and so, taking a break from the tedious minutiae of research design and participant selection, we will walk down memory lane with Nabokov, place our hands in the water with Helen Keller, steal pears with Saint Augustine, and read poetry written by Chagall. At times, I will point out serendipitous connections between people or phenomena and at other times I will leave traces in the text for the readers to make their own connections. I will also leave you with questions to which I do not have any answers. In this, I follow the advice of my favorite expert on academic writing, Bill Germano, who encourages us to write scholarly books as unfinished quests, for which the reader alone can provide the unwritten chapters. It is all yours now.

# Contents

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<i>List of tables</i>	page vii
<i>Acknowledgments</i>	ix
<i>Preface</i>	xi
1 The Sapir-Whorf hypothesis and the bilingual turn in the study of language and cognition	1
1.1 The Sapir-Whorf hypothesis: a story of manufactured consent	2
1.2 The bilingual turn in the study of language and cognition	18
1.3 The evolutionary turn in the study of language and cognition	25
2 Material worlds: linguistic categorization of the ‘kaleidoscopic flux of impressions’	40
2.1 Methodological approaches to the study of linguistic categorization	41
2.2 Referential indeterminacy and factors affecting lexical choice	43
2.3 Colors	45
2.4 Objects and substances	64
2.5 Language effects in categorical perception: color, cups, and cattle	80
3 Multidimensional worlds: number, time, and space as linguistic systems of symbolic relationships	84
3.1 Numbers	85
3.2 Time	103
3.3 Space	114
3.4 Language effects in numerical, temporal, and spatial cognition: three cows in the field	123
4 Dynamic worlds: linguistic construal of motion events	126
4.1 Motion	128
4.2 Event construal	155
4.3 Language effects in motion cognition: ‘reprogramming’ the mind	166
5 Narrative worlds: locating ourselves in storylines	169
5.1 Autobiographical memory: linguistic or non-linguistic?	172
5.2 Autobiographical narratives and their effects on autobiographical memory	177
5.3 Bilinguals’ autobiographical narratives and memories	188
5.4 Language effects in autobiographical memory: Damasio’s error?	202

6	Discursive worlds: inner speech, interpretive frames, and the accomplishment of intersubjectivity	206
6.1	Bilingualism and inner speech	207
6.2	Bilingualism and intersubjectivity	224
6.3	Language effects in the use of interpretive frames: speaking with a forked tongue?	242
7	Emotional worlds: emotion categorization, affective processing, and ascription of significance	245
7.1	Emotion theories and their implications for the bilingual mind	249
7.2	Emotions as linguistic categories	253
7.3	Emotions as social categories	267
7.4	Affective processing	280
7.5	Language effects in the bilingual body: 'feeling for speaking'	296
8	The bilingual mind and what it tells us about language and cognition: some renegade thoughts	299
8.1	Whorfian effects of the first kind: the illusion of seamless concord	299
8.2	Whorfian effects of the second kind: thought insofar as it is linguistic	300
8.3	Whorfian effects of the third kind: destabilization of language effects	302
8.4	Where to from here? The bilingual turn in academic research	309
	<i>References</i>	316
	<i>Author index</i>	369
	<i>Subject index</i>	378

# 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?

## 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,<sup>1</sup> 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

<sup>1</sup> 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,