The strikingly similar titles of Cook and Bassetti’s Language and Bilingual Cognition (LBC) and mine, Language and Cognition in Bilinguals and Multilinguals: An Introduction (LCBMI), suggest that these two volumes have a very similar coverage. But contrary to this suggestion, they clearly complement rather than duplicate one another, the fleeting misperception of duplication being caused by the reader’s spontaneous assignment of the same meaning to the noun language and the conjunction and shared by the two titles while implicitly different senses are emphasized.

The larger part of LBC deals with the time-honored question of linguistic relativity, that is, the question of whether our thinking is influenced by the structural characteristics of the language we speak. In addressing this question, LBC is particularly concerned with the implications of linguistic relativity for bilinguals, whose two languages can differ in the way their grammar and lexicon reflect particular aspects of reality and, consequently, may exert a different influence on thought. So language in LBC’s title refers primarily to the structure of (specific) languages, the language system, and and is used in a relational sense, the book trying to elucidate the relation between language structure and thought. Although language in the sense of language use is the focus in a couple of LBC’s chapters, in the majority of them it is present implicitly only in the role of mediator, the languages’ specific structural characteristics under examination exerting their potential effects on thinking through habitual language use (and, initially, language acquisition). Cognition in LBC’s title is used as synonymous to thought, mental life, and in the myriad studies reviewed in LBC particular aspects of cognition (e.g., the mental representation of objects, colors, time, space, or motion) are typically examined by means of nonverbal tasks (e.g., choosing the most similar objects or color chips from a set; memorizing spatial arrangements and reproducing them after having changed orientation in space).

Instead of focusing on language structure, language in LCBMI emphasizes language use, verbal behavior, in its various forms (especially speaking, listening, and reading) and the mental processes involved. In most of the experimental work discussed in LCBMI bilingual participants performed some verbal task, such as reading words or sentences or producing words, and the influence of the contextually inappropriate language on performance was determined. The conjunction and in the volume’s title is used in a loose coordinate sense, intending to convey the information that the volume does not deal exclusively with language use, verbal manifestations of bilingual cognition, but that it has something to say about nonverbal manifestations of it as well. In fact, the sections of LCBMI that deal with nonverbal bilingual cognition address the same issues as LBC does, but the two volumes cover them in very different proportions. For instance, LCBMI has a section on linguistic relativity and how it plays out in bilingualism, but this section covers only 2.5% of the volume while, as mentioned, the larger part of LBC deals with this topic. Conversely, both volumes discuss the relation between bilingualism and nonverbal executive control, but this is a more central topic in LCBMI than in LBC.

There are further salient differences between the two volumes: LCBMI is a monograph intended as an introduction in psycholinguistics from the viewpoint of the bilingual language user and is meant to be accessible to undergraduates (in cognitive psychology and applied linguistics). Instead, LBC is an edited volume that aims at a more advanced and specialized audience, its 25 chapters written by experts in their respective fields: applied linguistics, psychology, anthropology, and philosophy. A further salient difference is the degree of linguistic sophistication that speaks from the two volumes, this being much larger in LBC than in LCBMI. This difference obviously follows from LBC’s focus on language diversity and how it relates to cognitive diversity. In turn, this specific focus is likely to be responsible for a final clear difference between the volumes: The bilinguals examined in LCBMI most often master a pair of typologically close languages (e.g., two Germanic languages), and those in LBC more often master two distant languages (e.g., Chinese and English). Plausibly, the larger a particular structural difference between a pair of languages, the larger the chance a differential effect on cognition materializes, hence the focus on distant-language bilingualism in LBC.

LBC consists of three parts. Part A, containing six chapters, pays tribute to the founding fathers of the linguistic relativity research field: Edward Sapir, Benjamin Lee Whorf, Franz Boas, and Wilhelm von Humboldt. In addition, it provides an informative overview of the themes, current methods, and find-
ings in the field, doing so from the perspective of the different contributing disciplines (linguistics, psychology, anthropology, and philosophy) and focusing on cross-language studies of monolingual speakers of different languages. It thus lays the foundation for Part B, which contains 15 chapters and deals with LBC’s core issue: language diversity and cognition in bilinguals. Finally, Part C, containing four chapters, considers implications of the insights gained from research on bilingual cognition for various settings, such as language teaching and marketing. The book concludes with an entertaining epilogue on how linguistic relativity has inspired the science fiction literature.

Parts A and B both start with an introductory chapter in which the editors prepare their audience in two ways for what comes. First, they introduce the cognitive domains that have been examined most in the study of linguistic relativity (e.g., motion and time) and briefly point out how each of these is assumed to relate to a specific structural difference between languages (e.g., differences between languages in the way they encode the manner and path of motion and in their use of grammatical tense). Second, they introduce a couple of important distinctions (to be explained later) that greatly help the reader to mentally organize the diverse studies in this field and to see how all the volume’s chapters indeed heap together under its title, Language and Bilingual Cognition, even though on first glance there appear to be some strangers in their midst (not all chapters deal with linguistic relativity).

In the introductory chapter of Part A, Cook furthermore poses the preliminary questions of whether differences in thinking between people exist at all and, if so, whether such differences are indeed correlated with differences between the languages they speak (instead of being correlated with the different cultures and environments they live in). On the basis of a succinct presentation of the available evidence, Cook gingerly provides affirmative answers to both these questions, concluding that “at least some aspects of human cognition are not universal” (p. 6) and that “some aspects of cognition seem to go with particular aspects of language in a measurable way” (p. 9).

Cook then takes the next logical step, wondering whether the correlation between language and cognition implies causality and considering both possible directions of causation, from cognition to language and from language to cognition. Of course, the latter direction of causality constitutes the tenet of linguistic relativity theory, bringing Cook to pose a final question: whether changing people’s language actually alters their (nonverbal) cognition. This being so is the central idea in the aforementioned epilogue on linguistic relativity as it features in science fiction (think of George Orwell’s 1984 [1949] and Jack Vance’s The Languages of Pao [1958/1974]). But more to the point in view of LBC’s main subject, the widespread phenomenon of second-language (L2) learning provides a natural playground to examine effects of language change on people’s cognition (after all, adding a new language to one’s linguistic repertoire involves language change). Furthermore, acquiring two languages from the start (simultaneous bilingualism) should result in a cognitive disposition that differs from cognition in monolingual language users. Indeed, it is due to the growing understanding that L2 learning and bilingualism may have consequences for cognition that linguistic relativity researchers have started to embrace L2 learners and bilinguals as suitable, perhaps even ideal, participants in their experiments (see Pavlenko, 2005, for a discussion). Not only LBC but also a second recent edited volume on language and thought in bilinguals (Pavlenko, 2011) and a special issue of Bilingualism: Language and Cognition (Jarvis, 2011) attest to this.

As mentioned, Cook and Bassetti present a couple of contrasts that enable the reader to help structure LBC’s content and to see the connections between the chapters. Two correlated contrasts concern one between transient and lasting effects of language on cognition and a second one that distinguishes between effects of linguistic diversity on online thought processes during language use on one hand and those on nonlinguistic cognition as manifested in nonverbal tasks on the other hand. The thinking that takes place during language use was coined “thinking-for-speaking” by Dan Slobin (1987), who gathered a substantial amount of evidence showing that such thinking is language specific, that is, that the thought processes that are mobilized to express a particular mental content in one language differ from those mobilized when the same content is to be expressed in another language. The reason these thought processes are language specific is that they must be must be molded to map onto the available linguistic means, that is, the grammatical and lexical categories that are encoded by the language to use (and that differ between languages). This thinking-for-speaking is presumably synonymous with conceptualization, the cognitive processing that in models of speech production (e.g., Levelt, 1989) is assumed to be the first stage in the production process. (Note, however, that Slobin uses thinking-for-speaking as an umbrella term that covers
not only the thought processes involved in speech but also those involved in reading, listening, writing, and other forms of language use.)

In LBC thinking-for-speaking is presented as a weak version of the hypothesis that language influences cognition. This version is cursorily alluded to in many chapters, and it is the main object of study in some. The strong version, though, the one assuming a lasting influence of language structure that is manifest in cognitive tasks that do not involve the use of language, is the focus of LBC’s attention. Note, however, that the two versions are closely related, the lasting effects of language-specific structures on nonverbal cognition originating from the fact that during language use the available structures time and again enforce a particular mode of thinking. Dealing primarily with bilingualism, LBC specifically aims to discover whether bilinguals’ thinking-for-speaking in two languages causes their nonverbal cognition to differ from that of monolinguals. The reported evidence suggests that such is the case and that this holds not only for bilinguals who have grown up with two languages but also for those who acquired a second language later in life. A conclusion that language structure exerts lasting effects on nonverbal cognition therefore should not be taken to mean that such effects are nonmalleable but only that they extend beyond actual language use into nonverbal areas of cognition.

A further relevant contrast pointed out by the editors distinguishes between two fundamentally different ways in which bilingualism can exert an effect on cognition: at a micro level and a macro level. Micro-level effects result from a specific linguistic contrast between a bilingual’s two languages. For instance, French and English differ in the way they express motion, and, consequently, monolingual speakers of English may think about motion in a different way from monolingual speakers of French. One of the possible effects of this cross-linguistic difference on French–English bilinguals may then be that their thinking about motion involves some merger of French-specific and English-specific motion cognition. In the majority of LBC’s chapters such micro-level effects of bilingualism on cognition are examined, and these are the ones that reflect the linguistic relativity research tradition.

Cognition may also be influenced by bilingualism per se, the fact that the people in question know and use two languages, irrespective of the structural contrasts that exist between these two languages. Such effects of bilingualism are called macro-level effects by the editors. As I argued in LCBMI, studies that look at such effects are relatively easy to design because they are not constrained by the availability of specific linguistic contrasts that may affect cognition in a specific way. Furthermore, in studies of this type it is not imperative that all bilingual participants master the same pair of languages so that participant recruitment is relatively easy.

Two of LBC’s chapters clearly deal with macro-level effects of bilingualism on cognition. One of them discusses the effect of knowing two languages on theory of mind (TOM), defined as the human faculty that “permits us to reason about the mental states of others—their beliefs, desires, and intentions—and to understand and anticipate how these can differ from our own and from reality” (p. 431). The little evidence there is suggests that bilingual children are better at TOM tasks than monolingual children, as is, for instance, suggested by bilingual children’s superior ability to recognize appropriate responses in a conversation and violations of conversational maxims such as Grice’s “maxim of manner” (which prescribes that a speaker should avoid ambiguity, confusion, and obscurity). The second chapter on macro-level effects of bilingualism on cognition focuses on the beneficial effects of bilingualism on nonverbal executive control, a topical issue in the study of bilingualism that has been popularized by, especially, Ellen Bialystok and the present chapter’s author (David Green). The underlying idea is that bilinguals must incessantly control their two languages and that this has turned them into experts in executive control in general. That expertise in language control transfers to executive control as required in nonverbal behavior has been demonstrated in multiple ways, for instance by showing a bilingual advantage when the performance of bilinguals and monolinguals is compared on visual-motor tasks that require the inhibition of conflicting visual information (e.g., the Simon task).

In passing, these two chapters on macro-level effects of bilingualism on cognition exemplify a further relevant contrast in this field of study, also mentioned by the editors: It has to be established whether a particular effect of bilingualism on cognition is caused by knowing or by using two languages. An effect of bilingualism on TOM is plausibly due to knowing two languages, more precisely, to a higher level of metalinguistic awareness that knowing two languages as compared with knowing just one brings about. Conversely, an effect of bilingualism on general executive control is probably caused by extensive practice in using the two languages appropriately in each specific context,
which forces the general executive control system to incessantly monitor that performance is in accordance with the contextual requirements and to adapt it the moment it deviates from these requirements.

To get back to LBC’s core theme of linguistic relativity, the volume’s joint chapters provide a kaleidoscopic picture of the great structural diversity among natural languages. In addition, they suggest that the cross-language differences in question affect nonverbal cognition in subtle ways and that these differences can play out differently in bilinguals and monolinguals. There are languages other than English that require their speakers to specify in the verb whether an event they are talking about was actually witnessed by them or whether they know about it through hearsay. Conversely, English marks verbs for grammatical tense, requiring that the time of happening of an event (in the past, present, or future) is coded in the verb, whereas in other languages (e.g., Mandarin) time coding in linguistic expressions is optional, and if time is coded at all, it is by means other than verb marking. Languages differ in aspect marking, that is, in whether or not action verbs are inflected to indicate that the action being talked about is completed or still going on (the perfective–imperfective distinction in English). They also differ in how they deal with grammatical number, plural marking of nouns referring to inanimate objects being obligatory in some languages (e.g., in English glass must be pluralized as glasses) but forbidden in others (e.g., Japanese or Yucatec). These latter languages talk about inanimate objects the same way the former talk about substances (from the English perspective, treating glass as if it were a mass noun like sugar or sand). Furthermore, languages differ in grammatical gender marking and the degree to which grammatical gender and natural gender may be correlated, in how they code the location of objects in space (e.g., in relative or absolute terms) or describe movements through space, in the direction of their writing system and whether the written symbols map onto meaning directly or via phonology, in how many words they have to describe the color spectrum, and in what means they have to describe emotional states. Languages even appear to differ in whether verbs that describe the handling of objects specify the shape the objects take during the handling action: In Navajo “a blanket laid out flat requires a different verb stem from a rolled-up blanket” (p. 221).

In LBC, all these cross-language differences and their potential effects on nonverbal monolingual and bilingual cognition come up one way or the other, in reviews of the literature or in original experimental work. Space limitations prevent me from detailing how each of them may affect nonverbal cognition. I will therefore confine myself to a detailed illustration of the effect of language diversity on motion cognition, the cognitive domain that is represented most prominently in LBC and perhaps also in linguistic relativity research in general (Slobin, 2003, called it his “parade-case” in developing his thinking-for-speaking theory). In addition, a brief illustration regarding time cognition will be presented, just to demonstrate that language structure indeed influences cognition across a more varied range of cognitive domains.

Because motion is a universal human experience, all languages have means to describe motion events, but the means to do so differ between them. Two features can be distinguished in all motion events: their path (the location change) and manner (the way the location change is effectuated, e.g., by running, crawling, creeping, jogging, strolling, or whatever other way we can move from A to B). Considering these two aspects of motion, Talmy (2000) classified natural languages in two categories. “Satellite framed” (S) languages, such as the Germanic and Slavic languages, encode paths by means of prepositions and particles (the eponymous “satellites,” e.g., in, out, under) while they convey manner in verbs (e.g., crawl, trod, jump, run, walk, fly, sprint). In contrast, “verb-framed” (V) languages, such as the Romance and Semitic languages, encode path in verbs (e.g., Spanish entrar, “enter,” and cruzar, “go across”), whereas the encoding of manner in these languages is optional, and, if expressed at all, it is done by means of adverbial phrases. A correlated difference is that S-languages have more verbs expressing manner of motion than V-languages do. As a consequence of these two different patterns of expressing motion, speakers of S-languages are thought to attend to manner more, and are consequently more sensitive to it, than speakers of V-languages, whereas speakers of V-languages are more attentive and sensitive to the path of motion events (Czechowska & Ewert in LBC; Slobin, 2003). Consequently, in addition to expressing themselves differently in verbal tasks that require them to describe motion events, speakers of S- and V-languages may also behave differently in nonverbal tasks that reflect motion cognition (e.g., memory, mental imagery, or visual perception tasks).

One possible consequence of these differences between S- and V-languages for L2 learning is that the way motion events are verbalized changes when native speakers of an S-language are learning a V-language (or vice versa). A second is that the changes in verbal expression to be observed become reflected in
nonverbal task performance as well, suggesting cognitive change. In LBC Hendriks and Hickmann examine the verbal descriptions that L1 English learners of L2 French (and English and French monolinguals) provided when they were presented with animated cartoons showing motion events and asked to describe them in French. Looking at language use, this study thus exemplifies a test of the weak thinking-for-speaking version of the linguistic relativity hypothesis. On the other hand, Czechowska and Ewert test its strong version by examining how differences between Polish and English in the expression of motion events affect nonverbal visual perception.

Even though they both qualify as S-languages, the path aspect of motion is lexicalized more prominently in English than in Polish. Czechowska and Ewert therefore hypothesized that speakers of English generally pay more attention to the path of motion than speakers of Polish during language use and that this might lead to differences in the perception of motion events between speakers of Polish and English. In addition, motion perception in Polish learners of English may change such that path of motion gradually becomes more salient to them.

In one experiment the researchers presented English and Polish monolinguals and three groups of L2 English speakers, all with Polish as their L1 but differing in their level of English proficiency, with pairs of photographs depicting motion events. The depicted events differed in manner or path of motion (e.g., one and the same woman walking or jumping into a room or walking into or out of it), and the participants were instructed to rate the similarity of each pair. In a further experiment, triads of these pictures were presented (e.g., the woman walking in vs. walking out vs. jumping in), and the participants were asked to select the two they regarded most similar. The performance of the two monolingual groups showed clear differences that could be related directly to their specific language experience and confirmed the hypothesis that English monolinguals focus more on path than Polish monolinguals (e.g., by showing higher similarity ratings for same-path picture pairs). The results furthermore confirmed the hypothesis that with increasing levels of English proficiency path of motion would become gradually more salient for the L2 English learners. Interestingly, the similarity ratings for same-path picture pairs of the most proficient learner group were even higher than those of the English monolinguals, suggesting that path of motion was more salient for the former group. The joint results suggested that in the least proficient L2 English speakers the conceptualization of motion had shifted to that akin to English, whereas in the two groups with a higher level of proficiency in L2 English a restructuring of motion cognition had taken place such that their conception of motion differed qualitatively from the way Polish and English monolinguals conceive of motion.

In addition to thus demonstrating two forms of cognitive change that can take place during L2 learning (conceptual shift and restructuring), Czechowska and Ewert stress a crucial point that has remained implicit so far, namely, that attention allocation plays a pivotal role in the development of conceptual representations from linguistic experience: The specific linguistic expressions perceived and produced by a language user (and learner) guide attention to specific aspects of the situations that embed these expressions, and what is attended to most becomes stored in the ensuing memory representations most prominently. This idea of attention as the underlying cognitive mechanism determining the content of conceptual representations, the changes of this content as a consequence of becoming bilingual, and the differences in conceptual content between monolinguals and bilinguals are three more general themes in LBC.

To provide one further example, in a chapter on Chinese–English bilinguals’ sensitivity to the temporal phases of action events, Chen and Su suggested that long-term experience with a language that contains explicit markings on the verb for tense and aspect (such as English) leads to a perceptual system that becomes sensitive to the temporal aspects of action events because these explicit markings direct speakers’ attention to time aspects of the event (Has it finished? Is it still going on? Will it take place in the future?). Conversely, people who lack such linguistic experience (e.g., Chinese monolinguals) should lack this specific perceptual sensitivity. But when such people start learning a new language containing grammatical tense and aspect marking, they may still gradually develop this sensitivity in parallel to learning the new language. These ideas are supported by an earlier study testing English and Chinese monolinguals and the current one testing Chinese speakers of L2 English. The results of the monolingual study suggested that English monolinguals perceive the present, past, and future phases of action events encoded in pictures but that Chinese monolinguals tend to perceive only an action event’s present phase. The current study (using a sentence–picture matching task) shows that Chinese–English bilinguals with a high level of English proficiency behave like the English monolinguals, similarly
manifesting sensitivity to the different temporal aspects of depicted action events.

*LBC*’s joint chapters provide more demonstrations of cognitive change resulting from L2 learning, and the combined evidence suggests that, in addition to cognitive shift and restructuring, L2 learning and bilingualism induce other types of cognitive change. One of them involves the fusing or mingling of an L1 concept and its most closely related L2 concept. L2 learning may also lead to the emergence of totally new concepts and the doubling of concepts in cases where a concept belonging to the new language deviates substantially from the most similar concept in the old language. In general, the joint chapters add to earlier evidence (reviewed by Pavlenko, 2005) that bilingualism leads to various types of cognitive change and enriches the methods to obtain such evidence.

It takes little imagination to see how some of these types of cognitive change evolving in tandem with learning a new language might bring about an increase of mental power or, conversely, how reducing one’s stock of concepts may have the opposite effect. In George Orwell’s *1984*, Oceania’s totalitarian regime designed Newspeak to curtail the thought of Oceania’s people, to render all thoughts that diverged from the principles of Ingsoc (the regime’s ideology) utterly unthinkable. In constructing Newspeak on the basis of Oldspeak, standard English, all linguistic means to express politically incorrect ideas were removed from the latter, and, to generally limit the variety of ideas that could be expressed, Newspeak’s vocabulary was brought down to an absolute minimum. This way, Oldthink, the thinking patterns associated with and enabled by Oldspeak, would no longer be possible, which was just as well because Oldthink was considered Crimethink, and you could end up in jail for it. To borrow and adapt Orwell’s terminology, Newspeak thus promoted Narrowthink, a confined mental world.

But as compared with being bilingual, just mastering Oldspeak English or any other single language also implies a form of Narrowthink. This idea is exploited in Vance’s *The Languages of Pao* (1958/1974), as related by Brooke in *LBC*’s epilogue. Here the people of Pao, monolingual speakers of a language that lacks verbs and thus fosters idleness, are occupied by the enemy. To cut a long story short, the hero, who happens to be a bilingual, persuades a portion of Pao’s population to learn a second language (*Pastiche*) that “allows its speakers to see the world more completely” (p. 563). This broader view of the world enables the L2 speakers to develop an efficient strategy to tackle the enemy, with the effect that peace is ultimately restored on Pao. In terms of Orwell’s vocabulary again, Doublespeak encourages Doublethink, thus lifting mental powers, including the knowledge of how to take advantage of them.

Fortunately for Singlethinkers, there are ways to increase one’s cognitive abilities other than becoming bilingual. One of them is engaging in metacognition. Dealing with language and thought—presumably the two quintessential abilities of humankind—*LBC* constantly invites metalinguistic and metacognitive thinking, time and again forcing the reader to step back from the text and reflect on the essence of language and thought. This is likely to lead to valuable new insights and changed views in all its readers. The great diversity of cross-language differences covered by *LBC* has strengthened my doubts about the existence of language universals and made me incline more toward the view that the recurrent patterns in linguistic organization as manifested among natural languages arise not from language universals but from universal constraints on human cognition (Evans & Levinson, 2009). In addition, I ponder more than before on the consequences of English having become the lingua franca among scientists despite the fact that it includes scientific concepts that have no proper equivalent in other languages (in one of *LBC*’s chapters Wierzbicka argues that cognition itself is such a concept). Another issue to brood on is the ubiquity of English as the L2 in bilinguals worldwide despite the fact that the total number of the world’s natural languages exceeds 3,000. The conclusion must be that, so far, we have come to know only a minuscule portion of what there is to know about bilingual cognition and that the task ahead of us is vast. *LBC* also makes one see the source of L2 English utterances that deviate from standard English and that can truly baffle a naive reader and listener at times. When I recently checked my e-mail after coming home from a visit to China, a number of messages from the people I had met there were awaiting me. They included phrases such as “It’s really a great honor to be with you in Beijing and Guanzhou” and “I am so glad to meet you at Guandong University of Foreign Studies.” But I was back in the Netherlands! The person who had accompanied me to the gate at Hong Kong airport even wrote, “How is your flight?” Knowing about the lack of grammatical tense in Chinese makes one realize that such grammatical infelicities result from transferring Chinese thinking-for-speaking to L2 English. In turn, such awareness informs the foreign language curriculum.
Learning about such themes and being encouraged to think more deeply about them is why reading *LBC* has been an extremely enriching experience to me. Anyone who wants to know more about the way bilingualism affects cognition, Singlespeakers and Doublespeakers alike, is strongly advised to get hold of a copy of *LBC* and get immersed in it. Mentally enriching Wide-think will be the reward.

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