Metalinguistic relativity: Does one’s ontology determine one’s view on linguistic relativity?

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Abstract

Linguistic relativity is a notion that has been met with both praise and scorn. We argue that there is correlation between theorists’ general conceptions of the nature of language, and their stance toward linguistic relativity. Starting with the proponents of the thesis, we distinguish between the relativists of the early days (Boas, Whorf) and modern neo-Whorfians (Levinson, Slobin), showing that the first but not the latter are committed to a view of language as a monolithic semiotic system contrasting “arbitrarily” with other such systems. Critics of the thesis also come from two diametrically opposed views of language. While universalists (Pinker, Bloom & Kiel) see the most significant part of language as pan-human cognitive structure (insulated from thought in general), socio-cultural theorists (Berthele, Björk) emphasize the nature of language as contextually situated activity. In both cases the potential for locally sedimented linguistic structures to influence thought is excluded or at best marginalized.

In response, we propose that a synthetic ontology of language as an experientially grounded semiotic system for meaning making in actual social contexts allows for the possibility for language to influence thought, though in different ways. These depend on whether we consider language as situated use, as sedimented conventions or as ultimately prelinguistic motivations for “universal” properties like predication. We argue that all three of these perspectives need to be considered. With the help of the Motivation and Sedimentation Model, which is based on such a linguistic ontology, and inspired by the integral linguistics of Eugenio Coseriu, we show how the deadlock in the debate over linguistic relativity can be resolved, and the possibility for discussion to proceed in less antagonistic manner.

Keywords: Linguistic relativity, neo-Whorfian, language and thought, linguistic philosophy, integral linguistics, phenomenology, Motivation and Sedimentation Model

Highlights

• Linguistic relativity is a controversial topic with strongly divergent interpretations, related to explicit and explicit standpoints on the nature of language, i.e. linguistic ontologies.

• Both proponents and opponents have focused on different dimensions of language: as situated practice, as a conventional semiotic system, and as universal cognitive process, but downplayed the need to integrate the three.

• A pluralistic ontology of language, such as that of the Motivation and Sedimentation Model, can clarify the crucial differences between different interpretations of linguistic relativity, and hopefully make the debate less polarized.
1. Introduction

In his investigation into the history of the human sciences, Foucault (1970[1966]) claims that the concept of language has undergone drastic transformations over time, maintaining that what we take to be “language” today differs substantially from what people thought about it during the Enlightenment, which in turn differs from Renaissance ideas and so on. The concept language, according to Foucault, has varied over the ages along with changes in predominant conceptual schemas. Albeit in a more restricted sense, Leavitt (2011) proposes something similar concerning the idea that differences between languages lead to different ways of thinking: linguistic relativity. As indicated by the title Linguistic Relativities the proposal is that this idea has metamorphosed across discourses and historical epochs. The differences between these manifestations are so profound that there does not seem to be a single, unified notion of linguistic relativity. One aspect of this variation has consisted of “alternating sets of images replacing each other periodically in a swinging of attitudes between wonderment at and denigration of the diversity of languages” (Leavitt, 2011, p. 212).

But what is perhaps the most intriguing observation in Leavitt’s historical exposé is how recent the contemporary notion actually is. Ever since the establishment of the term “linguistic relativity” in the introduction to the well-known compilation of texts by Benjamin Lee Whorf (Carroll 1956), there has been an upshot of contradictory interpretations, readings and meanings attached to it. Much of the contemporary discussion derives from a strongly critical reading based in cognitive psychology and “classical” cognitive science, which portrays linguistic relativity as conceptually incoherent and empirically dubious (e.g. Brown and Lenneberg, 1954; Fodor, 1975; Pinker, 1994; Carruthers, 2005). In part in response to this critique, reinterpretations by so-called “neo-Whorfians” have aimed to update methods and conceptual underpinnings in order to place the program on stable scientific footing (e.g. Lucy, 1992; Gumperz and Levinson, 1996; Slobin, 1996; Boroditsky, 2001; Levinson, 2003; Casasanto, 2008). There have been a number of debates whether results from experiments comparing speakers of different languages do in fact support linguistic relativity or not (e.g. Li and Gleitman, 2002; Majid, Bowerman, Kita, Haun and Levinson, 2004).

The debates surrounding linguistic relativity have often been fierce, and accepting a degree of exaggeration, one could agree with the claim that “the Whorf hypothesis seems to bring out the worst in those who discuss it” (Ellis 1993: 55). Whether or not the (hypo)thesis of linguistic relativity is true or not, we need to ask: why are there so many different and mutually excluding interpretations of it, and why have they so often been engaged in such hostile debate? A partial answer to these questions is that the idea does not single out a unitary theory or model, but can rather be seen as an umbrella term covering a family of related but different proposals (Wolff and James, 2011; Zlatev and Blomberg, 2014, 2015). To lump these together as if belonging to a monolithic theory is a misrepresentation, since while some focus on thought processes that are activated during actual speech production (e.g. Slobin, 1996), others emphasize the role of using any language as a mediating tool in solving cognitive tasks (e.g. Gentner, 2003), and yet others propose that domain-specific typological differences between languages (e.g. the expression of spatial reference, see Section 2) lead to corresponding cognitive differences (e.g. Majid et al., 2004).

But such differences do not account for the highly antagonistic nature of the debate: the second part our question above. Our main proposal in this article is that the fierce climate surrounding linguistic relativity is at least in part due to the fact that different “relativities”
emanate from radically different understandings of ontologically loaded concepts like language and thought. We propose that different ontological commitments at least correlate with different views with respect to linguistic relativity. Whether they “determine” or simply “influence” theoretical positions, thus corresponding to “strong” and “weak” versions of metalinguistic relativity, is more of an open question.

We focus on four types of positions in the debate. We begin by considering the proponents of the thesis in Section 2, first the early ones (Sapir, 1921; Whorf, 1956) and then contemporary neo-Whorfians such as Lucy (1997), Levinson (2003) and Majid et al. (2004), arguing that the first but not the latter display a strong influence from structural linguistics. We then turn to two kinds of criticism in Section 3. On the one side, there is the attack based on a view of language as an individual cognitive phenomenon under strong innate constraints (Fodor, 1975; Pinker, 1994). This implies that differences between languages are relatively minor, and that language and cognition are separate “modules,” with hardly any possibility for linguistic relativity. On the other side, there is the critique based on conceiving of language as fluid social discourse. This position rejects any notions of a context-independent “lexicon” and “grammar” that are not, at most, a second-order description of linguistic reality, and not language itself. Hence the possibility that differences in lexico-grammar may influence thought is ruled out (Björk, 2008; Berthele, 2013).

Having made our case that different understandings of language strongly affect how the concept of linguistic relativity is viewed, in Section 4 we propose a synthetic account, inspired by integral linguistics and phenomenology (Coseriu, 1985; Zlatev, 2011, 2018; Zlatev and Blomberg, in press). Within this proposal, the general phenomenon of language can be seen as existing on (at least) three different levels of linguistic reality: the situated, the sedimented, and the embodied, with corresponding epistemologies and methodologies. While we will not have the space to elaborate this framework in detail, we will explain the main point that neither of these levels is to be viewed as ontologically primary, and that the essence of the complex phenomenon of language is to be sought in their interaction. We conclude by proposing this as a suitable terrain for further explorations in linguistic relativity, which can hopefully proceed in a less antagonistic manner.

2. The Proponents

After having been scorned as little more than unscientific and ethically detestable speculation (e.g. Fodor, 1975; Brown, 1976; Pinker, 1994), linguistic relativity has undergone a reformulation leading to what Leavitt (2011, p. 208) describes as “the return of the repressed”. This reformulation and the subsequent changes in the reception of the idea are the result of at least two developments. First, modern methods for investigating linguistic relativity follow the standards of experimental psychology (Lucy, 1992; Majid et al., 2004). Second, current notions of language and thought are different from those of early 20th century North American anthropological linguistics (Sapir, 1921; Boas (1913[1911]). These two differences have led Leavitt (2011, p. 208) to state that contemporary research does not occupy a “Boasian terrain”. While both the Boasian and the Neo-Whorfian perspectives readily accept that differences between languages resonate with differences in thinking, they are not “on the same page”. Let us consider both positions in order, focusing in the latter case on a particularly influential branch of contemporary neo-Whorfian research concerned with how languages may structure our conception of space.
It is not known if Whorf had read *Cours de linguistique générale*, but the zeitgeist of the 1930s on both sides of the Atlantic had a structuralist character, carrying with it a view of individual languages as self-contained systems that are socially maintained, and prone to function as a “filter” on reality: “[t]he individual does not have the power to change a sign in any way once it has been established by the linguistic community” (Saussure, 1960[1916], p. 69) and “[w]ithout language, thought is vague, uncharted nebula. There are no pre-existing ideas, and nothing is distinct before the appearance of language” (ibid., p. 112).

American anthropological linguistics, with its emphasis on apparently boundless linguistic diversity, was in a sense the ultimate confirmation of this view. In addition, the “classificatory” aspects of discrete linguistic categories with respect to pre-linguistic experience were emphasized:

> Since the total range of personal experience which language serves to express is infinitely varied, and its whole scope must be expressed by a limited number of phonetic groups, it is obvious that an extended classification of experiences must underlie all speech. (Boas, 2013[1911], p., 24)

> It seems in retrospect quite natural that Whorf would have arrived at the *principle of linguistic relativity*, not through his own foray into the Hopi language, but through the influence of Boas’ insistence on the complexity of all languages and that “each language, from the point of view of another language may be arbitrary in its classification” (Boas, 2013[1911], p. 22). Similarly, Sapir claimed that “[n]o two languages are ever sufficiently similar to be considered as representing the same social reality” (Sapir 1949, p. 162). As holistic and internally determined systems, comprising both a lexicon and obligatory grammatical markings, languages give a particular structure to “reality” itself for those who have adopted them. This view is clearly expressed in what is perhaps Whorf’s most famous quotation:

> 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. (Whorf, 1956, p. 213)

We have very little control over this organization, as we are unaware of what is so customary to appear not as a rule or a convention, but as belonging to a natural and impartial classification of experience:

> [I]f a rule has absolutely no exceptions, it is not recognized as a rule or anything else; it is then part of the background of experience of which we tend to remain unconscious. Never having experienced anything in contrast to it, we cannot isolate it and formulate it as a rule until we so enlarge our experience and expand our base of reference that we encounter an interruption of its regularity. (Whorf, 1956, p. 209)

This conception of language, and consequently of linguistic relativity, is often called “linguistic determinism” (e.g. Dor, 2015), and is typically compared to a prison, or to a set of goggles that we cannot remove. However, when it comes to Whorf’s view on language, a more
appropriate metaphor would be that of a map. Any map is only a partial, and perspective-based representation of the territory. Yet, it is for Whorf not the same as the territory, unlike in certain structuralist and post-structuralist theories where the difference disappears (cf. Chandler, 2007). While we are prone to move around by this map and rely on it “habitually” (Whorf, 1956, p. 147), we can, albeit with some effort, categorize the world differently. In a less-often quoted paper, Whorf describes perceptual experience as constrained by principles such as those of Gestalt psychology, which are not language- and culture-specific but rather universal. Providing an argument reminiscent of phenomenology, Whorf even argues that this can give us the necessary methodological loophole for comparing different languages: “[t]o compare ways in which different languages differently ‘segment’ the same situation of experience, it is desirable to analyze or ‘segment’ the experience first in a way independent of any language or linguistic stock, a way which will be the same for all observers” (Whorf, 1956, p. 162; cf. Zlatev, Blomberg and David, 2010). Needless to say, even allowing the possibility to “analyze experience…independent of any language” goes beyond the strictures of languages as organizing otherwise chaotic thought, as expressed in the Saussurean quotations above.

Thus, there is arguably a degree of latitude in how deterministically one should interpret even the original “principle of linguistic relativity”. This may have contributed to the wealth of “relativities” that have followed (Leavitt 2011). Still, we may discern a certain take on the nature of language that is common to these versions of linguistic relativity. As expressed earlier: languages are monolithic, self-contained and differing from one another systems, which constrain and possibly even determine perceptual experience and thinking.

Let us now turn to the neo-Whorfians of the last two decades. The literature has grown to considerable proportions (see Leavitt, 2011; Wolff and James, 2011; C. Everett, 2013 for reviews), so we shall limit our discussion to one influential and frequently cited line of research, viz. whether differences in spatial semantics correlate with, and possibly influence, non-linguistic reasoning about space (e.g. Vandeloise, 1991; Levinson and Wilkins, 2006). Within this topic area, we focus on the category frame of reference (hence, FoR).

As with those who had worked on the “Boasian terrain” nearly a century earlier, neo-Whorfian research is predicated on cross-linguistic differences. However, due to progress in the semantic analysis of languages, it is no longer a matter of comparing languages in an ad hoc manner (e.g. Hopi vs. “Standard Average European”), but along dimensions found relevant by semantic typology. With respect to FoR there is considerable agreement in the field that “there are exactly three frames grammaticalized or lexicalized in language” (Levinson, 1996, p. 138). These three types are illustrated by the English sentences in (1-3).

(1) The shoe is to the east of the chair.
(2) The shoe is to the left of the chair.
(3) The shoe is in front of the chair.

The FoR in (1) is called “absolute” or “geocentric” and anchors the referent object (here, the shoe) according to fixed geo-cardinal coordinates. Example (2) involves a “relative” or “viewpoint-centred” FoR, where a real or imaginary perspective serves as the reference point, and coordinates are projected accordingly. Finally, (3) uses an “intrinsic” or “object-centred” frame, where the landmark object (here, the chair) and its functionally determined shape project the relevant coordinates. These frames have different logical properties: the intrinsic and absolute
frames express a binary relation between the reference object and the landmark object, while the relative frame is ternary (including someone’s perspective as a third element); the relative and absolute frames support transitive and converse inferences, while the intrinsic frame does not. For example, from (2) it follows that the chair is to the right of the shoe, but from (3) it does not follow that the chair is behind the shoe, or if that even makes sense. Hence, Levinson (1996, 2003) argues that the three frames are incommensurable; even though specific utterances can be translated across frames extensionally – the sentences in (1-3) could describe the same state-of-affairs – their respective inferences would not follow; hence any translation would remain partial.

Importantly, some languages privilege the use of one frame over another. The English example (1) may be a correct sentence, but would hardly be used outside of a joke or a linguistic paper, while languages such as Guugu Yimidhirr (Australian, Pama-Nyungan) and Tzeltal (Mayan, Yucatec-Core Mayan) would use such spatial descriptions regularly, as pointed out by (Levinson, 1996, p. 111):

This is the basic way to describe the relative locations of all objects separated in space on whatever scale. Thus if one wanted to pick out one of two cups on a table, one might ask for, say, the uphill one; if one wanted to describe where a boy was hiding behind a tree, one might designate, say, the north (downhill) side of the tree.

Of even more relevance for linguistic relativity, such languages do not use what is the most “natural” FoR from a Western perspective: the relative/viewpoint one:

[L]inguistic specifications like our to the left, to the right, in front, behind are not available in the language; thus there is no way to encode English locutions like ‘pass the cup to the left’, ‘the boy is in front of the tree’, or ‘take the first right turn’. (ibid., p. 111)

Levinson with colleagues have in a number of studies found that the predominant linguistic FoR in a particular language strongly influences the way in which non-linguistic tasks, such as ordering objects in a particular direction, are solved (Pederson, Danziger, Wilkins, Levinson, Kita and Senft, 1998; Levinson 2003; Majid et al., 2004). Testing participants from different cultures but similar dominant FoRs, and vice versa (similar cultures but different FoRs) have led the neo-Whorflan researchers to conclude that linguistic differences are the primary explanans (Majid et al., 2004). Thus, extensive testing with different language communities and different experimental paradigms has appeared to find support for linguistic relativity.

The reasoning above seems to imply categorical semantic differences between different languages, their (monolingual) speakers, and their corresponding thoughts. If, for example, Tzeltal speakers indeed lack the linguistic resources for expressing relations such as to the left/right of (Levinson 2003), then it in not unreasonable that they would at least find it more difficult to think in terms of such relations. However, at least some cases seem not to be categorical, but rather preferential, as with the relative unnaturalness in the English example (1). A more realistic example is offered by Tamil (Dravidian), which has both relative and absolute systems, but some dialects prefer one over the other. Pederson (1995) compared speakers of two Tamil dialects that differed in this way, and found that the two groups tended to solve non-linguistic spatial tasks in ways that corresponded to their linguistic preferences, even though “this difference in habitual
language use is not deeply rooted in the grammatical system” (ibid., p. 40). As could be expected, the differences in the non-linguistic tasks were statistical rather than categorical. Such gradience and context-sensitivity (present in some, and absent in other experimental conditions) of “Whorfian effects” have been a recurrent theme in the empirical findings.

As pointed out above, one of the focuses of neo-Whorfian research has been to establish a methodologically valid paradigm for investigating the relation between cross-linguistic differences and non-linguistic cognition, and there is little doubt that contributions have been made in this respect. As for the second aspect, concerning the nature of language, the neo-Whorfian point of view is reflected in Lucy’s (1997) differentiation between three types of “language influence on thought”: the semiotic type, the structural type, and the functional type. The first is concerned with “having a code with a symbolic component” (p. 292), i.e. with having a language as opposed to not having one. This general influence from language is different from the structural level where “quite different morphosyntactic configurations of meaning affect thinking about reality” (ibid.). Such an influence is concerned with different obligatory or preferential patterns is specific languages, like those concerning FoR discussed above. Finally, both of these are different from what Lucy calls a functional kind of influence, which involves “discursive practices [that] affect thinking either by modulating structural influences or by directly influencing the interpretation of the interactional context” (ibid.). Ultimately, there is of course interaction between the three types.

As we acknowledge in Section 4, these three “types of influence” correspond to the three levels of language acknowledged in integral linguistics, which have served as the basis for our pluralist conception of language. One may use Lucy’s terms here, to point out that while many neo-Whorfians appear to be mostly interested of the “structural” level (Levinson 2003, p. 211-212), the simple allowance of the “functional” level shows that structural differences are not conceived of almighty in any determinist fashion, but “modulated” by context, and indeed manifested in “discursive practices”, as in the work by Pedersen (1995), reviewed above.

We may sum up the major interrelated differences between the original Whorfian and the more recent neo-Whorfian takes on linguistic relativity with the following four points.

• On the one hand we have a “principle” which is derived from a conceptual scheme where language and thought are assumed to be closely related, if not identical, along with substantial linguistic differences. This principle was not fully a priori, and Whorf aimed to provoke empirical investigations. Still this was nowhere near a testable “hypothesis”; at best it corresponds to what we could today call a “research program” (Hill and Mannerheim 1992, p. 383; Zlatev and Blomberg, 2015). On the other hand, we have the studies of the neo-Whorfians with specific hypotheses, where (aspects of) language, thought, and culture are treated as separate variables aiming to exclude alternative explanations (e.g. Lupyan, 2012).

• While for Whorf, languages were seen to embody holistically complete interpretations of reality, the neo-Whorfians study “one category at a time” in a much more piecemeal fashion, and it is the semantics of such categories, like FoR (Levinson, 2003), or motion and aspect (Slobin, 1996) - which cut across languages non-holistically - that are correlated with potential cognitive differences, rather than languages as such.
• Rather than the determinacy of “structures” and “obligatory rules”, neo-Whorfians have been mostly interested in how habitual linguistic patterns exercise their influence by guiding actual language use, which is what in turn shapes cognitive habits (Pederson, 1995).

• In the footsteps of structuralism, Whorfians had a tendency to “bracket the referent” (Chandler, 2007), i.e. to assume that linguistic meaning is determined by language-internal relations without involvement of the real world of objects and events, constraints emanating from human perception, and extra-linguistic context. Or to put it in different terms: that the semantic “code” always underdetermines pragmatic meaning (e.g. Sperber and Wilson, 1995).

On the other hand, many neo-Whorfians readily acknowledge the difference between linguistic semantics, and full pragmatic meanings, which are specified with the help of inference and context (Levinson 2000). Support for such “pragmatic meanings” can be taken from co-speech gestures, which have been found to signify at least in part differently from the language spoken, for example indicating movement to the left or to the right without expressing this verbally (Kita and Özyurek, 2003).

   It is by and large the heavy-handedness of the Whorfian claims in these four aspects that has made the original notion of linguistic relativity a relatively easy target of criticism (Pinker, 1994). The neo-Whorfian view is much more modest, less deterministic, and less committed to a particular ontology of language. Leavitt (2011) expressed this by stating that linguistic relativity was a starting point and perhaps even pre-condition for meaning for Whorf, it amounts to various “effects” in neo-Whorfian research. We add that neither of the two positions should be regarded as monolithic, as various authors (and even the same authors in different writings, as we have seen) oscillate between “stronger” and “weaker” versions of the thesis. And at least one of the reasons for such oscillations, we propose along with our main thesis, is that many authors do not formulate an explicit linguistic ontology, but shift between linguistic levels and perspectives such as those we formulate in Section 4. Before we turn to this though, we need to examine two critical takes on linguistic relativity. As we shall see, they too are based on radically different conceptions of language.

3. The Opponents

3.1 The universalist critique

Many psychologists and cognitive scientists have strongly objected to claims that linguistic variation corresponds to cognitive differences (e.g. Brown, 1976; Fodor, 1985; Pinker, 1994). Often their objections have been stated in methodological terms. Arguably, though, this is not the main motivation behind their critiques. Rather, the motivation is a particular metalinguistic position, from which the possibility for linguistic relativity is more or less ruled out.

Pinker (1994) has famously referred to linguistic relativity as a “conventional absurdity”: an idea that common sense dictates is clearly wrong, but nevertheless keeps on being repeated due to the fascination it holds. The strength of Pinker’s objection lies in the strong conviction that many of us have: it is indeed possible to think without using language (cf. Dor, 2015), with language often feeling like poor clothing for the imagery of our thoughts:
We have all had the experience of uttering or writing a sentence then stopping and realizing that it wasn’t exactly what we meant to say. To have that feeling, there has to be a ‘what we meant to say’ that is different from what we said. Sometimes it is not easy to find any words that properly convey a thought. (Pinker, 1994, p. 57)

In addition, one could support the existence of non-linguistic thought by alluding to empirical evidence of relatively complex thought processes in both pre-linguistic children and non-human animals, such as making judgments by monkeys (Griffin and Speck, 2004), planning in great apes (Osvath and Osvath, 2008), and being able to project oneself into the mental states of others by pre-verbal infants and chimpanzees (Preston and de Waal, 2002). But of course, such objections only affect the most extreme versions of linguistic determinism (e.g. Dennett 1991), with a rather literal reading of Saussure’s statement that “there are no pre-existing ideas, and nothing is distinct before the appearance of language” (1960, p. 112) quoted earlier (cf. Widoff, 2018 for a different and less extreme reading of such passages in structuralist writings). As argued in the previous section, not even Whorf, and much less the neo-Whorfians can be associated with such an extreme position. Language is not identical with thought, but it may still very well exercise an influence on it (Casasanto, 2008; Zlatev and Blomberg, 2015), and Pinker must be very well aware of this difference.

Therefore, it is easy to suspect that it is not the non-linguistic experience of thought that is the main motor in Pinker’s vehement rejection of relativity, but rather his ontology of language, which is essentially individualist and physicalist, in accordance with the “generative linguistics” school of thought to which his work belongs (cf. Itkonen 2008). The key aspect of language in such a framework is a biologically instantiated “language faculty” which is modular both internally, with syntax being separate from semantics, and externally – with respect to cognition in general and thought specifically (Fodor 1985). As the syntactic sub-module is largely innate and hence universal, the major if not the only thing that differentiates languages are their lexica. These are, however, both too unstructured (though see below), and separate from the conceptual level, which is the level of thought. Of course, there is much debate both within the generative school on the “architecture” of the language faculty, and even more so with proponents from other schools who reject such strong universalism (see Evans and Levinson, 2009, along with commentaries). Here, we are not concerned with the veracity of such a linguistic ontology, but to point out that it rules out the possibility for any kind of linguistic relativity, save perhaps for the role of different lexica, and their “information” bearing properties.

Characteristically, it is precisely the latter that Bloom and Keil (2001) proceed to invalidate in an influential critique of linguistic relativity, where they emphasize “the distinction between the interesting claim that language induces theory change because of linguistic structure (e.g. the particular words it has) versus the trivial claim that language induces theory change because of the information it conveys” (p. 362, original emphasis). After reviewing experiments aiming to show effects of “linguistic structure” on thought, and showing that they do not live up to methodological scrutiny, it is only the “trivial” aspect of language influencing thought by means of providing information that would remain.

But what does the distinction of “structure vs. information” amount to? Though Bloom and Keil (2001) mention “particular words” on the structural side, there is the persistent view, expressed even by Whorf (1956) that grammatical features are both more pervasive and more
unconscious, and hence a much better candidate to serve as cognitive determinant. Along with the syntax-lexicon dichotomy, there is another, even more famous one, that Bloom and Keil’s division brings to mind: between language system and language use, reflected in different ways in Saussure’s (1916) *langue* vs. *parole*, Chomsky’s more individual-biological counterpart *competence* vs. *performance* (Chomsky, 1965), and its follower I-language vs. E-language (Chomsky, 1986). In all these dichotomies, it is the first term that is meant to be essential, while the latter is secondary, and more or less residual.

So why should the effects of “information” and language use on thinking, and in particular on children’s cognitive development be considered trivial? It is hardly due to the fact that the information we hear and read about does not affect our thinking – it is rather that it does this so obviously that it is hardly worth arguing for. Nearly everything that we know without the benefit of direct perceptual experience is linguistically mediated (and more recently, pictorially mediated): dinosaurs, Mount Everest, quarks, genes, etc. Still, Bloom and Keil (2001) discount such cognitive effects as they apparently lack “structure”. With the help of some basic ideas from structuralism, we questioned this argument in an earlier publication as follows:

[T]he meaning of words is not exhausted by their referential (“informational”) content, but also involves the web of relations to other words. […] Is it not a structural aspect of English that *dinosaurs* are (considered to be) *reptiles*, while *elephants* are *mammals*, and so are *dolphins*, though the latter were thought for a long time to be *fish* (and still are in many other languages/cultures)? Such structure, as well as that encoded in “grammatical patterns” of language, will of course provide “information” during language learning and everyday use. Thus, the dichotomy between information and structure that Bloom and Keil’s view rests upon cannot be upheld: linguistic information is always structured, and structural distinctions are informative (Zlatev and Blomberg, 2015, “4. Interesting and trivial kinds of language influence,” para. 5).

The implication for the present argument is that linguistic theories that make rigid distinctions between different modules or levels of language will be prejudiced against linguistic relativity, as long as they can insulate (and privilege) a particular module/level from interactions with culture and cognition.

Let us consider here a final anti-relativistic argument from the universalist side and see if it follows a similar logic. Papafragou and Gleitman (2005) question linguistic relativity (or linguistic influence on thought in general) on the basis of the under-determination of linguistic meaning. As they phrase it, “language is sketchy, thought is rich” (ibid, p. 636). Some rather trivial examples of this are homonyms like *bank*, and semantically general words such as *uncle*. As words, and even complex constructions are semantically general or skeletal, while our corresponding thoughts are “fleshed out”, we must be able to get from the first to the latter in comprehension, and vice versa in language production: “linguistic representations underdetermine the conceptual contents they are used to convey” (ibid, p. 637). It is widely accepted in the field of linguistic pragmatics that this gap is filled by inferential processes based on principles such as Sperber and Wilson’s (1995) *relevance*, or similar. As these principles are thought of as being part of our universal cognitive make-up, this again does not seem to leave much space for linguistic relativity.
But even if this is granted, which of course is still debatable, the “filling in” from general semantic meaning to a fully specifying pragmatic meaning would also need recourse to the immediate situational context, as also pointed out by the authors: “[…] lexical items typically take on different interpretations tuned to the occasion of use […] and depend on inference for their precise construal in different contexts” (Papafragou and Gleitman 2005: 637, our emphasis). So it is not only universal cognitive principles that helps make thoughts from skeletal semantic representations, but also the situated level of contextualized language use. Which brings us back to the parole/performance/information aspect of language downplayed in universalistic approaches to language since it lacks the structure that could influence thought, and may even be too messy and unruly to even be an object worthy of systematic linguistic investigation. But as pointed out, such a conclusion would be at best premature.

To sum up, we have here discussed three related attempts at refuting linguistic relativity emanating from what we have identified as a strong bias towards a universalist and largely nativist ontology of language: Pinker’s (1994) conception of the “language faculty” as essentially modular, and evolutionarily determined, Bloom and Keil’s (2001) dichotomy of structure (competence) and language use (performance) and trivialization of the latter, and Papafragou and Gleitman (2005) relevant observation of semantic under-determination, but questionable assumption that it is resolved mostly due to universal inferential processes.

3.2 The Socio-cultural critique

The critique of linguistic relativity can also be formulated from an ontological stance that is diametrically opposite to the one analysed above, one that emphasizes that language occurs in particular situations with variable contextual criteria for appropriate use and interpretation. More generally, language use is thus tightly intertwined with certain socio-cultural practices, or “language games” (Wittgenstein, 1953). To view language primarily as an abstract system – as has often been done in linguistics – is to detach language from the activity of using language and instantiating it in a theoretical framework, assumed to be privileged “over and above the actual practice” (Anward 2015, p. 73). The critique of such “abstract objectivism” goes back at least to Voloshinov (1986 [1930]). From such a view, it is possible to develop a position that questions the coherence of the notion of “a language” as such as stated by Berthele (2013, p. 57): “[t]he term ‘language’ is an abstraction […] my basic assumption is that language is social practice and that the agent in language use, change, and variation is the speaker-hearer rather than some abstract ‘system’.”

It is from such a socio-cultural standpoint that Björk (2008) questions the soundness of neo-Whorfian research. Björk’s critique is extensive, focusing on how a more situated understanding of fundamental notions such as language, thought, and culture yields a radically different interpretation of neo-Whorfian studies like those discussed in Section 2. We can only reiterate the most relevant part for our purposes. On Björk’s interpretation, the neo-Whorfian take on language presupposes a simplified and static view of language as a “fixed code”, i.e. community-wide systems with specific grammatical and semantic rules:

The neo-Whorfian studies investigate the role of linguistic diversity in the language-and-thought relation, and language is thus explored primarily as ‘particular languages’, such as English, Tzeltal, Dutch or Yucatec Maya. The particular languages are viewed as
demarcated, cognitively represented systems, in which linguistic meaning is inherent. That is, linguistic meaning is given by the system, prior to any particular situation of language use. The term ‘language’, that sometimes comes into the discussion about relativity as opposed to ‘languages’, seems to refer to general aspects of having ‘a language’, a code. When communication is mentioned, this too seems to be a general aspect of using ‘a language’. (Björk, 2008, p. 125-126)

In other words, the claim is that neo-Whorfian studies presuppose that the semantic and grammatical structures of a particular language exercise an influence on speakers independently from the contexts and situations in which these would be used. But if there are no stable structures and meanings in language that are independent from the practices to which their use is bound, the status of context-independent structures is that of a description. And it is invalid to draw a causal connection from a description of language use to differences in thinking:

If [...] the relation is addressed from the point of view that language is integrated practice, there can be no causal effect of linguistic structures. As descriptions of verbal aspects of linguistic practice, lexical or grammatical features of Guugu Yimithirr or English cannot serve as explanations for why people of English-speaking or Guugu Yimithirr-speaking communities think or act differently. (ibid, p. 105. Emphasis in original)

At the same time, it should be noted that Björk does not exclude the possibility of linguistic influence on thinking (albeit in another sense than in Whorfian and neo-Whorfian ways), since one of the main points is that language, thought, and culture are not to be seen as clearly demarcated from one another.

Learning to be a speaker of a language means more than just learning to produce utterances with fixed meanings according to the rules of a particular language system. It means learning to talk, to act in certain ways, linguistically and otherwise. Thus, in a broader sense of language, ‘cognitive style’ has to do with language, not in the sense that it is induced by grammatical or semantic properties of particular languages, but in the sense that language is ‘placed’ in the activities of life where cognitive style develops (Björk, 2008, p. 110)

But need the socio-cultural view of language be so diametrically opposed to one that assumes the reality of a “linguistic system”? Traditionally, that has been the case, but very often those who have regarded language as essentially equivalent to “lexicon and grammar” and have underestimated language use have also been universalists (e.g. Chomsky, 1965, critisised by Harris, 1981). Yet, it is also possible to consider system and use as two aspects in a deeply social conception of language. For example, Itkonen (2008) distinguishes between language as grammatical and semantic norms and as utterances. While the linguistic norms of a language community do not determine actual speech, they exercise their influence on the latter analogous to the ways social norms influence social behaviour. Another possibility is to regard the two positions as two different perspectives on our general experience of the phenomenon of language.
Whereas one considers language from the point of view of immediate and engaged activity, the other takes a more distanced and reflective perspective (Widoff 2018).

Furthermore, we should remind that many of the neo-Whorfian researchers mentioned in Section 2 (e.g. Pederson, 1995; Slobin, 1996) did not operate with a “monolithic language” concept, and focus on linguistic preferences across dialects and contexts of use, and attempt to relate such differential patterns of language use with possible cognitive effects. We interpreted this to be consistent with “the functional type” of linguistic relativity in Lucy’s (1997) terminology. Hence, the socio-cultural critique seems more opt with respect to the original Boasian views of language that informed Whorf’s conception of linguistic relativity, than the more careful formulations of the neo-Whorfians. But admittedly, the latter have been in general less concerned with ontological issues than the topic merits. This is what we turn to in the following section, taking on the “defence” role, from a pluralist perspective.

4. The Defence: A pluralist ontology of language

We have in the previous two sections focused on “correlations” between ontological positions on the nature of language and takes on linguistic relativity, first among proponents, and then among two different kinds of critics. Given some generalizing licence, we saw that the classical relativists tended to see language in structuralist terms as a conventional semiotic system, while cognitivists departed from an individualist, and more or less universalist position. Finally, many social-cultural theorists follow the footsteps of Voloshinvov (1986 [1930]) in emphasising that language is primarily ongoing social interaction. The question then arises: what if one were to assume a richer linguistic ontology that manages to incorporate, at least to a degree, these three different viewpoints? This is exactly what we aim to do here, by presenting the outline of an account of “the nature of language”, and use it to elucidate, and offer the keys to a possible resolution of the debate on linguistic relativity. The outcome of this process may be construed as a “defence” of linguistic relativity, since, as in the title of an earlier publication it implies that “language may indeed influence thought” (Zlatev and Blomberg, 2015), in different ways, corresponding to different senses of the term “language”.

Our linguistic ontology is influenced by the work of the Eugenio Coseriu, and his school of integral linguistics, combining ideas from structural linguistics, functional linguistics and phenomenology (e.g. Coseriu 1985; cf. Zlatev, 2011; Zlatev and Blomberg, 2015, in press). In short, integral linguists analyse the phenomenon of language on three different levels of generality: (a) language in general, (b) a specific communal language or dialect, (c) individual utterances in accordance with a register or style. These are usually referred to as the “universal”, “historical” and “individual” levels respectively. The universal level “comprises everything that applies in principle to all languages independently of their respective linguistic structuring, that is a number of principles of thought and the general knowledge of the world” (Coseriu 1985: xxix). The historical level corresponds to Saussure’s langue as a “social institution”, but with an important difference: “a historical language is never one single “linguistic system”, but a “diasystem”: an ensemble of ‘linguistic systems’ between which there is at every stage co-existence and interference” (Coseriu 1967: 33), allowing for considerable variability in both use and linguistic intuitions among speakers of the same (historical) language (Zlatev and Blomberg, in press). Importantly, each of the levels is sufficiently complex to require different perspectives, of which two are most important: (a) as ongoing activity that is at least in part creative (energeia),
and (b) as the implicitly normative knowledge that underlies this activity \(\textit{dynamis}\). While there is close interdependence between these, \textit{energeia}, the most creative aspect of language, is always a step ahead of the norms of the language. This conception is very similar to the idea of a dialectics between spontaneity and sedimentation, concerning meaning-making in general, emphasized in phenomenology, and in particular by Merleau-Ponty, who used the terms \textit{language parlant} and \textit{language parlé}, for the more creative, and the more sedimented, aspects of language (cf. Zlatev, 2018).

Such a linguistic ontology is the central idea behind a synthetic model of language called the \textit{Motivation and Sedimentation Model} (Devylder and Zlatev, in press), and illustrated in Figure 1. It distinguishes between three, closely interacting levels of meaning: (a) the \textit{situated} (corresponding to the “individual” in integral linguistics), the \textit{sedimented} (corresponding to the “historical”), and the \textit{embodied} level, where the model mostly clearly deviates from integral linguistics. Rather, leaning toward both phenomenology and cognitive linguistics, it emphasises the rootedness of language in fundamentally pre-linguistic experiences and cognitive processes.

The embodied level in the model thus concerns not conventionalized linguistic structures, as those on the sedimented level, and not concrete activities, as on the situated, but pan-human \textit{motivations} for the historical emergence and stabilization of linguistic patterns that occur in all human languages. Examples of such motivations are processes of typification, analogy making, and intersubjectivity, resulting on the higher levels of structures like linguistic categories, conventional metaphors and “pragmatic” markers that help ensure joint reference in conversation, (which of course will differ across different languages). But such structures become established only through the activities on the situated level of social interaction. Further, it is not only the situated level that is a step ahead of the sedimented level, but the actual activity \(\textit{energeia}\) is also a step ahead of the gradual sedimentation of norms, where we can distinguish between more local and flexible “situated norms” concerning style and appropriateness and more general and static “sedimented norms” concerning correctness (Zlatev and Blomberg, in press). Thus, (language) norms are not only sedimented upon the motivating processes on the universal level, but also emerge as sedimentations of \textit{energeia}, which may extend, and in some cases break existing norms.
### Levels

<table>
<thead>
<tr>
<th>Levels</th>
<th>Use</th>
<th>Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situated</td>
<td>Creative use</td>
<td>Situated norms</td>
</tr>
<tr>
<td>(activities)</td>
<td>(language parlant)</td>
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<tr>
<td>Sedimented</td>
<td>Conventional use</td>
<td>Sedimented norms</td>
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<td>(structures)</td>
<td>(language parlé)</td>
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<tr>
<td>Embodied</td>
<td>Typical use across different languages</td>
<td>Typification, Analogy-making, Bodily experience</td>
</tr>
<tr>
<td>(processes)</td>
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#### Figure 1. The Motivation and Sedimentation Model (MSM).

*Sedimentation* relations are represented in solid lines and *motivation* relations in dotted lines, with enchronic (horizontal) and historical (vertical) temporal scales.

When the time scale concerns the sedimentation of meaningful linguistic actions into situated norms, we refer to this as *enchronic* sedimentation, following Enfield (2013). Further, there is a *historical*, long time scale dialectic between sedimentation and motivation as well, represented on the vertical dimension. Again, on this thoroughly dynamic account of the nature of language, pan-human universal experiences motivate language use and the establishment of situated norms, which on their part may “sink” in, and stabilize enough to make the notion of a shared communal language a coherent one, not only as a linguistic description, but as a socially shared cognitive structure, rooted in bodily experience.

Given such a synthetic framework, we can interpret the claims of the most convinced proponents and opponents of linguistic relativity by stating that they appear to privilege *only one* of the three levels that are made explicit in MSM. Starting with the critics (see Section 3.1), we can see a persistent emphasis on putatively universal features – either of language or cognition – like hierarchical (recursive) syntax and pragmatic inferences. By its very nature, such an understanding of language necessarily abstracts away from differences between languages, and from the meaning making that takes place in different contexts. Since the possibility of relativity rests on variation, any linguistic ontology that concentrates on universal features of language and thought will be bound to be relativity-sceptical.

The classical relativists (and some of the neo-Whorfians), on the other hand, focus on both differences between languages, and the notion of each language being a self-contained system (see Section 2). This corresponds to an overemphasis of the sedimented level of language, without taking into account that it presupposes both pre-linguistic experience on the universal level and actual languages use on the situated level, and in itself constitutes – as sociocultural theorists correctly point out – an abstraction. Looking at Figure 1, this would correspond to a disembodied lexico-grammar as “knowledge” that generates fully conventional expressions as “use”. But as indicated by Merleau-Ponty’s terminology, this would at most be an...
account of language parlé, pre-fabricated utterances that characterize the robots that we are forced to “interact” with more and more in our technologized lives.

The acknowledgement that language is first and foremost free and creative social activity, is made by the socio-cultural approach (see Section 3.2). But again, this situated level of language tends to be conceived as “autonomous” and any notion of a stable level of linguistic structures to be seen as a description of language (thus invalidating possible influences from it), rather than an essential dimension of language, as on our account. The sedimented level is essential, since it constrains the “degrees of freedom” of situated language use, giving rise to what already Whorf referred to as habitual patterns of speaking, and indirectly, of thinking. Strong evidence for the existence of this level in every speaker of a language (and not only among linguists) is the high degree of consistency in linguistic intuitions on what are correct and incorrect utterances (Itkonen 2008; Zlatev and Blomberg, in press). Further, even the situated level can be demarcated as in Figure 1, between the actual (creative) utterances, and enchronically sedimented situated norms, which with time and successful social transmission lead to sedimented norms. At the same time, we are in agreement with socio-culturalists that there can be no determining, but only motivating relation between norms and utterances, and hence to possible patterns of thought. Linguistic determinism is thus ruled out.

Of the approaches to linguistic relativity that were described in the previous two sections, it is those of some neo-Whorfians that are easiest to align with the proposed linguistic ontology. This was seen in Lucy’s typology of influence “types” on the level of language as such (with universal features like predication and reference), of language-specific grammatical structures, and of specific discourse practices (see Section 2). Also, in at least some of their writings, neo-Whorfians have acknowledged that linguistic variation is constrained by non-linguistic principles like visual perception (Levinson 2003; Majid et al. 2004), and ultimately dependent on specific language use that can vary across discourses and regional varieties (Pederson 1995; Pederson et al. 1998). Their major fault is when they seem to forget this, and write of what is “possible” and “impossible” in a given language, as if sedimented structures had an a direct causal link to creative language use. And of course, this makes their link to cognition even more tenuous.

In sum, the application of our pluralistic ontological framework to the vehement debates surrounding linguistic relativity offers a “diagnosis”: overemphasizing one of the three levels at the expense of the others implies scepticism at best, and often hostility, towards claims about the nature of language and its consequences for cognition that are based on alternative levels. Since such differences are not “merely” theoretical, but ontological, this goes a long way to explaining why debates about linguistic relativity have both given the impression of cross-talk, and have generated so much heat.

But our approach may also help avoid the deadlock of the present debate and open the field for explorations in how language may (and may not) influence thinking. First of all, acknowledging the existence of a universal embodied level of human experience on which all languages are grounded, undercuts the most extreme forms or linguistic relativity, such as those of the classical relativists who saw languages as incommensurable, and “arbitrary” with respect to one another. It is such, empirically as well as conceptually, unsupported claims, that have led to extreme claims that each language imposes its own “reality”, i.e. linguistic determinism. The embodied level is necessary to be able to formulate the conceptual framework in which to compare languages, as acknowledged by Whorf (see Section 2; cf. Croft, 2003). Since this is not a level of actual linguistic structures but of motivating processes, to this level should be attributed
hypothesized notions like “image schemas” and “conceptual metaphors” (see Zlatev 2011), and “non-actual motion” (Blomberg, 2015), often studied in cognitive linguistics as part of linguistic meaning rather than as motivations for it, as we emphasize.

At the same time, the existence of linguistic norms that differentiate the grammars and lexica (or constructions, which generalizes over both) of different language communities should not be neglected (Itkonen 2008). The distinction between dialect and language is admittedly vague (Dahl 2007), but when differences amount to a lack of mutual understanding, we are clearly dealing with different languages. Furthermore, as typological linguistics has shown after a century of documentation, cross-language differences are both real and extensive (Croft 2003; Evans and Levinson 2009). Yet, this does not entail that each language make up its own self-contained galaxy, since semantic typology is predicated on comparing categories (like “frame of reference”) and constructions (like “basic word order”), rather than wholesale languages. Different languages can sometimes share the same feature (e.g. Tzeltal and Guugu Yimithirr), while other languages can have two alternative features on the same category (e.g. Tamil). In both cases, however, any potential of linguistic influence on thought will have to pass through the filter of actual language use, i.e. the situated level. This has been realized by many neo-Whorfians (e.g. Slobin, 1996; Pederson et al., 1998), even when not acknowledged, since they endeavour to document such use, and only then venture to propose correlations between it (and not the structures of the sedimented level) and performance on non-cognitive tasks.

Finally, the MSM framework also coheres with features that have been emphasized by socio-cultural approaches to language. First, it gives precedence to language as activity (energia) rather than as knowledge. Second, it acknowledges that in communication, the situated level is what really matters: rules of logic may be broken, and semantic and grammatical norms twisted or adapted to the context at hand. Where it differs from e.g. conversational analysis (Schegloff, 2007), or the perspective from which Björk criticises linguistic relativity (Section 3.2), is that it emphasises that the sedimented level is both cognitively real for speakers (and not just a description by linguists) and necessary for situated language to be possible at all, by providing a normative bedrock against which creativity and spontaneity can appear. Thus, it is quite legitimate to state (a) that such norms are acquired and known (implicitly) by their speakers (Zlatev, 2011; Zlatev and Blomberg, in press), (b) that they motivate speakers’ linguistic performance; and consequently, (c) that they may play a causal role in cognitive tasks that are mediated by overt or covert language use.

Such a “context-specific” version of linguistic relativity predicated on different lexicosemantic structures (see Zlatev and Blomberg, 2015) is fully consistent with a pluralist linguistic ontology, such as that proposed in this section. But as we emphasise the difference between motivation (process) and convention (structure) on all levels, we can also acknowledge the other two kinds of influences in Lucy’s (1997) three-part distinction. We may study relativity on the situated level, when different ways to construe a situation may be used for rhetorical and cognitive effects. For example, it can cognitively matter if rising crime rates are described metaphorically as a virus or as a beast. (Thibodeu and Boroditsky 2013). Finally, even though the embodied level concerns prelinguistic universal cognitive processes, we can motivate (and eventually explain) the emergence of universal features of language like predication and word classes, and study the cognitive consequences of “having a language” as opposed not having one, in the manner of Vygotsky (1978, 1986[1934]).
Thus, the influence of language on thought is fully possible, in at least these three different ways corresponding to the nature of language as an experientially grounded semiotic system for meaning making in actual social contexts. How this influence materializes remains to be studied. We rest our case.

5. Conclusions

We have argued that different linguistic ontologies (i.e. basic assumptions on the nature of language) strongly influence, and in some cases may even determine, one’s position on the issue of linguistic relativity. If one holds a staunch universalist position, in which there is in effect “only one language” (as in some versions of generative linguistics), there is no logical possibility for any linguistic relativity, except perhaps for the “trivial” effects of different lexica and their informational value. Conversely, if one were to deny the actual existence of a shared communal language (e.g. Berthele, 2013), and only accept the existence of situated language use, or local language games, then again there is no way for community-wide patterns of thinking that could be motivated by with language specific conventions to come about. Finally, assuming a view of different languages as mutually incommensurable “social contracts” as in structuralism and the classic relativists, has been a rather easy target for critics, from both the universalist and social-cultural sides, as such a view both exaggerates differences and makes the connections to the world of experience and to actual use rather mysterious.

In practice, most researchers have not been so ontologically consistent, and thus have not succumbed to what we have called in the title (with only a slight dose of irony) “metalinguistic relativity”: the effect of one’s linguistic ontology on one’s view of relativity. We saw that even Whorf admitted the need for a universal level, that neo-Whorfians explore actual language use, and discourse patterns (and their correlations with thought patterns), that Bloom and Keil at least allow for linguistic effects on the level of discourse, and that socio-cultural approaches are open to a close interaction between language, culture and thought, even while rejecting the role of linguistic structures, viewed only as abstractions.

Hence, we do not believe that the debate surrounding linguistic relativity needs to be as polarized as it has been. We proposed that a pluralist model of language, the Motivation and Sedimentation Model (inspired by the integral linguistics of Coseriu and colleagues) may help resolve the tensions, and open the field for productive empirical research. The main point is to consider both the relative autonomy, and the close interaction between the three levels of (linguistic) meaning making: the embodied of experiential motivations, the sedimented level of historically entrenched linguistic norms/conventions, and the situated level of discourse and situated norms. Such a linguistic ontology validates many of the ideas from the different “camps” but questions their strongest either pro or contra claims concerning linguistic relativity, since effectively they either ignore or belittle all but one of the levels of language. By broadening the picture, on the other hand, we not only gain a better understanding of language as a complex social and cognitive phenomenon, but also justify the possibility for linguistic influence on thought, on different levels and of different kinds, as acknowledged by the most careful of the neo-Whorfians. We predict that future empirical investigations will give increasing respectability to the notion of linguistic relativity, but only if such empirical research is combined with more explicit discussion of metalinguistic issues.
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