Cognitive Linguistics and linguistic typology

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0. Introduction

This chapter looks into the relations between Cognitive Linguistics and linguistic typology. The first half of the chapter offers a 'neutral' characterization of the field of linguistic typology. Linguistic typology is defined as a cross-linguistic, descriptive as well as explanatory enterprise devoted to the unity and diversity of language with respect to linguistic form or the relation between linguistic form and meaning or function. The second half is devoted to an exploration of the relations between linguistic typology and Cognitive Linguistics. It is argued that the two strands are eminently compatible, that there is work that illustrates this, but also that most cognitive linguists and typologists nevertheless work in different spheres. In a first section we discuss the difficulty of applying typology's sampling method in Cognitive Linguistics. In a second one, we focus on the typologists' prime orientation on grammar and their hesitation to relate their strictly speaking linguistic generalizations to wider cognitive concerns.

1. What is linguistic typology?

The term 'linguistic typology' is rather general. It could be taken to mean no more than the investigation of linguistic types. Linguistic types appear when the linguist has classified linguistic

entities in virtue of a similarity. In this sense, any linguistic discipline counts as typology. In morphology, for instance, prefixes and suffixes can be said to be entities of the same type, called 'affixes'; and affixes and roots or stems are also entities of the same type, called 'morphemes'. In sociolinguistics, most Australian languages and most native American languages are of the same type: they are all threatened languages. Or in historical linguistics one can say that Norwegian and Danish are languages of the Germanic type. In reality, however, the term 'linguistic typology' is used in a narrower way. Although, in part as a result of the generality of the literal meaning just described, there are various controversies as to its exact nature, the definition in (1) captures at least its most central concerns.

(1) Linguistic typology is a cross-linguistic (a) description (b) and explanation (c) of the unity and diversity of languages (d) with respect to linguistic form (e) or the relation between linguistic form and meaning/function (f).

In the above definition, six features are singled out. We will discuss them in some detail.

Saying that linguistic typology should be *cross-linguistic*—feature (a)—means that observations should be based on a wide variety of languages. In principle, one cannot do typology on the basis of one language, not even if the language is a conglomerate of divergent dialects. Also, in studies of only a handful of languages one does not usually speak about 'typology', but about 'contrastive linguistics'. The languages selected should furthermore constitute a sample. The size of the sample (which can vary considerably—cf. the 22 languages of Xrakovskij ed. 2001 on imperatives to the 272 of Siewierska 1999 on verbal agreement) is geared towards being representative of the variation in the totality of the world's language. Of course, representative-ness is not solely a matter of sample size. Typologists now have increasingly better methods to

control for genetic or areal bias—i.e. the danger of taking too many languages of (respectively) the same family or the same area—and even for typological bias—i.e. the danger of taking too many languages of which it is already known that they are typologically similar (see Dryer 1999; Rijkhoff & Bakker 1998; Croft 2003: 19-28).

As to feature (b), typologists first of all need to *describe* the facts. This is less obvious than it may sound, however. Descriptions are based on analytic concepts, which are unavoidably inspired by theories. Hence no description can be fully theory-independent. This is a matter of degree, however. In extreme cases, descriptions can vary tremendously, to the point even of being incomprehensible to any but linguists of the same theoretical persuasion. Since typological descriptions should be useful to linguists of diverse theoretical orientations, however, it is essential to reduce their theory-dependence as much as possible. A version of this aim for neutrality coupled to an aversion to the current proliferation of linguistic theories has been called "basic linguistic theory" by Dixon (1997: 128-135).

Before we turn to feature (c), concerning explanation, let us clarify what it is that should be described. Feature (d) states that typologists are looking for the *unity and diversity* of languages. Typologists describe how languages differ, but at the same time also how they are similar or even identical, relative to one or more parameters. Features characterizing all languages are called 'universals'. There are what may be called 'absolute universals', which apply to all languages, as illustrated in (2), and there are non-absolute or 'statistical' universals, which hold true of most languages, as illustrated in (3).

(2) a. All languages have nouns and verbs. (Whaley 1997: 59)

b. All languages have stops. (Maddieson 1984: 39)

(3) Most languages have either an SOV or an SVO basic word order. (Tomlin 1986: 22)

The universals in (2) and (3) make a claim about a property that does not depend on any other property of language, i.e. they are not 'conditional' or—the preferred term—not 'implicational'. But there are also implicational universals, and it is these that have been most prominent in the last few decades. They too, can be absolute or statistical. (4) gives examples of absolute implicational universals.

(4) a. If a language has a dominant VSO word order, it will have prepositions. (Greenberg 1963: 78)

b. If a language has NP internal agreement, then the agreement features may include case, but not person. (Lehmann 1988: 57)

Particularly interesting about an implicational universal is that it does not only tell us about unity but also about diversity. (4a), for instance, implies three subsets of possible languages:

(5) a. dominant VSO order and prepositions

b. no dominant VSO order and prepositions

c. no dominant VSO order and no prepositions

In logical terms, this kind of universal is a material implication. There are three situations that make it true: antecedent true and consequent true; antecedent false and consequent true; antecedent false and consequent false. Hence postulating this kind of universal goes hand in hand with a classification of languages. An implicational universal does rule out one situation, of

course, viz. that of a true antecedent and a false consequent. Thus, (4a) rules out the combination in (5d).

(5) d. dominant VSO order and no prepositions

Actually, typologists now believe that languages of type (5d) do exist, after all (see Song 2001: 46). This means that the universal in (4a) is statistical only and, in fact, the more typical universal has now become the statistical one (Dryer 1998). Of course, this observation in no way diminishes the value of the universal. On the contrary, typologists must now explain both the very strong tendency to rule out (5d), as well as the fact that some languages can nevertheless withstand this tendency.

This takes us to feature (c) of the definition in (1), viz. *explanation*. Do typologists also attempt to explain the regularities they observe? They do, but in some corners of linguistics their explanations are taken to be of negligible or insufficient quality. The reason is that explanation requires a theory, and not all theories are compatible. As stated before, most typological descriptions aim to be relatively theory-neutral and to offer 'descriptive' or 'empirical' observations, of the kind in (2)-(4). These generalizations can then serve as input for various theories. In a simple world, then, the typologists could be deliverers of data, and it is up to theoreticians to explain these. But in the actual world, the division of labor is not that simple. In modern typology, most typologists attempt to explain the data themselves, and this part of the work is not theory-neutral at all. In terms of the current sharp division in linguistics between formalist and functionalist paradigms, typologists tend to be functionalists.[1] As a consequence, the non-typological theoretician of the functionalist brand will usually not only appreciate the data from the typologist, but also his/her theoretical considerations. But the formalist non-

typological theoretician will usually at best be grateful for the data but feel free to neglect the typologist's theory.

What can a 'typological explanation' be, then? Let us first discuss two features which it should *not* have, at least not according to many typologists: it cannot rely on 'genetic inheritance', and it cannot be 'areal'. Both elements require some elaboration.

First, saying that typological explanation cannot rely on 'genetic inheritance' means that a similarity between languages cannot be accounted for by simply referring to the hypothesis that they inherited it from a common ancestor language. (Note that this only concerns genetic inheritance per se, and not genetic/diachronic explanation in general—see below). For example, part of the reason why both modern Danish and modern Dutch have two types of preterite—with a dental suffix or with a stem vowel change—is that the parent language had them too. Or, most Tibeto-Burman languages are verbfinal and postpositional, and they may have inherited this from Proto-Sino-Tibetan (DeLancey 1987: 806). But of course, these observations as such cannot be the whole story, for languages do also easily discard part of their inheritance, viz. through language change. The essential question is: why do languages (ancestors and inheritors) have such features, and why did they or did they not keep them in diachronic change?

We are touching here upon the issue of the borderline between linguistic typology and historical linguistics. Languages obviously change in a relatively orderly fashion, and so one can study types of language change. Does this fall within the purview of typology, or should one keep this as part of the subject-matter of historical linguistics? Both views are represented in the literature. The main spokesman for 'diachronic typology' is Croft (1990: 203-245, 2003: 212-279). Most typologists, however, do not use this terminology. Instead, they see typology as relevant for historical linguistics, but prefer to talk in terms of an application of typology to the concerns of the historical linguist (e.g. Comrie 1981: 194-218; Song 2001: 297-317). And they

also accept the relevance of historical linguistics to the concerns of the typologist. In particular, they allow regularities of linguistic change as explanatory of synchronic universals. Heine (1997), for instance, in a typological study of the expression of possession, explains much of the synchronic variation in his data diachronically: the attested expression types are stages of universal grammaticalization chains.[2] (See also Svorou 1994, this volume.)

Second, at least according to many typologists, typological explanation should not be 'areal'. In an areal explanation, a similarity between languages is hypothesized to be due to contact between them, often through bilingualism. In the Balkans, Romanian, Bulgarian, Macedonian, Albanian, and Greek either have no infinitives at all or do not make much use of them. This feature is not due to inheritance, but probably results from contact convergence. There are several other features of this kind that characterize the Balkan languages, e.g. the postposed definite article or the pronominal doubling of objects. One could say that these features define a 'Balkan language type', and since Trubetzkoy (1930) the name for this kind of clustering is *Sprachbund*. Now, since a *Sprachbund* can be said to define a type of language, it is no surprise that one finds the term 'areal typology' employed in this connection. But not everybody favors this term, the reason being that linguistic typology in general is definitionally devoted to the study of all the languages of the world. Nevertheless, the employment of the term 'areal typology'is on the increase, no doubt because typologists are becoming increasingly aware of the importance of contact as a source of explaining similarity (see Dryer 1989; Nichols 1992; witness also the resurrection of Whorf's 1941 'Standard Average European'—Haspelmath 2001).

If genetic inheritance and contact interference may be excluded as typological explanations, what factors can be used then to explain similarities and differences and be considered typological? We can distinguish two types: internal and external ones. An internal explanation accounts for linguistic properties with reference to other linguistic properties. For instance, if a

language has 'object-verb' (OV) as its unmarked word order, one may want to explain this with the following set of assumptions: (i) many elements of grammar are either heads or dependents, (ii) in the relation between a verb and its objects, the objects are dependents and the verb is the head, and (iii) in that language, heads generally or always follow dependents, i.e. it has a dependent-head order.

Any explanation may itself be in need of explanation, however, and that is where external explanation comes in, i.e. explanation in terms of non-linguistic factors. For example, assuming that the above internal explanation is correct, one should ask why languages would prefer dependent-head orders or, the opposite, head-dependent orders. Two types of answers have been offered in this connection. A first type refers to our genetic make-up—the approach defended by generative linguists. Thus, Kayne (1994) takes the VO order to be innate. This explanation is external since the genetic make-up of the human being is not itself a linguistic property. In the second type of answer, a preference for dependent-head or head-dependent ordering is related to language processing: consistency in this ordering pattern may be argued to make the language easier to produce and to comprehend (e.g. Dryer 1992; Hawkins 1994). Again, one can push the explanation further and ask why word order consistency should be easier from a processing point of view. Ultimately, the reference must again be to genes, the ones that are responsible for the human language processor, but these genes are typically not taken to be inherently linguistic.[3]

Typology describes and explains unity and diversity of languages, but unity and diversity in what? Features (e) and (f) of our definition in (1) characterize two possible answers. One possibility is that the typologist only studies form—feature (e). The typologist can thus study the phonetic inventories of languages. The description and explanation of nasal vowels, for instance, may well go on in complete abstraction from issues of meaning or function. The other possibility is that the typologist studies both form and meaning/function—feature (f). Quantitatively, this

orientation characterizes the bulk of modern typology. Relative clauses, tense-aspect-modality marking, comparatives, or number—to name just a few examples—are topics which have engaged the typologists in both matters of meaning/function and of form (see e.g. Lehmann 1984; Dahl 1985; Corbett 2001). In this kind of study, it is typically the (grammatical) meaning or function which defines the topic of investigation. For example, one first describes the role of relative clauses, and one then tries to find out what the strategies are which languages employ to realize this meaning/function in their grammar. But to some extent the alternative perspective is possible, too. One can, for instance, define the verb-initial sentence format and then go on to study its semantic/functional potential across languages. The problem is that the formal definition of the verb-initial sentence presupposes that one knows what a verb is, and this problem must ultimately bring in semantic/functional considerations again (cf. Croft 2003: 17-18 on the distinction between what he calls 'external' and 'derived structural' definitions).

At this point it is useful to come full circle and return to the notion of 'type', which we started out with. Many people will associate linguistic typology with an attempt to classify languages. In fact, historically, linguistic typology started as a discipline about 'language types'—more specifically morphological types, aiming to classify languages as fusional, agglutinative or isolating. Yet, the foregoing exposition has been, and current linguistic typology generally is, about 'types' of strategies or expressive devices which languages use to realize certain grammatical functions: types of relativization strategies, types of tense-aspect-modality systems, types of expressions of comparison, and so on. Did typology change its agenda? Not really. For any one grammatical function, languages may use more than one 'type' of strategy. Thus a language may have both prenominal and postnominal relative clauses, for instance. Or, in terms of basic word orders, a language may exhibit both an SVO and an SOV pattern. But it is of course also possible that a language only allows one type of strategy, or that there is a reason for

considering one type as the unmarked one. To that extent, the language as such can be said to be of a certain type, say the prenominal relative type or the SVO type. This demonstrates how easy it is to go from statements about strategies or expression types to statements about language types (see also Whaley 1997: 8).

2. Linguistic typology and Cognitive Linguistics

As explicated in full length elsewhere in this volume, Cognitive Linguistics (in the narrow sense, as a specific part of the wider field of cognitively oriented linguistics) can be characterized as a (conglomerate of more or less closely associated) theoretical perspective(s) on language, which assume(s) a functional perspective on language, and which aim(s) to discover the cognitive principles and systems behind language use, both regarding language structure and regarding semantic/conceptual structure (with a focus on the latter). If one compares this characterization with the description of the field of linguistic typology in section 1 above, it is clear that these two branches of linguistics are, in principle, highly compatible. Still, to a considerable extent the two 'live their own life', at least in part due to practical circumstances and/or differences in their research interests. Relations and divergences between them can be considered at two levels: the methodological level and the theoretical level.

2.1. The methodological level: The use of typological data

As appears from section 1, linguistic typology involves a method of sample-based data collection.

Nothing in Cognitive Linguistics bars the use of such data. On the contrary, since a considerable portion of what cognitive linguists are investigating concerns notions and principles which are assumed or hypothesized to be essential parts of our conceptual and/or linguistic apparatus (metaphor, mental spaces, frames and constructions, etc.), it is crucial to test their universality and variability against the facts of a representative sample of the world's languages (or rather, the linguistic behavior of users of a representative sample of languages from all over the world). In practice, however, the use of truly typological data by cognitive linguists is rare (exceptions aside, see below). Surely, some of the notions figuring centrally in Cognitive Linguistics have been applied to individual languages other than English, including typologically unrelated ones—cf., e.g., Alverson (1994), Emanatian (1995), Goddard (1996), or Yu (1998) on (aspects of) metaphor theory, or Casad and Langacker (1985), Poteet (1987), Tuggy (1988), Langacker (1998), on aspects of Langacker's (1987, 1991) Cognitive Grammar; and see also some contributions in Hiraga et al. (1999) and in Casad and Palmer (2003). But, according to the norms of current typological linguistics, to the extent that this research compares languages, it typically counts as cross-linguistic rather than as typological.

But some work in Cognitive Linguistics does count as typology. The best illustration is Talmy's (2000).[4] Throughout his work, Talmy makes frequent reference to different languages. (His PhD-thesis—Talmy 1972—already involved a detailed comparison of semantic notions in English and Atsugewi, an Indian language of Northern California. Correspondingly, his work has been taken very seriously by typologists, witness among others his 1978a, b contributions to the seminal series *Universals of human language* edited by Greenberg.) For typologists the best-known part of it concerns his distinction between two 'types' of languages in terms of how they express event structure, viz. 'verb-framed' vs. 'satellite-framed' languages (Talmy 1985, 1991). This distinction, originally developed in order to account for differences in the expression of

motion events, has been extended later to cover other types of events as well. But let us—for the sake of simplicity—confine the presentation to motion events here. In strongly simplified terms,[5] if (a path of) motion is expressed jointly with a further specification of its circumstances or properties, such as its cause or manner, then languages can do two things. Verb-framed languages express the motion itself in the main verb, and express the additional property in a satellite (or what others would call an adverbial constituent) attached to the clause; satellite-framed languages, on the other hand, will express the motion itself in a satellite (often with the help of an adposition expressing motion), and will express the additional property in the main verb. Consider Talmy's (2000, vol. 2: 223-224) original example in (6), comparing English as a moderate example of a satellite-framed language and Spanish as a good example of a verb-framed language.

(6) a. English:

The bottle floated out.

b. Spanish:

La botella salió flotando.

In the English example, the satellite *out* expresses the motion (the path), and the main verb expresses the manner of the motion. In Spanish, on the other hand, the main verb expresses the motion (again the path), and the manner is expressed in a satellite (here a gerund). Talmy himself illustrated this difference by means of several languages, and its typological relevance has been worked out further by other researchers, esp. by Slobin (1996a, b, 2003) (and see Pederson this volume on its implications for the linguistic relativity hypothesis).[6]

One of the reasons why typological research in Cognitive Linguistics is rare, however, is no

doubt the fact that existing grammars and grammatical descriptions of languages—which constitute an important source of information for current typological research—do not offer information on many of the conceptual semantic notions central to cognitive linguistic theorizing. Consequently, a typological investigation of these notions has to start with the bare essentials of collecting first-hand information on the languages in one's sample, and even if this concerned only a dozen of them, this would be an enormous undertaking, let alone if one wanted to work according to the tendency in current typological linguistics to aim for samples of several hundred languages. So it appears unavoidable to first have an intensive phase of systematic comparative or cross-linguistic research, in which the primary data for different singular languages are collected, before a truly typological approach to the notions at stake will be feasible.[7]

2.2. The theoretical level: The presence of explicit cognitive concerns

Since both cognitive linguists and (most) typologists take a functionalist perspective on their subject matter, there is no principled incompatibility between them at this level either. There is a difference between them, however, in terms of their 'cognitive concerns'. Few typologists will deny that the notions they use in their accounts of the typological data—especially the semantic or functional ones—are relevant for cognitive theorizing, and at least have the potential to be cognitively plausible. They would furthermore accept that an external explanation referring to language processing or language acquisition can be called 'cognitive' as well. The point is, though, that most typologists are interested only in the linguistic aspects of their findings, and do not wish or dare to make explicit claims about or arguments for how they ought to be incorporated in a cognitive theory, nor try to relate them to non-linguistic dimensions of human

cognition.

This 'cognitive modesty' of most typologists no doubt has to do with the fact that they have their roots in 'traditional' functionalist theories of grammar—e.g. in various streams of the functionalist 'underground' in the North American linguistics of the mid to late 20th Century, or in traditional schools in European functionalism—which (at least originally) had no cognitive ambitions. Surely, some cognitive linguistic notions—and the corresponding cognitive linguistic way of thinking about the phenomena involved—have made their entrance in the theoretical considerations of certain typologists, but on the whole, typologists do not often draw on cognitive linguistic theories. And this, in turn, is no doubt related to the 'topical orientation' of current typological research. As indicated in section 1, current typology is predominantly concerned with describing and explaining structural (grammatical) phenomena in languages, such as word order, relativization strategies, or morphosyntactic or morphological phenomena such as tense-aspect-modality marking, and these are issues which are much more central to traditional functionalist theories than to (most) theories of the cognitive linguistic brand. Or at least, such phenomena have received much more attention in the former than in the latter: in principle, of course, the more grammar oriented branches of Cognitive Linguistics—such as Langacker's Cognitive Grammar, or (the cognitively oriented versions of) Construction Grammar—offer a framework in which all these phenomena can be described and explained as well. Maybe, the latter are simply too 'young' to have been able to substantially influence linguistic typology yet—and this may obviously change in the future. In fact, in the recent literature there are already signs of developments in that direction, among others in the work of Heine, and even more so in the Radical Construction Grammar of Croft's (2001) (and see also Helmbrecht 1997).

Thus, Heine has adopted the cognitive linguistic notion of 'event schemas' and has developed it into an influential 'explanatory tool' for typological analysis. Perhaps the best illustration is

his work on possession (Heine 1997). One cross-linguistically frequent strategy to express that 'X possesses Y' is to say that 'Y is at X's place', or to use a construction that historically derives from the latter. Russian is a case in point.

(7) U menja kniga.
at me book
'I have a book.'

'Y is at X's place' is the "event schema". For Heine (1997: 225) event schemas "are part of the universal inventory of cognitive options to humans". As such they assume a wider relevance than just a linguistic one: "they appear to be but one manifestation of a more general cognitive mechanism that is recruited for understanding and transmitting experience" (Heine 1997: 222).

One of the notions central to Croft's Radical Construction Grammar is that of the 'semantic map'. The idea comes from typology, but as the title of the introduction to this volume suggests, it appeals to cognitivists other than Croft as well. A brief discussion of this notion will allow us to clarify the difference between an innocuous and an outspoken cognitive perspective on typology.

Semantic maps have become an increasingly important tool for representing essential typological facts, viz. cross-linguistic similarity and difference. The essential idea underlying the semantic map model is that linguistic elements are similar because the meanings or functions they encode are similar. Consider the sentences in (8), and more particularly the meanings of the modal verb *must*.

(8) a. To get to the garden you *must* go through the kitchen.

b. Mary *must* be home now.

(8a) expresses a 'situational necessity': there is something in the situation, viz. the design of the house, that necessitates a walk through the kitchen to achieve the goal of reaching the garden. (8b) expresses a strong inference or (near) certainty. 'Situational necessity' and strong inference or (near) certainty are by no means the same concepts, yet they are related. For a strong inference or (near) certainty is also a kind of necessity, even if in a different sphere, viz. an 'epistemic' or 'inferential' (or 'evidential') one: there is evidence which necessitates the speaker of (8b) to believe that Mary is home now (in 'logical' terms: the premisses are sufficient relative to the conclusion, and the conclusion is necessary relative to the premisses).[8] Clearly, in English the auxiliary *must* can be used for both kinds or dimensions of necessity. In the Tungusic language Evenki, however, this is not the case: it has a marker for situational necessity, viz. the suffix *-mAchin*, and another one for epistemic necessity, viz. the suffix *-nA*.

(9) a. Minggi girki-v ilan-duli chas-tuli suru-*mechin*-in.
my friend-1SG.POSS three-PROL hour-PROL go.away-SITNEC-3SG
'My friend must go/leave in three hours.'

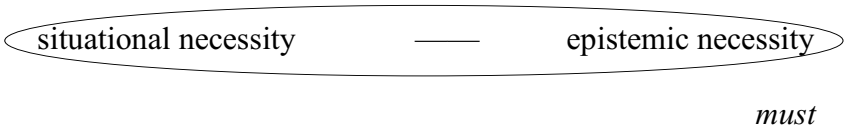
b. Su tar asatkan-me sa:-*na*-s.
you that girl-ACC.DEF know-EPISTNEC-2PL
'You must know that girl.'
(Nedjalkov 1997: 264, 265, 269)

We now have a mini-typology of languages: there are two types, viz. those that have a grammatical form that can express both situational and epistemic necessity, and those that do not

have such a form. We also have a mini-map.

(10) situational necessity —— epistemic necessity

Situational and epistemic necessity occupy two distinct points in what could be called 'semantic space'. But these points are related: hence the connecting line. On this map we can plot the meanings of English *must* and of Evenki *-mAchin* and *-nA*.

(11) 

(12) 

The criterion for assigning a separate position to situational and epistemic necessity on the map is inherently cross-linguistic. If all modal necessity markers in all languages were like English *must*, the semantic map would feature only 'necessity' as such. It is only because there is at least one language that has separate grammatical forms for situational vs. epistemic necessity that the two deserve a separate position. Of course, even for English *must*, linguists may be convinced that situational and epistemic necessity describe two different meanings of *must*, and that English *must* is polysemous (e.g. Palmer 1979). But there are also linguists that claim that English *must* has the same meaning in (8a) as in (8b) and that the difference is only pragmatic and concerns different functions or uses (e.g. Perkins 1983). For semantic map making, polysemy vs. monosemy decisions are irrelevant: the polysemist will consider the map in (10) as showing

two separate meanings, and the monosemist two uses of the same meaning, yet they can collaborate in their typology.

The field of modality is, of course, much more complex than shown in (10) to (12). The more complete map has to relate necessity to possibility, it has to introduce additional types of modality and/or distinguish subtypes of situational and epistemic modality (e.g. the 'obligation' use of English *must*), it has to account for intermediary values in some of the modality types (e.g. degrees of epistemic probability), and it also has to relate the modal concepts to non-modal ones (a proposal for a more complete map is made in van der Auwera and Plungian 1998). Whatever the complexity of the resulting map, however, the strategies that languages use to encode the meanings or uses have to cover contiguous portions of the map. This has been called the 'adjacency requirement' (van der Auwera and Plungian 1998: 111-114) or 'connectivity hypothesis' (Croft 2001: 96). Consider the abstract maps in (13).

(13) a. meaning/use 1 meaning/use 2 meaning/use 3

b. meaning/use 1 meaning/use 2 meaning/use 3

c. meaning/use 1 meaning/use 2 meaning/use 3

The constellations in (13a) and (13b) are predicted to be possible, and the one in (13c) is taken to be impossible. If a marker can be used for two meanings or uses that are not contiguous, it must also be usable for any intermediate meaning or use. It it in part because of their strong predictive power and their falsifiability that typologists have grown to like them.[9]

Despite the success of the semantic map idea, it is of interest to note that their ontological

status is not quite clear. Strikingly, the maps are not always simply called 'semantic' (as in Kemmer 1993, 2003; Stassen 1997; van der Auwera & Plungian 1998; Haspelmath 2003). In Haspelmath (1997), they are called 'implicational',[10] in Kortmann (1997) 'cognitive', in Anderson (1986) 'mental', and in Croft (2001, 2003) 'conceptual' (in the latter with the further complication that he calls 'spaces' what are here called 'maps' and that he reserves the term 'map' for any construction-specific region of the map). For some linguists, the choice for a more cognitive rather than a more linguistic label does not matter much. For instance, Kortmann's 'cognitive maps' lie within 'semantic space' and he would not mind the term 'polysemy chains' (Kortmann 1997: 177) either. Conversely, the use of the more linguistic terminology may go hand in hand with a cognitive perspective. Kemmer (2003: 90), for instance, who sticks to the 'semantic map' label, proposes to call the enterprise involving them 'cognitive typology', and the categories which she proposes are supposed to be not only fundamental for linguistic semantics but to pertain to "deeper levels of conceptualization". For this reason she is also interested in non-linguistic evidence, such as found in the the behavior of pre-linguistic infants (Kemmer 2003: 98). The same perspective is embraced by Croft (2001: 105): "conceptual space [i.e. the totality of semantic maps] presents a universal structure of conceptual knowledge for communication in human beings" or again, "a geography of the human mind, which can be read in the facts of the world's languages in a way that the most advanced brain scanning techniques cannot ever offer us" (Croft 2001: 364). But—in line with our earlier characterization of their position—most typologists would not go that far.[11] From their point of view, a semantic map pictures the universal space that linguistic forms move around in, according to certain rules. It is not excluded that one needs these semantic maps for characterizing (other aspects of) human cognition, but hypothesizing a semantic map is neither in need of evidence to that effect, nor necessarily relevant for modeling cognition. An excellent illustration of this position is Stassen's

(1997: 578), regarding his semantic map of intransitive predication: according to him, this map is "a general semantic 'topography'or 'layout', which is universal, and *somehow* anchored in human cognition" (italics ours). Or to illustrate the issue with a concrete example: We have mentioned above that the semantic map of modal necessity is indifferent as to the issue of whether a modal auxiliary such as *must* is monosemous or polysemous. For cognitive modeling, however, this issue—and the related one of the mental status for the speaking subject of the meanings featured on the map—is very relevant. But the semantic map of modality does not offer any arguments to resolve this dispute, nor is it affected by the latter's outcome.

3. Conclusion

Cognitive Linguistics and linguistic typology are beyond any doubt mutually compatible fields of inquiry, both with respect to method and theoretical asumptions. Still, to a considerable extent they remain separated strands on the linguistic scene. On the one hand, Cognitive Linguistics rarely uses the 'typological method', no doubt to a large extent because of the unavailability of the relevant types of data and the difficulties involved in getting at them. On the other hand, linguistic typologists are often 'cognitive agnosticists', possibly because of typology's focus on grammar and because it is hard enough to achieve valid generalizations over the enormous range of facts from the languages of the world. As recent developments demonstrate, however, there is every reason to expect a closer collaboration between the two fields in the future.

Notes

1 This is the perspective from which to understand the phrase 'the functional-typological approach', advocated by among others Croft (1990: 2, 2003: 2).

2 The one process that will be most relevant for typology is grammaticalization, as in the study of Heine (1997) just cited, and the recent upsurge of interest in this phenomenon is at least as much due to typologists, starting with Lehmann (1982/1995), as to historical linguists (esp. Hopper & Traugott 1993). In particular, semantic maps, which have an independent *raison d'être* in typology (see section 2.2), can be the ideal background for drawing grammaticalization paths (see van der Auwera & Plungian 1998).

3 Linguistic change, in particular, grammaticalization, has been identified already as an important explanatory factor, but it is not clear whether it should be considered external or internal. Heine (1997: 7) considers it to be external, because the process of change is *outside* of the states of the language prior and posterior to the change. But the change is still linguistic, and from this point of view, internal, and hence in need of further explanation, such as the need for expressiveness (Haspelmath 1999) and habituation (Bybee 2003).

4 The reference to Talmy (2000) is misleading to the extent that this volume is actually a collection of all his major papers published in the last three decades of the 20th century.

5 In Talmy's conceptual semantic analysis, this actually involves a complex 'macro-event'

consisting of a framing event—i.c. the motion—plus a secondary 'co-event' which supports the framing event by specifiying further elements of it—e.g. its manner, cause, etc.

6 One can also refer to Berlin and Kay's (1969) work on color terms. Interestingly, this work arose in the context of anthropology. It predates the rise of Cognitive Linguistics, but is now clearly considered part of the latter, not least because it offers a beautiful illustration of the prototype notion (Ungerer & Schmid 1996: 2-19). The work was also deemed highly important by Comrie (1981: 34) for typology, yet it has not become a classic in the field of typology, largely because of the latter's focus on grammatical meaning.

7 This is, for example, also the kind of approach taken by Levinson (2003) and his colleagues at the Max-Planck Institute for Psycholinguistics (see also Pederson et al. 1998) in their semantic-typological investigation of the conceptualization of space: for lack of reliable existing sources of information, this research is being performed by means of a careful collection of (often very subtle) first-hand semantic and linguistic data, among others by means of experimental techniques, through intensive fieldwork on a number of individual languages across the globe. This research group would not generally be characterized as part of Cognitive Linguistics, nor as part of linguistic typology—but it does offer and excellent illustration of how to bridge the gap between the kinds of concerns of the two fields. See also Palmer, this volume.

8 The question whether *must* is epistemic or inferential is a matter of dispute, of course. For the sake of simplicity we will henceforth label the meaning involved 'epistemic'. This does

not signal that we are taking sides in this dispute, however—we are not, but a discussion of the matter would lead us astray.

9 Semantic maps have now been proposed for a large variety of linguistic topics. We single out the perfect, as the topic of the earliest influential study in this connection (Anderson 1982), and indefinite pronouns, as the typologically most detailed application of the semantic map model (Haspelmath 1997).

10 This term is motivated as follows: the adjacency requirement triggers implications—if two meanings or uses are encoded by a strategy, then any intermediate meaning or use will get the same strategy—and since the maps are taken to be universal, we can talk about 'implicational universals'.

11 Haspelmath (2003) is tempted by the strong cognitive perspective and he quotes Croft with approval (Haspelmath 2003: 233). But, on the other hand, he is aware of the danger that these ambitions may not be appropriate (Haspelmath 2003: 219, 239).

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