Grammaticalization

A Conceptual Framework

Bernd Heine

Ulrike Claudi

and

Friederike Hünnemeyer

BERND HEINE is professor and director of the Institute of African Studies at the University of Cologne.
ULRIKE CLAUDI is assistant professor at the Institute of African Studies at the University of Cologne.
FRIEDERIKE HÜNNEMEYER is co-editor of *Afrikanistische Arbeitspapier.*

Contents

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Abbreviations

ABL	ablative		IMP	imperative
ABS	absolutive		IMPERF	imperfect
ACC	accusative		IMPFV	imperfective
ACT	actor		INCL	inclusive
ADV	adverb		INDEF	indefinitive
ALL	allative		INF	infinitive
AND	andative suffix		INGRESS	ingressive
AOR	aorist		INSTR	instrumental
ASP	aspect		INTR	intransitive
ASSOC	associative		IO	indirect object
AUX	auxiliary			
			LOC	locative
BEN	benefactive			
			MASC	masculine
CAUS	causative			
CL	noun class		NEG	negative
COMP	complementizer		NF	nonfuture
COND	conditional		NOM	nominative
CONJ	conjunction		NOMI	nominalization
COP	copula, copulative		NP	noun phrase
DAT	dative		OBJ	object
DEF	definite marker		OPT	optative
DEM	demonstrative			
DET	determiner		part	participle
DIR	directional		PASS	passive
DO	direct object		PAST	past
DS	different subject		PERF	perfect
DUR	durative		PFV	perfective
			PL	plural
EMPH	emphatic		POSS	possessive
ENC	enclitic		PREP	preposition
EXCL	exclusive		PRES	present
			PROG	progressive
FEM	feminine		PURP	purposive
FOC	focus			
FUT	future		Q	interrogative
GEN	genitive		RED	reduplicative
GER	gerund		REFL	reflexive

REL	relative	TNS	tense
REP	repetitive	TOP	topic
SG	singular	TRANS	transitive
SIN	singulative	VEN	venitive
SS	same subject	VOC	vocative
STAT	stative		
SUB	subordinate	1	first person
SUBJ	subject	2	second person
SUBJUNCT	subjunctive	3	third person

1   Introduction

> Our minds delight in the discovery of resemblances, near and remote,
> obvious and obscure, and are always ready to make them the foundation of
> an association that involves the addition of a new use to an old name.
> [Whitney 1875:86]

1.1 Some Notions of Grammaticalization

According to Kuhn (1962), a new theoretical "paradigm" starts with the scientist
becoming aware of certain anomalies that are not predicted by the existing para-
digm and that may even contradict it. The development of a new paradigm is
completed once existent anomalies can be predicted within the new theoretical
framework.

Most post-Saussurean models of grammar rely—explicitly or implicitly—on
the following tenets:

a) Linguistic description must be strictly synchronic.
b) The relationship between form and meaning is arbitrary.
c) A linguistic form has only one function or meaning.

The main purpose of the present work is to propose solutions to problems result-
ing from these premises. The nature of the problems involved may be illustrated
by the following example taken from Ewe, a language belonging to the Kwa
branch of the Niger-Congo family, spoken in eastern Ghana, southern Togo, and
southern Benin.[1] Consider the following two sentences:

(1)   me-ná   ga   kofí
         1SG-give   money   Kofi
         'I gave Kofi money'

(2)   me-ple   ɓɔtrú ná   kofí
         1SG-buy   door   give Kofi
         (a) 'I bought a door and gave it to Kofi'
         (b) 'I bought a door for Kofi'

(3)   me-wɔ   dɔ´   vévíé ná   dodókpɔ́   lá
         1SG-do work   hard give exam   DEF
         'I worked hard for the exam'

Whereas in sentence (1) the element *ná* is a verb meaning 'give,' in sentence
(2) it is ambiguous and may be interpreted alternatively as a verb ('give') or as a
benefactive preposition ('for'), and in (3) *ná* can be interpreted only as a preposi-
tion ('for').

We are dealing here with an instance of grammaticalization, whereby a lexical item, the verb 'give,' assumes a grammatical meaning, that of expressing a "prepositional" notion, 'for' or 'to' in certain contexts,[2] a process that has occurred in a number of languages worldwide.[3]

Not only is our interpretation of this process based on the meaning or translation of the relevant sentences, but it is also borne out by the morphosyntactic behavior of *ná* in these sentences. Thus, in sentence (1), where *ná* has full lexical meaning, it may receive the entire range of verb inflections. The same applies to sentence (2), as far as meaning (*a*) is implied. If, however, the intended meaning is that of (2*b*), *ná* loses its lexical status to become a grammatical element and appears in a "decategorialized" form (cf. Hopper and Thompson 1984); that is, it no longer accepts verbal inflections such as tense, aspect, or negation markers. *Ná* in sentence (3) is an invariable function word that, unlike a verb, may not be preceded by a coordinating conjunction such as *éyé* 'and,' thus rendering sentence (4) ungrammatical:

(4)   * me-wɔ dɔ́   vévíé éyé me-tsɔ́-e   ná   dodókpɔ́ lá
         1SG-do work hard   and 1SG-take-3SG   give exam   DEF

Where a lexical unit or structure assumes a grammatical function, or where a grammatical unit assumes a more grammatical function, we are dealing with grammaticalization, a process that can be found in all languages known to us and may involve any kind of grammatical function. The implications that grammaticalization has for language structure, as well as for language description, are considerable. First, grammaticalization can be described alternatively as a diachronic or a synchronic phenomenon. Within a diachronic perspective, we might say that the verb *ná* "has developed" some prepositional uses, that is, that the verbal uses preceded the prepositional ones in time.

Within a synchronic analysis, grammaticalization provides a challenge to the notions of discrete morpheme classes or sentence constituents. In previous grammars of Ewe, for example, the morpheme *ná* has been cited as a case of homonymy, denoting a verb 'give' on the one hand and a preposition 'for, to' on the other (cf. Ansre 1966). Assuming that this analysis is correct, how is the meaning of *ná* in sentence (2) to be interpreted? Does the semantic ambiguity of *ná* in (2) involve overlapping homonymy, or are we dealing with a third "homonym," one that combines both verbal and prepositional uses? In the latter case, one might argue that this ambiguity is a result of translation rather than of inherent semantics.

That a homonymy/discrete-category approach raises a number of questions becomes even more obvious in view of the fact that the above data have provided a highly simplified, if not distorted, account of the actual situation: sentences (1), (2), and (3) include but a small collection of the many possible uses *ná* has. Given enough contexts in which this form occurs, it would be possible to demonstrate

that these uses can be arranged along a continuum extending from prototypical verbal uses, as in (1), to prototypical prepositional uses, as in (3). Sentence (2) exemplifies only one of a large range of possible points along this continuum. This means that, rather than analyzing the structure of *ná* in terms of discrete categories such as constituent types or morpheme classes, a more appropriate approach would be that which highlights the continuum nature of linguistic structures.

A theory of grammaticalization has to account for problems of this kind. In the present work, we wish to propose a framework for dealing with such problems.

The by now classic definition of the term "grammaticalization" was provided by Jerzy Kuryłowicz ([1965] 1975:52): "Grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status, e.g. from a derivative formant to an inflectional one." More or less the same definition has been used by other scholars and will be adopted here.[4] A number of alternative terms—such as "reanalysis" (see 8.2), "syntacticization" (Givón 1979a:208ff.; see 8.7), "semantic bleaching" (see 2.3.1), "semantic weakening" (Guimier 1985:158), "semantic fading" (Anttila 1972:149), "condensation" (Lehmann 1982:10–11), "reduction" (Langacker 1977:103–7), "subduction" (Guillaume 1964:73–86), etc.—are occasionally used as synonyms or near synonyms, although in most cases they refer to certain semantic or syntactic characteristics of grammaticalization. Grammaticalization has also been referred to as "grammaticization" (e.g., Givón 1975a:49; Bolinger 1978:489; Bybee and Pagliuca 1985) or "grammatization" (Matisoff, in press).[5]

Some authors have drawn attention to the problem of how grammaticalization is to be delimited from lexicalization. Most of them would agree that, when words belonging to an open class, like that of nouns, develop into closed class words such as adverbs, this constitutes an instance of grammaticalization. Anttila, however, argues that this is also an instance of lexicalization.[6]

In a number of works, the term refers only to the initial phase of the process, that is, to the development from lexical to grammatical structure. Thus, for Samuels (1971:58), grammaticalization "consists of intake from lexis"; it takes place when a word becomes "sufficiently empty of lexical meaning."[7] According to Sankoff (1988:17), it is present when "the once content-words or open-class morphemes of the language have become function words, or closed class morphemes."

Other authors again confine the use of the term "grammaticalization" to the transition from pragmatic structures to syntax. Hyman (1984:73, 83), for example, observes that pragmatics provides much of the substance of syntax, and he reserves the term "grammaticalization" to "the harnessing of pragmatics by a grammar." It would seem that such narrow definitions restrict the use of the term unnecessarily, especially since it would require an alternative terminology for the

development from less to more grammatical structure on the one hand and for the entire development on the other.

Other authors again define the term in a wider sense than the one adopted here. In a number of more recent studies, for example, it is discussed in terms of coding strategies (cf. Mithun, in press), and, for Levinson (1983:9), grammaticalization simply covers "the encoding of meaning distinctions . . . in the lexicon, morphology, syntax and phonology of languages."[8] Within the framework of emergent grammar proposed by Hopper, grammaticalization is used as a near synonym to grammar: "There is, in other words, no 'grammar' but only 'grammaticization'—movements toward structure" (Hopper 1987:148).

What is common to most definitions of grammaticalization is, first, that it is conceived of as a process. Most frequently it has been claimed to form essentially a diachronic process.[9] Thus, Kuryłowicz (1964) remarks in the preface to his *Inflectional Categories of Indo-European,* "Such shifts as *iterative > durative, static present > perfect, desiderative > future, adverb >* 'concrete' case *> grammatical case, collective > plural* . . . recur constantly and independently in all languages. They represent diachronic universals and must be somehow enrooted, directly or indirectly, in the elementary speech situation." Note also Traugott and König (in press), who define the term in the following way: "Grammaticalization . . . refers primarily to the dynamic, unidirectional historical process whereby lexical items in the course of time acquire a new status as grammatical, morphosyntactic forms, and in the process come to code relations that either were not coded before or were coded differently."

Other authors again have emphasized that grammaticalization can also be defined or interpreted as a synchronic process (cf. Lehmann 1986; Heine and Claudi 1986b). In a number of works, however, it is not specified how a grammaticalization process is to be conceived of.[10] Second, while the term "grammaticalization" has been applied to all kinds of domains, including that of phonology (cf. Anderson 1981; Booij 1984:273–74), most scholars treat grammaticalization as a morphological notion, that is, as one that concerns the development of a given word or morpheme.

A third characteristic that is implicit in these definitions and has frequently been mentioned as an intrinsic property of the process is that grammaticalization is unidirectional, that is, that it leads from a "less grammatical" to a "more grammatical" unit, but not vice versa. A few counterexamples have been cited (e.g., Kahr 1976; Jeffers and Zwicky 1980; Campbell, in press). They concern either degrammaticalization or regrammaticalization (cf. Greenberg, in press). The former is present when the direction of grammaticalization is reversed, that is, when a more grammatical unit develops into a less grammatical one, while the latter applies when forms without any function acquire a grammatical function.[11] Although both degrammaticalization and regrammaticalization have been ob-

served to occur, they are statistically insignificant and will be ignored in the remainder of this work.[12] Note that many cases of alleged degrammaticalization found in the literature on this subject can be shown to be the result of an inadequate analysis (see Lehmann 1982:16–20).

1.2 Previous Approaches

The question as to the origin and development of grammatical categories is almost as old as linguistics. This fact should not stop us, however, from viewing grammaticalization as a new paradigm. In the present section, some developments in grammaticalization studies will be reviewed to provide a better understanding of this paradigm, although more detailed historical treatment of the subject is urgently required (for details, see Lehmann 1982).

1.2.1 Earlier Works

It would seem that the notion of grammaticalization was first recognized outside the world of Western scholarship. At the latest, since the tenth century, Chinese writers have been distinguishing between "full" and "empty" linguistic symbols, and Zhou Bo-qi (Yuan dynasty, A.D. 1271–1368) argued that all empty symbols were formerly full symbols (Harbsmeier 1979:159ff.).

An interest in grammaticalization, as we now conceive of it, however, goes back to the eighteenth century. Scholars such as the French philosophers Etienne Bonnot de Condillac and Jean Jacques Rousseau argued that both grammatical complexity and abstract vocabulary are historically derived from concrete lexemes. Condillac was apparently the first to notice that verbal inflections such as tense suffixes are historically derived from independent words (Condillac 1746, 1749)—an observation that appears to have inspired generations of nineteenth-century scholars engaged in formulating the principles of comparative (Indo-European) grammar.

It was Condillac's contemporary J. Horne Tooke who may be regarded as the father of grammaticalization studies. For Horne Tooke, the "secret" of words lies in their etymology. A key notion in his work, which appeared first in 1786 and 1805 and was published later in one volume (Horne Tooke 1857), is "abbreviation": nouns and verbs are called "necessary words" and are considered to be the essential parts of speech, while other word classes, such as adverbs, prepositions, and conjunctions, result from the abbreviation or "mutilation" of "necessary words."[13] Inflectional and derivational forms are treated by him as fragments of earlier independent words agglutinated to the root word (see Robins [1967] 1979:155–58).[14]

That verb forms inflected, for example, for tense or aspect can be explained as being the result of the coalescence of several independent words had already been pointed out forty years earlier by Condillac (1746). Horne Tooke's work, how-

ever, led to such observations being used to develop a theory according to which language in its original state is "concrete" and "abstract" phenomena are derived from concrete ones.

Grammaticalization was also a topic in linguistics throughout the nineteenth century. It formed a central theme in the work of Franz Bopp (1816, 1833) on the principles of comparative grammar. In the tradition of Horne Tooke and other eighteenth-century scholars, Bopp presented numerous examples of the development from lexical material to auxiliaries, affixes, and, finally, inflections. Grammaticalization, as conceived of by Bopp, forms an important parameter in understanding diachronic Indo-European linguistics.

August Wilhelm von Schlegel (1818) presented a number of thoughts that have come up again in recent discussions on grammaticalization. His "paper-money theory," as we propose to call it, according to which words are stripped of their semantic content in order to facilitate their circulation in language, is based on some of the paradigm cases of grammaticalization: the development from demonstrative to definite article (cf. Greenberg 1978a), from the numeral 'one' to an indefinite article (cf. Givón 1981), or from *have*-constructions to perfective/past markers (Fleischman 1983):

> Man entkleidet einige Wörter ihrer Bedeutungskraft und läßt ihnen nur einen Nennwert (valeur nominale), um ihnen einen allgemeineren Kurs zu geben und sie in den Elementarteil der Sprache einzuführen. Diese Wörter werden zu einer Art Papiergeld, das den Umlauf erleichtert. Zum Beispiel irgendein Demonstrativpronomen wird zum Artikel. Das Demonstrativpronomen lenkt die Aufmerksamkeit auf einen Gegenstand, dessen reale Präsenz es anzeigt; als Artikel zeigt es nur noch an, daß das Wort, dem es vorangeht, ein Substantiv ist. Das Zahlwort *ein* wird unter Verlust seines numerischen Wertes zum unbestimmten Artikel. Ein Verbum, das das Besitzen bezeichnet, verbindet sich mit einem anderen Verbum als Hilfsverb und drückt nun nur noch den idealen Besitz der Vergangenheit aus. [Schlegel 1818:27–28, quoted in Arens 1969: 190]

Even more influential was a lecture presented by Wilhelm von Humboldt in 1822 (and published in 1825) to the Academy of Science in Berlin, entitled "Über das Entstehen der grammatischen Formen und ihren Einfluß auf die Ideenentwicklung" (On the origin of grammatical forms and their influence on the development of ideas). Humboldt defended Horne Tooke's thesis that word classes such as prepositions and conjunctions "have their origin in real words denoting objects" (Humboldt 1825:63), and he proposed the following four-stage evolution of means employed for achieving grammatical designations:

Stage I (which he calls "the lowest stage"): idioms, phrases, and clauses;
Stage II: fixed word order and words vacillating between "matter and form meaning";

Stage III: "analogs of forms," which are "pure expressions of relations";
Stage IV ("the highest stage"): "true forms, inflection, and purely grammatical words"
  (Humboldt 1825:66).

This model, which later came to be known as the "agglutination theory" or "coalescence theory" (Jespersen 1922:376), is closely related to the well-known three-stage typology developed by Schlegel and Humboldt: Stages I and II roughly correspond to the isolating type, while Stage III is suggestive of the agglutinating and Stage IV of the inflectional type. Furthermore, this model reveals Humboldt's major motivation for dealing with grammaticalization: linguistic typology and the way it correlates with the evolution of language and thought.

It was Franz Wüllner who developed perhaps the most pronounced notion of grammaticalization during the first half of the nineteenth century. In his *Über Ursprung und Urbedeutung der sprachlichen Formen* (On the origin and original meaning of linguistic forms), he summarized his findings in the following way: "From these few examples we may draw the conclusion that designations for all non-perceptible are derived from perceptible [concepts]" (Wüllner 1831:14). His examples include instances of the development from independent word to inflection, for example, from auxiliary verb to tense inflection, or from self-standing pronoun to bound personal ending, and he discussed in some detail the transition from periphrastic constructions to tense markers.

A comparable perspective was adopted by William Dwight Whitney (1875) in his *Life and Growth of Language*. While his evolutionary thesis and a number of his etymologies are no longer tenable, some of his views on semantic change are immediately relevant to modern conceptions of grammaticalization. According to Whitney, transfer and extension are important factors in semantic change; they lead to "a movement in the whole vocabulary from the designation of what is coarser, grosser, more material, to the designation of what is finer, more abstract and conceptional."[15] This development, he argues, is not confined to the lexicon; rather, it also leads to the emergence of grammatical forms, involving a process of "attenuation, a fading-out, a complete formalizing, of what was before solid, positive, substantial" (Whitney 1875:89–90, 90). One of his examples of how lexemes enter "into the service of formal grammatical expression" concerns the development from a verb 'seize, grasp' (Latin *capere*), to one expressing possession (Latin *habere*, English *have*), to a perfect marker on the one hand (e.g., *I have gone*) and a marker of obligation (*I have to go*) and futurity (French **je fendre ai > je fendr-ai* 'I'll split') on the other. The following passage illustrates his way of semantic reasoning:

> Present possession often implies past action: *habeo cultellum inventum, habeo virgulam fissam, habeo digitum vulneratum,* 'I possess my knife (recovered after loss), I possess a twig that is split, I have a wounded finger:' here the several conditions have been pre-

ceded by the several acts, of finding, splitting, wounding. On this
absurdly narrow basis is built up the whole immense structure of the
"perfect"-tense expression: the phrase shifts its centre of gravity
from the expressed condition to the implied antecedent act; and *I
have found the knife, ich habe das Messer gefunden, j'ai trouvé le
couteau*, become indicators of a peculiar variety of past action con-
templated as completed. [Whitney 1875:91]

Various works by German scholars that appeared in the second half of the last
century dealt with issues that are only now beginning to be discovered as being of
interest to grammaticalization studies. Attention should be drawn, inter alia, to
the studies of Wegener (1885), in particular to his concept of *Sprachleben* and his
description of discourse pragmatic patterns developing into morphosyntactic
constructions. Furthermore, we owe some important contributions to gram-
maticalization theory to Riis (1854) and Christaller (1875), two German
missionaries working on the Twi (Akan) language in Ghana, who presented a
new framework for describing the development from lexical to grammatical cate-
gories (Lord 1989). By the time Georg von der Gabelentz ([1891] 1901:250–51)
proposed the notion of an evolutionary spiral to describe the development of
grammatical categories, the "what-today-are-affixes-were-once-independent-
words" paradigm had become almost a commonplace in linguistics. Gabelentz's
attempt to account for grammaticalization in terms of two "driving forces," *Be-
quemlichkeitstrieb* (indolence, ease) and *Deutlichkeitstrieb* (distinctness), had a
considerable impact on early twentieth-century views of grammaticalization:
"Nun bewegt sich die Geschichte der Sprachen in der Diagonale zweier Kräfte:
des Bequemlichkeitstriebes, der zur Abnutzung der Laute führt, und des Deut-
lichkeitstriebes, der jene Abnutzung nicht zur Zerstörung der Sprache ausarten
lässt. Die Affixe verschleifen sich, verschwinden am Ende spurlos; ihre Func-
tionen aber oder ähnliche bleiben und drängen wieder nach Ausdruck"
(Gabelentz [1891] 1901:256).

Subsequent generations of linguists were concerned with more detailed de-
scriptions of this process. Toward the end of the century, for example, the
semanticist Michel Bréal pointed out, "Among all words of a certain kind, dis-
tinguished by a certain grammatical imprint, there is always one which is little by
little drawn apart from its fellows. It becomes the pre-eminent exponent of the
grammatical conception of which it bears the stamp. But at the same time it loses
its individual value, and is no more than a grammatical instrument, one of the
wheels of the phrase" (Bréal 1897, quoted in Matisoff, in press).

It was Bréal's compatriot, Antoine Meillet, who may be called the founder of
modern grammaticalization studies. His "L'évolution des formes gram-
maticales" (1912) marks the beginning of a perspective of grammaticalization
that is still prevalent today. Meillet not only introduced the term *grammaticalisa-*

tion (1912:133), but he also justified the relevance of grammaticalization studies as one of the major activities in the science of language.

In his discussion of the transition of words from what he referred to as *mots principaux* to *mots accessoires,* Meillet followed Bopp, rather than Humboldt, in using grammaticalization as an explanatory parameter in historical linguistics. Like Gabelentz, he argued that linguistic development proceeds in spirals, and his discussion of the distinction between *affaiblissement* (weakening) and *expression intense* (intensive expression) is also strongly reminiscent of that between Gabelentz's two driving forces.

Meillet claimed that there are only two ways in which new grammatical forms arise, either via analogical innovation or via grammaticalization (= *l'attribution du caractère grammaticale à un mot jadis autonome*). While the former does not interfere with the overall system of language, the latter leads to a transformation of the entire system by introducing new categories for which no linguistic expressions existed before: "Tandis que l'analogie peut renouveler le détail des formes, mais laisse le plus souvent intact le plan d'ensemble du système existant, la 'grammaticalisation' de certains mots crée des formes neuves, introduit des catégories qui n'avaient pas d'expression linguistique, transforme l'ensemble du système" (Meillet 1912:133). The distinction between analogy and grammaticalization is important to Meillet, especially since it helps him set off his own view from that of the then very powerful neogrammarians, who, he claimed, were preoccupied with only two things: "phonetic laws" and analogical innovation. [16]

The transition from lexical items (*mots principaux*) to auxiliaries and other morphemes fulfilling grammatical functions (*mots accessoires*), also referred to as "empty words" (*mots vides*), is described by Meillet as a kind of continuum, [17] although he insists that at the same time this is also a discrete distinction. With this observation on the dual character of the process, he has captured one aspect that any theory of grammaticalization has to take into consideration, as we shall try to demonstrate. Another important observation relates to the inverse correlation between the increase in the frequency of use and the decrease in expressive value that units undergo on their way to becoming *mots accessoires* (Meillet 1912:135–36).

A number of generalizations on language structure that more recently have become key notions of grammaticalization are contained in Sapir's *Language* (1921). Although chapter 5 of this book mainly deals with synchronic typology, it contains a wealth of observations on grammaticalization. For example, what today is referred to as the "bleaching model" (see 4.4) was presented by him under the label "thinning-out process," and our notion of a "form-meaning asymmetry" in the process of grammaticalization (8.1) was described in the following way: "Now form lives longer than its own conceptual content" (Sapir 1921:98).

Sapir's description of the concrete-abstract continuum and its relation to linguistic expression is still relevant to modern studies on the development of grammatical categories (see chap. 2).[18] The following statement illustrates Sapir's understanding of language structure: "It is enough for the general reader to feel that language struggles towards two poles of linguistic expression—material content and relation—and that these poles tend to be connected by a long series of transitional concepts" (Sapir 1921:109). At the same time, however, his framework did not include grammaticalization as a major paradigm.

The Boppian perspective of grammaticalization as an essential part of classic Indo-European linguistics is still apparent in the work of Kuryłowicz ([1965] 1975) and Benveniste (1968). The former has volunteered a definition of this term that is now widely, though not generally, accepted (see sec. 1.1 above).

Benveniste proposed a distinction between "innovating mutation" and "conservative mutation" that is strongly reminiscent of Meillet's distinction between analogical innovation and grammaticalization: both distinctions contrast two major types of morphosyntactic change, and both draw attention to grammaticalization as forming one of these types. But, whereas Meillet's *grammaticalisation* relates mainly to the transition from one category of words (*mots principaux*) to another (*mots accessoires*), Benveniste's term "conservative mutation" highlights the morphosyntactic process involved, which, according to him, is periphrasis: conservative mutation, Benveniste (1968:86) argued, serves "to replace a morphemic category by a periphrastic category with the same function." Thus, case inflections are replaced by prepositional phrases etc. The data presented by Benveniste include an insightful description of the evolution from a periphrastic construction *habere* + past participle in Latin to a perfective category and from *habere* + infinitive to a future category in French.

Up to 1970, grammaticalization was viewed mainly as being part of diachronic linguistics, as a means of analyzing linguistic evolution, of reconstructing the history of a given language or language group, or of relating modern linguistic structures to previous patterns of language use.[19] This tradition has yielded a wealth of data on individual grammatical developments and on the way such developments may contribute to understanding synchronic language states. Lockwood, for example, has described the evolution from demonstrative to definite article in German in the following way: "The natural way of giving linguistic expression to the desire to draw attention to the definite or familiar is to qualify the noun in question with a demonstrative pronoun, i.e. with a word meaning 'this' or 'that' or both. But in this new function, the demonstrative force of the word automatically diminishes, eventually disappearing altogether; when this happens the article is born" (1968:86).

This evolution, which was later defined in more precise terms by Greenberg (1978a), offers an explanation as to why there are now two forms of the German demonstrative paradigm *der, die, das* 'this/that': one form that still carries stress

and preserves the original function as a demonstrative, contrasting with another one "where the original demonstrative now bears no stress, having become an article pure and simple" (Lockwood 1968:87).

By around 1970, the notion of grammaticalization had been accepted by a number of linguists as constituting one of the factors responsible for language change. Anttila (1972:149–52), for example, discussed it in his *Introduction to Historical and Comparative Linguistics,* together with lexicalization, as one of the processes to be observed in semantic change.

1.2.2 Recent Approaches

One of the main merits of grammaticalization studies after 1970 was that attention was drawn to the potential they offer as an explanatory parameter for understanding synchronic grammar. Dissatisfaction with existing models of grammatical description provided a major incentive for turning to grammaticalization as a means of surmounting "static" approaches for analyzing grammar, in particular structuralism and generative transformational grammar. One point of criticism concerns the fact that structuralist and generative approaches, in particular the Chomskyan paradigm of transformational grammar, are hard pressed to account for the relation between cognitive domains such as space, time, manner, etc. and the effect that creative processes such as metaphor and other figures of speech have on language structure. A number of works, many of them inspired by Fillmore's notion of case grammar, were devoted to this issue in the early 1970s.

A noteworthy but little-known attempt to reconcile generativist theory with findings on metaphor, metonymy, synechdoche, and other cognitive processes was that of Lambert (1969), who, by adopting a modified version of Fillmore's case grammar, proposed an extended model, called "modified case grammar." An essential part of this model includes "construal rules" whose function it is to resolve feature contradiction by means of creative language processes on the one hand and metaphor on the other.[20] The latter two are said to differ from one another in that "creative language processes" come in when there is compatibility, though not identity, between lexical features and case features, while metaphor is employed to resolve feature contradiction. By incorporating such cognitive activities within the framework of case grammar, Lambert was able to demonstrate that grammatical and lexicographical descriptions can be simplified considerably. On the basis of earlier studies by Weinreich (1966), McCawley (1968), and others, he proposed a catalog of common construal patterns, which serve to resolve such notorious problems as "feature contradiction," inadequately accounted for by previous linguistic schools.

According to another, perhaps better-known paradigm, many structures that appear in grammar can be derived from the domain of space: "Spatial expressions are linguistically more basic . . . in that they serve as structural

templates, as it were, for other expressions" (Lyons 1977:718). This line of research has been referred to as the "localist hypothesis" or "localism" (Lyons 1967; Anderson 1971; Pottier 1974), of which an extended version can be found in Diehl (1975). Diehl proposed an egodeictic space hierarchy in which four types of space are distinguished. These spaces are ordered in the form of an inward/outward progression, where "social space" is closest to the core and "logical space" is the most peripheral (see 2.4.1). Each space has its own deictic center, which is glossed by Diehl in the following way:

Social space	*me*
Spatial space	*here*
Temporal space	*now*
Logical space	*in this case*

While Lambert, Diehl, and others aimed at accounting for language structure within prevalent paradigms of linguistics, a number of other scholars argued that existing models of linguistic analysis were inadequate and that a new perspective on the subject was required according to which language structure is the result of nonlinguistic phenomena, above all of cognitive processes. Perhaps the most noteworthy approaches are those of Talmy (1972, 1975, 1978, 1983, 1985a), Lakoff and Johnson (1980), Lakoff (1987), and Langacker (1981, 1982, 1986).

Another major point of criticism of the mainstream theories concerns the problem of explanations in linguistic theory. Dissatisfaction with the restrictions of structuralism and other rigidly synchronic models led to an awareness of the need for parameters that might help explain linguistic behavior in a noncircular way. It was mainly thanks to the work of Talmy Givón that attention was focused on new parameters, one of them being diachrony and linguistic evolution, whereby a new perspective of analysis emerged, inspired by typological works such as that of Greenberg (1963b). In one of his earliest writings, Givón sketches this perspective in the following way: "in order to understand current morphologies and morphotactics of a language, one must construct specific hypotheses about the syntactic order and transformational structure of the language at some earlier stage of its historical development" (Givón 1971b:394). Givón's by now classic assertion that "today's morphology is yesterday's syntax" (Givón 1971b:413), possibly influenced by Hodge's description of a cyclic typological evolution in Egyptian, marked the beginning of a new era of research on the development of grammatical categories.[21] Like Hodge (1970), he assumed that linguistic evolution is cyclic, involving the development from free lexemes to bound affixes, which undergo attrition and eventually fusion with the stem, the result being the beginning of a new cycle (Givón 1971b:411–12).

In later years, a revised approach emerged in Givón's work. Since the

mid-1970s, discourse pragmatics came to be recognized as a major parameter for understanding language structure in general and the development of syntactic structures and grammatical categories in particular. On the basis of their analysis of the development of relative clause structures in New Guinean Tok Pisin, Sankoff and Brown arrived at the following conclusion: "We find that the basic processes involved in relativization have much broader discourse functions, and that relativization is only a special instance of the application of general 'bracketing' devices used in the organization of information. Syntactic structure, in this case, can be understood as a component of, and derivative from, discourse structure" (Sankoff and Brown 1976:631).

In addition to his earlier slogan, "Today's morphology is yesterday's syntax," Givón drew attention to another paradigm case of linguistic evolution, one that can be paraphrased roughly as, "Today's syntax is yesterday's pragmatic discourse." Givón argued that, in the process of grammaticalization, a more pragmatic mode of communication gives way to a more syntactic one. According to this perspective, loose, paratactic discourse structures develop into closed syntactic structures. Since the latter in time erode via morphologization, lexicalization, and phonological attrition, the result is a cyclic wave of the following kind (Givón 1979a:208–9):

Discourse > syntax > morphology > morphophonemics > zero

This line of research has opened a new window on grammaticalization studies, one that encourages a view of grammaticalization not simply as the "reanalysis of lexical as grammatical material" but also as the reanalysis of discourse patterns as grammatical patterns and of discourse-level functions as sentence-level, semantic functions (Hopper 1979a, 1979b, 1982; Herring 1988, in press; Thompson and Mulac, in press). New findings, such as DuBois's observation, according to which recurrent patterns in discourse tokens exert pressure on linguistic types (DuBois 1985), have stimulated research in particular on discourse frequency as an indicator for the emergence of new grammatical patterns (Givón 1984b; Bybee and Pagliuca 1985; DuBois 1987; Durie 1988; Hopper 1987). We will return to this issue in later chapters (see 7.2.2, 8.7).

That grammaticalization processes may be material to understanding synchronic language structures was demonstrated most clearly by Li and Thompson (1974a). Like Givón, they used grammaticalization as an explanatory parameter to account for certain language structures, such as the shift from an SVO (subject-verb-object) basic order to a verb-final, SOV (subject-object-verb) syntax in Chinese.

Rather than relying on prevalent models of that time—for example, that of Vennemann (1973), according to which new word orders result from a direct reorganization of sentential constituents within simple clauses—they argue that the transition from SVO to SOV in Chinese is the result of a process whereby

verbs assume a grammatical function. In an SVO language, when the first verb (V1) in a sequence S-V1-O-V2 is grammaticalized to a case marker, then the result is an SOV structure since V2 assumes the role of the only verb in the sentence. Li and Thompson argue that exactly this has happened in Chinese. For example, with the grammaticalization of the verb *bǎ* 'to take hold of' as V1 to an objective case marker, V2 becomes the main verb; hence, an SOV order emerges. The result is a structural shift of the following kind:[22]

$$S = V1 = O = V2 > S\text{--objective case--}O\text{--}V$$

Li and Thompson conclude that the gradual shift in word order helps explain a number of characteristics of Chinese grammar, for example, why certain sentences have an SVO order or why case markers in an SOV language derived from the order SVO are prenominal rather than postnominal (Li and Thompson 1974a:210). Not only have such insights contributed to our understanding of synchronic language structure, but they have also provided new techniques for reconstructing earlier states of language development (Claudi 1988, 1990).

A new framework of grammaticalization has emerged in the work of Elizabeth C. Traugott. Her major concern is with principles of meaning change in the process of grammaticalization (cf. Traugott 1980:46). On the basis of the Hallidayan tripartite distinction of language functions, she suggests that the main change involved in the process of grammaticalization is from the propositional/ideational via the textual to the interpersonal/expressive functional-semantic component: "If there occurs a meaning-shift which, in the process of grammaticalization, entails shifts from one functional-semantic component to another, then such a shift is more likely to be from propositional through textual to expressive than in reverse direction" (Traugott 1982:256). Reverse changes, she argues, that is, changes from expressive through textual to propositional functions, are "highly unlikely in the history of any one grammatical marker" (Traugott 1987:1). This process, which is said to lead toward greater pragmaticization of meaning, is also called "subjectification" by Traugott since, over time, "meanings tend to come to refer less to objective situations and more to subjective ones (including speaker point of view), less to the described situation and more to the discourse situation" (Traugott 1986a:540).[23]

More recently, Traugott has proposed a refined framework in which the following three tendencies of semantic-pragmatic change are distinguished (see Traugott and König, in press):

I	External described situation	> Internal (evaluative/perceptual/ cognitive) situation
II	External or internal situation	> Textual situation
III	(Textual situation)	> Speaker's subjective belief state

Traugott cites the development of Old English *hwilum* 'at times' to Middle English *while* 'during' to present-day English *while* 'although' as an example: the meaning 'at times' "refers to a situation viewed as existing in the world," thus being part of the propositional component of language, while the meaning 'during' "signals a cohesive time-relation not only between two events in the world but also between two clauses, and therefore has a strongly text marking function." Finally, the concessive sense of 'although' is said to be primarily expressive of the speaker's attitude (Traugott 1987:1).

Concerning the question as to how these changes come about, Traugott draws attention to the role played by strengthening of informativeness, conversational implicatures, and metonymy in the development of grammatical categories (cf. Traugott and König, in press). It is this line of research that has had a considerable impact on the framework proposed here (see esp. chap. 3).

While in some previous works, such as that of Givón, the question as to where grammaticalization starts and where it ends was raised, Heine and Reh (1984) were concerned with the internal mechanism of the process. Observing that this process affects all levels of language structure, they distinguish between functional, morphosyntactic, and phonetic processes:

a)   *Functional processes:* desemanticization, expansion, simplification, and merger;

b)   *Morphosyntactic processes:* permutation, compounding, cliticization, affixation, and fossilization;

c)   *Phonetic processes:* adaptation, erosion, fusion, and loss (Heine and Reh 1984:16ff.).

To a large extent, the arrangement of processes both between and within the three groups reflects the chronological order in which they operate. For example, functional processes chronologically precede both morphosyntactic and phonetic processes; that is, if a linguistic unit undergoes both desemanticization and cliticization, then the former is likely to precede the latter in time. Furthermore, Heine and Reh (1984:67) list a number of more general observations that can be made during the process of grammaticalization. For example, the more grammaticalization processes a given linguistic unit undergoes,

a)   the more it loses in semantic complexity, functional significance, and/or expressive value;

b)   the more it loses in pragmatic and gains in syntactic significance;

c)   the more reduced is the number of members belonging to the same morphosyntactic paradigm;

d)   the more its syntactic variability decreases, that is, the more its position within the clause becomes fixed;

e)   the more its use becomes obligatory in certain contexts and ungrammatical in others;

f)   the more it coalesces semantically, morphosyntactically, and phonetically with
            other units;
g)   the more it loses in phonetic substance.

Between 1971 and 1975, a wealth of data on the development from lexical to grammatical categories in non-Indo-European languages was accumulated. One major theme of this research was to demonstrate, for example, what implications the grammaticalization of verbs to case markers, complementizers, or tense/ aspect categories has both for synchronic grammar and for the reconstruction of previous language states (Givón 1971a, 1975a; Li and Thompson 1974a, 1974b; Li 1975a; Lord 1973, 1976).

Roughly a decade later, a new line of research developed that was concerned with the linguistic nature of the process of development from lexeme to grammatical marker. On the basis of evidence from a number of unrelated languages, Heine and Reh concluded, "Grammaticalization is an evolutional continuum. Any attempt at segmenting it into discrete units must remain arbitrary to some extent" (Heine and Reh 1984:15).

One of the earliest attempts to describe the nature of continua resulting from the grammaticalization of lexemes to function words was made in works on Chinese grammar. In treatments written prior to 1980, the "co-verbs" of this language were usually classified either as full verbs or prepositions or as some category derived from either of these, like the "quasi-verbs" of Gao (1940:32), although the diachronic and synchronic relation existing between verbal and prepositional uses was both recognized and described (cf. Chao 1968; Hagège 1975; Li and Thompson 1974a, 1974b; Li 1975a; see also Li and Thompson 1981).[24]

Perhaps the first to refer to the "amphibious nature" of the co-verbs in Chinese as a continuum ranging from a verbal to a prepositional pole was Chang (1977). A description of this continuum was presented five years later by Paul (1982). Her analysis of six co-verbs suggests not only that each of them forms a continuum of "decreasing verbality" but also that these co-verbs differ from one another in the extent to which they (still) exhibit a verbal behavior and can be arranged along a scale of relative verbal characteristics. At one end of this scale is the co-verb *yòng* 'to use; with,' which has a wider range of verbal characteristics than, for example, *dào* 'to arrive at, go to; until'; *bǎ* 'to take; direct object marker,' however, is located at the other end of the scale since it exhibits a minimal range of verbal characteristics.

Subsequently, the structure of the continuum from verb to preposition also became the subject of two more detailed studies on languages other than Chinese, one on Thai (Kölver 1984) and another on Ewe (Hünnemeyer 1985). More recent observations suggest that, in addition to its continuum structure,

grammaticalization also has the characteristics of a chain (cf. Heine, Claudi, and Hünnemeyer, in press).

In an important paper published in 1985, Bybee and Pagliuca drew attention to a number of salient characteristics of grammaticalization. The first relates to the process of generalization, or weakening of semantic content, which had also been mentioned by some previous writers: "The notion of generalization, it should be noted, is twofold. On the one hand, a more general morpheme has a more general distribution, since it can be used in more contexts, and on the other hand, it is more general in that it lacks certain specific features of meaning. . . . Thus by generalization we do mean to imply that meanings are emptied of their specifities" (Bybee and Pagliuca 1985:63).

Another observation concerns frequency of use. Bybee and Pagliuca note not only that morphs that are recruited for grammaticalization are characterized by "very frequent and general use" (cf. Bybee and Pagliuca 1985:72) but also that their use further increases once they undergo this process: "As the meaning generalizes and the range of uses widens, the frequency increases and this leads automatically to phonological reduction and perhaps fusion." (Bybee and Pagliuca 1985:76). Furthermore, these authors proposed metaphorical extension as an important mechanism underlying generalization, whereby concrete lexical items serve to express grammatical functions that "in themselves are necessarily abstract" (Bybee and Pagliuca 1985:72). In later works by these authors, however, metaphor is no longer mentioned as a parameter of grammaticalization.

The framework of Bybee and Pagliuca (1985) appears to have been influenced by Givón (1981). Givón had pointed out that there are two prerequisites for the development from the numeral 'one' to a referential indefinite marker to take place, a development that has in fact occurred in many languages worldwide: a relatively high text frequency of the use of the numeral and a process of "semantic bleaching" or "generalization," in that order (Givón 1981:51).

The notion of "generalization" contrasts with that of "generality," proposed by Bybee in her monograph on morphology (1985a). She notes that derivational morphology is transitional between lexical and inflectional expression and proposes "a lexical/derivational/inflectional continuum" (Bybee 1985a:82), which is described in terms of two parameters, "relevance" and "generality." While the former relates to the relative degree to which an element directly affects or modifies the meaning of another element, "generality" refers to the degree of obligatoriness within a given syntactic construction (Bybee 1985a:13ff.). A high degree of relevance correlates with a low degree of generality, and vice versa.

These correlations are graphically represented in a simplified form in figure 1.1. Grammatical elements are located somewhere along this morphological
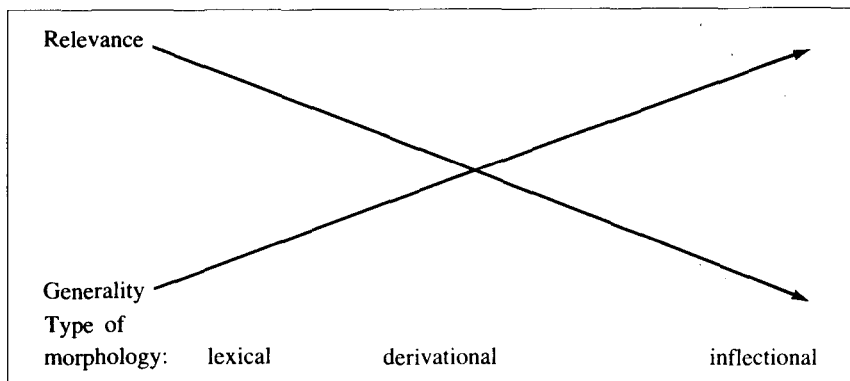
FIG. 1.1 Parameters underlying the lexical/derivational/inflectional continuum (according to Bybee 1985a).

continuum leading from lexical items to inflectional elements. The category of number, for example, tends to be located to the left of the category of case since in many languages it is likely to be less inflectional, and hence higher in relevance but lower in generality, than case.[25] More refined quantitative techniques for measuring relative degrees of grammaticalization are discussed in Bybee, Pagliuca, and Perkins (in press).

The search for synchronic parameters in describing grammaticalization is also apparent in the writings of Lehmann (1982, 1986), who draws attention, however, to the distinction between a diachronic and a synchronic aspect of this process. With regard to the synchronic aspect, Lehmann's primary interest lies in finding ways of measuring "grammaticality" (see above). For this purpose, he proposes six parameters (see table 1.1), set up on the basis of three aspects that are relevant for determining the autonomy of a linguistic form, namely "weight," "cohesion," and "variability," and the relation of these notions to their paradigmatic selection and syntagmatic combination.

These six parameters serve to order linguistic units along a synchronic scale

TABLE 1.1. Synchronic Parameters of Grammaticalization (according to Lehmann 1982, 1986)

	Paradigmatic Aspect	Syntagmatic Aspect
Weight	Integrity	Scope
Cohesion	Paradigmaticity	"Bondedness"
Variability	Paradigmatic variability	Syntagmatic variability

TABLE 1.2 Parameters and Processes of Grammaticalization (according to
          Lehmann 1986)

Parameter	Weak Grammaticaliza-tion	Process	Strong Grammaticaliza-tion
Integrity	Bundle of semantic features; possibly polysyllabic	Attrition	Few semantic features; oligo- or monosegmental
Paradigma-ticity	Item participates loosely in semantic field	Paradigma-ticity	Small, tightly integrated paradigm
Paradigmatic variability	Free choice of items according to communicative intentions	Obligatorifi-cation	Choice systematically constrained, use largely obligatory
Scope	Item relates to constituent of arbitrary complexity	Condensation	Item modifies word or stem
Bondedness	Item is independently juxtaposed	Coalescence	Item is affix or even phonological feature of carrier
Syntagmatic variability	Item can be shifted around freely	Fixation	Item occupies fixed slot

of grammaticalization. They may be of help, for example, in determining that
fusional case affixes are more grammaticalized than adpositions and that these
in turn are more grammaticalized than relational nouns (Lehmann 1986:3). Fur-
thermore, they can be used to describe processes rather than states, once the
"correlative increase or decrease" of all six parameters is measured.

In order to capture the processual nature of grammaticalization, Lehmann for-
mulates six processes, namely attrition, paradigmatization, obligatorification,
condensation, coalescence, and fixation. These processes are construed as a
"dynamicization" of the synchronic parameters listed in table 1.1. Table 1.2 de-
scribes the way these processes relate to the parameters of table 1.1. The
development from Proto-Indo-European *esti to English is (frequently z) is given
as an example for a decrease in phonological integrity (= "phonological attri-
tion") and that from Latin hac hora 'at this hour' to Spanish ahora 'now' as an
example for a decrease in semantic integrity (in this case the loss in specification
of the time unit), that is, as one paradigmatic parameter of grammaticalization.

The processes proposed by Lehmann differ considerably from those of pre-
vious authors, for example, in that they are not confined to specific areas of lan-
guage structure. Whereas Heine and Reh (1984) differentiate processes in
accordance with linguistic levels and hence distinguish between functional,

morphosyntactic, and phonetic processes (see above), Lehmann's processes cut across different levels of language structure. The notion of "attrition," for example, simultaneously refers to loss in semantic content and phonological substance and in the ability to inflect (Lehmann 1986:6–7), hence corresponding to different processes introduced by Heine and Reh (1984), where "attrition" refers to both the functional process of "desemanticization" and the phonetic process of "erosion."

Lehmann's framework, like most other studies on the subject, is based mainly on observations made on completed, that is, easily identifiable, instances of grammaticalization; it is more difficult to apply to processes that have not yet led to the "idiomatization" or "conventionalization" of grammatical structures (cf. Nichols and Timberlake, in press). Paul Hopper has therefore drawn attention to the incipient, less easily accessible stages of the process, and he proposes the following five principles that are said to underlie the emergence of grammatical forms (Hopper, in press):

a)   *Layering:* When new layers emerge within a functional domain, older layers are not necessarily discarded but may remain to coexist and interact with the new layers.

b)   *Divergence:* This principle refers to the fact that, when some entity undergoes grammaticalization, the result is that there are now "pairs or multiples of forms having a common etymology but diverging functionally."

c)   *Specialization:* This refers to "the narrowing of choices that characterizes an emergent grammatical construction."

d)   *Persistence:* When a grammaticalized meaning B develops, this does not necessarily mean that the earlier meaning A is lost; rather, B is likely to reflect A—at least as long as B has not yet undergone "morphologization."

e)   *Decategorialization:* Grammaticalization leads to a decrease in cardinal categoriality of the entity concerned. This implies a loss of optional markers of categoriality, such as modifiers, on the one hand, and of discourse autonomy on the other.[26]

The study of the role of grammaticalization in the interaction between discourse and grammar has opened an important new field of research. There is now, for example, an increasing awareness of the fact that tense and aspect categories may develop from discourse functions (Fleischman 1983; Herring 1988), that coordination and subordination in grammar arise as discourse structures that become conventionalized and, hence, grammaticalized (Haiman and Thompson 1988:x), and that clause combining may be interpreted as a grammaticalization of the rhetorical organization of discourse (Matthiessen and Thompson 1988).

Much of this research has been inspired by Paul Hopper, who has proposed the most pronounced discourse-based position on grammaticalization (Hopper 1979a, 1979b, 1982, 1987). By contrasting some previous approaches to lin-

guistics, which he refers to as "a priori grammar," with his notion of emergent grammar, defined as a continual movement toward structure, Hopper argues against the general "habit of seeing utterances in terms of a fixed framework of rules," his major concern being with the identification of recurrent strategies in building discourses (1987).

Ten years earlier, Gillian Sankoff (1977) had drawn attention to the distinction between ad hoc strategies in language use on the one hand and syntactic rules on the other, and she had proposed the term "syntacticization process" to refer to the transition from the former to the latter.[27] According to Hopper, either there is no grammar, or "grammar is always emergent but never present"—what there is, is grammaticalization (= "grammaticization" in his terminology), that is, movement toward structure (Hopper 1987:145–48). We shall return to this position in various later chapters (see esp. 3.3.3).

One of the paradigm cases of grammaticalization studies during the past decade concerned the structure of FUTURE categories. After a thorough analysis of the development of FUTURE marking in Romance languages by Suzanne Fleischman (1982a, 1982b, 1983), this tense category also became the subject of a comparative-typological analysis by Bybee and her associates (Bybee and Pagliuca 1987; Bybee, Pagliuca, and Perkins, in press). One question raised in these as well as various other studies on the development of FUTURE morphemes relates to the role played by "semantic bleaching" in the rise of grammatical categories.

Since the 1970s, a view has prevailed according to which grammaticalization forms a kind of filtering device, leading to what has been referred to variously as "bleaching" (Givón 1975a; Lord 1976:183), "semantic depletion" (Lehmann 1982:127), or "weakening of semantic content" (Bybee and Pagliuca 1985). This view is also shared by Sweetser (1988), who observes that there is in fact a development toward "fleshing out" or "abstracting out" central aspects of meaning and that the only component that remains unaffected in this process is the image-schematic or topological structure of the entities concerned.

Sweetser argues, however, that this loss in semantic content forms but one part of the development concerned: by transferring the schematic structure from the source domain to some particular target domain, the meaning of the latter is added to the meaning of the transferred entity (Sweetser 1988:400). Thus, in addition to losses, there are also semantic gains in grammaticalization.

A number of parameters have been proposed during the past two decades to account for grammaticalization. In a brief review of the more recent literature, Willett (1988) discusses the following main hypotheses that have been proposed for "semantic generalization" to be observed in the process of grammaticalization:

a)   the "metaphorical extension" hypothesis, according to which the concrete meaning of an expression is applied to a more abstract context;

b)   *the "containment" hypothesis,* according to which grammatical meanings are
        part of the internal semantic structure present in their lexical source;
c)   *the "implicature" hypothesis,* according to which the predominant mechanism
        for creating secondary meanings, which gradually take over as primary mean-
        ings, is the conventionalization of implicatures.

Willett cites Bybee and Pagliuca (1985) as representatives of *a,* Givón (1973) of
b, and Dahl (1985) of *c.* On the basis of his cross-linguistic survey of eviden-
tiality marking, he comes to the conclusion that the metaphoric extension
hypothesis is the most plausible.

1.2.3 Outlook

In the preceding paragraphs, we have picked out a few salient points from the
multitude of topics, approaches, and positions that have arisen in studies on
grammaticalization. Only a few works were discussed, and we have reduced
those that were to some aspect or other that we consider to be of interest for the
development of the subject.

In the course of our discussion, some major themes emerged that were of par-
ticular interest to students of grammaticalization. One of them is the evolution of
language or languages. At the latest since Humboldt presented his agglutination
theory in 1822 (see Humboldt 1825), scholars have attempted to demonstrate that
linguistic evolution takes place in spirals (Gabelentz [1891] 1901:251; Meillet
1912) or cycles (Hodge 1970). A closely related theme concerns typological
change, which has been discussed all the way from Humboldt to Givón (1975a,
1979a; see also Claudi 1990).

According to another tradition, grammaticalization is described as a unidirec-
tional process leading toward decline or decay, for example, toward
idiomatization and ossification (cf. Nichols and Timberlake, in press) or mor-
phological degeneration (cf. Lehmann 1982; Heine and Reh 1984).

Yet another line of research, which can be traced back to Bopp (1816) and
the neogrammarians, employs grammaticalization as an explanatory parameter
of diachronic linguistics. Traugott's search for principles of semantic change
(cf. Traugott 1980) may be viewed as a modern continuation of this tradition.

A fifth theme relates to the contribution that grammaticalization studies can
make for understanding synchronic grammar and/or linguistic universals (cf.
Lehmann 1982; Bybee 1985a; Bybee, Pagliuca, and Perkins, in press).

A sixth theme, marking a more recent direction of research, views gram-
maticalization as being located in discourse pragmatics, that is, as forming a
concomitant feature, or an outcome, or even an inherent constituent of dis-
course pragmatic forces (Sankoff and Brown 1976; Givón 1979a; Hopper
1979a, 1979b, 1982, 1987; Herring 1988, in press).

Finally, there is a more recent line of research according to which the basis of

grammaticalization is to be sought outside language structure, the main factors responsible for it being cognitive in nature (cf. Claudi and Heine 1986; Svorou 1988; Sweetser 1988; Heine, Claudi and Hünnemeyer, in press). This is also a position that forms the major concern of the following chapters.

1.3 The Present Study

While more recently abundant data on grammaticalization processes have become available, there are a number of problems that have remained unsolved. In the present work, we will be concerned in particular with the following list of questions (cf. Traugott and Heine, in press, introduction):

a)   What motivates grammaticalization?

b)   Is grammaticalization a gradual/continuous or a discontinuous process?

c)   What roles do metaphor and other related phenomena play in this process?

d)   To what extent is grammaticalization the result of discourse pragmatic forces?[28]

e)   What constraints are there in the choice of concepts serving as the input of grammaticalization?

f)   What is the semantic relation between the input and the output of grammaticalization? Does the latter represent a simplified, or "bleached out," version of the former?[29]

g)   If a given grammatical category is derived from more than one input, is this difference reflected in the semantics of the output? Conversely, do the various inputs necessarily have a common semantic denominator?[30]

h)   How can grammaticalization contribute to our understanding of language structure, such as providing explanatory parameters?

i)   What is its status within linguistics? Does it belong to diachronic linguistics, synchronic linguistics, both, or neither?

Another question, which has repeatedly aroused the interest of linguists, is whether the principles underlying grammaticalization are the same as those to be observed in other areas of linguistic evolution. Various attempts have been made to demonstrate that grammaticalization forms a process that in no way differs from other kinds of language change (cf. Sweetser 1988; Hopper, in press).[31]

This by no means exhausts the list of questions that a theory about grammaticalization has to answer. Grammaticalization may be influenced by various factors, such as our physical configuration, our neurophysiological apparatus, our sociocultural environment, the context in which we act, language contact, interference between the written and the spoken form of a given language, overall typological developments, etc. These factors will not be considered here and require a separate treatment.[32] The purpose of this work is not to present a textbook or some encyclopedic treatment of grammaticalization. Rather, our main concern is to provide a new framework for understanding grammaticalization. This framework is based on the assumption that grammaticalization is initiated

by forces that are located outside language structure. The approach used, which will be outlined in more detail in chapters 2, 3 and 4, concerns a level of cognition that is intermediate between language and the external or "real" world (see Svorou 1988:55); it is the level of the world as experienced, that is, the projected world, as Jackendoff (1983:28) has called it.

Givón (1979a:3–4) has proposed a catalog of eight parameters for explaining language structure. Here, we shall be primarily concerned with three of these and their prevailing interrelations. These parameters are cognitive structure, worldview pragmatics, and diachronic change.

Since we are all Africanists, our examples are confined mostly to evidence from African languages, whereas a number of more general works that are available on this subject have been based on findings made in Indo-European languages. By drawing on data from other language families, we hope to demonstrate that some of the observations made so far are not confined to Indo-European but might be of universal significance.

One might wonder, on the other hand, what justification there is for dealing with problems of linguistic development by relying mainly on evidence from languages for which hardly any historical documents are available. It is hoped that the data presented in the following chapters will show that such an approach may, nevertheless, be justified. The following observations may be helpful in this respect. The first is that by means of methods in diachronic linguistics, such as internal reconstruction and the comparative method, former language states can be and have fairly well been reconstructed in a number of African languages and language groups. Thus, contrary to a widespread assumption, there do exist some data on language history and language development in Africa. Furthermore, in a number of cases we were able to obtain a diachronic perspective by means of systematic comparisons within groups of closely related languages and dialects.

For example, in many African languages there is one and the same linguistic expression denoting both the verbal meaning 'go' and the grammatical function of a future tense. On the basis of the framework proposed here, we will predict that in such cases the grammatical function is historically derived from the verbal meaning. This hypothesis can be strengthened by looking at the morphemes that have been reconstructed as being ancestral to the present-day spoken forms within the relevant language group: most likely, it is the meaning 'go,' rather than 'future,' that will figure in the list of such reconstructions. This prediction is corroborated by looking at languages for which sufficient historical evidence is available. Such languages are, for example, French and English, which also have a morpheme used for the expression both of the verbal meaning 'go' and of a future tense.

The term "grammaticalization" will be used here in much the same way as that proposed by Kuryłowicz ([1965] 1975:52) cited in section 1.1 above. His

definition is fairly narrow, and in the following chapters a number of examples will be discussed that cannot strictly be subsumed in it. Thus, instead of lexical or other morphological segments, grammaticalization may involve discourse or clause patterns or nonsegmental structures such as word order.

It has been observed, for example, that polar questions may be grammaticalized to conditional clauses (cf. Haiman 1978; Traugott 1985a). Now, if in a given language such questions are distinguished from declarative clauses by word order only, then grammaticalization may have the effect that word order becomes the only distinguishing feature involved in grammaticalization, as appears to have happened in German, where the verb-initial (VSO; verb-subject-object) syntax found in polar questions has been extended to mark conditional clauses (Lockwood 1968:221). In spite of such extended uses, we shall return to the definition provided by Kuryłowicz, whenever the need arises, to discriminate between grammaticalization and other kinds of processes.

Some terms used here may give rise to misunderstandings since they have been employed with different meanings in linguistics and other academic fields. A typical example is provided by the term "evolution," which will be used to refer to changes in the development of linguistic units or structures according to their inherent tendencies (cf. Svorou 1988:213). It is important to note that we are dealing here not with the "evolution of languages" but rather with evolutions relating to specific parts of languages. How or to what extent such evolutions affect the overall structure of the languages concerned is a topic that is beyond the scope of the following chapters.

Other terms that have been connected in some way or other with grammaticalization studies are avoided here as far as possible, either because their relevance to the present subject matter is not clear or because their use may give rise to divergent interpretations and, hence, cause misunderstandings. This applies, for example, to terms such as "similarity" or "analogy," the latter frequently occurring in such phrases as "analogical transfer," "analogical extension," "analogical change," etc. While some argue that grammaticalization and analogy have to be strictly separated (cf. Meillet 1912; Lehmann 1982:142), analogy forms a key notion in the more recent work of Givón (1989, in press a). First, differing views about the role of analogy in grammaticalization are not necessarily the result of divergent theoretical positions; rather, they may simply be due to the fact that the term has been applied to different referents by different authors. Second, while the role of analogy in metaphorical processes has been outlined sufficiently in writings since Aristotle (*Poetics* 21), it must be viewed as a relation rather than the cause of metaphoric transfers and/or grammaticalization processes, and as such it does not seem to constitute or provide any explanatory parameter (cf. Quine 1979; Nöth 1985; Ricoeur 1986:179).[33]

Our main concern in this work will be with the initial stages of grammaticalization, especially with what causes this process. We will not be

concerned with morphosyntactic or phonetic processes such as the ones de-
scribed by Heine and Reh (1984). Nor will we be concerned with what happens in
the later stages of the process, when grammatical forms lose their meaning or
function, that is, when they undergo degrammaticalization (Greenberg, in
press), and how this may affect the phonological structure of the languages con-
cerned, for example, inducing phonogenesis (Hopper 1990) and other kinds of
language change. Furthermore, we will also not look into the question as to how
the rise of new grammatical forms affects the network of existing grammatical
expressions, such as leading to a restructuring of the content of these expressions
or to the emergence of "zero expressions" (cf. Bybee 1990). Finally, we will
omit the question as to how grammaticalization is to be delimited from a closely
related linguistic process, lexicalization (cf. Anttila 1972:149–52). As a recent
study (Lehmann 1989) suggests, the distinction between these two processes will
require much more attention in future research.

2 Cognitive Processes

> It would be impossible for any language to express every concrete idea by an independent word or radical element. The concreteness of experience is infinite, the resources of the richest language are strictly limited. It must perforce throw countless concepts under the rubric of certain basic ones, using other concrete or semi-concrete ideas as functional mediators. [Sapir 1921:84]

2.1 On the Motivation of Grammaticalization

The main claim made here is not only that grammaticalization offers an important parameter for understanding linguistic behavior but that grammaticalization itself is motivated by extralinguistic factors, above all by cognition.

2.1.1 Grammatical Concepts

One of the focal questions to be discussed in this book is, How do people acquire labels for concepts for which no previous designations exist or for which new designations are required? The following appear to be the most obvious options:

a)   inventing new labels, that is, creating arbitrary combinations of sounds;
b)   borrowing from other dialects or languages;
c)   creating symbolic expressions such as onomatopoeia;
d)   composing and deriving new expressions from already existing lexical and grammatical forms;
e)   extending the use of existing forms for the expression of new concepts, commonly described strategies including analogical transfer, metonymy, metaphor, and the like.

These strategies may, and quite often do, occur in combination. Loan translations, for example, involve *d* and/or *e* as well as *b*. In the languages we are familiar with, *c* is seldom and *a* hardly ever made use of. What the remaining strategies have in common is that they are motivated. People very rarely invent new expressions; rather, they draw on already existing linguistic forms and structures (cf. Boretzky 1987:54).

Strategies *b–d* are mainly employed to enrich the inventory of lexical items within a given language, whereas grammatical elements are seldom borrowed or created by means of symbolism or word formation. Strategy *e* also serves the introduction of new lexemes; at the same time, however, it forms the primary means for creating grammatical expressions.

In accordance with the main theme of this book, our concern here will be with

e. More precisely, we shall be concerned with strategies employed for the expression of a specific range of cognitive entities called "grammatical concepts." These concepts can be, and have been, characterized in the following way:

i)   they are more "abstract" than other concepts;[1]
ii)   they include both the derivational and the relational concepts of Edward Sapir (1921:101) and thus contrast with his basic or concrete concepts, such as objects, actions, and qualities;[2]
iii)   whereas "concrete concepts" are autosemantic, that is, they "have semantics by themselves," grammatical concepts have been described as being synsemantic, that is, as acquiring semantics by combination with other concepts (cf. Sasse, in press);
iv)   whereas lexical elements contribute the majority of the content of cognitive representation, grammatical concepts tend to determine its structure (cf. Talmy 1988);
v)   they may be described in terms of topological structures and image schemata (cf. Sweetser 1988);
vi)   they tend to be encoded linguistically as nonlexical forms such as auxiliaries, particles, clitics, affixes, suprasegmental units, word order distinctions, etc., and, whereas the membership of "concrete concepts" is open ended, grammatical concepts are expressed by means of linguistic categories forming closed classes.[3]

According to the position maintained here, there is one specific principle that can be held responsible for the creation of linguistic forms serving the expression of grammatical concepts. This principle is referred to by Werner and Kaplan as the "principle of the exploitation of old means for novel functions" (1963:403). By means of this principle, concrete concepts are employed in order to understand, explain, or describe less concrete phenomena. In this way, clearly delineated and/or clearly structured entities are recruited to conceptualize less clearly delineated or structured entities, and nonphysical experience is understood in terms of physical experience, time in terms of space, cause in terms of time, or abstract relations in terms of physical processes or spatial relations (see 2.4.1).

From a slightly different perspective, Traugott (1980:54) comments on the change of meaning to be observed in grammaticalization in the following way: "The speaker needs to specify a new relation, or to strengthen one that already exists but has become eroded. . . . The exigencies of having to be clear direct the speaker to the most concrete term possible." This principle also implies that the cognitive activity leading to grammaticalization is egocentric, and egodeictic, in nature; it leads from domains of conceptualization that are close to human experience to more distant domains. This also means that grammaticalization

phenomena can be described with reference to a scale of egocentric distance (cf. Fleischman, in press; Diehl 1975; see below).

According to this view, grammaticalization can be interpreted as the result of a process that has problem solving as its main goal, whereby one object is expressed in terms of another. Needless to say, this process is not confined to grammaticalization. Lakoff and Johnson (1980), for example, argue that it is the main characteristic of metaphor in general. Similarly, Traugott (1988:413) points out that semantic change can be interpreted as problem solving.

Underlying our claim that grammaticalization is the result of problem solving are a few basic assumptions. The first is that concept formation and naming are two different things and that in the process of grammaticalization the former precedes the latter. The second assumption is that the use of a given linguistic term for a new concept involves a process whereby two different concepts are metaphorically equated and that the term used for one of them is extended also to refer to the other. This process, which will be described in more detail in chapter 2, is referred to as conceptual transfer and the entities involved as source concepts and target concepts, respectively. The third assumption is that conceptual transfer is a creative act (see below).

The way this process relates to language structure is illustrated in simplified form in figure 2.1, where it is shown that the need for presenting a certain grammatical function (Function 1) in discourse leads to the recruitment of a lexical form for the expression of this function. The result is that the relevant lexical form acquires a grammatical status (Grammaticalized Form 1). Subsequently, there may be yet another, more abstract grammatical function (Function 2) that draws on Grammaticalized Form 1 for its expression—with the effect that a second grammaticalized form (2) arises. The strategies employed for this operation constitute the main topic of this work and are summarized in chapter 4.

The process shown in figure 2.1 might suggest that the development of grammatical structures is motivated, for example, by unfulfilled communicative needs or by the presence of cognitive contents for which no adequate linguistic designations exist. At the same time, however, it has been observed by a number
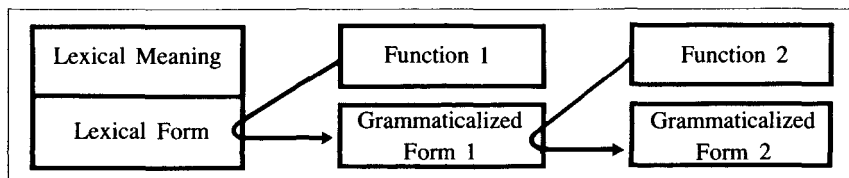

FIG. 2.1 A scenario of grammaticalization as a problem-solving device

of students of grammaticalization that new grammatical devices may develop despite the existence of old, functionally equivalent structures. Bybee provides the following examples to illustrate this point:

> In American English we have *will* and *gonna,* which are interchangeable in certain contexts. In Spanish and French, a synthetic future exists, but a *go*-future has also developed. American English *can* is now used for permission, along with *may. Could* has recently developed an epistemic possibility use despite the prior existence of *may* and *might* for this use. . . . Dutch *hebben gewerkt* 'to have worked' is often interchangeable with the simple past *werkte;* in French the *passé composé* developed alongside of and eventually replaced the *passé simple.* In these cases no two grams are precisely synonymous in all uses, but they have enough overlapping functions to falsify the notion that grams only exist in languages in sets of contrasting oppositions. [Bybee 1985b]

According to Radden (1985), English has recruited eleven spatial prepositions for expressing causality—despite the fact that it already had five at its disposal exclusively denoting causality—and König (1985:280) draws attention to the principle of creative language use according to which there is a constant attempt to express the same (grammatical) meaning in other words.[4]

2.1.2 Creativity

Problem solving is used when we want to reach a certain goal and that goal is not readily available. There are three aspects involved: the original state, the goal state, and the rules (Manis 1971:301). In our case, the original state is one where there is a grammatical concept, say FUTURE tense, for which no appropriate linguistic expression exists. The goal state would be reached when such an expression is found, say a verb of volition ('want,' 'desire') or a verb of motion ('go to,' 'come to'). The rule leading from the original state to the goal state would be to draw on the relevant pool of existing terms for the expression of that grammatical concept. This again presupposes that a conceptual link be established between the two domains involved, in this example between the domain of concrete (typically lexical) concepts (i.e., the source domain) and that of more abstract, grammatical concepts (i.e., the target domain). The activity employed to establish such a link will be referred to as "creativity."

   A number of definitions have been proposed for creativity, and so far there is no generally accepted way of measuring it. Creativity has been described simply as the ability to bring something new into existence (Taylor 1975) or as involving diverse associations that are formed into new combinations (Mednick 1962). One of the important factors in creativity is the ability to see things in an original way, but, in addition to originality, a creative act also fits some worthwhile purpose

(Manis 1971:218). Following Matlin (1989:347), we will say that creativity involves finding a solution that is both unusual and useful.[5]

In the present work, we will be confined to but one aspect of creativity, namely the ability to conceptualize abstract domains of cognition in terms of concrete domains,—for example, the domain of space in terms of that of physical objects, the domain of time in terms of spatial concepts, the domain of logical relations in terms of temporal concepts, etc. The linguistic result of this creative act is that lexical structures are employed to express grammatical meanings, and grammatical structures serve to express even more grammatical meanings. Thus, the kind of creativity we are concerned with here is unidirectional, leading from concrete to abstract concepts and from lexical to grammatical expressions. This activity is *unusual* in that it requires, first, that a new link be established between entirely different domains of cognition and, second, that expressions for concepts from one domain be transferred to another domain; it is *useful* in that it provides a means of expressing concepts for which no appropriate names existed. Among the various kinds of creativity that have been distinguished (cf. Taylor 1964), we will be dealing here mainly with the inventive type, which relates to the new use of old parts (Arieti 1976:16).

It may be useful to distinguish between three different kinds of creativity; these may be referred to, respectively, as universal, communal, and individual creativity. Universal creativity is common to mankind as a whole, while communal creativity is specific to sociocultural, political, or other units, such as ethnic groups, speech communities, nations, etc. Individual creativity relates to the behavior of individuals, manifesting itself, for example, in distinctions between "creative" and "less creative" persons.[6] On the basis of a distinction proposed by Arieti (1976:10), individual creativity can be viewed as being either "ordinary" or "great," while universal and communal creativity are more strongly associated with "ordinary" creativity.

We may use an example to illustrate these different kinds of creativity. Universal creativity can be seen, for example, in the general ability to conceptualize points of spatial orientation in terms of concrete objects such as parts of the body or environmental landmarks (Svorou, in press). Thus, in all languages known to us, terms for body parts may be employed for the expression of spatial reference, like the body part 'head' or 'breast' for the spatial concept FRONT or the body part 'back' or 'buttock' for the spatial concept BACK. Furthermore, the ability to employ verbs for the expression of tense, aspect, or mood may also be viewed as being suggestive of universal creativity.

There are, however, regional, ethnic, sociocultural, or other differences in both the way and the extent to which this ability is made use of. For example, as we shall see in chapter 5, there are some societies that express the concepts ON and UNDER by means of terms for body parts, 'head' and 'anus' or 'buttock,'

respectively, while other societies express these spatial concepts in terms of land-
marks such as 'sky' and 'ground, earth,' respectively. We will assume that such
distinctions are suggestive of differences in communal creativity, that is, in the
way the domain of concrete objects is exploited for the conceptualization of a
more abstract domain in a given society or speech community.

Individual creativity may manifest itself in personal differences of conceptual
manipulation, in the way links are established between different cognitive do-
mains by means of figures of speech such as metonyms and metaphors. It may be
present, for example, when someone uses a certain physical object as a meta-
phorical vehicle to describe some spatial notion in a novel way, for example,
when referring to the interior of a house as the 'belly' of the house in a society or
speech community where such a conceptual link would be unusual.

Most likely, the process of grammaticalization starts with individual creativ-
ity, which, in specific instances, leads to communal creativity, with both being
influenced by universal strategies of conceptual manipulation. However, the ex-
act way in which these different kinds of creativity contribute to and interact in
this process is still largely unclear.

2.2 Source Structures

It would seem that there is a limited number of basic cognitive structures in what
Jackendoff (1983) refers to as the projected world that make up the source of or
input to grammaticalization. This input will be looked at in more detail in chapter
5. In sections 2.3 and 2.4, we will be concerned with the relation between the
input and the output of this process.

2.2.1 Concepts

The source concepts that are used for grammaticalization in the vast majority of
cases are composed of concrete objects, processes, or locations. Note that the
term "source concept" is to be understood as a relative notion. A given entity is a
source concept only with reference to another more "abstract" concept that may
itself be the source of another even more "abstract" concept. To give an example,
a concrete object like a body part ('back') may serve as a source concept for space
('three miles back'), which again may be the source for time ('three years back').
We will therefore distinguish between "basic source concepts," such as body
parts, which cannot derive from any more concrete entities, and "derived source
concepts," such as temporal concepts, which, while forming the source of other
concepts, themselves derive from "basic source concepts"—even if this may not
be apparent synchronically or even diachronically in a given case. Thus, in the
following, whenever we talk of "source concepts," we are referring exclusively
to basic source concepts.

Source concepts have been described as "fundamental elements (symbolic and
deictic in function) in a typical speech situation" (see Traugott 1982:246). They

are of frequent and general use (Bybee and Pagliuca 1985:72), although, conceivably, their frequent use is due to their being "fundamental elements." In addition, they can be described in many cases as objects of what Rosch (1973b, 1978) has defined as the basic level of categorization, which provides, for example, "the most useful and, thus, the most used" names for items (Rosch 1978:35). Thus, basic-level verbs of physical state such as *sit, stand,* and *lie* form extremely common sources of grammaticalization (Van Oosten 1986).

Note, however, that not all source concepts are basic-level objects; many of them—for example, such items as 'person,' 'thing,' or 'do'—appear to belong to the level of superordinate categories. This would also seem to apply to a verb such as 'go' that, unlike 'walk,' is a superordinate-level verb of motion according to Rosch's criteria (cf. Rosch 1977; see also Sweetser 1988).

Furthermore, not all basic-level objects qualify as source concepts; in fact, only a small fraction does, as we shall see below. The way this fraction is to be defined is still not quite clear, although egocentricity (cf. Diehl 1975), for example, appears to be one of the parameters relevant for defining the range of source concepts. [7]

If there is a more general observation that can be made at the present stage of research, it is that categories of the subordinate level are unlikely to serve as source concepts, as Sweetser has pointed out: "The generalization seems to be that lexical items naming subordinate-level categories are not the ones likely to be grammaticalized; and a cursory examination of the semantically commonest auxiliary verbs (*have, be, take, give, make, come, go*) certainly includes no subordinate-level items" (Sweetser 1988:402).

Linguistically, source concepts are ultimately codified as lexemes. They have much in common with what in lexicostatistics is termed the "basic vocabulary," that is, lexemes that are less subject to replacement than others. Both include, for example, body part items such as 'head,' 'breast,' 'back,' 'belly,' 'hand,' and 'foot'; natural phenomena such as 'earth' and 'sky'; some human items such as 'person,' 'father,' 'mother,' and 'child'; dynamic verbs such as 'come,' 'give,' and 'take/hold'; posture verbs such as 'stand' and 'sit'; a mental process verb such as 'say'; quantifiers such as 'one' or 'many'; and basic demonstratives (cf. Swadesh 1951; Gudschinsky 1956). Furthermore, both have in common that they include items that are largely culture independent; that is, they tend to be conceived of in a similar way across linguistic and ethnic boundaries. There are, however, some remarkable differences, as we shall see.

Source concepts may be said to refer to some of the most elementary human experiences; they are typically derived from the physical state, behavior, or immediate environment of man and are frequently referred to in human thought and communication. They are likely to form part of the "alphabet of human thoughts' and to belong to the universal set of semantic primitives (Wierzbicka 1988, 1989)—however these are to be defined.

What appears to make them eligible for the process of grammaticalization is the fact that they provide "concrete" reference points for human orientation that evoke associations and are therefore exploited to understand "less concrete" concepts (see 2.1). The human body, for instance, offers a convenient pool of reference points for spatial orientation (see Svorou, in press). Thus, parts of the body are recruited as source concepts for the expression of grammatical concepts because of their relative location: 'back' or 'buttock' for the space behind; 'breast,' 'chest,' 'face,' 'eye,' or even 'head' for the front; 'belly,' 'stomach,' or 'heart' for inside; 'head' for above; and 'anus' or 'foot' for below (see chap. 5).[8] Other body parts such as 'liver' also belong to the basic vocabulary of lexicostatistics but do not seem to form reference points for spatial orientation and, hence, do not evoke associations relevant for the expression of spatial concepts—or any other grammatical concept for that matter.

At the same time, location is not the only characteristic of body parts that is exploited; there are some alternative associations as well. For instance, the association between holding an object in one's hand and owning that object has led to the development of the body part 'hand' as a marker of possession in some West African languages (cf. Claudi and Heine 1986; see 2.2.2 below), and the observation that, as the center of intellectual activity, the head is responsible for human behavior might have induced the choice of 'head' as a reference point for some more abstract concept, CAUSE/PURPOSE, which again has triggered the grammaticalization of 'head' as an adposition and/or complementizer of cause/ finality in these languages (see 2.3.2). One should also mention that various body parts, including the term 'body' itself, have provided a kind of synecdochic source for the development of reflexive pronouns in many African languages (Keith Allan, Derek Nurse, personal communication; Essien 1982; Awolaye 1986).

There are a few guidelines that appear to be useful for defining source concepts. Wierzbicka (1989:8), for example, decides to include the concept 'say,' which forms a common source concept (e.g., for the grammaticalization of complementizers; see Saxena 1988a), within her set of universal semantic primitives essentially on the basis of two main parameters:

> For example, the concept realised in English by the verb *say* is useful for defining, among other things, hundreds of English verbs of speech, such as *ask, demand, apologise, curse, scold, persuade, criticise,* and so on. . . . By contrast, words such as *chase* or *persuade* are not similarly useful in defining other words. Furthermore, the concept realised in English as *say* is known to have its exact semantic equivalents in hundreds of other languages, and in fact there is no known human language which wouldn't have a word expressing this concept. By contrast, English words such as *chase* or *persuade* are highly language-specific, and it is questionable wheth-

er they have exact semantic equivalents in ANY other language, let alone in EVERY other language.

The combination of these two independent criteria—defining power and universality—provides a powerful empirical check on the range of hypotheses which could be put forward on the basis of mere speculation, and gives the program of research defined in this way a strongly empirical character. [Wierzbicka 1989:8]

With regard to processes, source concepts constitute some of the most basic human activities, such as 'do/make,' 'take/hold,' 'finish,' 'say,' or movements such as 'go,' 'come,' 'leave,' or 'arrive.' Furthermore, a number of items defining a position or state are among the most common source concepts, typically codified linguistically as state verbs, such as 'be/exist,' 'be at,' 'sit,' 'stand,' 'lie (down),' 'stay/live.' Some concepts expressing desire ('want/like') or obligation ('shall,' 'ought to') also provide source items in a number of languages. On the other hand, there are some verbs found in the basic vocabulary list of lexicostatisticians that one might consider as candidates for source concepts but that nevertheless are not. These include 'drink,' 'hear,' 'sing,' 'hit,' 'die,' and many others.

Despite the many attempts that have been made so far, it is not yet possible to define, in a noncircular way, the range of items serving as a source for grammatical concepts. None of the factors proposed, such as frequency of use, conceptual simplicity, semantic unmarkedness, or pragmatic salience, is sufficient in itself to understand the nature of source concepts.

The evidence available suggests, for example, that human nouns such as 'man' or 'person' provide convenient items for grammaticalization, and these nouns are in fact common sources, for example, for the expression of pronominal categories: compare Latin *homo* 'person, man' to French *on* (impersonal subject pronoun), German *Mann* 'man' to *man* (impersonal subject pronoun), and Latin *persona* 'person' to French *personne* (negative pronoun, negation marker). On the other hand, one would hardly expect semantically more complex human nouns such as 'slave,' 'servant,' 'master,' or 'lord' to form the input of grammaticalization, yet it is exactly these nouns that have been grammaticalized to first- and second-person pronouns: in Japanese, the Chinese loanword *boku* 'slave' is said to have developed into a first-person pronoun 'I'; and, in a similar way, the Indonesian pronoun *saya* 'I' derives from a literate noun *sahaya* 'servant.' Furthermore, Old Japanese *kimi* 'lord' has been grammaticalized to a second-person pronoun, 'you' (hon.), and finally to 'thou'; and Indonesian *tuan* 'you' (hon.) is an Arabic loanword meaning 'master.'[9]

The domain of personal pronouns appears to be one where grammaticalization is highly dependent on the sociocultural situation in which language is used. Given a society where speakers tend to refer to themselves as being of subordi-

nate and to listeners as being of superordinate social status, pronominal categories such as these may easily emerge. Yet, as long as the exact psychological, social, and cultural foundations of discourse in the languages of the world still form a terra incognita, generalizations on the input of grammaticalization must remain conjectural to some extent.

2.2.2 Propositions

In addition to the concepts considered above, there are some more complex cognitive structures that we tentatively refer to as "source propositions." These propositions express states or processes that appear to be basic to human experience and can be rendered by means of linguistic predications typically involving two participants. Perhaps the most common of these predications are the following examples:[10]

(1)	"X is at Y"	Locational proposition
(2)	"X moves to/from Y"	Motion proposition
(3)	"X does Y"	Action proposition
(4)	"X is part of Y"	Part-whole proposition
(5)	"X is (like) a Y"	Equational proposition
(6)	"X is with Y"	Comitative proposition

Source propositions describe in an elementary way where one is, where one moves from or to, what one does, and how one is related to other concepts. It may be useful to distinguish between propositions that are static or time stable (see Givón 1979a:320–21), like (1), (4), (5), and (6), and those that are dynamic, like (2) and (3), or between propositions having a spatial dimension, like (1) and (2), and those that do not, like (3), (4), (5), and (6).

Each of these propositions may give rise to a different grammatical structure. The locational proposition is employed, for instance, to develop verbal aspects or moods such as progressive or intentional when the constituent slot represented by Y is filled with a nominalized process verb.[11] Thus, in many languages, a construction "X is at/in/on Y" has been reinterpreted as meaning "X is doing Y," as example (7) from Dutch illustrates:

(7)   Ik ben aan het gaan
         I   am   at   the going
         'I am going'

Constructions of this type, labeled PP-periphrasis in Heine and Reh (1984:115), have developed into progressive and similar aspects in many languages worldwide; they do in fact form the major source of progressive forms (cf. Blansitt 1975; Heine 1990). That such constructions may also give rise to grammatical categories expressing intention may be surprising, but they have been recorded

for Ewe where a structure "*X* is at *Y*'s place" has acquired the meaning "*X* is about/intends to do *Y*" and has been grammaticalized to a verbal aspect referred to in grammars of this language as "ingressive" or "intentional." Thus, the Ewe sentence (8a) is historically derived from (8b):

(8a)   me-le   yi-yi gé
         1SG-COP going INGRES
         'I am about to go, I intend to go'
(8b)   * me-le   yi-yi-´   gbé
          1SG-be go-go-NOMI place/area
         'I am at the place/area of going'

Moreover, the locational model has also given rise, for example, to expressions of verbal possession (see below). In this case, *X* is reinterpreted as the possessed and *Y* as the possessor constituent. Underlying this type of conceptualization there appears to be an implication of the kind "what is at *Y*'s place belongs to *Y*" (see 2.4.1).[12]

While one source proposition may give rise to more than one grammatical category, one and the same grammatical category may also be derived from entirely different propositions. Verbal possession ('to have, own'), for example, may be derived on the one hand from the locational model (see above) and on the other from the action model, the latter being based on a metaphorical transfer from "*Y* takes/seizes *X*" to "*Y* owns *X*." The former is the case, for example, in Ewe, where verbal possession ("*Y* has/owns *X*") derives from a construction "*X* is in *Y*'s hand"), as can be seen in the following example:

(9)   xɔ   le así-nye
         house be hand-1SG.POSS
         'I have a house'

Examples for the action proposition as the source for verbal possession can be found in a number of Eastern Cushitic languages, where a clause like '*Y* has/owns *X*" is rendered linguistically as "*X* seizes *Y*," as can be seen in the following sentence from Waata, an Oromo dialect spoken on the Kenyan coast:

(10)   ani mín   k'awa
         I   house seize
         'I have a house'

More research is needed on the exact role source propositions of this kind play in the process of grammaticalization and in particular on their interrelations with concepts like those discussed in the previous paragraph. What is important to note is that such propositions may, but need not, be present in the process of grammaticalization. They are never present, for instance, when a concept ap-

pears as the dependent constituent, rather than the head, of a construction undergoing grammaticalization (see 3.1).

2.2.3 Source Structures and Target Structures

One of the most urgent problems in the analysis of grammaticalization concerns the relation between input and output, that is, between the source and the target within this process. This problem entails in particular the questions,

a)   Which source concepts and/or propositions give rise to which grammatical concepts?

b)   Given some grammatical category, is it possible to define its nongrammatical source unambiguously?

c)   To what extent are the source and target structures, as well as the relation holding between them, universally determined?

We are still far from being able to answer these questions with a degree of certainty approaching prediction, although a number of data relevant to these questions have been presented during the past decade and valuable generalizations attempted. It is by now well established, for example, that one source concept can give rise to more than one grammatical category and that, conversely, a given grammatical category may be historically derived from more than one source concept or structure.

An example from So, a Kuliak language of northeastern Uganda, may illustrate this. The verb *ac* 'come' of this language has developed on the one hand into a verbal derivative suffix *-ac* ("venitive") denoting movement toward the speaker or deictic center. On the other hand, it has become an auxiliary and, finally, a verbal proclitic denoting future tense. There is, however, a second verbal proclitic denoting future tense, *gá,* derived from another motion verb, *gá* 'go (to).'[13] Thus, we find in this example instances both of one source giving rise to two grammatical categories and of one grammatical category having two different lexical concepts as its source.

Thus, an additional question that arises is, Can one define the factors determining the choice between alternative sources available, and, conversely, under what conditions does a given source concept develop into grammatical category A rather than B, or into B rather than A, or into both? It is questions such as these that will be approached in the following chapters.

2.2.4 Frequency of Use

Linguistic expressions serving as the source of grammaticalization have one pragmatic feature in common: they are of frequent and general use. This observation has been made time and again in studies on the subject. In some works, the impression is conveyed that it is its high frequency of occurrence that makes a

given lexeme eligible for grammaticalization. A brief look at the situation in one particular language, Swahili, may be helpful in evaluating such observations.

In her study on word frequency in Swahili, Bertoncini (1973) has analyzed a corpus of 40,000 word tokens constituting 3,700 types. Her list of the most frequently used word types includes 1,443 entries, each of which occurs at least five times in her text sample. All lexemes that have been grammaticalized belong to the 278 words of highest text frequency; in other words, the pool of concepts from which grammatical concepts have been drawn in Swahili is to be found in this approximately 20 percent of the most frequently used lexemes. These findings would seem to corroborate observations made in other languages (cf. Bybee and Pagliuca 1985), according to which rarely used lexemes are unlikely to be recruited for grammaticalization.

Note, however, that among the fifteen most frequently used words, none has served as a source for grammaticalization. The first word in the frequency rank list that has been grammaticalized occupies the sixteenth position, namely the verb -*toa* 'put out.'[14] There are other verbs that have a higher text frequency but have not been grammaticalized, for example, -*ona* 'see' (sixth position), -*wa na* 'have' (ninth position), -*enda* 'go' (eleventh position), or -*sema* 'say' (fourteenth position). Similarly, the noun with the highest text frequency to have been grammaticalized is *mwana* 'child,' which occupies the 105th position, while a number of much more frequently used nouns, such as *mtu* 'person' (eighth position), *siku* 'day' (twenty-seventh position), *kazi* 'work' (twenty-ninth position), etc., have not been grammaticalized.[15] This observation would seem to suggest that high frequency of use on its own is not sufficient to account for grammaticalization; rather, it is likely to form a concomitant feature of the concepts recruited for this purpose.

2.3 From Source to Target

One way of characterizing the transition from the source to the target of grammaticalization is by means of the logical distinction between intension and extension: this process has the effect that the intensional content of the concept concerned is reduced while its extension is increased; that is, compared to the source structure, the target structure has a smaller intension but a larger extension.

While this characterization holds for most developments observed in the process of grammaticalization, it has some shortcomings. First, it does not apply to all instances of this process. Second, it does not help us understand why this process takes place at all. A number of alternative proposals have been made to describe the nature of this process. Two terms in particular have found wide currency in this connection and are therefore briefly discussed here: "bleaching" and "abstraction."

2.3.1 "Bleaching"

In his study of the development from verbs to grammatical categories of tense, aspect, and modality, Givón (1973) suggests that the meaning of these categories is largely predictable because it is part of the internal semantic structure of their lexical sources. Willett (1988:80) refers to this view as the "containment hypothesis."

This hypothesis has been referred to from a slightly different viewpoint by such labels as "semantic bleaching" (Givón 1975a; Lord 1976:183, 189), "semantic depletion" (Lehmann 1982:127), "semantic weakening" (Guillaume 1964:73–86; Guimier 1985:158), "desemanticization" (Heine and Reh 1984), "fleshing out" of meaning (Sweetser 1988), or "generalization or weakening of semantic content" (Bybee and Pagliuca 1985:59–63).[16] In the works mentioned above, grammaticalization is viewed from the perspective of the source concept, which carries the "full meaning," whereas the output of the process is interpreted as an impoverished form, one that is emptied of, or has bleached out, the semantic specificities of its source.

Usually, this view implies that the process concerned acts as a filtering device that sifts out everything except the semantic core. In this way, complex meanings are reduced to less complex but more grammatical contents. This implies that all linguistic forms that are part of one and the same line of grammaticalization share some common semantic denominator. As Lehmann puts it, "What we find in a grammaticalization channel is a function common to all the elements in it, the difference between them being primarily of a quantitative nature. This is to say, two adjacent elements on a grammaticalization scale fulfill the same function, but to different degrees. For example, a demonstrative and a definite article both have the function to determine, but the demonstrative determines more specifically than the article" (1982:124–25).[17]

Sweetser (1988) and Traugott (1988) present critical discussions of the "bleaching model," as we will call it. The latter maintains that bleaching does in fact occur, but only in the later stages of grammaticalization, for example, in the development of the main verb *do* into a dummy auxiliary in Standard English (Traugott 1988:407).[18] We shall return to this model in 4.4, when we contrast it with alternative models.

While the "bleaching model" captures one important aspect of grammaticalization, it would seem that it ignores certain other characteristics of this process (cf. Sweetser 1988). In the process of grammaticalization, the source meaning may disappear completely (cf. Traugott 1980:48), or it may be replaced by what—from a synchronic point of view—appear to be totally unrelated meanings or functions, such as the French negative markers *pas, personne, point,* and *rien* (which derive from nouns denoting, respectively, 'step,' 'person,' 'point,' and 'thing'), which in certain colloquial uses, where *ne* is omitted, form the only

expression of negation.[19] Given the right context, grammaticalization may take directions that are difficult to reconcile with this model.

The following example may illustrate this. It is a well-known fact that body part terms form the most common source for expressing certain basic spatial concepts, such as 'back' for 'behind,' 'breast' for 'in front,' etc.; we will deal with this topic in more detail in chapter 5. Body parts may be classified as time-stable, static entities, and so may the spatial concepts derived from them: they refer almost exclusively to static spatial relations. There are, however, a few examples that suggest that body part terms may also be grammaticalized to dynamic spatial relations; that is, they may give rise to directional locatives, like 'hand' to 'from' (Igbo) or 'eye' to 'to, toward' (Papago; Svorou, in press). Such developments are hard to account for if one is confined to a framework that views grammaticalization as a process of semantic impoverishment. If, however, one tries to reconstruct both the cognitive and the pragmatic settings that were responsible for the relevant developments, then one may understand how it is possible that, for example, a static concept is grammaticalized to a dynamic concept. Svorou (in press), for example, interprets the development of Papago *wui* 'eye' to a directional marker 'to, toward' in the following way: "Eyesight, in a naive view, emanates from within the human body, and is directed towards the outside world. The eyes, as the organ of vision, may be metonymically used for eyesight. In fact, phrases such as 'She could see no living soul as far as her eyes could reach' are not uncommon. Thus, conceived directedness of eyesight makes eye terms eligible as lexical sources of directional grams."

Furthermore, it would seem to be hard to account for the fact that, in some West African and South Asian languages, a verb such as 'take' or 'leave, let' has given rise to the grammaticalization of highly divergent grammatical functions such as marking completive focus on the one hand and perfective aspect on the other (see 8.7; cf. Hopper 1979a, 1979b, 1982). As we will argue below (see esp. chap. 4), grammaticalization is the result of an interplay of cognition and pragmatics, and any attempt to reduce it to a consideration of only one of these variables is likely to miss important insights of the process concerned. It is hoped that the following chapters will make it clear why "bleaching" is inadequate as a descriptive or explanatory parameter of grammaticalization (see, e.g., 4.4, 8.6).

2.3.2 "Abstraction"

That the output of grammaticalization is "more abstract" than its input has already been pointed out in a number of discussions (see, e.g., Žirmunskij 1966:83; Traugott 1980:46–47; Matisoff, in press; Lehmann 1982:128).[20] We shall use the term "abstraction" or "abstractness" largely on intuitive grounds, to describe the nature of grammatical concepts with reference to their respective source.

TABLE 2.1 Types of Concepts According to Sapir
(1921)

Type of Concept	Degree of Abstractness
I Basic (concrete)	Concrete
II Derivational	Less concrete
III Concrete relational	More abstract
IV Pure relational	Purely abstract

In linguistic works, the distinction between nongrammatical and grammatical 'meaning' is frequently described as one of 'concrete' versus 'abstract' meaning. Lyons, for example, refers to the grammatical and the local functions of case inflections and prepositions as reflecting the distinction 'concrete' versus 'abstract,' and in the following statement he proposes a kind of "abstraction scale": "As an example of a 'local' distinction which is intermediate between the fully 'abstract' and the fully 'concrete' we may consider the opposition between the 'locative' and the 'directional': this is less 'abstract' than the distinction between 'subjective' and 'objective', but less 'concrete' than the distinction between 'exterior' and 'interior' " (Lyons 1967:303).

Perhaps one of the most well-known linguistic treatments of the concreteness/abstractness distinction is that of Sapir (1921), whose classification of four types of (linguistic) concepts is summarized in table 2.1. Type I, which is made up of "radical concepts, the concrete wherewithal of speech" (Sapir 1921:93), includes objects, actions, and qualities. Type II, although more abstract than I, also has "material content." In this respect, it differs from III and IV, which have to do with relations rather than with material content (Sapir 1921:101–2).

Although Sapir's notion of abstraction strongly correlates with modes of linguistic categorization, there are also some divergences. He observes, for example, that the two extremes of these concept types, I and IV, tend to be expressed by one and the same kind of linguistic unit, that is, by "unanalyzable independent words."

An entirely different treatment of the notion of "abstraction" is proposed by Diehl (1975), who correlates his continuum of egodeictic remoteness with what he calls the "concrete-abstract continuum." In his discussion of case grammar, Diehl (1975:98ff.) proposes four types of space—social space (SOC), spatial space (SPA), temporal space (TEM), and logical space (LOG)—showing an increasing progression of remoteness from or dissimilarity to EGO:

The other parameter which may serve to demonstrate some of this hierarchy of remoteness inherent in this interspatial order is the *con-*

crete-abstract continuum. The intimate vividness of relations in SOC represents the high point of (cognitively interpreted) concreteness or definition: the intensity and seeming clarity of the reality or existence of one's own acts, experiences, and personal possessions needs no elaboration; recognition of spatial positions and especially the physical objects in them is also accompanied by some (cognitive sense of) immediacy, potential if not actual; TEMporal objects (e.g. event, processes), however, seem much more vague or remote." [Diehl 1975:104]

Among the many types of uses to which the term "abstraction" has been put, there are three that are of particular interest to our discussion. One, called "generalizing abstraction," consists in reducing the number of distinguishing features of a concept to its most "central characteristics" or "nucleus." This type of abstraction evokes taxonomic reasoning, and it appears to be present, for example, in biosystematic folk taxonomies of the kind described by Berlin, Breedlove, and Raven (1973, 1974), where taxa are classified into a specific (e.g., *cork-oak*), generic (*oak*), life form (*tree*), and unique beginner rank (*plant*), thereby being increasingly emptied of their distinguishing features. A key notion of generalizing abstraction is inclusiveness: "The greater the inclusiveness of a category within a taxonomy, the higher the level of abstraction. . . . Thus the term *level of abstraction* within a taxonomy refers to a particular level of inclusiveness" (Rosch 1978:30; see also Kay 1971).

A second type, "isolating abstraction," separates one particular property or feature that is not necessarily the "core" or "nucleus characteristic" of that concept. Isolating abstraction may be interpreted as a special kind of generalizing abstraction.

Both generalizing and isolating abstraction also appear to be present when grammaticalization is analyzed in terms of bleaching (see 2.3.1): lexemes become more "abstract" by losing their semantic specificities and by being increasingly reduced to their respective core meaning (generalizing abstraction) or to one particular part of their meaning (isolating abstraction). Abstraction of both types implies that its output is necessarily part of its input; that is, what happens in the course of grammaticalization is that concepts are merely reduced in their intensional content while their extension is increased.

Another type is called "metaphorical abstraction" (cf. Schneider 1979). This type appears to be more complex and, hence, is more difficult to describe. It serves to relate "more abstract" contents to more concrete contents across conceptual domains, where the latter are the metaphorical vehicles for the former. Some of the more common distinctions found in the literature on grammaticalization are listed in table 2.2.[21]

It is abstraction of the metaphorical type, rather than any other, that underlies grammaticalization. Abstraction of this kind concerns the way we understand

TABLE 2.2 Characteristics of Metaphorical Abstraction

	Characteristics of the:	
Domain	Vehicle	Topic
Ideational	Clearly delineated, compact	Fuzzy, diffuse
	Physical (visible, tangible, etc.)	Nonphysical, mental
	Thing-like objects	Qualities
	Sociophysical interactions	Mental processes (Sweetser 1982:503)
	Process	State
	Space	Time, cause, manner
	Individual	Mass, class, noncountable
	Autonomous	Relational
Textual	"Real world"	"World of discourse"
	Less discourse based	More discourse based, or "speaker based" (Traugott 1986:540–41)
	Referential	Nonreferential
	New information	Old information
Interpersonal	Expressive	Nonexpressive

and conceptualize the world around us. Objects that are close to us are clearly structured and clearly delineated; they are less "abstract" than objects that are more distant, less clearly structured and/or delineated. Abstraction also relates to referentiality or manipulability in discourse. Objects that refer, that are autonomous speech participants, are less "abstract" than those that show a low-degree referentiality or manipulability (cf. Givón 1982; Hopper and Thompson 1984; see also 8.5.1).

There are various types of metaphorical abstraction. From a linguistic point of view, two kinds are of particular interest. The first, which may be dubbed "structure-preserving abstraction," does not affect the categorial status of the linguistic entities concerned. The second, however, which we will refer to as "structure-changing abstraction," leads to some kind of linguistic transformation, such as a shift from one morpheme or constituent type to another.

We may use the Ewe noun *ta'* 'head' to illustrate the difference between these two kinds. "Structure-preserving abstraction" has had the effect that this body part noun was employed as a metaphorical vehicle to express more abstract concepts such as 'intellectual ability,' 'main issue,' 'focal question,' 'division, part, chapter,' 'group, party,' 'kind, class,' or 'quantity.' In all these uses, *ta'* has essentially retained the characteristics of a noun. "Structure-changing abstrac-

tion," on the other hand, has led to the emergence of new linguistic structures, in particular adverbial constituents: *ta'* developed into a postposition and clause subordinator. In this capacity, it has assumed meanings such as 'over,' 'on,' 'in,' 'in order to,' for the purpose of,' and 'because, since' (cf. Westermann 1905:447–48).

It remains to be investigated what the cognitive basis underlying the distinction between these two abstraction levels is. Our concern in the present work is exclusively with the latter kind of metaphorical abstraction.

2.4 Metaphor

> For if a metaphor is like a model, or a map, or an analogue, of a domain, then just like models, maps and analogues in general, if they are to be useful and successful, metaphors had better be simpler, idealized, more easily grasped than the complex domains that they model. [Levinson 1983:160]

The term "metaphor" has been used with a variety of senses, which accounts for many, though not all, of the controversies and misunderstandings surrounding this term. For example, "metaphor" is employed on the one hand as a generic term for any figure of speech. Thus, Lambert (1969) applies the term in her framework of an extended case grammar to figures such as metonymy, synecdoche, hyperbole, etc. On the other hand, there are more narrow definitions, according to which metaphor contrasts with alternative figures such as metonymy. In the present work we will aim at adhering to a narrow definition of the term (see below) while at the same time applying it to relations between conceptual domains that hitherto have not been considered to be metaphorically structured.

We have argued elsewhere that one of the main processes underlying grammaticalization is metaphorically structured (Claudi and Heine 1986; cf. Sweetser 1987). Similar observations have been made by other students of this subject. Matisoff (in press), for example, views grammaticalization as a subtype of metaphor and defines it as "a metaphorical shift toward the abstract." Bybee and Pagliuca observe that grammatical meaning develops from lexical meaning by a process of "generalization or weakening of semantic content" and that one of the important mechanisms in this process is metaphorical extension: "A concrete lexical item is recruited to express a more abstract concept. . . . this emptying of lexical content is a prerequisite to grammaticalization because grammatical functions in themselves are necessarily abstract" (Bybee and Pagliuca 1985:59, 72).

After evaluating three possible ways of accounting for grammaticalization, which are referred to by him as the "metaphorical extension" hypothesis, the "containment" hypothesis, and the "implicature" hypothesis, Willett (1988:80–81) concludes that, of these, metaphorical extension provides the most

plausible explanation. In a similar way, Ransom (1988:372) has pointed out that metaphorical extension is responsible for the development from concrete lexical referents to abstract grammatical markers such as complementizers, in that certain semantic fields such as definiteness and existence are associated cognitively with truth and direction with futurity, possibility, or purpose.

Some authors do not use the term "metaphor," although their presentation makes it clear that they are essentially referring to the same phenomenon. Schlesinger, for example, uses the term "semantic assimilation," which he applies to "cases where a certain conceptual relation is treated, for the purpose of linguistic expression, like a different one" (Schlesinger 1979:317). In his discussion on the relation between the instrumental and the manner functions of the English preposition *with,* where he compares sentences such as (11) and (12), he observes that "manner is assimilated into the instrumental; that is, enthusiasm, care and intelligence are said, metaphorically, to be a means for doing something" (Schlesinger 1979:318):

(11)   He did it with enthusiasm.
(12)   He did it with a crowbar.

The role of metaphor in the development of grammatical categories may be illustrated by means of the following sentences:

(13)   Henry is going to town.
(14)   The rain is going to come.

In both sentences, we have the verb form *is going to,* but with a considerable difference in meaning—we may say in fact that the two meanings are "synchronically unrelated" (Palmer 1965:163). We know that sentences like (14) have developed historically from sentences like (13) and that before the fifteenth century (14) is unlikely to have been uttered (cf. Jespersen 1911: 217). We also know that we are dealing here with an instance of grammaticalization: the verb of motion *be going to* occurring in (13) has given rise to a future tense, actually the "purest" future form of English according to Palmer (1965:163), in sentence (14).

The claim made here is that the transition from the verbal action of (13) to the future tense category in (14) is metaphorical in nature, mainly for the following reasons:

a)   As is characteristic of metaphor, there is one meaning involved that is called "literal" and another one that is "transferred," or metaphorical. In our example, the form *is going to* is literal in (13), but there appears to be some justification in calling it "transferred" in (14).

b)   Metaphor involves a transfer, or a mapping of an image schema (Sweetser 1988:393), from one domain of conceptualization onto another. This is what can

be observed in the present case, where the domain of spatial movements is used as a metaphorical vehicle to refer to the domain of deictic time: the verb *go to* denoting a physical action serves as a structural template for conceptualizing a grammatical notion, that is, deictic time.

c)   In accordance with various characterizations of metaphor, a concrete movement like *go to* is "more easily grasped" than a concept of the more abstract domain of tense categories.

d)   Hoffman (1982:11) observed, "Technically, metaphors are anomalies since they violate the rules for putting word meanings together," and Ortony (1979:200) has claimed that metaphor stretches language beyond its elastic limit. According to one of the most frequently named definitional criteria, metaphor is an erroneous or false statement, one that conflicts with our expectations (cf. Davidson 1979; Ricoeur 1979:143; Swanson 1979:162). Exactly this, we speculate, must have been the case at the time when constructions such as (14) were introduced side by side with (13) since this involved anomalies, rule violations, etc. of the following kind: (i) the verb *go to* typically requires a human subject, while in (14) it is used with an inanimate subject; (ii) semantically, the verbs *go* and *come* are of contrasting deictic status.[22]

e)   As is apparent from *d,* the verb *go to* is typically associated with a human world: it implies a human agent and a human action, as can be seen in (13). In sentences such as (14), on the other hand, we are dealing with a world that is not necessarily human: both subject and verb may refer to inanimate concepts (for more details, see 7.1).

f)   One common, though not general, characteristic of metaphorical expressions is that in specific contexts they may also be understood in their literal, nontransferred sense. The result is semantic ambiguity, more particularly "homonymy," between the literal and the transferred sense. This can also be observed in the case of be going *to* as well as in other cases of grammaticalization. Sentence (15) is ambiguous since it can be interpreted as belonging to the construction type of either (13), in which case *to work* would be a locative adverbial phrase, or (14), in which case it would be a verb in the infinitive:[23]

(15)   I am going to work.

Observations like these suggest that the most obvious account for transfers such as that from (13) to (14) is in terms of metaphor. As we shall see below (2.4.4; chap. 3), however, things are slightly more complicated.

Various other cognitive factors than metaphor have been held responsible for grammaticalization or for particular grammaticalization processes. While discussing the correspondence between thematic and locative relations, Jackendoff (1983:209–10) argues that what is involved is "not just that some fields are structured in terms of other fields, but that all fields have essentially the *same*

structure"; instead of metaphor, he proposes some "abstract organization that can be applied with suitable specialization to any field." Traugott (1985b:49) draws attention to some "superordinate cognitive organization that concretizes and spatializes relations."

Invoking Peirce's distinction between different forms of "hypoicon" (i.e. metaphor, image, and diagram; Peirce 1932:157),[24] Brinton (1988:197) comes to the conclusion that the relation between spatial and aspectual expressions can be described in terms of iconic motivation that is diagrammatic rather than metaphorical since it is "based on an analogous relation of parts between objects in space (or moving through space) and situations developing through time," arguing that, whereas metaphorical iconicity is based on substantive parallels, diagrammatic iconicity is based on structural parallels. While this may be justified if one chooses a perspective like the one proposed by Brinton for her analysis of the English aspectual system, the discussion in the following paragraphs shows that the transfer patterns leading to grammaticalization are not confined to structural parallels between the vehicle and the topic concerned.

Leaving such distinctions aside, we try to demonstrate that metaphorical transfer forms one of the main driving forces in the development of grammatical categories; that is, in order to express more "abstract" functions, concrete entities are recruited. The only major counterargument we are aware of concerns the continuum nature of grammaticalization, which is more suggestive of a metonymical structure (cf. Traugott and König, in press; Brinton 1988:198). As we will argue in chapters 3 and 4, metonymy and metaphor are not only compatible with one another, but they form complementary aspects that are necessarily present in the process of grammaticalization.

It is unclear at the present stage of research whether, or to what extent, the framework proposed here offers genuine explanations for language behavior, yet, to some extent, the principle of exploitation of old means for novel functions, introduced in section 2.1, may be viewed as providing an explanatory parameter. Metaphor, on the other hand, which forms one of the key notions of this work, is interpreted as a cognitive strategy that helps us understand but does not explain grammaticalization or grammatical behavior.

2.4.1 Categorial Metaphors

Much of what happens when source structures like those described in section 2.2 develop into grammatical structures can be described in terms of a few basic categories that, on account of their relative degree of metaphorical "abstraction," can be arranged along the following scale, or chain, as we will argue below:[25]

(16)   PERSON > OBJECT > ACTIVITY > SPACE > TIME > QUALITY

Note that this is not the only scale of metaphorical categories to be distinguished here; a second will be introduced in chapter 6.

The categories introduced above represent prototypical entities, each of which includes a variety of perceptually and/or linguistically defined concepts and can be viewed as representing a domain of conceptualization that is important for structuring experience. The relation among them is metaphorical in nature; that is, any one of them may serve to conceptualize any other category to its right. The above arrangement of categories may therefore be interpreted as consisting of a number of what we propose calling "categorial metaphors," such as OBJECT-to-SPACE or SPACE-to-TIME, where the first category forms the metaphorical vehicle and the second the metaphorical topic. In many languages, for example, the lexeme for the body part 'back' is used as a metaphorical vehicle to express a spatial concept, 'behind' (= OBJECT-to-SPACE; see chap. 5), and the latter again serves as a vehicle for a temporal concept, 'after' (= SPACE-to-TIME).[26]

The category ACTIVITY, referred to in Claudi and Heine (1986) as "PROCESS," roughly corresponds to what Lyons (1977:483) calls a "dynamic situation" and includes acts, activities, events, and processes. The category QUALITY is the most fuzzy of all these entities. It is likely that future research will establish that it forms a kind of catchall for a number of quite divergent conceptualizations. It may refer, for example, to states as opposed to dynamic situations or to non-physical as opposed to physical concepts.

In Claudi and Heine (1986:308), a metaphor SPACE-to-PROCESS was proposed, according to which the category PROCESS is metaphorically derived from SPACE. More recent research suggests that this proposal rests on inadequate evidence. Rather, it would seem that the order of these two categories has to be reversed since there is clear evidence to the effect that spatial concepts tend to be derived from concepts representing activities. Such evidence can be found in a number of languages, for example, where process verbs have been reanalyzed as locative particles. In Ewe, for example, a number of verbs of motion have been grammaticalized to locative adverbs (Hünnemeyer 1985:92–114). Thus, the verb *ɖi* 'to descend, go down' has all the characteristics of a verb in (17), while in (18) it has the function of an adverb meaning 'down' and does not behave like a verb; that is, it may not be inflected for person, tense, aspect, negation, etc.:

(17)   me-ɖi   le sɔ   dzí
        1SG-descend be horse top
        'I dismounted the horse'
(18)   me-tsɔ-e   da ɖi
        1SG-take-3SG put down
        'I put it down'

Examples like these are also important with reference to the much discussed localist hypothesis, according to which spatial concepts are more basic than other

concepts and therefore provide an obvious template for the latter (cf. Anderson 1971; Lyons 1977:718ff.; Jackendoff 1983:210). While this hypothesis finds support in areas of grammar such as case marking (see 6.4), it does not hold true in the case of more "concrete" concepts such as the ones we are dealing with here, where SPACE can be clearly shown to be a derived category. Concerning more evidence, see 7.2.3.

It is important to note that we are dealing with a specific type of metaphor. First, this type appears to be based on a structure of conceptual chaining that is metonymic in nature, as we shall argue in chapter 3 (see also chap. 4). Second, it may be referred to loosely as "experiential metaphor," whose main function is to describe and/or understand abstract or conceptually complex phenomena in terms of concrete or less complex phenomena. This means, for example, that expressive metaphors, which serve to enrich the expressiveness of an utterance, or taboo metaphors, which serve to conceal or obscure reality (cf. Claudi and Heine 1986:299), will not be considered here.

A number of scholars have argued, implicitly or explicitly, that metaphorical processes as they are observed in language are the same irrespective of whether we are dealing with lexical or grammatical material. Our own observations suggest that these two parts of language structure behave strikingly different with regard to the types of metaphor applying to them. Whereas the lexicon allows all three types of metaphor distinguished above, only "experiential metaphors" appear to be involved in the case of grammatical categories. This fact accounts for one essential difference in the behavior of these two parts: while development in grammatical morphemes is unidirectional, leading from "more concrete" to "more abstract" meanings (see 2.3.2), developments in the lexicon do not undergo such a constraint.

We may illustrate this distinction with the following example. The Swahili noun *mbele* 'frontside, front part' is derived from a noun meaning 'breast' via a body part metaphor according to which the human body provides a convenient vehicle for conceptualizing spatial orientation (see chap. 5). *Mbele* has further been grammaticalized to a locative ('the front, in front [of]') and a temporal marker ('before') and in this way has become increasingly "more abstract" (for more details, see chap. 5). As a nominal lexeme, however, it has assumed a "more concrete" meaning in that it was used as the vehicle of a taboo metaphor and has acquired the meaning ('the front' > 'the front part' >) 'male sexual organs.'

Claudi and Heine (1986) discuss the term "categorial metaphor" and the way it is to be distinguished from the conceptual metaphors proposed by Lakoff and Johnson (1980). One major distinguishing feature is that the former are much more inclusive than the latter; one categorial metaphor typically includes several clusters of conceptual metaphors. One example may suffice to illustrate this. Lakoff and Johnson (1980:14–21) propose a number of conceptual metaphors

that all have in common that they use the distinction *up* versus *down* as their metaphorical vehicle, as can be seen in the following examples:

(19)   HAPPY IS UP; SAD IS DOWN

CONSCIOUS IS UP; UNCONSCIOUS IS DOWN

HEALTH AND LIFE ARE UP; SICKNESS AND DEATH ARE DOWN

HAVING CONTROL OR FORCE IS UP; BEING SUBJECT TO CONTROL IS DOWN

MORE IS UP; LESS IS DOWN

HIGH STATUS IS UP; LOW STATUS IS DOWN

GOOD IS UP; BAD IS DOWN

VIRTUE IS UP; DEPRAVITY IS DOWN

RATIONAL IS UP; EMOTIONAL IS DOWN

What appears to be common to these conceptual metaphors is that spatial orientation is employed in order to conceptualize physical, social, mental, and moral or other states or qualities—or, in short, where X is located serves as a metaphorical template in order to understand how X is or feels. This cluster of conceptual metaphors appears in one of the categorial metaphors included in (16) above, that is, the SPACE-to-QUALITY metaphor, whereby situations, states, or qualities are metaphorically rendered in terms of locative concepts.

The arrangement of categories is unidirectional; it proceeds from left to right and can be defined in terms of "metaphorical abstraction" (see above), where a given category is "more abstract" than any other category to its left and "less abstract" than anything to its right. This is in line with our claim that grammaticalization is the result of a problem-solving strategy according to which concepts that are more immediately accessible to human experience are employed for the expression of less accessible, more abstract concepts.

There exist a few examples that contradict the unidirectionality principle (see 1.1). One of the categorial metaphors presented above (= SPACE-to-TIME) requires that time is conceptualized in terms of space, and this is what usually happens, although there may be instances where the opposite holds, that is, where time serves as a vehicle to express a spatial notion, as appears to be the case in the following sentence, where the temporal markers *still* and *already* receive a spatial significance:[27]

(20)   Buffalo is still in the States, but Hamilton is already in Canada.

In lexical borrowing and pidginization, it can occasionally be observed that a temporal source item acquires a range of meanings, including a spatial one, in the receiver language. Keesing (in press), for example, reports that, when in the Pidgin English of the Solomon Islands the word *fastaem* was adopted from English (from *first time*) and developed, for example, into a temporal preposition, as in (21), some older Malaita speakers of Solomons Pidgin adopted it as a spatial marker, as in (22):

(21)   fastaem long faet
         'before the fight'
(22)   fastaem long haos
         'the front of the house'

Furthermore, a few cases of degrammaticalization (see Greenberg, in press) have been reported, and Campbell (in press) presents the case of the Estonian adverb *ep* 'yes, indeed, just so, then,' which is said to have developed from an unproductive affirmative suffix, as an instance of decliticization.[28] Examples like these are, however, rare and will be ignored in the following chapters.

With reference to the terminology introduced by Pepper (1970:85ff.) and Mac Cormac (1985:47–48), we may say that categorial metaphors are "root metaphors" while conceptual metaphors are typically "conveyance metaphors": the former are used to comprehend an entire area of human experience or of the physical world, whereas the latter tend to be based on isolated experiences and offer a metaphorical insight that is limited in scope. Mac Cormac (1985:48), for example, observes that the many metaphors employed to personify organisms and objects have been used as a single root metaphor.[29] This is exactly the PERSON-to-OBJECT metaphor that is included in (16) above, according to which inanimate or nonhuman entities (OBJECT) are conceptualized in terms of humans beings (PERSON). In Lakoff and Johnson (e.g., 1980:34, 47, 48, 134), there are a number of conceptual metaphors that appear to be included in this categorial metaphor, as shown in (23):

(23)   AN INSTRUMENT IS A COMPANION
         INFLATION IS AN ADVERSARY
         IDEAS ARE PEOPLE
         LOVE IS A PATIENT

We will deal with this root metaphor in more detail in 7.1.

The presence of categorial metaphors may be reflected variously in whole utterances, in propositions, in single concepts, or in the kind of contexts in which a given concept is used. For example, many languages have a comitative adposition 'with' that is used to refer to instruments with inanimate nouns and to manner with certain abstract nouns. Metaphor, in this instance, has the effect of conceptualizing an instrument as a companion and a quality as an instrument, as appears to be the case in the following examples:[30]

Example	Grammatical Function	Metaphorical Category
(24a) He fought with John	Comitative	PERSON
(24b) He fought with a knife	Instrumental	OBJECT
(24c) He fought with skill	Manner	QUALITY

That the preposition 'with' refers to entirely different categories or experiential domains appears to be a function of the differing contexts in which it is used rather than of its own conceptual characteristics.

Underlying the chain of metaphorical categories in (24), there appears to be a cognitive activity that can be described in terms of egocentric distance, proceeding from the category that is closest (PERSON) to human experience to one that is most remote (QUALITY).[31]

Whether the various metaphorical categories form a linear structure, as our presentation above suggests, remains unclear at the present stage of research. Assuming that underlying their ordering there is some principle of egodeixis, as Diehl (1975) does with regard to a set of comparable entities in case grammar, their interrelation may be more appropriately described in terms of an inward/outward progression (cf. Diehl 1975:117), roughly as sketched in figure 2.2. There are a number of conceptual domains that are difficult to locate within such a structure. One of them is POSSESSION. On the basis of the evidence available, one might suggest that this domain is located to the right of categories such as ACTIVITY and SPACE, in particular in the light of the following observations.

POSSESSION does not show any of the salient characteristics of any of the categories to the left of SPACE; for example, it does not have thing-like, spatial, or process-like contours—it is most appropriately understood as a nonphysical, time-stable entity, in the same way as qualities and states are.[32]

A survey of possessive constructions in African languages suggests that the most prominent donor domains for the expression of POSSESSION are SPACE ("Y is at X's place" > "X owns Y") and ACTIVITY ("X seizes/holds Y" > "X owns Y"). In view of the unidirectionality principle underlying grammaticalization, we must assume that POSSESSION is located somewhere to the right of these two categories, which, in turn, serve as a source for possessive concepts.

The situation is, however, slightly more complex. As we shall see in chapter 7, there is yet another, more "abstract" level of conceptualization where POSSESSION, as well as a number of other relational categories, is to be located (see 7.2.3).

2.4.2 The Categories and Their Interrelation

The distinction of categories like those in the metaphorical chain presented above is reflected in various aspects of language structure. For example, there appears to be some kind of correlation between these metaphorical categories and the division of both word classes and constituent types. Thus, the following prototypical correlations may be established:

Category	Word Type	Constituent Type
PERSON	Human noun	Noun phrase
OBJECT	Concrete noun	Noun phrase

(Continued on next page.)

Category	Word Type	Constituent Type
ACTIVITY	Dynamic verb	Verb phrase
SPACE	Adverb, adposition	Adverbial phrase
TIME	Adverb, adposition	Adverbial phrase
QUALITY	Adjective, state verb, adverb	Modifier

In his discussion of the relation between semantic, pragmatic, and syntactic categorization, Croft (1984) argues that there is a significant correlation between syntactic categories and their pragmatic and semantic behavior. On the basis of an approach that combines Jakobsonian marking theory with findings on prototype research, he concludes that prototypical nouns, verbs, and adjectives show the following "natural" correlations:[33]

Syntactic Category	Discourse Function	Semantic Class
Noun	Reference	(Physical) object
Verb	Predication	(Physical) action
Adjective	Modification	(Physical) property

As Croft's description suggests, the following approximate correspondences can be established between the three categories defined by him and the categories distinguished here: noun = PERSON or OBJECT, verb = ACTIVITY, and adjective = QUALITY.

Furthermore, it would seem that the various hierarchies that have been identified as, for example, determinants of word or constituent order are structured in a way that is suggestive of a similar or even identical underlying cognitive patterning (cf. Allan 1987). For instance, the case hierarchy proposed by Givón (1984b:174) might be correlated with the metaphorical chain distinguished here in the following way:

Case Function	Prototypical Category
Agent	PERSON
Benefactive	PERSON
Dative	PERSON
Accusative	OBJECT
Locative	SPACE
Instrument and others	QUALITY
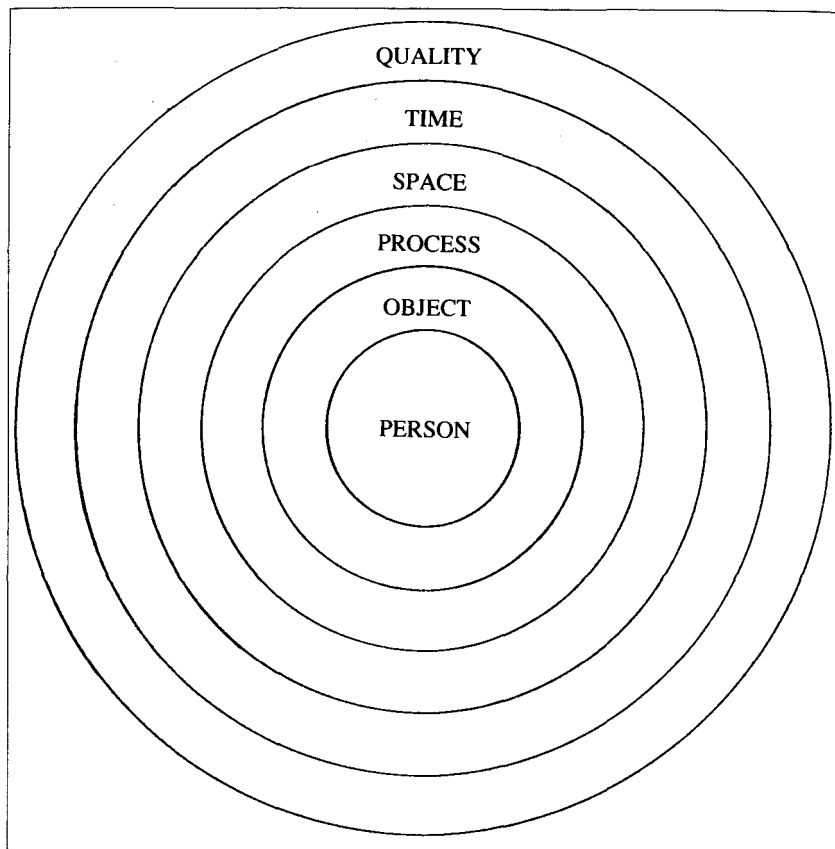
Fig. 2.2 The metaphorical categories in an inward/outward progression.

Similarly, structures like the personal, social status, and role hierarchies (see Allan 1987:57ff.) appear to imply a basic pattern according to which there is a human category preceding a nonhuman one, which again is followed by more abstract categories relating to nonphysical, quality-like referents.

2.4.3 On the Nature of Categories
2.4.3.1 Categories and Pronouns

One area where the categories distinguished above are perhaps most clearly reflected in language structure is that of pronouns. Interrogative pronouns, for example, tend to be structured lexically in a way that largely mirrors these categories. In order to study the relation between cognitive and morphological-

linguistic taxonomy in more detail, a small ad hoc survey involving fourteen languages was carried out.[34] Pronominal expressions for the following interrogative categories were elicited:

Category	Gloss	Category	Gloss
PERSON	'who?'	TIME	'when?'
OBJECT	'what?'	QUALITY/MANNER	'how?'
ACTIVITY	'what?'	PURPOSE	'what for?'
SPACE	'where?'	CAUSE	'why?'

The main purpose of the survey was to acquire some indication as to whether, or to what extent, the morphological structure of pronouns provides evidence concerning the cognitive contours of the categories that figure in metaphorical transfers leading to grammaticalization. Apart from the categories treated in 2.4.1, two "more abstract categories," PURPOSE and CAUSE, were selected. While the goal was to find some quantifiable cross-linguistic data, no attempt was made to aim at a representative sample.

One noteworthy, though not unexpected, result of the survey was that none of the fourteen languages looked at has different morphological expressions for OBJECT and ACTIVITY. Thus, in all these languages, the interrogative pronoun 'what?' refers not only to concrete entities, as in '*What* did she drink?' but also to actions and events, as in '*What* did she do?' This fact would seem to suggest a special cognitive relation between these two categories.[35] Since OBJECT and ACTIVITY have identical morphological expressions in all languages, we will not maintain a distinction between these two in the remainder of this chapter and will use OBJECT as a cover term for both.[36]

There are three interrogative pronouns that exhibit a minimal phonological and morphological complexity. These are the pronouns for PERSON, OBJECT/ACTIVITY, and SPACE, which are expressed by monomorphemic and monosyllabic forms in the majority of languages. The categories TIME and MANNER are slightly more complex: although they also tend to be expressed by forms consisting of one morpheme only, monosyllabic pronouns are less common.

However, one language, Ewe, which is frequently cited as an example of an analytic-isolating language, does not follow this pattern. In this language, interrogative pronouns are formed typically by means of two morphemes, one being a noun and the other an interrogative qualifier ('which?'), as the following examples show:

Ewe		Gloss
ame-ká	"person-which"	'who?'
nú-ká	"thing-which"	'what?'
afí-ká	"place which"	'where?'
γe-ká-γi	"hour which"	'when?'

The same pattern can be observed in the development of some pidgin languages. In Kenya Pidgin Swahili (KPS), a pidginized variety of Swahili spoken in up-country Kenya (Heine 1973), for example, the interrogative pronouns of Standard Swahili have been lost, and a specific set of nouns has been recruited to introduce a new paradigm of pronominal concepts. These concepts correspond exactly to the cognitive domains distinguished above:

Domain	Type of Concepts	KPS Nouns Serving as a Source for Pronominal Expressions	
PERSON	Human concepts	*m-tu*	'person'
OBJECT	Typically inanimate concepts	*kitu*	'thing'
ACTIVITY	Events, processes, and actions	*kitu*	'thing'
SPACE	Spatial relations	*ma(h)ali*	'place'
TIME	Temporal relations	*saa*	'hour'
		siku	'day'
QUALITY	States and qualities	*namna*	'manner, kind'

In combination with certain modifiers, two kinds of pronouns have developed out of these nouns: interrogative pronouns when combined with *gani* 'which?' and relative clause subordinators when combined with the distal demonstrative *ile* 'that':

Standard Swahili Forms		KPS Interrogative Pronouns		KPS Relative Pronouns
nani	'who?'	*mtu gani*	'who?'	*mtu ile*
nini	'what?'	*kitu gani*	'what?'	*kitu ile*
wapi	'where?'	*mahali gani*	'where?'	*mahali ile*
lini	'when?'	*saa gani*	'when?'	*saa ile*
		siku gani	'when?'	*siku ile*
vipi	'how'	*namna gani*	'how?'	*namna ile*

Note that there are two nouns that form the source for temporal pronouns: *saa* 'hour' and *siku* 'day.' The semantic distinction between these two has been retained in the KPS pronouns, although in a slightly modified form: *saa gani* and *saa ile* refer to periods of less than one day and *siku gani* and *siku ile* to periods of more than one day.

When referring to monomorphemic forms, we are disregarding "submorphemic" elements that occur in the interrogative paradigm of a number of languages. German, for example, has an element *w-* introducing interrogative pronouns: *w-er* 'who?' *w-as* 'what?' *w-o* 'where?' *w-ann* 'when?' *w-ie* 'how?' *w-ozu* 'what for?' *w-arum* 'why?' Swahili has two such elements, *-ni* and *-pi: na-ni* 'who?' *ni-ni* 'what?' *li-ni* 'when?' *wa-pi* 'where?' *vi-pi* 'how?' Even if these elements can be related formally to existing morphemes, they are not productive parts of the morphological inventory of the languages concerned.[37]

Among the pronouns considered here, two types may be distinguished on the basis of their morphological behavior. The first type includes all those referring to the conceptual categories distinguished in 2.4.1, which are as follows:

Category	Pronominal Meaning
PERSON	'who?'
OBJECT/ACTIVITY	'what?'
SPACE	'where?'
TIME	'when?'
QUALITY/MANNER	'how?'

These pronouns are expressed by one-word forms in the majority of languages. The second type, which includes the functions PURPOSE and CAUSE, shows a more complex morphology. Most languages use at least two words for their expression, one being derived from any of the above pronouns—almost always the OBJECT pronoun ('what?')—and the other being typically a case-marking morpheme.[38]

While it remains unclear what the exact correlations between the linguistic and the cognitive structure of pronouns are, a few assumptions may be tentatively formulated. First, the relative degree of morphological complexity that a pronoun exhibits is likely to correlate to some extent with the relative degree of its cognitive complexity. This is in line with the "complexity principle" proposed by Clark and Clark (1978:230), according to which "complexity in thought tends to be reflected in complexity of expression." For example, an interrogative pronoun that is expressed cross-linguistically by means of a bimorphemic form is likely to be conceptually more complex than one that is expressed by one morpheme only. Second, formal similarity between different pronominal categories may be indicative of some kind of conceptual relation between these categories.

We have cited the example of the categories OBJECT and ACTIVITY, which exhibit identical morphological forms (cf. English *what?*) in all languages of our sample. On the basis of such assumptions, the following generalizations may be proposed.

Interrogative pronouns referring to the categories PERSON, OBJECT/ACTIVITY, SPACE, TIME, and QUALITY exhibit the least degree of morphological complexity and are clearly distinguished in all languages studied. This may suggest that the metaphorical categories figuring in grammaticalization processes in general (see 2.4.1) are in fact salient taxa of the conceptual universe.

Compared to the categories given above, those of PURPOSE and CAUSE appear to be of a different nature since they require more complex linguistic forms for their expression. That there exists, however, a certain systematic relation between these two types is suggested by the fact that the latter are expressed in most cases by means of a label consisting of the pronoun for the category OBJECT plus some additional morphological element(s). The fact that PURPOSE and CAUSE exhibit more complex linguistic behavior may be related to the observation that they form part of a more "abstract" level of conceptualization, as we shall argue in chapters 6 and 7 (in particular, 7.2.3).

2.4.3.2 Jackendoff's Ontological Categories

A catalog of entities similar to the ones presented here has been proposed by Jackendoff (1983). His entities, referred to as "ontological categories," and their present equivalents are as follows:[39]

Category	Jackendoff's Major Ontological Categories	Category	Jackendoff's Major Ontological Categories
PERSON	. . .	. . .	DIRECTION
OBJECT	THING	TIME	. . .
ACTIVITY	ACTION	QUALITY	MANNER
. . .	EVENT	. . .	AMOUNT
SPACE	PLACE		

The differences between these two lists to some extent reflect differences in the goals pursued. Whereas our primary interest in this chapter is with categorization as reflected in metaphorical behavior, Jackendoff appears to be mainly concerned with the relation between ontological categories and features on the one hand and distinctions in (syntactic) phrasal and conceptual constituency on the other (cf. Jackendoff 1983:67). This observation would seem to account, for example, for the fact that, whereas the distinction between the categories PERSON and OBJECT is essential within our framework, it is largely irrelevant in Jackendoff's treatment. On the other hand, while AMOUNT is proposed by Jackendoff as a major

ontological category, it does not seem to form a primary category of meta-
phorization. Whether ACTION and EVENT on the one hand and PLACE and
DIRECTION on the other may not be allocated to the more general categories AC-
TIVITY and SPACE, respectively, as proposed by us remains to be decided by
future research.

2.4.4 Two Kinds of Metaphor

One main part of the present work is devoted to metaphorical transfer. Note,
however, that we will be concerned exclusively with dead or "frozen" meta-
phors; our task is essentially to reconstruct cognitive activity as it surfaces in
present-day language use. Accordingly, whenever we talk about metaphor, we
are referring to processes that must have been initiated some time in the past.[40]

In 2.4.1, a number of typological distinctions have been introduced in order to
describe the kind of metaphor that can be observed in grammaticalization. It was
pointed out that our concern here is exclusively with what we have referred to as
experiential metaphors and that both expressive and taboo metaphors are irrele-
vant for defining grammaticalization. Furthermore, we noted that we are dealing
here not with metaphors that are based on isolated experiences or that are limited
in scope, like the conveyance of Pepper (1970; Mac Cormac 1985) or the concep-
tual metaphors of Lakoff and Johnson (1980), but rather with a highly inclusive
type of root metaphor that we have proposed calling categorial metaphor (Claudi
and Heine 1986).

Finally, we have to add yet another kind of typological distinction that is of the
utmost importance for a better understanding of the following chapters: we will
distinguish between two kinds of metaphor that, for lack of more appropriate
terms, will be referred to, respectively, as "creative" and "emerging" meta-
phors.[41] The difference between these two relates exclusively to their respective
genesis. It does not imply, however, that creative metaphors are not "emerging"
in some way or that emerging metaphors do not involve creativity.

Metaphor has been described as, for example, a deviant predication, a false or
erroneous statement conflicting with our expectations and/or involving a willful
violation, an intentional breaking of rules (cf. Winner 1979:472; Davidson 1979;
Ricoeur 1979:143; Swanson 1979:162). This is exactly what marks the begin-
ning of a creative metaphor: a new expression is formed containing a false
predication and involving a willful violation of conceptual/semantic rules. Ide-
ally, this expression has never been uttered before, as, for example, when Ernest
Rutherford and Niehls Bohr proposed the metaphor in physics "An atom is a
solar system" (Hoffman 1982:8–9). A creative metaphor cannot be accounted
for by means of the rules of the code: the domain of the metaphorical vehicle is so
far removed from that of the topic that the metaphorical predication must con-
stitute a violation of that code.

Emerging metaphors, on the other hand, do not form new expressions when

they arise; they are built on predications that were already present. What is responsible for their rise is that an existing predication—and this is not seldom a frequently used predication—is introduced in new contexts or applied to new situations, thereby acquiring an extended meaning, for example, when expressions such as *to have a clean slate* and *to clean the slate* came to be used in contexts where the original meaning of *slate* was no longer applicable. In this kind of metaphor, the vehicle tends to be viewed as a conceptual extension of the topic rather than as belonging to an entirely different conceptual domain.

Perhaps one of the more salient characteristics of this distinction relates to the role played by psychology and pragmatics, respectively: psychological motivation is high but pragmatic motivation low in the case of creative metaphors, whereas the opposite holds in the case of emerging metaphors (cf. Levinson 1983:161). Emerging metaphors are in fact pragmatically motivated. They owe their existence to forces such as conversational implicatures and context-specific reinterpretation, and their development has much more to do with metonymy than with code violation or conceptual "jumps" (cf. 2.4.5, chap. 3).

This brief characterization might give the impression that we are dealing with a clear-cut typological distinction. This, however, is by no means the case. It is often hard, if not impossible, to tell where or to what extent an act of creativity or code violation or conversational implicatures and the like are involved. It would seem that these two kinds of metaphor can best be conceived of as forming extreme points on a scale made up of the properties of both in varying proportions.

On synchronic grounds, it is hard, and in many cases impossible, to tell whether a given metaphor is of the creative or the emerging kind. It is nevertheless important to maintain the distinction, in particular since in the remainder of this work we will ignore creative metaphors. Our concern will be exclusively with emerging metaphors since they present the only type of metaphorical transfer that can be observed in the process of grammaticalization. Note, however, that they do not correspond exactly to the prototypical notion of a metaphor; in fact, not a few authors would accept only creative metaphors as "genuine" metaphors, and most publications on this subject are confined to a treatment of creative metaphor.

2.4.5 Metaphor versus Metonymy

Within the framework proposed here, metaphor forms but one of the mental activities involved in the development of grammatical categories. The second major activity is metonymy. We may define metonymy as a figure of speech whereby the name of an entity is used to refer to another entity that is contiguous in some way to the former entity (cf. Taylor 1989:122), but we will use the term in a wider sense that also includes related figures, such as synecdoche, that refer to associations based on contiguity (cf. Lakoff and Johnson 1980; Rudzka-Ostyn 1988:521; Traugott and König, in press).

TABLE 2.3 Some Manifestations of the Metaphor versus Metonymy
Dichotomy according to Jakobson and Halle (1956)

Metaphor	Metonymy	Context
Similarity	Contiguity	General
Poetry	Prose	Literary genres
Romanticism	Realism	Literary schools
Surrealism	Cubism	Painting schools
"Identification and symbolism	"Displacement"	Freud (1950)
"Homeopathic" or "imitative magic"	"Contagious magic"	Frazer (1950)

The claim made here is that grammaticalization is the result of an interaction of both metaphor and metonymy—a claim that will be discussed in more detail in chapters 3 and 4. It would seem, in fact, that metaphors of the type to be considered here, that is, those of the "emerging" type (see 2.4.4), presuppose metonymy of some kind. This view appears to be at variance with that expressed by a number of linguists, philosophers, and psychologists who have assumed or implied that metaphor and metonymy form distinct, mutually exclusive types of expression.

One of the most influential linguistic treatments in this direction is that of Jakobson and Halle (1956), who describe the dichotomy between these two kinds of tropes as reflecting a "bipolar structure of language (or other semiotic systems)" that appears to be of "primal significance and consequence for all verbal behavior and for human behavior in general" (1956:78–79). That this dichotomy is not confined to language structure is suggested by a number of illuminating examples they provide, the most prominent of which are summarized in table 2.3.

While studying two types of aphasic disturbances, similarity disorder and contiguity disorder, Jakobson and Halle observe that metaphor is alien to the former just as metonymy is alien to the latter, and they conclude that, according to the metaphorical way, one topic leads to another through their similarity, whereas according to the metonymic way discourse is developed along the lines of topic contiguity. Among the examples they provide, the following may illustrate this point:

> The same stimulus produced the following substitutive reactions: the tautology *hut;* the synonyms *cabin* and *hovel;* the antonym *palace,* and the metaphors *den* and *burrow.* The capacity of two words to replace one another is an instance of positional similarity, and, in addition, all these responses are linked to the stimulus by semantic

> similarity (or contrast). Metonymical responses to the same stim-
> ulus, such as *thatch, litter,* or *poverty,* combine and contrast the
> positional similarity with semantic contiguity. [Jakobson and Halle
> 1956:77]

The authors observe that both processes are continually operative in verbal be-
havior, but, under the influence of a cultural pattern, personality, and/or verbal
style, preference is given to one of the two processes over the other.

The dichotomy is described, on the one hand, in terms of "gravitational
poles": the similarity relation prevails in certain contexts, and the contiguity rela-
tion prevails in others. Metaphor predominates, for example, in Russian lyric
songs, while in the heroic epics metonymy is preponderant. On the other hand,
the dichotomy is presented as one involving mutually exclusive alternatives.
Thus, in aphasia there is a fixation on one of these poles to the exclusion of the
other.

In the present work, the focus will be on a somewhat different perspective of
the relation between metaphor and metonymy. While there do exist many in-
stances of metaphor without metonymy and metonymy with metaphor, the more
common paradigm to be observed in human language appears to be one where
the two are not mutually exclusive but rather complement one another.

In his survey of figurative expressions involving, inter alia, English body part
terms, Goossens (1989) discusses cases of both "metaphors without metonymy"
and "pure metonyms." Expressions such as *put words into somebody's mouth* or
bite someone's head off are given as examples of the former, while *keep one's
mouth shut* or *be on one's feet* exemplify the latter. More than half the items in
Goossens's body part sample, however, are neither purely metaphoric nor purely
metonymic; rather, they involve both processes. He observes that there are two
main patterns with regard to the ways in which metaphor and metonymy interact,
these being as follows:

a)   Metonymy functions within a metaphor: the expression is basically metaphoric,
         but metonymy is part of it (e.g., *to bite one's tongue off, to stick in one's throat,
         to catch someone's ear;* "metonymy within metaphor").

b)   Metaphor and metonymy coexist in some uses of a figurative expression: the
         metaphorical interpretation is the normal one but can be said to derive from the
         metonymic one. An example would be *close-lipped.* In the case of a metonymic
         interpretation, this expression could be paraphrased by *having one's lips closed.*
         In the case of a metaphorical interpretation, the lips of the person concerned
         typically are not closed ("metaphorization from metonymy"; Goossens
         1989:15, 19–20).

Goossens furthermore observes that the way in which these two processes in-
teract differs from one cognitive domain to another. He demonstrates this by

looking at the domain of sound expressions. Nonhuman sounds, such as animal (*bark, cackle, purr, squeal,* etc.), or artificial sound expressions (*harp on, pipe down/up,* etc.) tend to be used metaphorically when referring to ways in which human beings speak. Human sounds such as *giggle, snort, wheeze,* etc. are as a rule used metonymically, "where the metonym can easily develop into a metaphor" (Goossens 1989:16): *giggle* may mean 'express or utter with a giggle' (= metonymic interpretation), but it may as well mean something like 'act like someone who giggles' (= metaphorical interpretation). The latter would be an instance of metaphor derived from metonymy.

Goossens's observation that, "although metonymy and metaphor are clearly distinct in principle, they are not always separable in practice" (1989:19) is of particular relevance for the conceptualization of grammatical structures, as we shall see in the following chapter.

3 Context-induced Reinterpretation

> It is because our conceptual scheme is a sliding scale rather than a philosophical analysis of experience that we cannot say in advance just where to put a given concept. We must dispense, in other words, with a well-ordered classification of categories. [Sapir 1921:107]

In chapter 2, we have described the process underlying grammaticalization as the result of a problem-solving strategy whereby "abstract" concepts are understood in terms of less "abstract" concepts. This process is metaphorical in nature and involves a transfer in discrete steps from one cognitive domain to another. In the present chapter, we will show that this forms but one aspect of the relevant process. We will argue that there is yet another perspective, one that suggests that the process is also gradual and continuous rather than discrete and discontinuous.

3.1 Discontinuity versus Continuity

We shall use the concept BACK to exemplify this point. Our example concerns the noun *megbé* 'back' from Ewe.[1] The development from a body part noun ('back') to a prepositional and/or adverbial entity ('behind, back') has been alluded to above. In accordance with the structure of categorial metaphors discussed in 2.4.1, this development may be reconstructed for the Ewe lexeme *megbé*, essentially involving the following categories:

(1)   OBJECT > SPACE > TIME > QUALITY

Thus, in sentence (2) *megbé* denotes a body part, hence a concept of the OBJECT category, while in (3) it expresses a locative content (SPACE)—either as an adverb, as in (3a), or as a postposition, as in (3b)—and in (4) a temporal content (TIME). Finally, in (5) it carries yet another meaning, 'mentally retarded,' which denotes neither a thing-like nor a spatiotemporal concept but rather one of the category QUALITY:

(2)   épé   megbé fá
        3SG.POSS back   be. cold
        'His back is cold'

(3a)   é-le   xɔ   á   megbé
        3SG-be house DEF behind
        'He is behind the house'

(3b)   é-nɔ   megbé
          3SG-stay   behind
          'He stays back'

(4)   é-kú   Ie é-megbé
          3SG-die be 3SG.POSS-behind
          'He died after him'

(5)   é-tsí   megbé
          3SG-remain   behind
          'He is backward/dull'

While this interpretation in terms of metaphorical transfers accounts for much
of the "polysemy" of *megbé,* there remain some problems. One relates to se-
mantic ambiguity. In quite a number of sentences in which this lexeme is used, it
may refer simultaneously to more than one of the categories distinguished above.
In sentence (6), for example, *megbé* may denote both a body part ('back') and the
'back part' of an inanimate item, and in (7) it may mean either the 'back part' of
an object or the 'space behind' that object. Sentence (8) again may have either a
spatial or a temporal meaning. Finally, sentence (9) (= [5]) has both a temporal
and a qualitative significance:

(6)   megbé keke-áɖé   le é-sí
          back   broad-INDEF be 3SG.POSS-hand
          (a) 'He has a broad back'
          (b) 'Its back is broad'

(7)   dzra   xɔ-á   pé megbé ɖó
          prepare house-DEF of back   ready
          (a) 'Prepare the back wall of the house!'
          (b) 'Prepare the place behind the house!'

(8)   é-le   megbé ná-m
          3SG-be   behind to-1SG
          (a) 'He is behind me (spatially)'
          (b) 'He is late (= he could not keep pace with me)'

(9)   é-tsí   megbé
          3SG-stay   behind
          (a) 'He remained behind/is late'
          (b) 'He is backward/dull'

It would seem that such instances of overlapping meaning are not coincidental but rather form an integral part of the development from a body part noun to a grammatical morpheme. Thus, the categories OBJECT, SPACE, TIME, and QUALITY are not held separate from one another.

Overlapping of this kind is nothing extraordinary; it is a common feature of grammaticalization processes and has been described in Heine and Reh (1984:57–59) under the label "split."[2] The transfer of *megbé* from a "thing-like" (OBJECT) to a spatial entity (SPACE), for example, does not necessarily imply a sudden replacement of the former by the latter but rather a stage where, at least for some time, the former coexists side by side with the latter, the result being overlapping.

A second problem concerning the metaphorical structure presented above is the following. Instead of forming a chain of discrete, though overlapping, categories, it can equally well be interpreted as representing a continuum without any clear-cut internal boundaries. We noted that sentences (2)–(5) are suggestive of the presence of distinct categories such as OBJECT, SPACE, TIME, or QUALITY, yet it is equally possible to isolate conceptual entities intermediate between these categories. The OBJECT-SPACE chain, for instance, consists of at least four such entities, as the examples below show. In (10), *megbé* denotes the body part 'back' (OBJECT/PERSON), and, in (11), it is transferred from the human (or animal) body to other physical items meaning 'back part' (OBJECT).[3] In (12), *megbé* is further transferred from the 'back part' of X to the 'place behind' X; that is, it denotes a spatial entity that is still conceived of as a physical object (OBJECT/SPACE). Finally, in (13), it refers to a purely spatial concept (SPACE). Thus, there are two intermediate points between the nominal meaning 'back of body' and the adverbial meaning 'behind':

(10) (= [2])   épé   megbé fá
               3SG.POSS back be cold
               'his back is cold'

(11)   e-kpɔ́   xɔ-a   pé megbé nyúíé má a
               2SG-see house-DEF of back   nice that Q
               'Do you see that nice back wall of the house?'

(12)   xɔ-á   megbé le nyúíé
               house-DEF back be nice
               'The place behind the house is nice'

(13) (= [3a]) é-le   xɔ-á   megbé
               3SG-be   house-DEF behind
               'He is at the back of the house'
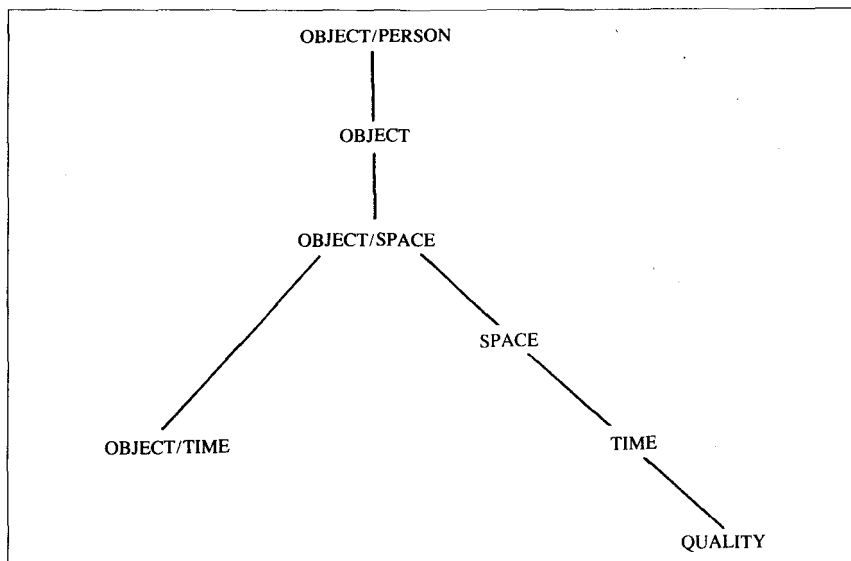
FIG. 3.1 The conceptual network of the Ewe noun *megbé*.

In a similar way, intermediate points can be identified between the SPACE and the TIME categories: *megbé* is conceptualized both as a temporal object ('the time after'; OBJECT/TIME) as in (14) and as a purely temporal concept (TIME) as in (15). The range of conceptual distinctions expressed by this lexeme has now increased to seven and can be represented graphically as in figure 3.1:

(14)   é-dzó   le núd̯ud̯u-a pé megbé
            3SG-leave be food-DEF of behind
            'He left after eating'

(15) (= [4])   é-kú   le é-megbé
                3SG-die be 3SG.POSS-behind
                'He died after her'

These are but a few examples suggesting that there is no discontinuity between categories like OBJECT and SPACE; indeed, many more intermediate entities could be identified if more contexts were considered. It is hoped that these few examples may suffice to give an impression of the "continuum" nature of the process from OBJECT to SPACE or of any other categories. The conclusion to be drawn from such observations is that an analysis in terms of discrete metaphorical jumps captures only one aspect of the process. Both discontinuity and continuity, or metaphorical transfer and gradual extension, are involved in grammaticalization. The presence of such divergent cognitive activities appears to be

the result of an interplay between conceptual-taxonomic behavior on the one hand and pragmatic-textual strategies on the other, as we will try to demonstrate below.

3.2 Token versus Type

There is yet another perspective concerning the "polysemy" of the lexeme *megbé*, one that relates to the internal structure of concepts. In some works, a distinction is made, respectively, between concepts in their token and concepts in their type value, and Jackendoff (1983:78–88) proposes to distinguish between TOKEN concepts and TYPE concepts, where the former are mental constructs of potentially elaborate internal structure and the latter "are the information that the organism creates and stores when it learns a category."

In the present work, we will assume that concepts have both a token and a type dimension (cf. Givón 1982), and the metaphorical approach sketched above rests essentially on the assumption that transfer from one category to another takes place between entities in their token rather than their type dimension. When we observed, for example, that *megbé* as a body part noun denotes an entity of the category OBJECT, then we were alluding to its token characteristics, to the fact that 'back' stands for a mental construct of a visible, tangible object that can be delimited and counted and that typically serves as a referential participant in discourse.

Entities like *megbé* may, however, equally well be understood in their type dimension as typically nonreferential constructs, as stored information without reference to particular instances of the concept BACK, and it is in this capacity that they appear to be used as metaphorical vehicles. When calling John a donkey, then, it is not the referential token significance but rather the nonreferential type dimension that is exploited as a vehicle.[4] Similarly, when a concept like BACK is used for the expression of spatial orientation, it is not the body part as a referential/existential unit but rather a single intensional feature or type property, referring to its location relative to some defined reference point, that forms the link between *megbé* as a body part and *megbé* as a spatial entity, respectively.

Now, assuming that the latter two entities have one property in common, the question arises as to whether we are indeed dealing with a transfer between different categories and whether "metaphor" adequately describes the relevant process (see sec. 3.3). The transition from body part to part of an inanimate object may be interpreted as one whereby some type property ('a part that is behind') is highlighted—with the effect that either the prototype structure of the concept BACK is extended, that is, redefined (cf. Givón 1989), or else a new prototype and a new concept emerges.

Observations like these aim at drawing attention to the fact that metaphor is but one factor involved in the process of grammaticalization and that there is a second, equally important factor, which forms the subject of the present chapter.

3.3 From Metonymy to Metaphor

There are two main problems that have been pointed out with reference to metaphorical approaches like the one sketched in chapter 2. One is the coexistence of a less and a more grammaticalized meaning, both being expressed by the same linguistic form, "which gives the impression of a continuum of meaning" (Brinton 1988:183). The second is that the transition from a less to a more grammatical meaning is gradual, whereas metaphor suggests a discrete transfer from one conceptual domain to another (see above). The first problem can be ignored since it is an inherent property of metaphor that it may introduce ambiguity between the literal and the transferred meaning. The second, however, is hard to reconcile with common notions of metaphor.

Metonymy and metaphor are considered by many scholars to be mutually exclusive phenomena of human conceptualization. While this is so in some instances of cognitive patterning (cf. 2.4.5), we will endeavor to demonstrate that, with reference to the structure of grammatical concepts, metonymy and metaphor, at least metaphor of the "emerging" type (see 2.4.4), are not mutually exclusive but rather complement each other—that is, that a development from a lexical item to a grammatical marker might not be possible unless there is an intermediate stage whereby distinct conceptual domains are bridged by means of a metonymical understanding.

3.3.1 Context-induced Reinterpretation

The analysis proposed here has been inspired by Traugott and König (in press), who argue that metonymy in such cases serves the "strengthening of informativeness" (cf. 3.3.2; see also Traugott 1987). According to them, semantic change of this kind contrasts with that involving metaphor in that it is "associated with solving the problem of being informative and relevant in communication," whereas metaphor "is correlated with solving the problem of representation" (Traugott and König, in press).

The observations made in the preceding paragraphs suggest that the process from cognition to grammar has both a discrete and a continuous perspective. The former is mainly psychological in nature and suggests an analysis in terms of metaphor, while the latter appears to be essentially pragmatic: it is highly context dependent and exhibits a metonymical structure. Consider the following sentences:

(16)   Henry is going to town.
(17)   Are you going to the library?
(18)   No, I am going to eat.
(19)   I am going to do my very best to make you happy.
(20)   The rain is going to come.

Sentences (16) and (20) have already been presented ([13] and [14] in 2.4) as an example of a metaphor in the previous chapter: the form *going to* has its literal meaning, expressing a spatial movement, in (16) but a transferred meaning, that of denoting temporal deixis (future), in (20). What we did not mention in that context is that there is no discontinuity between the literal and the metaphorical meaning. Rather, a large number of intermediate sentences could be inserted between (16) and (20) that suggest that between the verbal action of *going to* in (16) and (17) and the tense marker in (20) there is a continuum, or chain, of minimally different conceptual shadings—roughly of the kind we encountered in 3.1.

Sentences (18) and (19) provide but two examples of such intermediate shadings. In (18), which is an answer to (17), the primary sense of *going to* appears to be INTENTION, with a secondary sense of PREDICTION, but there are still some relics of the spatial verbal sense that is characteristic of (16) or (17). The meaning of (19) appears to be similar to that of (18), but there is no longer a spatial sense. In (20), there is no longer INTENTION; the only sense of *gong to* is PREDICTION.

Similar observations have been made by Brinton in her account of the shift from spatial to aspectual meanings in English:

> The prefixes and particles occur first in contexts in which spatial meanings are primary, with verbs of motion or of physical action. In many of these contexts, though, both spatial and aspectual meanings are possible. This is the "locus for change" in focus from spatial to non-spatial meaning. . . . Such a "shift in point of view concerning a detail of a total situation" is what Stern calls "permutation" (1931 [1964]:351), but it might be understood better as a kind of "metonymy". Once such a change in meaning from spatial directionality to situational bondedness has taken place, the prefixes and particles can then occur freely in combinations in which spatial meanings are impossible. [Brinton 1988:197–98]

What appears to be responsible for the rise of metonyms is a discourse pragmatic manipulation whereby concepts are subjected to contextual factors in utterance interpretation (Sperber and Wilson 1986:1). We will refer to this process as "context-induced reinterpretation," which involves the following idealized stages:

Stage I: In addition to its focal or core sense A, a given linguistic form F acquires an additional sense B when occurring in a specific context C. This can result in semantic ambiguity since either of the senses A or B may be implied in context C. Which of the two senses is implied usually is, but need not be, dependent on the relevant communication situation. It is equally possible that the speaker means A and the hearer interprets him or her as implying B or that the hearer understands B whereas the speaker intends to convey A.

Stage II: The existence of sense B now makes it possible for the relevant form to be used in new contexts that are compatible with B but rule out sense A.

Stage III: B is conventionalized; it may be said to form a secondary focus characterized by properties containing elements not present in A (cf. Dahl 1985:11)—with the effect that F now has two "polysemes," A and B, which may develop eventually into "homophones."

A number of different perspectives and approaches have been discussed to account for context-induced reinterpretation, the most common ones being (see 4.4) as follows:

a)   *Invited inferences:* On the basis of a Gricean framework, the emergence of B may be said to be the result of a generalized conversational implicature (Grice 1975). It would seem, however, that the kind of instances referred to here as context-induced reinterpretation are not exactly covered by Grice, and it might be more appropriate to talk of a special kind of implicature instead, one that Geis and Zwicky (1971) refer to as invited inferences.

b)   *Perspectivization:* Context-induced reinterpretation may also be regarded as the result of a cognitive strategy referred to as perspectivization, whereby different uses of a linguistic form (F) tend to highlight different components or senses (B) of that form, a process that gradually shades into metonymic extension (Taylor 1989:90).

c)   *Schematization:* By applying, in everyday usage, a more concrete concept (A) across a large number of contexts (C), individual differences are backgrounded and similarities foregrounded, the result being a schema (B) that represents an "idealization" of that concept (Rubba 1990).

d)   *Prototype extension:* In specific contexts, certain instances or attributes of a category are foregrounded, a process that may lead to the extension of prototype structures (cf. Givón 1989).

The relative significance of these approaches to understanding the initial stage of grammaticalization is still largely unclear; they clearly suggest, however, that context-induced reinterpretation is both pragmatically and cognitively motivated.

What appears to be remarkable about the schema presented here is that grammaticalization itself has two divergent components. One is metaphorical, involving a transfer from one conceptual domain, which includes sense A, to another domain, which includes B, where the former domain is more abstract than the latter. The second component is metonymic in nature. The transition from stage I via stage II to stage III is continuous; it reflects a process whereby a given context invites a specific conceptual interpretation, which is concrete in stage I, either concrete or abstract in stage II, and abstract in stage III. Thus, there is no discrete step separating A and B: both are conceptually linked.

Brinton (1988:188–89) describes the transition from spatial to aspectual meanings in English in the following way: "Because of frequent observations concerning the figurative nature of the prefixed or phrasal verb at all stages of English, I wish to emphasize that the shift described here is metonymic, not metaphoric. . . . Furthermore, though metaphorical shifts are common in prefixed and phrasal verbs . . . they do not necessarily cause the change in focus from spatial to non-spatial meaning." Our interpretation of the relevant development is in line with that proposed by Brinton, except that we wish to argue that metonymy and metaphor, rather than being mutually exclusive, are complementary aspects of grammaticalization. While the change in focus from spatial to nonspatial meanings appears to be due to some kind of metonymic force, the ultimate result can be described in terms of a metaphorical transfer from the domain of space to the more "abstract" domain of verbal aspects and *aktionsarten*. This transfer starts with conversational implicatures leading to a metonymic structure. What is important to note is that these implicatures are unidirectional: spatial concepts license temporal implicatures, but not vice versa. That is, the direction of metonymy in the process of grammaticalization is fixed; it leads from more concrete to more abstract domains, in accordance with the metaphorical structure described in 2.4.1.

That metonymy and metaphor constitute divergent or even mutually exclusive cognitive strategies has been pointed out time and again by linguists, philosophers, and psychologists. It would seem, however, that even outside the area of grammaticalization there are more metaphors that have a metonymic base than one is inclined to believe (see Goossens 1989; 2.4.5 above).

When describing the conceptualization of feeling in terms of physiological phenomena, Lakoff observes that "the folk theory of physiological effects, especially the part that emphasizes HEAT, forms the basis of the most general metaphor for anger: ANGER IS HEAT." Metaphors like this one, however, would seem to have a metonymic base. Thus, Lakoff states, "We use this folk theory in large measure to tell when someone is angry on the basis of their appearance—as well as to signal anger or hide it. In doing this, we make use of a general metonymical principle: The physiological effects of an emotion stand for the emotion" (Lakoff 1987:382–83). This process, he argues, yields a system of metonymies for anger, including the following:

(21)   Don't get *hot under the collar*.
(22)   Billy's a *hothead*.
(23)   They were having a *heated argument*.

What appears obvious is that there exists a link between two domains of human behavior, physiology and feeling, that can be described in terms of both a metonymic and a metaphorical model.

It would seem that metaphor and metonymy form different components of one

and the same process leading from concrete to more abstract grammatical concepts. On the one hand, this process is made up of a scale of contiguous entities that stand in a metonymic relation to one another. On the other hand, it contains a smaller number of salient and discontinuous categories, such as SPACE, TIME, or QUALITY. The relation between these categories, which we have discussed briefly in 2.4.1, is metaphorical but can also be described as being the result of a number of metonymic extensions. Conceivably, metonymy is the more basic component of this process in that metaphor is grounded in metonymy (cf. Skinner 1957; Eco 1979), as is suggested by examples such as the following, volunteered by Taylor:[5] "Consider the conceptual metaphor MORE IS UP. As you add objects to a pile, the pile gets higher. This experience establishes a natural association between quantity and vertical extent. Strictly speaking, the association is one of metonymy; if one adds objects to a pile, height is literally correlated with quantity. Only when the up-down schema is released from the piling-up image and applied to more abstract instances of addition (as when one speaks of *high prices*) does metaphor take over" (Taylor 1989:138). In spite of their different nature, however, the metonymic and the metaphorical components of grammaticalization have the structure

$$(24)\ A \rightarrow A, B \rightarrow B$$

in common, which suggests that in the transition from a conceptual entity A to B there is an intermediate stage (A, B) where the preceding and the succeeding entities coexist side by side.[6] The presence of this intermediate stage, which has been described in the literature on grammaticalization under labels such as "split" (Heine and Reh 1984:57), is responsible in language structure for some kinds of ambiguity as well as free variation (see chaps. 8, 9).

This view differs slightly from that of Traugott and König (in press), who argue that metaphor and metonymy correlate with shifts to different types of grammatical function: "Metaphor is largely correlated with shifts from meanings situated in the external described situation to meanings situated in the internal evaluative, perceptual, cognitive situation, and in the textual situation. Metonymy is largely correlated with shifts to meanings situated in the subjective belief-state or attitude toward the situation, including the linguistic one."

According to the claim made here, both metaphor and metonymy are part and parcel of one and the same process, grammaticalization, although in the case of a particular grammatical function one of them may be more prominent than the other. The development of concessive, causal, and scalar particles discussed by Traugott and König (in press) provides examples suggesting that conversational inferences lead to metonymy and may provide the main parameter for conceptual shift, for example, from a temporal to a causal interpretation. It would seem, however, that, even in the case of these examples, metaphor is involved. This can be demonstrated by looking at the following sentences cited by Traugott and

König to exemplify a transition of the complementizer *since* from a temporal marker, as in (25), via a temporal marker having a causal implicature (26) to a purely causal marker (27):

(25)   I have done quite a bit of writing *since* we last met.

(26)   *Since* Susan left him, John has been very miserable.

(27)   *Since* you are not coming with me, I will have to go alone.

It would seem that underlying this causal inference from a temporal expression there is a TIME-to-CAUSE metaphor whereby a sequence of events in time is used metaphorically to refer to a sequence of events in a causal relation. Once the implication "what I do earlier is the cause of what I do thereafter" becomes conventionalized, the result is a shift from a metaphorical category of TIME to one that is more "abstract," like that of CAUSE. Linguistically, the most common result is that a complement of time turns into a complement of reason.[7]

Once again, we wish to emphasize that inferences or implicatures of this kind are unidirectional: in accordance with the metaphorical structure sketched in 2.4.1, they lead from concrete to abstract domains. With reference to the categories TIME and CAUSE, for example, this means that temporal expressions license causal implicatures, while the opposite is unlikely to happen.

No attempt is made here to justify that an assumption of the kind, "Since *X happens earlier than Y, X* must be *the cause of Y,"* may give rise to a metaphor that forms part of a more general parameter of conceptualization. This topic will be discussed in chapter 6. Furthermore, we will not deal here with the question of whether the metaphorical or the metonymic component is more important in the process of grammaticalization. It might turn out that it is the former that is responsible for defining the direction of conceptual change, but this is an issue that requires further investigation.

Another example is provided by what we may call the TIME-to-ACTUALITY metaphor. According to this metaphor, distance in time is exploited as a vehicle to conceptualize distance in more abstract domains, like the domain of epistemic modality, assertiveness, interpersonal relations, evidentiality, or "speaker subjectivity" (Fleischman, in press). In the following sentences, the pluperfect is apparently used for two different purposes:

(28)   I had helped him.

(29)   I had hoped we might get together tonight.

In (28), it clearly serves tense-aspect meaning. Its use in (29), however, is described by Fleischman (in press) in the following way: "The speaker, via the PLUPERFECT, distances himself . . . from the potential loss of face that a rebuff would entail." Thus, in contexts like the one underlying (29), the pluperfect substitutes for one of its properties, that of marking temporal distance, a new significance, that of marking a certain kind of modality. The result of this con-

text-induced reinterpretation is a kind of metaphor, one whereby tense-aspect, a propositional-ideational domain in the terminology of Halliday (1970b), is employed for the expression of modality, a notion of the interpersonal domain.

3.3.2 A Possible Motivation

There are a number of factors that can be held responsible for context-induced reinterpretation. Traugott and König (in press) draw attention to some notions that we consider to be focal for understanding this phenomenon: pragmatic strengthening, conversational implicatures, and metonymy.[8]

These authors observe that certain kinds of grammaticalization are instances of a pragmatic process called strengthening of informativeness, or "strengthening of the expression of speaker involvement." This process, which is said to be complementary to metaphor, is considered to be a type of metonymy. Invoking Grice's observation that it is possible "for what starts life . . . as a conversational implicature to become conventional" (Grice 1975:58), they argue that strengthening of informativeness entails conversational inferences or implicatures that may be conventionalized to new meanings, or polysemies:

> Although analyses may differ concerning when polysemy does or does not occur, it is generally accepted that *after* is not polysemous in English, but in context allows various inferences about immediacy of precedence. By contrast, *since* is polysemous between temporality and causality. We argue that the polysemies of *since* have arisen through the conventionalizing of earlier conversational inferences. The inferences in question are presumably stereotypical ones, since only standard inferences can plausibly be assumed to have a lasting impact on the meaning of an expression or to function cross-linguistically. [Traugott and König, in press]

In addition to this case involving the conventionalizing of temporal markers as causal ones, the authors present a couple of other examples to demonstrate the effects of strengthening. One concerns the development of concessive connectives, for which three grammaticalization channels are discussed (Traugott and König, in press; see also König 1985):

a)   connectives originally expressing simultaneity or temporal overlap (e.g., *while, still, yet*);

b)   connectives originally expressing simple co-occurrence or concomitance (e.g., *all/just the same*);

c)   negative specifications of co-occurrence (*notwithstanding, nevertheless, nonetheless*).

Another example concerns the development from temporal marker to preference marker. Thus, the adverb *sooner* has a temporal sense in (30) but a preference sense in (31) (Traugott and König, in press):

(30)   Bill died sooner than John.

(31)   I'd sooner die than marry you.

While both senses already existed at the earliest attested stage of *sooner* in Middle English, the evidence adduced by the authors suggests that the emergence of a preference sense involved strengthening of informativeness and is the result of conventionalizing a conversational implicature of the temporal sense.

3.3.3 Emergent Grammar

According to DuBois (1988:11), there are two distinct types of models that grammaticalization draws on: the "substance" and the "pattern model." The present framework, like most other works on the subject, is based on the former. The main proponent of the "pattern model" is Paul Hopper with his notion of emergent grammar.

Hopper argues that there is no grammar or, more specifically, that "grammar is always emergent but never specific" and that it is anchored in the specific concrete form of an utterance (Hopper 1987:142). As a substitute for "grammar," he proposes the notion of grammaticalization ("grammaticization" in his terminology), which he defines as "movement toward structure" (Hopper 1987:148).

Hopper argues against the general "habit of seeing utterances in terms of a fixed framework of rules," and he contrasts the prevalent view of grammarians, referred to by him as "a priori grammar," with his framework of emergent grammar: "The notion of Emergent Grammar is meant to suggest that structure, or regularity, comes out of discourse and is shaped by discourse as much as it shapes discourse in an on-going process. Grammar is hence not to be understood as a prerequisite for discourse. . . . Its forms are not fixed templates, but are negotiable in face-to-face interaction in ways that reflect the individual speakers' past experience of these forms, and their assessment of the present context" (Hopper 1987:142).

Hopper does not make reference to processes such as context-induced reinterpretation. The framework proposed by him suggests, however, that his analysis can be reconciled with an approach according to which grammaticalization is a continuous, rather than a discrete, process—one that views linguistic activity "as a continual movement towards structure."

While it is hard to translate Hopper's notions into the present framework, there would, nevertheless, seem to be a number of parallels. One concerns the dynamic nature of grammatical behavior, continually involving movement between one kind and another (cf. Hopper 1987:147). Another parallel concerns the distinction between conversational inferences or implicatures on the one hand and the conventionalization of such implicatures on the other. This can be related to a distinction that is apparent in Hopper's study, one between the movement toward structure, with structure being always provisional, always negotiable, on the one

hand, and the recurrent strategies, regularities for building discourses, and "useful" constructions that tend to become structuralized by achieving cross-textual consistency, on the other. The former state appears to be characteristic of the initial phase of context-induced reinterpretation, an on-going process where conceptual manipulation is still largely provisional, unstable, "epiphenomenal." In the second phase, the amount of morphological and syntactic repetition increases, there are recurrent strategies for building discourses, and there are emergent grammatical regularities. This is the phase where grammatical concepts are stabilized, or conventionalized, and develop into distinct "senses."

3.4 Metaphor, Context, and Creativity
3.4.1 The Variables

There are three main variables that appear to be crucial for an understanding of grammaticalization. These variables are metaphor, context, and creativity.[9] In order to develop grammatical concepts, a link must be established between different conceptual domains; further, a specific context is required in order for this link to be applicable, and an act of creativity must be able to relate these concepts to new contexts. Thus, to exploit the body part metaphor for the expression of spatial orientation, there has to be, first, a link between the domain of physical objects and that of space, second, a context where the transfer from physical object to space fits in, and, finally, someone who manipulates concepts and contexts in a way that is acceptable to other people.

It is unclear, however, to what extent the context constrains creativity and to what extent creativity manipulates the context or, even further, whether both might not be determined by some other parameter, say metaphorical reasoning. The introduction of the body part *foot* for a spatial notion, *at the foot of the mountain,* presupposes a creative act involving, for example, the transfer from a human/animate to an inanimate concept and manipulating the environment in which such a creative act is considered "acceptable." Whether either one of these two variables is more important than the other or whether both are governed by some more general principle, one allowing the human body to serve as a vehicle of metaphorical topic for a mountain but not for some other domain, is a question that will not be further pursued here. There are cases that suggest, for example, that metaphor is irrelevant, that is, that grammaticalization is exclusively a result of context manipulation.[10] In many of these cases, however, alternative interpretations seem possible. We will come back to this problem.

Mention should also be made of the fact that the extent to which strategies like the OBJECT-to-SPACE metaphor are exploited varies from one language to another. In a number of African languages, it is possible to locate the 'breast,' the 'back,' the 'anus,' the 'head,' or the 'neck,' though not the 'foot' or the 'hand,' of a mountain.[11] Whether this suggests a particular amount or kind of creativity or is

a function of the respective sociocultural, geographic, or other context remains to be investigated.

3.4.2 On the Fate of Children: The Case of Ewe *vi'*

As we have argued above, there are two main forces involved in the development of grammatical categories: metaphorical transfer and context-induced reinterpretation. We will now look at the interrelation between the two in more detail by studying the development of the Ewe noun *vi'* 'child' on its way to becoming a derivative suffix. Our starting point will be the use of this noun as the head in compounds consisting of two nouns, as in (32):

(32)   yevú-ví   koklô-ví
         European-child   chicken-child
         'young European'   'chick'

Usually, this suffix is called a diminutive marker (Westermann 1907:122), and, indeed, this does account for the majority of its uses, as is obvious from examples like the following:

(33)   kpé,   'stone'   kpé-ví,   'small stone'
         xɔ,   'house'   xɔ-ví,   'small house, hut'

The development from a human noun to a diminutive marker can be and has been accounted for nicely in terms of a categorial metaphor whereby the category PERSON, in this case the noun 'child,' is employed to conceptualize a QUALITY, that is, the suffix meaning 'small' (see Claudi and Heine 1986:314–16). Consider idiomatic expressions like the following, where nouns denoting human beings refer exclusively to qualities:[12]

(34) ŋútsu,   'man'   é-   wɔ   ŋútsu,   'he is virile, brave'
                          3SG- make man

(35) amegá,   'elder'   é-   ɖu   amegá,   'he is unfluential'
                          3SG- eat elder

The story is, however, much more complicated: the suffix *-ví* has quite a number of derivative functions that would seem to be incompatible at first sight. A few examples may give an indication of this complexity:

(36) amedáhe,   'poor person'   amedáhe-ví,   'a truly poor, deplorable
                                                   person'

(37) kesinɔtɔ́, 'rich person'   kesinɔtɔ́-ví,   'a parvenu, somebody who
                                                   is not really rich'

Neither in (36) nor in (37) is there a diminutive function involved; furthermore, in these two cases the suffix *-ví* exhibits a highly contrastive function: in

examples like (36) it signifies that the noun to which it is suffixed is a typical representative or has all the properties of a typical representative of its category, while in (37) it has the function of emphasizing that the noun preceding it is not a member or at best is a marginal member of that category. Compare the following sentences:

(38)   Kofí nyé amedáhe gaké mé-nyé   amedáhe-*ví* o
         Kofi be poor   but NEG.3SG-be poor-   NEG
         'Kofi is a poor man, but he is not deplorable, he is not extremely poor'

(39)   Mensa nyé kesinɔtɔ́ akúakú, ésiatáé   mé-nyé   kesinɔtɔ́-*ví* o
         Mensa be rich   genuinely therefore NEG.3SG-be rich-   NEG
         'Mensa is really rich, she is not just pretending to be a rich person'

The noun *apé* denotes a 'home' or 'homestead,' but *apé-ví* has some highly divergent meanings.[13] On the one hand it refers to a 'small hut used for customary practices' and on the other hand to a 'native inhabitant' or 'compatriot.'[14]

We now try to demonstrate that highly divergent functions like these can be reconciled once one reconstructs the process underlying the evolution from noun to derivative suffix. This process is essentially dependent on three variables: conceptual manipulation, the immediate context in which the relevant unit occurs, and creativity. We concentrate only on the more salient points of this process; that is, our presentation offers no more than a skeleton of the many conceptual and contextual ramifications that ought to be considered when trying to do justice to the development concerned. Furthermore, unless otherwise stated (see 3.4.3.2), we confine ourselves to the respective focal sense that the suffix exhibits when combined with a given noun.

To account for the different semantic developments of the lexeme *vi'* 'child,' we assume two main components, which can be referred to by the conceptual labels YOUNG and DESCENDANT-OF; that is, this lexeme designates human beings who are not yet grown up on the one hand and/or the biological offspring of *X* on the other. There are some contexts where the meaning of *vi'* is reduced to one of these two senses, YOUNG,[15] such as when it occurs as the head of another noun denoting some more inclusive grouping within the category of human beings, like the following:[16]

(40)   ŋútsu,   'man'   ŋútsu-ví,   'boy'
         nyɔ́nu,   'woman'   nyɔ́nu-ví,   'girl'
         yevú,   'European' yevú-ví,   'young European'

But *-ví* may also refer to someone who is still INEXPERIENCED in a new field of activity. This applies, for example, to someone entering a profession and having no previous experience in it:

(41)	núŋlɔlá,	'writer'	núŋlɔlá-ví,	' inexperienced writer'
	núfíálá,	'teacher'	núfíálá-ví,	' inexperienced teacher, somebody who has just started teaching'

A child is not only inexperienced; he or she is still in a process of learning and has to meet the requirements set for it by society in order to proceed to the status of an adult. It is therefore hardly surprising that -*ví* also denotes a student or an apprentice:

(42)	dɔyɔlá,	' healer'	dɔyɔlá-ví,	' assistant of or apprentice to a healer'
	asitsalá,	' market vendor'	asitsalá-ví,	' apprentice to a market vendor'

An apprentice or someone in a process of learning may already know the skills of his or her profession, but he or she has not yet fulfilled the formal requirements in order to be recognized as a member of that profession; that is, he or she has NOT YET PASSED AN EXAM, as in (43):

(43)	βu'kulá,	'driver'	βu'kulá-ví,	' somebody who knows how to drive but has not yet acquired a driving license'

A *βu'kulá-ví* may never become a *βu'kulá* if he is not successful in the driving test. The meaning of -*ví* is in fact also extended to mark a person who has been striving to reach a certain position but has been UNSUCCESSFUL, as in the following examples:

(44)	kesinɔtɔ́,	'rich person'	kesinɔtɔ́-ví	' a parvenu, somebody who is not really rich'
	amegá̃,	'elder, boss'	amegá̃-ví	' somebody who pretends to be an elder or a boss'

Not infrequently, in contexts like that of (44), -*ví* may acquire the sense BLUFF; that is, it may refer to someone who pretends to have reached a certain standard when in fact he or she has not.

While the noun *vi´* is confined to humans, it can also be transferred to animals when governing nouns denoting domestic as well as a number of other animals, for example:[17]

(45)	koklô,	'chicken'	koklô-ví,	' chick'
	nyi,	'cow'	nyi-ví,	' calf'
	dzatá,	'lion'	dzatá-ví,	' lion cub'
	to,	'buffalo'	to-ví,	' young one of a buffalo'

Furthermore,-*ví* is also extended to some cultivated tree species:

(46)   akɔɖútí,   'banana plant'   akɔɖútí-ví,   'young·banana plant'
        detí,   'oilpalm tree'   detí-ví,   'young oilpalm tree'

Although objects like those listed in (45) and (46) are conceived of as being typically small and genetically derived from corresponding fully grown ones, the primary association is that they are YOUNG, that is, not yet grown to full maturity. Thus, the most common definition volunteered by our informant for, say, *nyi-ví* is as follows:

(47)   nyi-*ví* nyé nyi si   matsimatsi
        cow- be cow REL unripe
        'A calf is a cow that is not yet fully grown'

Although entities referred to as *vi'* are conceived of as being typically smaller than their parents, size does not seem to form a salient semantic property of *ví*, as can be seen in sentence (48):

(48)   míá   vi´ kɔ́   wú-m
        1PL.POSS child be tall defeat-1SG
        'Our child is taller than I am'

Children may be called *vi'* irrespective of whether they exceed the size of adults; what matters is either their age (YOUNG) or their relationship to their progenitors (DESCENDANT-OF). Nevertheless, in the majority of cases where the suffix derived from *vi'* occurs, it has the sense SMALL. This would seem to be the result of a transfer whereby one connotative characteristic of children, that is, small size, serves as the grounds for a metaphorical equation that is part of the categorial metaphor A QUALITY IS A PERSON.

We observed above that when -*ví* governs names of animals it denotes the young ones of these animals. These include both domestic animals, like *gbɔ* 'goat,' *dadi* 'cat,' or *nyi* 'cattle,' and wild animals, like *aβako* 'hawk,' afi 'mouse' or *klo* 'tortoise.' In folk biological terminology, these names stand for generic taxa. Once, however, more inclusive taxa are involved, such as life forms or other groupings consisting of several generic taxa, then relative age or maturity is no longer at issue, giving way to size: -*ví* no longer means YOUNG but SMALL, for example:

(49)   lã̃,   'animal'   lã̃-ví,   'small animal species'
        dã̃,   'snake'   dã̃-ví,   'small snake species'
        akpa,   'fish'   akpa-ví,   'small fish species'
        abɔbɔ,   'snail'   abɔbɔ-ví,   'small snail species'
        núdzodzoé, 'insect'   núdzodzoé-ví   'small insect species'
        xeví,   'bird'   xeví-ví,   'small bird species'

It may be interesting to note that within this group there is also a human taxon, in fact the most inclusive human category, *ame* 'person': *ame-ví* refers to a short person or a person of small size. In most cases, however, it is with inanimate count nouns that *-ví* means SMALL, that is, clearly has a diminutive meaning:

(50)   kpé,   'stone'   kpé-ví,   'small stone'
        du,   'town, village'   du-ví,   'small village'

At this point, attention should be drawn to the fact that the primary function of *-ví* is to designate not that an item is of 'small size' but rather that the relevant item has the gestalt of a concept of that size, compared with the concept expressed by the same lexeme without the *-ví* suffix. This becomes clear once we contrast the function of *-ví* with that of the adjective sue' 'small,' as in the following examples:

(51)   zikpui,   'stool, chair'
        zikpui sue',   'a small stool, chair'
        zikpui-ví,   'a stool that has the shape of a children's stool'
        hɛ̃,   'knife'
        hɛ̃ sue',   'a knife that is shorter than average knives'
        hɛ̃-ví,   'a small type of knife, e.g., a razor'
        βu',   'drum'
        βu' sue',   'a drum of small size'
        βu-ví,   'a small type of drum that is held under the armpit'

That the main effect of the "diminutive marker" *-ví* is to transform a given concept into another concept, rather than adding a qualifying element, may be illustrated by a few examples. The noun *ɣletí* 'moon' receives the meaning 'star' when the suffix *-ví* is added (*ɣletí-ví*). When suffixed to *xɔ* 'kind of rat,' the resulting meaning is 'guinea pig' (*xɔ-ví*). Within the terminology of body parts, the "diminutive marker" tends to be employed to derive smaller, less conspicuous parts from more prominent, larger body parts, for example:

(52)   alɔ,   'lower arm'   alɔ-ví,   'finger'
        afɔ,   'foot, leg'   afɔ-ví,   'toe'
        nu',   'mouth'   nu-ví,   'eyelid'
        ŋkú,   'eye'   ŋkú-ví,   'pupil'

In contexts where nontangible and/or nonvisible entities are involved, the meaning of *-ví* changes from SMALL to more specific senses such as 'unimportant,' 'weak,' or 'harmless.' The following are examples of this kind of extension:

(53)   gbe,   'voice'   gbe-ví,   'weak, faint voice'
        ya,   'wind'   ya-ví,   'light wind, breeze'

Since something that is weak is often likely to be less important, -*ví* has also acquired the sense INSIGNIFICANT, as in the case of the following nouns:

(54)   dɔ,   'disease'   dɔ-ví,   'minor suffering, such as a cold'
        nya,   'matter, word'   nya-ví   'an insignificant matter, a minor
                                                 thing'

Finally, it seems that another extension has been derived from the sense SMALL, which may be referred to as a DELINEATED PART OF A MASS. This sense is found in "abstract nouns" as well as in some nouns denoting a mass or unlimited substance, for example:

(55)   súkli   'sugar'   súkli-ví,   'a piece of sugar, a sugar
                                                  cube'
        núnono, 'drinking'   núnono-ví,   'a mouthful of liquid'
        dzidzɔ, 'happiness'   dzidzɔ-ví,   'fun (in a limited situation)'

There is another development that has the effect that the feature YOUNG, which forms one of the two main components of the noun *vi'* 'child,' is "bleached out"—with the result that the second component, DESCENDANT-OF, is generalized. Here again there are two distinct lines of direction. One involves the elimination of the relationality of DESCENDANT-OF, as in the following examples:

(56)   megbé,   'back'   megbé-ví,   'late comer, last born, straggler'
        ŋgɔ,   'front'   ŋgɔ-ví,   'first born'

What matters in nouns of this type is not who the progenitor is but exclusively the relative time of birth. This line has not developed into a productive pattern, the examples given, in addition to a few others, being the only instances, and they appear to be on the verge of lexicalization. The noun *amegbetɔ* 'human being' is another example: in specific contexts, the derived form *amegbetɔ-ví* emphasizes the fact that somebody 'is born as a human being.' Consider the following example:

(57)   amegbetɔ-*ví* wo-nyé gaké mé-nyé   amegbetɔ o
        human-   3SG-be but NEG.3SG-be human   NEG
        ' Although he was born as a human he does not behave like a human
        being'

Sentence (57) is said, for example, about the former "emperor" Bokassa who is of human descent but is claimed to have done things that one does not expect a human being to do.

The second line, however, is fully productive. It is likely to be the result of an analogical transfer of the kind parents:child to community:individual. Sentence (58) presents some typical examples:

(58)   Eβe,   'Ewe'   Eβe-ví,   'an Ewe'
       du(me),   'village'   dume-ví,   'a native of a village'
       pome,   'kinship'   pome-ví,   'a relative'

Thus, within this highly productive pattern -ví designates the MEMBER within a political, sociocultural, or geographically defined community. Note that membership is normally conceived of as membership by birth. In this respect, -ví contrasts with -tɔ, another suffix, derived from the noun tɔ 'father' (see Claudi and Heine 1986), which also denotes membership, but not necessarily by birth. Compare the following examples:

(59)   Tógó-ví,   'a native of Togo, a Togolese'
       Tógó-tɔ,   'an inhabitant of Togo'
       Dzáma-ví,   'a native of Germany, a German national'
       Dzáma-tɔ,   'an inhabitant of Germany (could be Turkish or Italian by
                     birth)'

There are, however, a few examples to show that the component 'by birth' that -ví exhibits in these cases may also be "bleached out" so that -ví has no more semantic content, as in ha'metɔ-ví 'member of a club or society,' which is largely synonymous with ha'metɔ (see below).

There is yet another feature implied by the use of -ví within this pattern: -ví, as opposed to -tɔ, designates a representative member of the relevant community, that is, one who shows the typical properties that representative members of that community are expected to show. Depending on the context, therefore, Tógó-ví may not only refer to a Togolese by birth; it may also focus on the characteristics that are representative of a good Togolese, such as being calm and peaceful. Given such a context, a white man who has just arrived in Togo and is still unfamiliar with the languages and cultures of this country may nevertheless by called Tógó-ví if his behavior is interpreted as being that which a good Togolese is supposed to exhibit. Thus, the statement

(60)   é-nyé   Tógó-ví
       3SG-be Togo-
       ' He is Togolese'

will receive quite different interpretations depending on whether it is an answer to the question, 'Is he Nigerian?' or, 'Is he a good person?' In the former case, the answer would normally relate to the nationality of the person concerned, which can be established, for example, by showing one's passport. In the latter case, on the other hand, the answer would emphasize the moral and other qualities associated with a Togolese.

The implicature that someone who is a member of a certain group exhibits behavior that is representative of that group appears to have invited another con-

ceptual interpretation, namely that *-ví* also denotes a person who adheres to the
TYPICAL BEHAVIOR of that group. The following are examples of this
interpretation:

(61)   amedzró,   'foreigner, alien'
         amedzró-ví,   'somebody who behaves like an alien'
         amedáhe,   'poor person'
         amedáhe-ví,   'a deplorable person, somebody who suffers because he or
                             she is poor and therefore deserves pity and attention'
         ameyibɔɔ,   'black person'
         ameyibɔɔ-ví,   'somebody who shows a typical African behavior, adheres
                             to African values'

Sentence (62) maybe said, for example, of a beggar who leads a happy life even
though he is extremely poor (cf. [38] above):

(62)   amedáhe wo-nyé gaké mé-nyé   amedáhe-*ví* o
           poor   3SG-be but NEG.3SG-be poor-   NEG
           'He is a poor person but does not show the behavior of someone who is
           destitute'

In contexts like those of (62), the feature DESCENDANT-OF is no longer relevant.
A noun like *amedrzó-ví* may be applied to someone who behaves like a foreigner
whether he or she is or not.

    There are examples where the difference between the member of a group and a
person exhibiting the typical behavior of members of that group is no longer se-
mantically obvious. Thus, in the following example there is no discernible
difference between the underived noun and the one with the suffix *-ví* (see
above):

(63)   ha'metɔ́ *or* ha'metɔ́-ví,   'member of a club/society'

In such cases, the meaning of *-ví* has been "bleached out" to the extent that it has
left no semantic trace behind.[18]

3.4.3 The Parameters

In the examples considered, we have looked at the development of the Ewe noun
ví' to the derivative suffix *-ví*. The semantic structure of this noun can be de-
scribed as consisting essentially of two components, which we have referred to
by means of the labels YOUNG and DESCENDANT-OF, respectively. In this devel-
opment, several channels of conceptual expansion were involved. These
channels are presented graphically in figure 3.2. A number of the meanings of *-ví*
appearing in figure 3.2, such as YOUNG, SMALL, INSIGNIFICANT, or DELINEATED
PART OF A MASS, are also characteristic of diminutive markers in many other lan-
guages. On the other hand, some of the meanings found in European and other

```
                              'child'
                        YOUNG/DESCENDANT-OF



                 YOUNG        DESCENDANT    MEMBER

          INEXPERIENCED          SMALL

NOT YET PASSED      INSIGNIFICANT    DELINEATED        TYPICAL
AN EXAM                             PART OF A MASS     BEHAVIOR

UNSUCCESSFUL
```
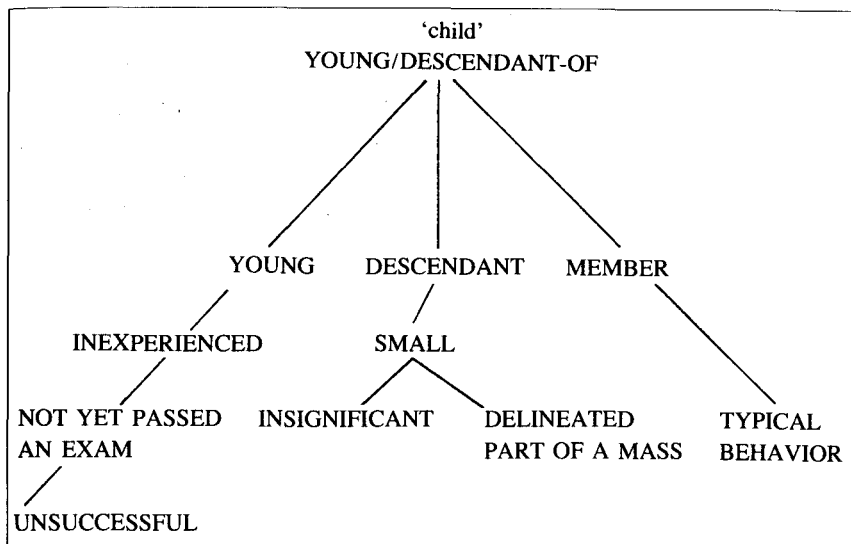
FIG. 3.2 The conceptual expansion of the Ewe noun *vi'*.

languages, such as those expressing affection or tenderness (see Taylor 1989:145), appear to be absent in Ewe.

We are now able to account for the highly contrastive meanings presented above in (36) and (37): *amedáhe-ví* is a 'poor person' who is exhibiting the TYP-ICAL BEHAVIOR of someone who is poor, and who is therefore deplorable, whereas *kesinɔtɔ́-ví* is someone who is striving to become rich, or to be recog-nized as a rich person, but who has been UNSUCCESSFUL, either because he or she has not acquired enough riches or else because he or she is simply not considered by others to qualify as a rich person. Thus, the difference in meaning that the derivative suffix exhibits in these two nouns is a result of the fact that entirely different channels of conceptual expansion are involved.

The same applies to the different meanings of *apé-ví,* which is derived from *apé* 'home, homestead' (see 3.4.2): the meaning 'small hut used for customary practices' is derived from the feature SMALL, while the meaning 'native inhabi-tant, compatriot' can be attributed to the feature MEMBER, which has developed as a result of a metaphorical equation child:family = native inhabitant:location (see below).

The impression that may have been conveyed by this and other examples pre-sented in the preceding paragraphs is that when a given lexical item receives the suffix *-ví* only one semantic interpretation follows. This is by no means the case; many nouns can select more than one of the meanings listed in figure 3.2. Con-sider the following examples:

(64)	megbé,	'back'	megbé-ví,	(a)	'the last-born, a straggler'	(DESCENDANT)
				(b)	'narrow back'	(SMALL)
	apé,	'homestead'	apé-ví,	(a)	'a native of a certain geographic unit'	(DESCENDANT-OF),
				(b)	'a small hut (used, e.g., for customary practices)'	(SMALL)
	awu,	'dress'	awu-ví,	(a)	'children's dress'	(CHILD)
				(b)	'dress of a reduced size, e.g., a sleeveless shirt or jacket'	(SMALL)

As we noted above, the function of *-ví* is not essentially to add a qualifying property to a given concept but rather to denote a different concept. In this respect, the suffix differs from modifiers such as adjectives. Thus, *kpé-ví* ('stone-child') is not simply a 'small stone' but rather a kind of stone that is conceptually different from a normal stone, such as a pebble. *Kpé-ví* is typically, but not necessarily, smaller than *kpé. Kpé suε'* ('stone small'), on the other hand, is not conceptually different from *kpé*—what distinguishes them is merely their size. This conceptual difference between the derivative suffix *-ví* and the adjective *suε'* 'small' mirrors their different morphosyntactic status: whereas the former governs the preceding noun, the latter is dependent on it.

While *-ví* serves mainly to introduce new concepts, its use has had some more far-reaching semantic implications, for example, in the area of folk taxonomy. One example may illustrate this. *Xe* historically denotes the noun 'bird' in Ewe. The derived form *xe-ví* was introduced, denoting birds exhibiting the TYPICAL BEHAVIOR of this category, to set them off from "less typical" birds, who normally do not fly, live on the ground, and are large, like *koklô* 'chicken' or *kpákpá* 'duck.' *Xe-ví* has now been generalized as the common designation for 'bird.' The result is a new taxonomic structure, summarized in figure 3.3, according to which the life form *xe* includes two sub–life forms, the "typical birds" (*xe-ví*), which also includes *agutɔ* 'bat,' and the "less typical birds" (*xe*).

xe
(vertebrate animals with wings)

xe-ví   xe
"typical birds"   "less typical birds"
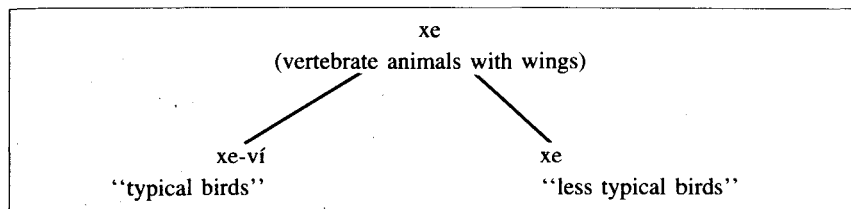
FIG. 3.3   The life form BIRD in Ewe.

3.4.3.1 Metaphor

What has been considered here constitutes a typical example of a categorial metaphor as presented in 2.4.1: it involves a conceptual transfer from the category of PERSON ('child") to the category of QUALITY, as reflected in meanings like SMALL, INSIGNIFICANT, TYPICAL BEHAVIOR, etc. Linguistically, the result is a shift from a noun to a derivative suffix. This transfer does not proceed straight from one category to another; rather, it involves a number of intermediate steps, the most salient of which have been discussed in the preceding section and are summarized in figure 3.2.

While these intermediate steps are contiguous, or metonymous, they nevertheless show a relation to one another that can be described as being "weakly metaphorical" in nature (cf. Goossens 1989). Some examples may illustrate this. The transition from YOUNG to NOT YET PASSED AN EXAM does not qualify as being metaphorical since the latter feature is typically associated with young people. If, however, this feature is applied to an adult, as is the case with nouns like *ßu'kulá-ví* 'somebody who knows how to drive but has not yet acquired a driving license,' then a metaphorical relation emerges between a child and an adult having a characteristic associated with children. Thus, if we assume that metaphor "is, literally, a false statement" (Davidson 1979), a "deviant predication" (Ricoeur 1981:143), or an "erroneous statement" that therefore "conflicts with our expectations" (Swanson 1979:162), then this applies, for example, to a sentence like the following, which our informant claimed to be "semantically deviant":

(65)   * ßuˊkulá-*ví* nyé viˊ
            driver-   be child
            ("A driver who has not yet acquired a driving licence is a child")

The same applies to all other relations holding between the immediately adjacent meanings of figure 3.2: they can be said to be conceptually close to one another but contrast in certain contexts in a way that is suggestive of a metaphorical relation. In a number of cases, however, a more obvious metaphorical

relation is discernible. For example, when *vi'* is suffixed to names of animals like *nyi* 'cow' or of plants like *akɔdútí* 'banana plant,' then there is a transfer from the human to a nonhuman domain; that is, nonhuman animates are treated metaphorically as humans. Note that the noun *vi'* 'child' is confined to human referents, thus rendering the following sentence unacceptable:

(66)   * nyi-*ví* nyé vi´
          cow- be child
          ("A calf is a child")

Other examples of what could be called conceptual metaphors of the type presented in Lakoff and Johnston (1980) would be as follows:

> A SMALL OBJECT IS A YOUNG ANIMATE: This predication, which is a manifestation of our categorial metaphor AN OBJECT IS A PERSON (see 2.4.1), holds when the meaning YOUNG, as in *nyi-ví* 'calf,' is transferred to inanimate concepts and assumes the meaning SMALL, as in *kpé-ví* 'small stone.'
> A COMMUNITY IS A FAMILY: According to this metaphor, sociocultural, political, or geographic groupings are conceptualized in terms of a grouping that is essentially biologically defined. In our example, this metaphor has the effect that the meaning DESCENDANT-OF is extended to denote a MEMBER as well.

It might be worth mentioning that not only the noun *vi'* has been subject to metaphorization in cases like those considered here, where it forms the head of compounds. Similar developments can also be observed in other syntactic constructions. For example, as the object of the pro-verb *po, vi'* has been transferred from the human domain to that of animals, as in (67a); plants, as in (67b); and inanimate objects, as in (67c).[19] Note that in such constructions *vi'* is decategorialized; that is, it may not be pluralized or take a modifier:[20]

(67a)   koklô lá   po vi´
          chicken DEF beat child
          ' The hen has brooded'

(67b)   atí lá po vi´
          tree
          ' The tree has developed branches'

(67c)   tsi lá po vi´
          water
          ' The water has bubbled'

Apart from developing into a derivative suffix, the noun *vi'* has also been grammaticalized to an adjective and, when qualified by the indefinite article *dé* or *é,* also to an adverb.[21] In both cases, the resulting meaning is 'little, a bit' (SMALL), for example,

(68)   me-dí   súkli ví
            1SG-want sugar little
            'I want a bit of sugar'

(69)   me-dɔ́   alɔ̃   ví(ɖ)é
            1SG-fall   sleep   little
            'I have slept a bit'

Although the entire network of features presented in figure 3.2 can be described in terms of such metaphorical processes, this on its own would not be a satisfactory account, in particular since it leaves a number of questions unanswered. It would not help us to understand, for example, why the suffix -ví has the meaning YOUNG in the case of animal species, like nyi 'cow,' but SMALL in the case of more inclusive animal categories, like lã 'animal' or núdzodzoé 'insect.' For this and other problems, an analysis of context offers a more adequate perspective.

3.4.3.2 Context

Throughout this work, we have been using the term "context" in a restricted sense; our concern is essentially with lexical co-text. The result is a highly simplified account of the semantics of -ví. We observed, for example, that, when this suffix is combined with the noun akpa 'fish,' then the resulting meaning is 'small fish species' (SMALL). But this applies only to one set of contexts, for example, when buying fish at the market. In a situation under water, for example, where a fish mother is seen swimming with a shoal of young ones, the latter could be referred to as akpa-ví (YOUNG). Again, nyi-ví ("cow-child") refers in most cases to a calf (YOUNG), but given the right context it may assume other meanings instead (cf. Hopper 1987:143). Within a herd of cows, one of them that is distinctly smaller than the others can be called nyi-ví (SMALL), or, to express that cow X is the mother of cow Y, Y may be referred to as nyi-ví (DESCENDANT-OF) vis-à-vis X.

Such linguistic or extralinguistic contexts are not taken into consideration here. Rather, we are concerned with the most salient or focal meaning that -ví has when combined with a given noun or group of nouns and when its focal meaning is SMALL in the case of a noun like akpa 'fish' but YOUNG in the case of nyi 'cow.' In many cases it is possible to predict which of the various meanings is focal in a given context once we take context-induced reinterpretation into consideration, that is, prototypical implicatures invited by the respective context. A few examples may illustrate this point.

As we have outlined above, one of the two basic semantic components of the source noun vi' is YOUNG. Common associations would be that someone who is young lacks experience, is educationally immature, and has not yet fulfilled the requirements that society sets for being recognized as an adult. These im-

plicatures have been conventionalized in a number of ways. As we have seen in the preceding section, they have been responsible for the focal meaning INEXPERIENCED in the context of nouns of the type *núŋlɔlá* 'writer': a writer who has not yet acquired the experience expected in this profession is a *núŋlɔlá-ví*. A driver who has not yet fulfilled the obligations required for this occupation (NOT YET PASSED AN EXAM) does not qualify as *βu'kulá* 'driver'; she remains a *βu'kulá-ví* ("driver-child") until she acquires a driving license.

Nouns like *amegã* 'elder, influential person' and *kesinɔtɔ́* 'rich person' refer to highly prestigious positions in Ewe society that everyone would like to attain but that few actually do. It may not seem surprising, therefore, that when suffixed to such nouns -*ví* invites the interpretation that the person concerned is striving for such a position but was UNSUCCESSFUL.[22]

The noun *Tógó-ví* has various meanings. Depending on the context, it may denote a 'child born in Togo,' that is, retain the meaning of the source noun, or it may have the meaning MEMBER, that is, refer to a 'citizen of Togo.' The latter meaning would be present, for example, in the following statement as an answer to the question, Is he German or Togolese?

(70)   Tógó-ví wo-nyé
         Togo-   3SG-be
         'He is Togolese'

A different context is created, however, when statement (70) is an answer to the question, Is he a good man? In this case, the implicature would be that the relevant person has the TYPICAL BEHAVIOR of a Togolese. This becomes the focal meaning with nouns of the type *amedrzó* 'foreigner, alien' where neither descent nor membership are important: *amedrzó-ví* is someone exhibiting the typical behavior of a foreigner. Thus, which of the various meanings of -*ví* is focal depends to a large extent on the implicatures offered by the relevant noun to which it is suffixed.

We may now return to the problem mentioned in the preceding paragraph. Why is the focal meaning of this suffix YOUNG in the case of animal species, such as *koklô* 'chicken,' but SMALL in the case of more inclusive animal categories, such as *xeví* 'bird'? The answer seems obvious: the respective meaning is dependent on the kind of experience man has had with his environment. In the case of animal species, the most important distinction is young versus fully grown since it determines what expectations one has vis-à-vis the relevant animal: a *koklô* lays eggs, but a *koklô-ví* ('chick') does not; a *dzatá* ('lion') is dangerous, while a *dzatá-ví* ('lion cub') does not arouse fear. In the case of more inclusive animal categories, on the other hand, age or sexual maturity is less important; what matters more is the size of the respective species: large animal species are more salient and more immediately relevant to human experience than small ones.

Similarly, one may wonder why -*ví* has YOUNG as its focal meaning when suf-

fixed to *detí* 'oilpalm tree' but SMALL when suffixed to logo 'wild tree species.'[23] The reason is that *detí* is an important cultivated plant, which means that, whereas *detí* is harvested, *detí-ví* is not. The distinction fully grown versus young is therefore economically, and culturally, relevant in the case of *detí* but not in the case of plants such as *logo*.

3.4.3.3 Creativity

When the suffix *-ví* is attached to a noun like *dɔyɔlá* 'traditional healer, doctor,' giving rise to the meaning 'apprentice or assistant of a healer,' then this can be interpreted in terms of both a context-based and a metaphorical model. *Dɔyɔlá-ví* typically refers to a person qualifying as *vi'*, a young person who aims at becoming a healer, the tacit expectation being that, when that person becomes an adult, he or she will also be recognized as a *dɔyɔlá*, and vice versa. However, once the noun *dɔyɔlá-ví* is applied to an apprentice who is an adult, a context-oriented approach appears to be less relevant than one based on a metaphorical interpretation that makes it possible to bridge the gap between the domain of children and that of adults.

One may argue, however, that there has never been such a gap. Not infrequently, assistants of traditional healers are adults. Age or sexual maturity is largely immaterial as a characteristic of a *dɔyɔlá-ví;* what matters is that that person does not yet qualify as *dɔyɔlá*. Thus, instead of analyzing this process in terms of a transfer from the domain of children to that of adults, it would be more appropriate to say that what happens is that the feature YOUNG grows pale and another feature, NOT YET PASSED AN EXAM, comes into focus. This is a gradual process: in some contexts, the feature YOUNG may be present; in others, it may be suppressed but still implied; and, in still others, such as when dealing with an adult *dɔyɔlá-ví*, may have been eliminated.

This raises the question whether innovations of this kind are indicative of creativity. While there is no clear evidence, the answer would seem to be in the affirmative. Creativity requires speakers to manipulate contexts and concepts in a way that is intelligible and is eventually adopted by the speech community. The direction such a manipulation takes differs from one case to another. Whereas the use of *-ví* in the case of *dɔyɔlá* has introduced the meaning NOT YET PASSED AN EXAM, manipulation has had a different effect in the case of the noun *núfíálá* 'teacher,' where it received the meaning INEXPERIENCED, *núfíálá-ví* being a teacher who is new in his or her profession and therefore lacks experience. This difference has probably been invoked by the traditional context of Ewe society, in which apprentices of medical practitioners were more commonplace than students of education and were therefore more likely to be conceptually distinguished, but it would nevertheless seem to be based on some kind of creative act in which speakers manipulate contexts, concepts, and reactions of receivers for cognitive and communicative purposes.

3.4.4 Discussion

The development from a noun meaning 'child' to a diminutive marker is relatively widespread in African languages. It has been claimed to be a special feature of African languages (Greenberg 1959:23) and can even be observed in a number of Bantu languages that already have an established diminutive marker as part of their noun class structure (see Poulos 1986:288–91).[24] The Bantu case provides an example of how competing strategies for marking one and the same grammatical category interact in the process of grammaticalization. The transition in the marking of a diminutive function from noun class prefixes to a suffix derived from the Proto-Bantu noun *-gana 'child' can be observed in particular in some Southeastern Bantu languages. In Venda and Tsonga, both noun class prefixes and the suffix -ana (from *-gana 'child') serve as diminutive markers, for example:

Venda:
tavha,   'mountain'
ku-tavh-ana,   'a very small mountain'
CL20-mountain-

In Zulu and Sotho, the noun class morphology has lost this function, which is now expressed exclusively by the suffix -ana:

Northern Sotho:
taba,   'matter'
tab-ana   'small matter'

In some languages, specific uses of the conceptual network derived from the noun 'child' have been conventionalized. According to the data provided by Timyan (1977), in the Kode dialect of Baule there is a derivational suffix ba (or [m]ma) that is likely to be a grammaticalized form of the noun ba (pl. mma-mū 'child').[25] This suffix appears to have conventionalized one particular chain of the network described for Ewe: the chain leading from SMALL to DELINEATED PART OF A MASS, or some part thereof. Thus, when suffixed to count nouns, its primary sense is 'a particular part of, a particular instance of, or a smaller variety of,' for example:

swa, 'house'   : swa-ba,   'inner room'
sa,   'hand, arm' : sa-mma,   'finger'

When suffixed to a mass noun, it functions as a particularizer or singulative, the resultant noun being a count noun, for example (Timyan 1977:111–12):

ajwe, 'rice' : ajwe-ba, 'rice kernel'
sika, 'money' : sika-ba, 'coin'

In our example from Ewe, we have ignored many aspects that are not immediately relevant for an understanding of grammaticalization. No attempt was made to relate our findings to prevalent issues of linguistic description. We have not, for example, looked into the question of which instances in the development from noun to suffix lead to productive patterns of derivation and which do not. The following would seem to be examples of highly productive, and hence predictive, uses of *-ví*:

Type of Nouns	Focal Suffix Sense
Important animal or plant species	YOUNG
More inclusive animal or plant categories	SMALL
Inanimate objects	SMALL
Names of sociocultural, political, or geographic units	MEMBER

In all other instances, productivity is either limited or nonexistent; this issue, however, requires separate treatment.

Now the question arises, Where is the boundary between grammaticalization and lexicalization? Assuming that both involve some kind of "idiomatization" (cf. Nichols and Timberlake, in press), the latter may be said to be morphologically productive in the case of grammaticalization but not in that of lexicalization. While there is no clear answer to this question either, the following observation may give some indication as to where to look for an answer: the more the concepts concerned differ from one another, the more likely it is that the use of *-ví* will lead to lexicalization. For example, in the case of the following body parts *-ví* has the sense SMALL, but, whereas (71) presents examples of a productive derivative pattern, informants' reactions suggest that (72) provides instances of a more lexicalized use of the suffix. In (71), size is clearly the distinguishing feature, whereas, in (72), *-ví* not only marks a difference in size but also refers to different body parts:

(71) tó,   'ear'   tó-ví,   'small ear'
      así,   'hand'   así-ví,   'small hand'
      alɔ,   'lower arm'   alɔ-ví,   'finger'
      ŋkú,   'eye'   ŋkú-ví,   'pupil'

The question as to whether the transition from noun to derivative suffix is interpreted by the native speaker as a series of homophones or as a case of extended polysemy is beyond the scope of our investigation. The responses of our consultants suggest, however, that immediately adjacent senses along the channels of conceptualization in figure 3.2, such as YOUNG and SMALL or SMALL and INSIGNIFICANT, are interpreted as polysemes while more remote senses, like YOUNG and UNSUCCESSFUL, tend to be regarded as homophones.

Further research is also required on the question of where, morphosyntactically, the noun ends and the derivative suffix starts. The answer is likely to be complex since we are dealing with a continuum of decreasing nominality and increasing grammaticality that is hard to segment. There are neither phonological nor morphosyntactic criteria that suggest a clear-cut boundary. One way of setting a boundary would be to determine the "semantic nucleus" of each compound, for example, by using the following kind of paraphrases:

(73a) X-ví   nyé ví
          X-child be   child
          'X-child is a child'

(73b) X-ví   nyé X
          X-child be X
          'X-child is an X'

This enables us to establish that -*ví* forms the semantic nucleus of nouns that have the sense DESCENDANT, like *megbé-ví* ("back-child") 'straggler, last born,' since only paraphrase (73a) applies to them, while that with nouns with senses like SMALL, INEXPERIENCED, INSIGNIFICANT, or TYPICAL BEHAVIOR only (73b) is possible. Other nouns again, especially those with the sense YOUNG, tend to accept both paraphrases, although to varying degrees: a noun like *nyɔ́nu-ví* ("woman-child") 'girl' accepts (73b) only in certain contexts, while for *nyi-ví* ("cow-child") 'calf' paraphrase (73a) is ruled out, except in highly specialized contexts. Thus, parameters like these may contribute to describing the nature of the continuum between noun and grammatical marker but are not necessarily helpful for defining the boundary between them.

The main problem looked at in this section was how metaphor and context interact in the development of grammatical meanings. Our findings suggest that the two variables form inextricable, Janus-like aspects of this development and are largely complementary. The more prominent the role of context-induced reinterpretation is, the less relevant the effect of metaphor. Also, the closer two given senses are to one another, the more appropriately their relation can be accounted for in terms of context. However, the more remote the sense along any of the channels of conceptualization described in figure 3.2, the more plausible an analysis in terms of metaphor is.

As mentioned above, the development from the noun *vi'* 'child' to a derivative suffix is suggestive of the PERSON-to-QUALITY metaphor (see 2.4.1). A conceptual scale ranging from the domain of human beings to the domain of qualities and states can be observed when looking at the type of contexts involved:

Context (= semantic properties of the noun preceding -*ví*)	Focal Sense of -*ví*
Human	YOUNG, INEXPERIENCED, etc.
Animal, plant	YOUNG
Concrete object	SMALL
Nontangible object	INSIGNIFICANT
Mass or "abstract" noun	DELINEATED PART OF A MASS

According to this table, which is based on only one line of development of -*ví*, there is an overall correlation between the categories figuring in context and those figuring in metaphorical transfer: both are suggestive of a scale ranging from the category of human beings at the one end to that of nonphysical and highly "abstract" concepts at the other. As we shall see in chapter 4, things are slightly more complicated, and a few other observations also have to be taken into consideration.

4 Outline of a Framework

On the basis of observations made in the preceding chapters, we will now propose a framework for describing the development of grammatical concepts.

4.1 Macrostructure versus Microstructure

The framework proposed comprises two parts. The first concerns the overall network of conceptual ramifications that can be observed in the process of grammaticalization. Figure 4.1 presents a skeleton of this network. In this structure, the symbols B, C, D, etc. stand for different senses of a linguistic unit undergoing grammaticalization, and all these senses are derived from the source item A. The following are some of the more salient characteristics of this structure:

a)   The network may be described in terms of a divergency model that can be represented graphically in the form of a tree diagram.

b)   The various senses are connected with one another by means of lines of conceptual shift.

c)   This shift is unidirectional and proceeds from "more concrete" senses at the top to "more abstract" senses at the bottom.

d)   The top-most item A is typically, but not obligatorily, a lexical entity.

Our interpretation resembles the theory of lexical networks proposed by Lakoff (1986, 1987) and Norvig and Lakoff (1987), in a number of ways. First, it rests on the assumption that an objectivist approach is inadequate to account for the patterns of conceptual relations considered here. Second, Lakoff's model of "a radially structured category, with a central member and links defined by image-schema transformations and metaphors" (Lakoff 1987:460), has its parallel in our tree diagram in figure 4.1: both have a central or basic member from which all others are derived, and in both models the links between the various members are established by cognitive processes like metaphor, metonymy, etc. (see below).

There are also, however, some divergences. Perhaps the most important is that, while we are interested exclusively in grammatical concepts, Lakoff and his associates deal mainly with lexical categories (see, however, Lakoff 1987: 462ff.; and also Sweetser 1988). This means, for example, that the "abstraction" principle, which is an essential feature of grammaticalization, is of less significance in their model.

Another difference concerns the relation between cognitive and linguistic structure. In the view of Lakoff and his associates, there seems to be a largely one-to-one correspondence between a lexical item and the cognitive entity that this item stands for. Thus, all the various senses of English lexemes such as *over*
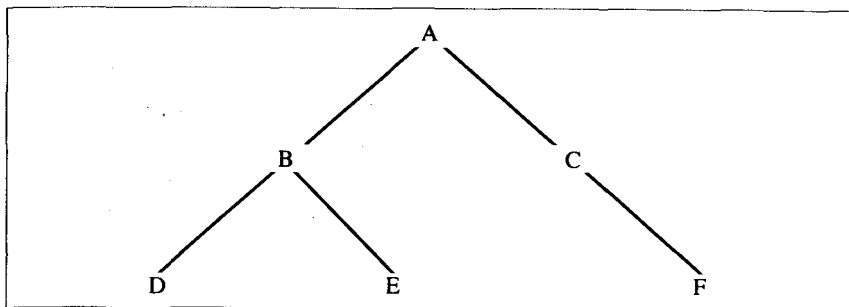
FIG. 4.1 The conceptual network of grammaticalization.

or *take* are treated by Lakoff as members or "subcategories" (cf. Lakoff 1987:463) of a single category. There appears to be a tacit assumption to the effect that cognitive development of the type described by Lakoff takes place within a given category. The examples that we present here suggest that development in the process of grammaticalization does not stop at linguistic or conceptual category boundaries but cuts across morpheme classes and cognitive taxa, as we have seen, for example, in the case of the Ewe noun *vi.'*

The second part of our framework relates to the transition from one sense to another, that is, to the question of what happens when, for example, sense A gives rise to sense B.[1] While Lakoff (1987:460) mentions two kinds of links, image-schema transformation and metaphor, Norvig and Lakoff (1987:197–98) propose the following six types: image-schema transformation, metaphor, metonymy, frame addition, semantic role differentiation, and profile shift.

At the present stage of research, it is hard to tell how and to what extent these types are relevant to conceptual manipulation in the process of grammaticalization. We may now choose an alternative perspective according to which an expression like A has a simple, unitary sense but where this focal or core sense (see below) has an unstable, context-specific pragmatic overlay, that is, a set of implicatures. Now, each of these implicatures can develop into a new conventionalized sense and acquire its own set of implicatures. According to this perspective, B may be interpreted as a conventionalized implicature of A (cf. Levinson 1983:99, 166).

Let us take the example of the grammaticalization of the Ewe noun *ví* 'child' to look at the kind of problems involved. As we observed above, the suffix *-ví* has the sense YOUNG when attached to nouns denoting domestic and other animals but the sense SMALL when added to denotations of more inclusive animal categories, for example:

nyi,   'cow'   nyi-ví,   'calf, young cow'
lã,   'animal'   lã-ví,   'small animal species'

This is a highly simplified description. As we have seen above (3.4.3.2), *nyi-ví* may also refer to a 'small cow' or a 'calf,' and *lã-ví* can also be a 'young animal,' the 'young one of an animal,' or an 'insignificant animal,' in accordance with pragmatic construal rules or principles of interpretation available to Ewe speakers (cf. Searle 1979a; Levinson 1983:158). The senses 'calf' and 'small animal species,' respectively, are the most salient, or focal, ones; they are likely to be the first named by native speakers in translations, to be used most frequently, and to show the least amount of contextual constraints. Figure 4.2 summarizes this situation.

While the notion of "focal" sense can be defined more or less in this way, it is more difficult to describe what a "nonfocal" sense is—unless it is with reference to its corresponding "focal" sense. Depending on the perspective one adopts, the following kinds of opposition, in particular, can be invoked to characterize the distinction, for example, between the "focal" sense YOUNG of the noun *nyi-ví* and its "nonfocal" senses DESCENDANT-OF and SMALL: primary versus secondary meaning, primary versus secondary focus (Dahl 1985:11), denotative versus connotative meaning, central property versus peripheral property, core property versus identification property of a category (Smith and Medin 1981:20–21), prototypical property versus typical property (Coleman and Kay 1981:37), or semantic marker versus stereotype (Putnam 1978).

There would seem to be some justification in applying oppositions like these in order to describe the transition from the focal sense YOUNG in nouns like *nyi-ví* 'calf' to SMALL in nouns like *lã-ví* 'small animal species,' for example, in the following way:

	YOUNG	SMALL
nyi-ví	Denotative meaning	Connotative meaning
	Central property	Peripheral property
	Core property	Identification property
	Prototypical property	Typical property
	Semantic marker	Stereotype
lã-ví	Connotative meaning	Denotative meaning
	Peripheral property	Central property
	Identification property	Core property
	Typical property	Prototypical property
	Stereotype	Semantic marker

Alternatively, in terms of a pragmatic paradigm, we may say that the noun *nyi-ví* 'calf' has YOUNG as its stable, unitary, or focal sense and an "unstable, context-specific pragmatic overlay" in the form of a set of implicatures (Levinson

Sense:	DESCENDANT–OF	YOUNG	SMALL	INSIGNIFICANT
Lexeme				
nyi-ví	. . . . ———————————— x ——————.			
lā-ví	. . . . ———————————————— x —————————			

Fig. 4.2 Semantic characteristics of the Ewe nouns *nyi-ví* and *lā-ví* (——— = a range of senses; x = focal sense).

1983:99). One of these implicatures, referred to here by means of the conceptual label SMALL, has been conventionalized in the context of nouns of the type *lā* 'animal' and, accordingly, has developed into a new focal sense.

No attempt is made here to decide on the relative significance of these distinctions. Rather, we wish to draw attention to the following main components of the process concerned:

a)   *Context-induced reinterpretation:* Once one of the arrays of conversational implicatures is conventionalized, then context-induced reinterpretation may be said to come in. We are dealing here with what Norvig and Lakoff (1987:198) refer to as profile shift, which means that in the transition from nouns like *nyi-ví* to nouns of the type *lā-ví* the sense YOUNG is backgrounded and the sense SMALL foregrounded: the latter, which forms a peripheral or identification property of the noun *nyi-ví*, turns into a central/core property in the context of nouns like *lā*. In all cases we are familiar with, foregrounding is the result of context-induced reinterpretation, whereby some nonfocal sense is highlighted in a specific context and develops into a new focal sense.

b)   *Metaphor:* The transition from YOUNG to SMALL in the foregrounded sense involves a conceptual shift from a domain in which the concept YOUNG is important, that is, the domain of animate beings, to a domain in which this distinction is irrelevant, that is, the domain of typically inanimate concepts. Thus, in the vast majority of cases where the suffix *-ví* has the focal sense SMALL, inanimate nouns are involved. A shift like this can be interpreted as being metaphorical in nature since it implies a transfer whereby typically inanimate entities are conceptualized by using properties of the animate domain: what is SMALL is metaphorically rendered in terms of what is YOUNG.

Note that not all conversational implicatures are instances of context-induced reinterpretation; that is, they are not all conventionalized to the extent that they give rise to new focal senses. Only a minority of context-specific pragmatic overlays in fact undergo such an evolution. The evidence available suggests that certain types of implicatures will never reach the stage of context-induced reinterpretation and, hence, of developing into new focal senses. For example, in

their description of the grammaticalization of future tense categories, Bybee, Pagliuca, and Perkins (in press) observe that a number of languages use non-future tenses or aspects for the expression of future. Thus, the use of the present tense of English in sentences such as (1) invites implicatures relating to future time:

(1)   I go to Chicago tomorrow.

Not only present tenses behave in this way; Bybee, Pagliuca, and Perkins's worldwide sample contains a catalog of the following tense/aspect categories: present (nine cases), continuous (nine), habitual (seven), imperfective (seven), perfective (three), and past (three). What is interesting is that such future uses, referred to as "aspectual forms" or "aspectuals" (Ultan 1978a; Bybee, Pagliuca, and Perkins, in press), remain context-specific nonfocal senses; that is, they apparently never develop into focal future senses.[2] This observation is not at all surprising, especially since an evolution from a continuous, imperfective, or similar category to future would not conform to any of the patterns of conceptual transfer thus far identified in the process of grammaticalization. This fact, however, is not sufficient in itself to explain why certain conversational implicatures never lead to the emergence of grammatical categories while other implicatures consistently do; much more research is required on this issue.

As we observed above, the link between immediately adjacent senses tends to be only "weakly metaphorical"; that is, the metaphorical content is minimal or even nonexistent. The larger the distance between two senses, the more pronounced the metaphorical content is likely to be. Accordingly, in the case of the nouns *ŋútsu-ví* ("man-child") 'boy' and *kpé-ví* ("stone-child") 'small stone,' the metaphorical nature of the latter is more obvious, in that the quality SMALL is metaphorically expressed by means of the concept CHILD, in accordance with the PERSON-to-QUALITY metaphor, which is part of the metaphorical scale presented in 2.4.1.

That grammaticalization incorporates such highly divergent components has also been pointed out by other students of the subject (cf. Traugott and König, in press). Lehmann, for example, observes that adjacent items on a grammaticalization scale differ from one another only quantitatively, but these quantitative differences "sum up when the distances on a scale become greater, and there must certainly come a point where quantity changes to quality" (Lehmann 1982:125).

To conclude, in the process of grammaticalization there are what we propose to call both a "macrostructure" and a "microstructure." Their distinguishing features are summarized in table 4.1. The macrostructure, which is mainly psychological in nature, has to do with cognitive domains and the relations existing between them. These relations have been described by means of terms such as "similarity" or "analogy" (cf. 1.3). Metaphor forms the main strategy for bridg-

TABLE 4.1. Macrostructure and Microstructure in Grammaticalization

Macrostructure	Microstructure
Conceptual domains	Context
"Similarity," "analogy"	Conversational implicatures
Transfer between	Context-induced
conceptual domains	reinterpretation
Metaphor	Metonymy

ing the gap between these domains. The microstructure, which has its basis in pragmatics, relates essentially to context and context manipulation.[3] Manipulation triggers context-induced reinterpretation, whereby conversational implicatures are conventionalized to new focal senses—a process that is metonymic in nature.

4.2 On the Relation between Focal Senses

That both macrostructures and microstructures are involved in the process leading to the rise of grammatical categories may be illustrated by looking at some cognitive aspects in the use of the English preposition *with*. We will be confined to a consideration of two functions of this preposition, COMITATIVE ("together with") and INSTRUMENT ("by means of"). As we shall see in chapter 6, these two functions form part of a more extended chain of conceptualization. However, we confine ourselves to prototypical notions of these case functions or senses. Further distinctions as proposed, for example, by case grammarians are not considered.[4]

It is widely agreed that these two senses are conceptually closely related, an observation that does not apply only to English but that is supported by the fact that many languages worldwide use one and the same morpheme for these two senses. Thus, according to a survey carried out by Nilsen (1973:74–75), the following languages, inter alia, may use the same morpheme to express both senses: Danish (*med*), English (*with*), Eskimo (*mik*), Estonian (*ga*), Flemish (*met*), French (*avec*), Norwegian (*med*), Quechua (*-waeng*), Spanish (*con*), and Turkish ([*i*]*le*). Mention should be made, however, of the many languages, such as Hindi, Japanese, Korean, and Tamil, that use different linguistic forms for COMITATIVE and INSTRUMENT.

It is probably less well known that there is an asymmetrical relation since the evidence available suggests that COMITATIVE morphemes may acquire INSTRUMENT as an additional sense, but not vice versa (see 6.4). Underlying this relation is a transfer for which Lakoff and Johnson (1980:134–35) propose a conceptual metaphor that they refer to as the "AN INSTRUMENT IS A COMPANION" metaphor. This transfer has the effect that accompaniment serves as a metaphorical vehicle

TABLE 4.2. The Mean Rank Order of Ten Sentences Containing *with*
(Schlesinger 1979:310)

	Mean Rank Order
1. The pantominist gave a show with the clown.	1.67
2. The engineer built the machine with an assistant.	2.90
3. The general captured the hill with a squad of paratroopers.	3.67
4. The acrobat performed an act with an elephant.	3.87
5. The blind man crossed the street with his dog.	4.67
6. The officer caught the smuggler with a police dog.	6.17
7. The prisoner won the appeal with a highly paid lawyer.	6.27
8. The Nobel Prize winner found the solution with a computer.	7.40
9. The sportsman hunted deer with a rifle.	9.00
10. The hoodlum broke the window with a stone.	9.40

for expressing instrumentality; in more general terms, the domain of human beings is exploited to conceptualize entities belonging to the domain of inanimate concepts (see 7.1).

Within such a framework, which is in line with the perspective that we have described in more detail in chapter 2, we are dealing with discrete entities, in our example with two distinct case functions, and the gap between them is bridged by means of a cognitive process, called metaphor. However, one may argue with the same justification that we are confronted here not with a cognitive transfer or jump from one category to another but rather with a continuum. This position is maintained, for example, by Schlesinger (1979): "But I want to make an even stronger claim: that, conceptually, the instrumental and comitative are really only two extreme points on what is a conceptual continuum" (Schlesinger 1979:308).

Schlesinger asked thirty respondents to number ten sentences according to whether the preposition *with* contained in these sentences was closer in meaning to COMITATIVE ('together') or to INSTRUMENT ('by means of'). The sentences and the rank order assigned by his respondents are presented in table 4.2. The ordering exhibits a continuum ranging from *with* as most clearly meaning 'together with' in sentence 1 to most clearly meaning 'by means of' in sentence 10. Schlesinger summarizes the results in the following way: "Although there may be two discrete linguistic categories, instrumental and comitative, this does not mean that we view the world in terms of such discrete categories. In our cognitive structures there are apparently no such neatly delimited classes. Rather, there is a continuum, and language, because of its necessarily limited means of ex-

pression, imposes a classification on this continuum" (Schlesinger 1979: 309–10).

We will not deal here with the question whether in this case the distinction discrete category versus continuum can be correlated with the distinction linguistic structure versus cognitive structure. It would seem, however, that the work of Lakoff and his associates, among others, has established beyond reasonable doubt that discrete categories of the kind analyzed by Schlesinger are not only found in language structure but can also be identified on the level of cognition—even if there need not be a one-to-one correspondence between linguistic and cognitive categories.[5]

Within the framework that we are proposing here, positions such as those of Lakoff and Johnson (1980) and Schlesinger (1979) are in no way mutually exclusive or contradictory; rather, they complement each other in a predictable way.[6] In the process of grammaticalization, such as when a COMITATIVE marker acquires an INSTRUMENT sense, there is necessarily both discontinuity and continuity: on the level of macrostructure we are dealing with a discrete step from one conceptual domain to another, while on the level of microstructure we are faced with a continuum of gradual conceptual extension.

4.3 Some Revisions

So far, we have presented a rather simplified account of the conceptual development leading to the emergence of grammatical, or "more grammatical," structures. We have ignored in particular two factors that we will discuss here. As a result, the framework proposed above will require some revision.

In section 4.1, we were dealing primarily with the focal senses of the morphemes in question, leaving aside the role of nonfocal senses in the development of grammatical concepts. Furthermore, we have looked at the development of these concepts in isolation without reference to related concepts and paradigms. Accordingly, we have argued that the macrostructure of grammaticalization can be sketched in the form of a simple tree diagram (fig. 4.1). As we shall see below, this model covers only one aspect of the process.

In our discussion of the fate of the Ewe lexeme *ví* 'child' (3.4), we observed that one of the senses of the suffix derived from this noun denotes 'membership within a political, sociocultural, or geographically defined community.' We also mentioned that there is yet another suffix, *-tɔ́*, that has a similar meaning, being derived from the noun *tɔ́* 'father' (see Claudi and Heine 1986:315–16). Thus a citizen of Togo may be called either *Tógó-ví* or *Tógó-tɔ́*. Similarly, *pome* means 'kinship, people of the same descent,' and a 'relative' can be called either *pome-ví* or *pome-tɔ́*.

While *-ví* and *-tɔ́* are largely synonymous in many contexts, there are other contexts where they are clearly distinguished. Consider, for example, the follow-

ing sentences, both of which could be translated as, 'He is a Togolese but he is not a Togolese':

(2)   Tógó-tɔ́   wo-nyé gaké mé-nyé   Tógó-ví o
        Togolese 3SG-be but   NEG.3SG-be Togolese NEG

(3)   Tógó-ví   wo-nyé gaké mé-nyé   Tógó-tɔ́ o
        Togolese 3SG-be but   NEG.3SG-be Togolese NEG

Both sentences are meaningful, but each of them may receive several interpretations. The interpretation that sentence (2) is most likely to receive can be glossed as either

(2a)   'He is a citizen of Togo, but he does not originate from Togo,'
        or
(2b)   'Although he is a citizen of Togo, he does not behave like one."

The meanings associated with sentence (3) are in particular the following:

(3a)   'He is a Togolese (by birth) but is not/no longer a citizen of Togo,'
        and
(3b)   'He behaves like a Togolese, although he is not Togolese.'

In order to understand the semantics of these two sentences, we have to return to figure 3.2, where we have sketched the conceptual expansion of the noun *vi'* 'child.' One of the chains of conceptualization described there is the following:

(4)   DESCENDANT-OF > MEMBER > TYPICAL BEHAVIOR

The focal sense of the noun *Tógó-ví* is MEMBER; that is, it normally means 'a citizen or inhabitant of Togo.' In (2) and (3), however, this sense is ruled out by context: this sense is conveyed by the noun *Tógó-tɔ́*, which stands in semantic contrast with *Tógó-ví*. The result is that the nonfocal senses of the latter noun are foregrounded, that is, the conceptually preceding sense DESCENDANT-OF, as reflected in (2a) and (3a), on the one hand, and the conceptually following sense TYPICAL BEHAVIOR, as in (2b) and (3b), on the other.

While the suffixes *-ví* and *-tɔ́* have a focal sense in common, they contrast semantically in sentences such as (2) and (3). There are, however, other contexts where they are largely synonymous, for example, when they are added to nouns where the nonfocal sense DESCENDANT-OF ("membership by birth") is ruled out on semantic grounds, as in the case of the noun *hã'(me)* 'group, club, herd.' Although TYPICAL BEHAVIOR may be a connotative nonfocal sense of *hãḿe-ví,* both *hãḿe-ví* and *hãḿe-tɔ́* mean 'member of a club or society' and are in most cases semantically equivalent. Thus, in such contexts, two distinct lexemes, *vi'* 'child' and *tɔ́* 'father,' have been grammaticalized in the same direction—to the effect that two different chains of grammaticalization have merged.[7]

With this example, we wish to draw attention to some particular characteristics of conceptual expansion that have been ignored in our framework as diagrammed, for example, in figure 4.1. The first relates to the observation that a description of grammaticalization in terms of a shift from A to B captures only one aspect of the process. It ignores, for example, the role of pragmatically motivated variation in the development of grammatical structures, which we have tried to illustrate in our simplified account by means of the distinction between "focal" and "nonfocal senses." Rather than dealing with a process A to B, a more appropriate representation of this process would be the one sketched in (5), where uppercase letters signify focal senses and lowercase letters nonfocal senses:

(5)   xAb > aBc > bCd

That the meaning of a grammatical entity is determined not only by its "focal sense" but also by preceding nonfocal senses has been repeatedly pointed out in works on grammaticalization, for example, under headings such as "split" (Heine and Reh 1984) or "layering" (Hopper, in press). What appears to be particularly interesting in our Ewe example is that not only conceptually "earlier" senses have to be taken care of in a description of grammatical meanings. "Later" senses, that is, nonfocal senses that are foregrounded in certain contexts and are likely to develop into new focal senses at a later stage of grammaticalization, must also be accounted for.

The second characteristic ignored in our framework is the nature of the conceptual network involved in the process. In section 4.1, we discussed this network in terms of a divergency model and sketched it accordingly in the form of a tree diagram in figure 4.1. The tree diagram does in fact form a mode of presentation that captures one of the most salient aspects of grammaticalization, as has been argued in Heine and Reh (1984) and can be exemplified most strikingly by looking at the way one and the same lexical entity has given rise to the grammaticalization of a whole range of different grammatical functions; Colette Craig's term "polygrammaticalization" (Craig, in press) is an indication of the relevance that this observation has for grammaticalization theory. One may wish to draw attention to the potential that a verb like 'go' has offered for the conceptualization of grammatical categories. Toedter, Zahn, and Givón (1989), for example, list the areas of grammatical functions that can be derived from this verb: tense-aspect, modality, case marking, deictic-directional, quotative, and inchoative. In addition, they observe that in Pastaza Quechua, a language spoken in northern Peru, 'go' also serves as a device for introducing imperatives and for detransitivization. This by no means exhausts the range of grammaticalization processes that verbs meaning 'go' and related lexical entities have contributed to the emergence of grammatical concepts.

The divergency model is indeed adequate, as long as one is dealing with the
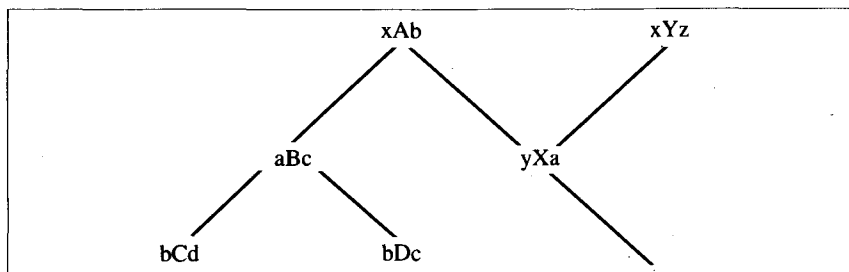
FIG. 4.3 The conceptual macrostructure of grammaticalization (uppercase = focal sense; lowercase = nonfocal sense).

evolution of a single linguistic entity, in our example that of a noun developing into a derivative affix or of a verb 'go' becoming a marker of an enormous array of grammatical functions. Once, however, one leaves the domain of linguistic expression and looks at the cognitive process taking place, a different picture emerges: not only do concepts split, but they also merge, as is suggested by examples like the development of Ewe -ví and -tɔ́. This observation requires a more complex model of grammaticalization than that sketched in figure 4.1, that is, one that, in addition to divergency, also takes care of cognitive convergency. It would therefore seem that figure 4.3 presents a more adequate description of the type of cognitive macrostructure that we are dealing with in the process of grammaticalization.

4.4 Previous Models

In earlier publications, a number of schematic accounts have been presented to describe the process leading from less to more grammaticalized concepts. For example, context-induced reinterpretation, which forms one of the main components of this process, may be described in terms of the following notions (see 3.3.1): invited inferences and conversational implicatures (Traugott and König, in press); perspectivization (Taylor 1989); schematization (Sweetser 1988; Rubba 1990; see below); and prototype extension (Givón 1989; see below).

According to Willett (1988:80–81), three main hypotheses have been formulated to explain grammaticalization or, as he puts it, "semantic generalization accompanying grammaticization": the "metaphorical extension" hypothesis, the "containment" hypothesis (see below), and the "implicature" hypothesis (see 1.2.2 above). In the present section, we try to relate the framework presented here to some alternative positions that may be distinguished in works on grammaticalization. For a better understanding of these positions, the reader is referred to section 3.3, where a number of approaches to describing context-induced reinterpretation were outlined.

According to the most common interpretation, the mechanism involved may
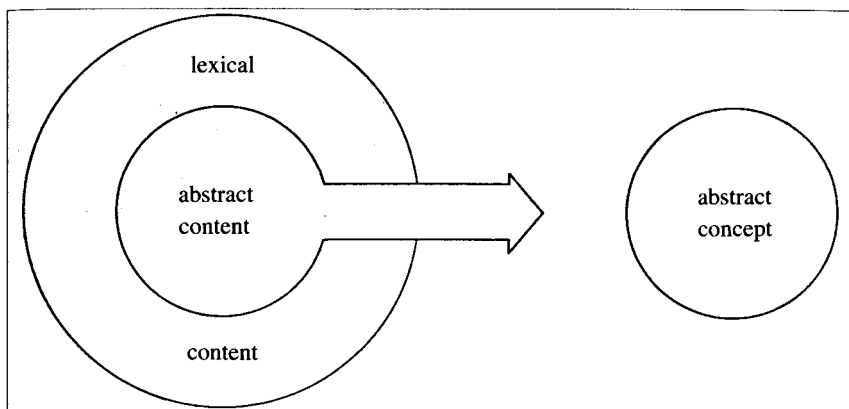
Fig. 4.4 The "bleaching model."

be conceived of as a filtering device that bleaches out all lexical content and retains only the grammatical content of the entity concerned. We shall refer to this interpretation, which was presented in more detail in section 2.3.1, as the "bleaching model" (see fig. 4.4).

One of the earliest forms of this model is found in Givón (1973), who points out that, in the development from verbs to tense/aspect/modality markers, the resulting grammatical meanings are largely predictable because they are already contained in the verbal meaning. Willett (1988:80), therefore, refers to Givón's interpretation as the "containment hypothesis."

Classic forms of this model have been discussed, inter alia, by Lehmann (1982) and by Bybee and Pagliuca (1985). The latter regard the development from lexical to grammatical meaning as a "process of generalization or weakening of semantic content," whereby "meanings are emptied of their specificities." The result is that concrete, lexical contents are reduced to abstract, grammatical functions. This entails that the entity concerned develops into a "more general" morpheme having a more general distribution since it can be used in a wider range of contexts and, accordingly, acquires a higher frequency of use (Bybee and Pagliuca 1985:59–76).

Bleaching is not confined to semantic contents. It also affects, for example, the categorial status of the relevant morpheme in that it involves a loss in prototypical categoriality and a loss in the ability to act as a referential participant in discourse (cf. Hopper and Thompson 1984; see 8.5). This, however, also applies to other models discussed below.

Other approaches have emphasized, however, that grammaticalization involves not only loss but also gain. This observation has been made in a number of contributions by Elizabeth Traugott. Sweetser (1988:402) distinguishes between
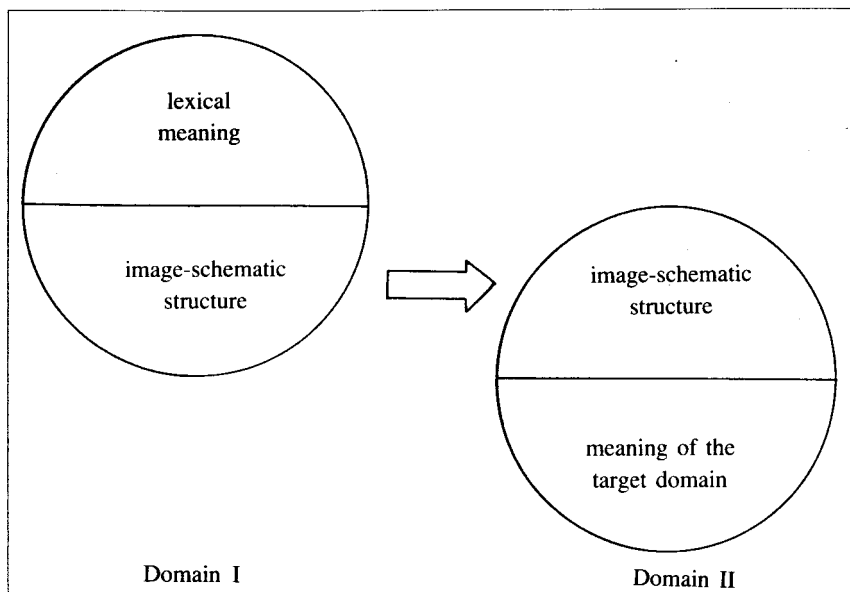
FIG. 4.5 The "loss-and-gain model" (Sweetser 1988).

generalization of meaning and metaphorical meaning shift. In the former case, a morpheme broadens its class of referents, for example by "abstracting out" central aspects of the morpheme's meaning and applying the morpheme to cover all referents involving those central aspects. In the latter case, the schema abstracted from the morpheme's meaning is mapped onto some other domain of meaning. Sweetser argues that the loss of lexical meaning is counterbalanced by the fact that, with the shift away from its source domain, the grammaticalized entity acquires meaning that is characteristic of its new, target domain: "When an image-schematic structure is abstracted from a lexical meaning—there is potential loss of meaning. The image schema does not have the richness of the lexical meaning in the source domain. . . . But if the abstracted schema is transferred from the source domain to some particular target domain, then the meaning of the target domain is *added* to the meaning of the word" (Sweetser 1988:400).

Sweetser's "loss-and-gain" model, as we shall call it, is sketched in figure 4.5. In the transition from source to target domain, there is one component that remains unaffected by this shift. This is, according to Sweetser, the image-schematic or topological structure. A more pronounced version of the "loss-and-gain" model is proposed by Jo Rubba (1990) in her discussion of the grammaticalization of body part nouns to adpositions, where she claims that the amount of gain exceeds that of loss in the process of grammaticalization. On the basis of the Ronald Langacker's cognitive grammar framework, she argues that
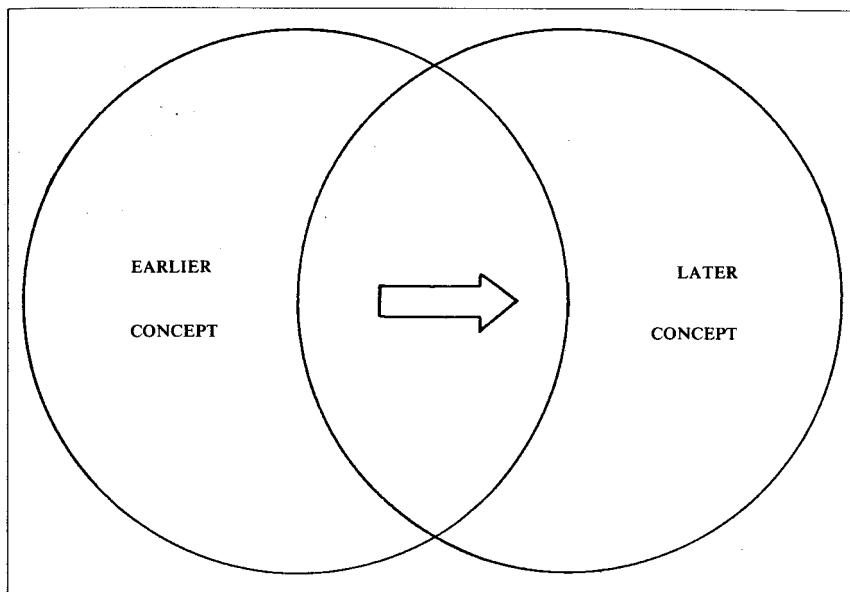
FIG. 4.6 The "overlapping model."

the meaning of adpositions is more complex than that of the nouns from which these adpositions are derived: "The semantics of the prepositions is actually more complex than that of the RELNs [relational nouns], not simpler. In the RELN we have the base domain, a landmark, and the profiled subpart or spatial region; in the preposition we have the base domain and the relational profile, including the profiled relation, the landmark, the search domain, and the trajector" (Rubba 1990:35–36).

There is wide agreement as to the nature of the loss component. It is far less clear, however, how the new additional meaning is to be defined. According to some, including, apparently, Sweetser, this "meaning" can be described in terms of cognitive-conceptual structures. Others have defined it in terms of pragmatic parameters (cf. Hopper 1979a, 1982; Herring 1988). It would seem that both perspectives are equally valid, each capturing a different aspect of the relevant process (see 4.1, 4.2).

According to a third model to be encountered in the literature on grammaticalization, referred to here as the "overlapping model" (fig. 4.6), the transition from source concept to target concept involves an intermediate stage where both coexist side by side (cf. Coates 1983). This is a stage of ambiguity since the relevant linguistic form can be understood to refer either to its lexical (or less grammatical) sense or to its more grammaticalized sense.

All these models assume that grammaticalization involves two distinct con-
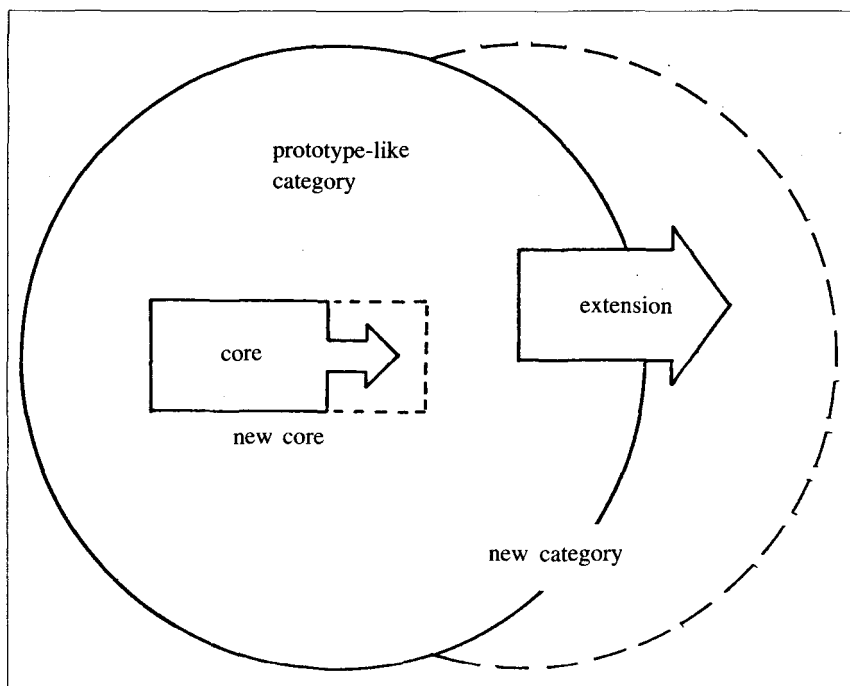
FIG. 4.7 The "prototype extension model." (Givón 1989)

ceptual units or categories: one that is less grammaticalized and another that is more grammaticalized. There is, however, another view according to which we are dealing not with the transition from one category to another but rather with the modification of an existing category, that is, with a process of extension within one and the same entity. Figure 4.7 presents an example as to how this process is to be conceived of. The model sketched there is based on Givón's (1989) conception of how prototype-like categories are modified or extended through analogy or metaphor, although he does not specifically apply this model to the analysis of grammaticalization.

Each of these models captures one aspect of the process. There is loss, as the "bleaching model" suggests. That is, lexical content is "fleshed out," and the resultant, more grammatical entity is "poorer" in several ways. It lacks the referential freedom and the wide-ranging specifities of the lexical item; distinctions relating, for example, to color, shape, or absolute size or time are filtered out in the process of grammaticalization. In addition to losses, however, there are also gains. There is the new domain that affects the nature of the emerging grammatical concept, and there are new contexts inviting new interpretations, which

again are responsible for new conceptual distinctions. Furthermore, in the transition from one concept to another, there is an intermediate stage of overlapping, where the earlier and the later concepts coexist side by side, before the former is ousted. Finally, it is equally valid to view the process not as one that involves a transition from one concept to another but rather as one involving, for example, prototype extension, as figure 4.7 suggests.

The impression conveyed in the preceding paragraphs might be that we are dealing with essentially two different types of models, one implying a shift from a source to a target item (figs. 4.4 and 4.5) and the other involving a category-internal development such as the modification of an entity (fig. 4.7). It would seem that this distinction is of minor importance for the issue under discussion. For example, it is possible to describe the content of the "bleaching model" or the "loss-and-gain model" in terms of item modification rather than item shift, for example, if one views the process from the point of view of the linguistic form rather than from that of conceptual contrasts.

The framework adopted here incorporates all the observations highlighted in the models presented above. As we have argued in previous sections, there are two different forces involved in the processes of grammaticalization. One is conceptual transfer, which is metaphorical in nature and relates different cognitive domains with one another, as can be seen in figure 4.8. The second force is pragmatically motivated. It involves context-induced reinterpretation and metonymy and leads to the emergence of overlapping senses, represented in figure 4.8 in the form of a chaining structure. Note that the structures sketched in figures 4.3 and 4.8, respectively, are in no way contradictory; rather, the latter focuses on some aspects of the process that have been ignored in the simplified account of figure 4.3.

4.5 Localism

There are a number of approaches that are related in one way or another to the framework proposed here; we have mentioned the most important ones in section 1.2.[8] One of the most well known is that of localism (Hjelmslev 1935; Anderson 1971, 1973; Lyons 1967, 1975, 1977; Pottier 1974), according to which spatial expressions are linguistically more basic than other kinds of expressions and therefore serve as structural templates for the latter. The connection that exists between this school of linguistics and the present framework can be seen, for example, in the following statement by Lyons: "Much of what is commonly thought of as being metaphorical in the use of language can be brought within the scope of the thesis of localism" (Lyons 1977:720).

The notions used by adherents of the localist hypothesis in some ways resemble those employed by Lakoff and Johnson (1980) to formulate several of their conceptual metaphors. For example, the concept of a journey figures as a
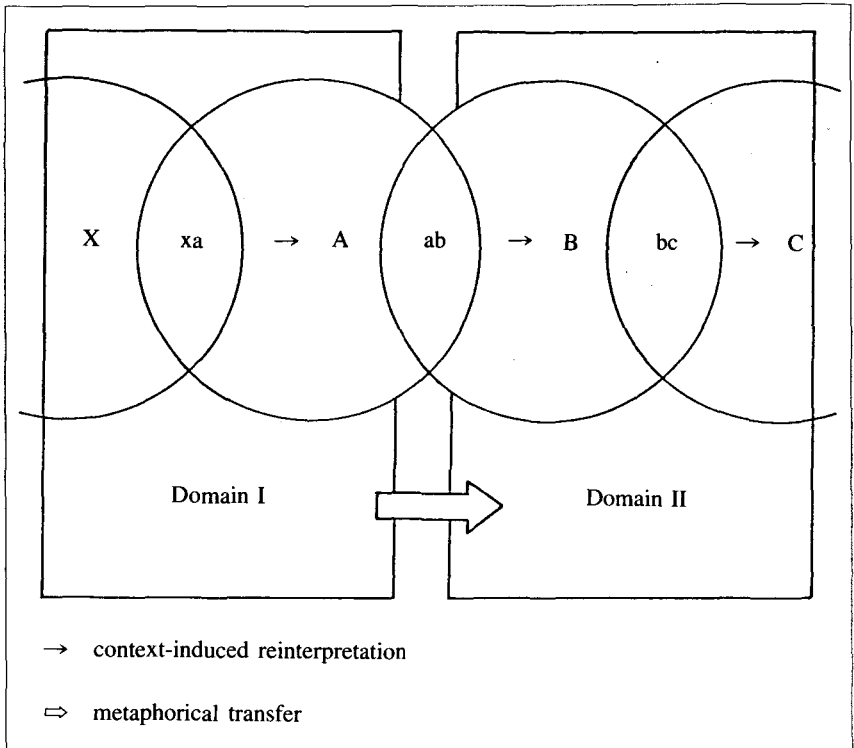
FIG. 4.8 The metonymic-metaphorical model (uppercase = focal sense; lowercase = nonfocal sense).

vehicle in a number of the conceptual metaphors proposed by Lakoff and John-son, such as LOVE IS A JOURNEY, MARRIAGE IS A JOURNEY, LIFE IS A JOURNEY, or AN ARGUMENT IS A JOURNEY. The same concept is also invoked by localists in order to account for some more abstract conceptual structures:

> Journeys are initiated by the entity's departure from the source and terminated by the entity's arrival at the goal. Both departure and ar-rival are achievements. . . . If the source and the goal are conceived as areas, rather than points, departure and arrival will be achieve-ments that have the more particular logical property of being describable as border-crossings. . . . By generalizing these lo-calistic notions from the paradigm case of so-called concrete locomotion . . . to various kinds of abstract locomotion, the im-plicational relations that hold between such pairs of propositions as "X has learned Y" and "X (now) knows Y" or between "X has for-gotten Y" and "X no longer knows Y", on the one hand, and

TABLE 4.3. Some Instances of Grammaticalization
Proposed by Localists (cf. Lyons
1977:718ff.)

Source	Derived Structure
Locative categories	Temporal Categories
Abstract location	Possession and existence
Locative and deictic expressions	Distinction past vs. nonpast
Locative construction	Aspectual notions of progressivity or stativity
Locative notions	Temporal, causal, and conditional clauses

between "X has arrived in Y" and "X is (now) in Y" or between "X has departed from Y" and "X is no longer in Y", on the other, can be brought together within a common framework. [Lyons 1977: 720–21]

Research within the localist framework has provided a wealth of findings on grammaticalization, and it has revealed some major aspects of the process leading to the emergence of grammatical categories. Some of these findings, such as those summarized in table 4.3, are subscribed to by most of its adherents. According to these findings, distinctions of aspect and tense and of possession and existence, temporal constituents including temporal subordinate clauses, as well as some other types of clauses are all, or may be, expressed by means of locative constructions.

There is, however, also a "stronger" form of localism, expressed, for example, in statements like the following: "Underlying grammatical functions are in general organized basically in terms of oppositions involving location and direction" (Anderson 1973:10). According to such a position, even linguistic expressions relating to truth, modality, negation, or quantification would be brought within the scope of localism. It would seem to us that, with regard to such domains, localism reaches its limits: since it is concerned with only one of the forces underlying grammaticalization, it is able to account for but a limited part of the cognitive patterning to be observed in the course of that process.

As we observed in chapter 2, there are a number of domains that serve as pools for the development of grammatical concepts. We have discussed these domains in terms of categories such as PERSON, OBJECT, ACTIVITY, etc. People use objects, activities, or locations to express more abstract entities or to structure texts. Among such reference points, SPACE forms but one pool on which to draw. With

regard to the role played by the category SPACE as a source of grammaticalization, there are the following main possibilities:

a)   SPACE forms the only source.
b)   SPACE forms one of the several categories available.
c)   SPACE is not recruited as a source of grammaticalization.

Some authors, especially proponents of localism, have argued that possibility *a* applies, for example, to temporal concepts. However, we are not aware of any grammatical category of TIME that has SPACE as its only source. Notions of deictic time in particular may be derived from a number of verbal sources many of which do not involve SPACE. This applies, for example, to modality verbs such as 'want,' 'wish,' 'have to,' etc., which form a common source for future markers, as we shall see in 7.1.1. Thus possibility *a* does not seem to occur, and grammaticalization has to be described in terms of either *b* or *c*. The relevance of *b* can be shown by looking at two examples that have been treated as paradigm cases in works on localism.

One of these paradigm cases concerns possession: "There are very many unrelated languages throughout the world in which overtly locative constructions are used in sentences that would be translated into English as 'John has a book' (or 'The book is John's')" (Lyons 1977:722). This also applies to African languages, most of which have grammaticalized locative constructions in some way or other for the expression of possessive concepts (see 2.2.2). SPACE, however, does not form the only source of possession. Another common source is the category ACTIVITY, according to which actions and processes, encoded linguistically as verbs, are employed to conceptualize notions of possession. Verbs that are recruited for this purpose are in particular 'seize,' 'take hold of,' 'take,' 'acquire,' 'get,' and the like, and we may refer to this source as the "acquisition model," since the dynamic concept of acquisition serves as a vehicle to express possessive concepts, especially verbal possession: "*X* acquires *Y*" to "*X* owns/has *Y*." We have drawn attention to this model in section 2.2.2 in connection with the "action proposition" and have provided an example from Oromo; more African examples can be found in Claudi (1986).

There is another source, which may be called the "companion model," that is widely employed for the expression of verbal possession: according to this model, a proposition like "*X* is with *Y*" is reanalyzed as "*X* owns/has *Y*." This model is made use of, for example, in a number of Bantu and other Niger-Congo languages, for example:

(6)   *Swahili*:
           ni-li-kuwa   na   redio n-zuri
           1SG-PAST-be with radio CL9-nice
           'I had a nice radio'

Some localists might argue that even such notions as "action" or "comitative function" have an underlying locative structure.⁹ One may wonder, however, whether such a view is sufficiently backed by linguistic or other evidence. Conceivably, there is some topological or image-schematic structure that is shared by locative markers, verbs meaning 'seize,' and comitative prepositions. If in fact this should turn out to be the case, then the question remains whether such a structure is necessarily locative in nature. Rather than pursuing this issue any further, we are satisfied at this point to observe that, among the various models employed for the expression of possessive concepts, only one is demonstrably locative in nature.

Another paradigm case of localism concerns aspect marking: "There are many languages in which the aspectual notions of progressivity or stativity (and more especially, contingent stativity) are expressed by means of constructions that are patently locative in origin" (Lyons 1977:719). An even stronger position is expressed by Anderson: "Aspectual distinctions are interpreted as involving crucially the notions of location and direction. The progressive, for instance, is analysed as predicating location-in-existence-at-a-certain-time of the event whose predicate is the 'main verb'" (Anderson 1973:5).

In many languages worldwide, locative constructions of the type "X is at Y" have in fact been grammaticalized to progressive aspects (to "X is doing Y"). This, however, is not the only source for progressive aspects. Once again, concepts of the category ACTIVITY may be employed as an alternative to those of the SPACE category. Thus, in some African languages progressives are conceptualized in terms of processes (cf. Heine and Reh 1984:122–26). In Mamvu, a Central Sudanic language of the Nilo-Saharan family, for example, the verb *taju* 'sit, live, stay' is used for the expression of the past progressive aspect (Vorbichler 1971:248–50):

(7)   ɔ'bɛ   mu-taju   *or*   mu-taju ɔ'bɛ
        dance 1SG-sit
        'I was dancing'

In Ngambay-Moundou, an Ubangi language of the Niger-Congo family, both ACTIVITY (8) and SPACE (9) have been made use of as source categories for what appear to be largely equivalent progressive constructions (Vandame 1963:94–96; Blansitt 1975:27). In the former case, a serialized verb construction is employed, while in the latter case the strategy used is what Heine and Reh (1984) refer to as "prepositional periphrasis," whereby predicates are encoded linguistically as locative complements. Prepositional periphrasis entails that the verb appears in a nominalized form and is governed by an adposition:

(8)   m-ár   m-úsaa daa
        1SG-stand 1SG-eat meat
        'I am eating meat'

or

(9)   m-ár   mbaa k-úsà   daa
         1SG-stand for   NOMI-eat meat

One might argue that verbs such as 'sit, live, stay' are likely to have some locative base. If this should be the case in the examples presented here, then the locative base appears to be largely irrelevant; what matters is that it is some kind of activity, rather than a spatial notion, that has been exploited for the expression of progressive aspect.

There are a number of grammatical concepts for which possibility c applies, that is, concepts that, according to the evidence available, cannot be derived from locative concepts. Negation appears to be one of them. Markers of negation may be derived from nominal, adverbial, or verbal structures (cf. Givón 1979a:204), but we are unaware of any spatial sources.

In most cases where it is possible to reconstruct a lexical source for grammatical markers of negation, that source is verbal in origin, which suggests that ACTIVITY forms the primary category for deriving concepts of negation. Verbs that have given rise to the development of grammatical morphemes expressing negation denote meanings such as 'fail,' 'lack,' 'refuse,' 'deny,' 'decline,' 'be absent,' etc. (cf. Givón 1979a:204), but there are also some verbs that do not contain any inherently negative denotation. The infinitive negation marker -to- of Swahili, for example, is historically derived from the verb -toa 'put out.'

There is a second, perhaps even more serious point to be raised against localism. While SPACE as a source domain does in fact give rise to a wide range of grammatical functions, it does not seem itself to form a "primary" source category: wherever there is evidence available, it turns out that locative concepts themselves are derived from more "concrete," referential entities, in particular from concepts belonging to the category OBJECT. We have proposed a categorial metaphor OBJECT-to-SPACE for this process (secs. 2.4.1, 3.1). As we will demonstrate in chapter 5, salient locative notions originate from physically defined entities such as body parts and environmental landmarks. Thus, in some languages body part terms such as 'back' have been grammaticalized to locative adverbs or adpositions ('behind,' etc.), temporal markers ('after'), case markers, and eventually subordinating conjunctions.

These are but a few observations that suggest that the scope of localism is too narrowly defined to account for a larger body of grammatical structures. Another aspect will be dealt with in 7.2.3.

4.6 Natural Grammar

More recent studies have revealed that there are a number of principles underlying both language structure and language change. These studies are subsumed under the label "natural grammar." This approach has its roots in the notion of

markedness developed by the Prague School linguists, most of all by Roman Jakobson. Proponents of the natural grammar approach in fact tend to treat the distinction unmarked versus marked as being synonymous with the distinction "natural" versus "unnatural." The notion of naturalness was later exploited in phonology (cf. Stampe 1969; Hooper 1976; Donegan and Stampe 1979), where it refers to simplicity in articulation and perception and concerns relative degrees of strain on the speech organs.

More recently, studies in naturalness have focused on morphology (Mayerthaler 1981; Wurzel 1984, 1988; Dressler 1987), which had already been an important theme in Jakobson's work (cf. Jakobson 1962). This research led to the formulation of assertions about "normal and preferable symbolization" in human language and of a number of principles, in particular the following:

a) *Constructional iconicity:* There exists a "diagrammatic relation" between form and meaning. Thus, the number marking pattern found in examples such as *dog-s* (vs. *dog*) is described as being maximally iconic, that in *geese* (vs. *goose*) as minimally iconic, and that in *sheep* (vs. *sheep*) as noniconic.

b) *Uniformity:* The same grammatical category "should" always be expressed by the same formative. The Turkish plural marker *-ler*, for example, may be said to be uniform in that it expresses both nominal (e.g., *Türk-ler* 'the Turks') and verbal plural (e.g., *Türk-tür-ler* 'they are Turks').

c) *Transparency:* One form has one meaning only, and vice versa.

d) *System adequacy or system congruity:* A given form conforms to "normal" patterns within the system to which it belongs.

e) *Stability of morphological classes.*

A given form is said to be (maximally) natural if it conforms to the principles of naturalness or markedness, that is, if it is iconic, uniform, or transparent or exhibits systemic adequacy and stability, etc. That is, more natural forms are said to lack allomorphy, polyfunctionality, to conform to the structure of the language or language type to which they belong, etc.

These principles may be, or come to be, in conflict with one another. Conflicts arise in particular because each component of language structure tends to follow its own principles of naturalness. Naturalness in language correlates with certain extralinguistic parameters such as neurobiological and sociocommunicational structuring; what is "natural" is claimed to be "easy for the human brain" (Dressler 1987:11). Structures and processes in grammar are considered to be natural if the following observations apply to them:

a) They are widespread among languages.

b) They often occur through language change but are themselves comparatively resistant to language change.

c) They are acquired relatively early by children.

d) They are relatively unaffected by speech disorders (Wurzel 1984:165).

What is particularly interesting about these observations is that they are derived from four quite different areas of linguistic behavior. Note that the parameters employed are, for example, both synchronic and diachronic in nature. Indeed, the principles proposed relate in much the same way to typological, universal, evolutional, and diachronic aspects of language; they serve the "optimalization" of linguistic systems, and (natural) linguistic change is therefore claimed to lead to the decline and breaking down ("Abbau") of marked units in language.

Research within the framework of natural grammar has so far focused on phonological and morphological issues and, to a lesser extent, also on syntactic issues. Problems concerning the relation between syntax and morphology appear to be more difficult to handle within this model, and Stolz (n.d., in press) therefore proposes adding a new component, "natural morphosyntax," to the model—one that takes care of the findings of grammaticalization in order to account, for example, for the transition from syntactic to morphological structures.[10]

The question in which we are particularly interested here is, How does grammaticalization theory relate to the principles of naturalness? While the two approaches capture entirely different perspectives of linguistic behavior, they overlap to some extent, and the boundary between them is a fuzzy one—to say the least.

It would seem, however, that there are some striking parallels between the two. One of them concerns the fact that both "natural processes" and grammaticalization are widespread processes in the languages of the world. Another parallel relates to the unidirectionality principle, which is part of both frameworks. Adherents of naturalness theory argue that linguistic change leads from "nonpreferential" marked phenomena to "preferential" unmarked phenomena, not vice versa. Similarly, according to the position maintained by students of grammaticalization, this process leads, respectively, from lexical to nonlexical or from less grammatical to more grammatical structures; or, expressed in terms of the main cognitive parameter employed here, more "concrete" concepts serve as structural templates for the expression of less "concrete" or more "abstract" concepts.

A third, perhaps even more striking parallel can be seen in the fact that certain types of linguistic change are interpreted by both schools in a similar way. The decline of case inflections in a number of Indo-European languages may be described simultaneously as reflecting the effect of principles of naturalness (cf. Wurzel 1988:502ff.) and as being suggestive of grammaticalization in its final stages, which are discussed in Heine and Reh (1984:27ff.) in terms of notions such as simplification and loss.

The latter example draws attention to yet another kind of relation. The transi-

tion from marked to unmarked linguistic forms, which is a characteristic of natural change, tends to coincide with grammaticalization in its initial stage as a strategy for developing new marked forms. Thus, new cognitive structures are introduced and take over the function of declining grammatical devices. For example, spatial concepts, encoded typically as locative adverbial/adpositional phrases, form the most convenient source for expressing case functions for which adequate linguistic means no longer exist (see chap. 6 and 7.2). Accordingly, in many languages worldwide, the decline of case inflections correlates with the introduction of spatial expressions for case marking—with the effect that locative adpositions (*from, at, by, through, to, for,* etc.) have assumed the function of the declining case inflections.

One instance discussed by Wurzel (1988:502) involves the decline of the German genitive suffix *-s,* whose loss would have led to ambiguity in some contexts, such as following proper nouns (*der Ball Peter-s* 'Peter's ball' > **der Ball Peter* 'the ball [called] Peter'). The locative strategy employed had the effect that the (source/ablative) preposition *von* 'from' assumed the function of the lost case inflection (> *der Ball von Peter*). In such instances, natural linguistic change may be said to have "triggered" grammaticalization.

In spite of parallels of this kind, naturalness theory and grammaticalization deal with drastically different perspectives of linguistic behavior. The former is concerned with factors such as co-occurrence and compatibility conditions holding between different linguistic structures both within a given language and between languages, while the latter is essentially concerned with the creative manipulation of language (see 3.4). On the one hand, creativity has a pragmatic base and involves the manipulation of context, the effect being context-induced reinterpretation. On the other hand, it has a psychological base and involves conceptual transfer between different domains of cognition (see 4.1 above).

One main effect of creativity in the process of grammaticalization is that a given linguistic symbol is employed in order to express other concepts, a characteristic result being polysemy. For example, if a verb 'go (to),' as in (10), is employed for the expression of a tense category like future when governing verbal lexemes, as in (11)—a process that can be reconstructed for many languages worldwide (cf. Bybee, Pagliuca, and Perkins, in press)—then this leads to a violation of the "one function–one form" principle, in that one and the same linguistic form happens to express two different meanings or grammatical functions:[11]

(10)   He is going to town soon.
(11)   He is going to come soon.

Once creativity leads to the emergence of a new grammatical meaning or function, however, the later is subjected to some principle that we are inclined to

locate within the realm of naturalness. This principle may be formulated in the following way (for more details, see Heine and Reh 1984; Bybee, Pagliuca, and Perkins, in press):

> If a lexical item acquires a grammatical function, it is likely to lose in phonological substance in that capacity.

On the basis of principle, it may be predicted that, owing to the more grammatical status of 'go (to)' in (11), it tends to be reduced phonologically (see 2.4).[12] As a matter of fact, a number of the phonetic, morphosyntactic, and functional processes described in Heine and Reh (1984:16–45) as being due to grammaticalization may be more appropriately reformulated in terms of a theory of naturalness.

5 From Lexical to Grammatical Concepts

> It would have been . . . fantastic for humans not to begin describing the world of their experience in terms of the human body and its everyday experiences; this is exactly why languages are anthropocentric. [Allan 1989a:11]

The present chapter is devoted to the initial step in the development of grammatical categories. We argued in chapter 2 that there are a limited number of basic cognitive structures forming the input of grammaticalization (2.2). In the present chapter, we look at this input and the way in which it is related to its output.[1]

Our concern is with one of the categorial metaphors proposed in 2.4.1, the OBJECT-to-SPACE metaphor, whereby locative notions are expressed in terms of visible, tangible objects. We deal exclusively with a set of five spatial reference points that are, or may be, distinguished in all languages known to us: ON, UNDER, FRONT, BACK, and IN. Some of these reference points correspond to more than one of the locations (= static spatial relations) defined by Soteria Svorou (1988). Table 5.1 summarizes these correspondences. Each of the five labels corresponds to a number of linguistic terms, for example, *above, over, on top of, up* (for ON); *down, below* (for UNDER); *before, in front of, ahead* (for FRONT); *behind, after* (for BACK); and *inside, within* (for IN).

5.1 Patterns of Transfer

We confine our discussion of strategies for encoding adpositional concepts to what Clark (1973) refers to as the "P-space," that is, space as it is cognitively structured or perceived, rather than to the "L-space," the language of spatial relations (cf. Tanz 1980:32), although our evidence is exclusively linguistic.[2] Our observations are based on a sample of 125 African languages selected according to linguistic (both typological and genetic) and geographic criteria. The sample includes languages from all four African language families—Congo-Kordofanian, Afroasiatic, Nilo-Saharan, and Khoisan—and from all major typological and geographic groupings that have been established in the field of African linguistics (for more details, see Heine 1989). Our approach is essentially "etic," rather than "emic," and we aim at cross-cultural generalizations and ignore cultural diversity wherever possible. A few remarks, however, may be of interest for a better understanding of how spatial orientation is perceived and expressed linguistically in some African societies.

There are, for example, a number of striking differences in the way that front-back orientation is conceptualized. In European languages, objects without in-

TABLE 5.1. Regions and Static Spatial Relations
According to Svorou (1988:410–12)

Reference Point	Region	Spatial Relations
ON	TOP	Superior, top
UNDER	BOTTOM	Inferior, under, base
FRONT	FRONT	Anterior
BACK	BACK	Posterior
IN	INTERIOR	Interior

trinsic fronts and backs, that is, "frontless" (Tanz 1980:17) or "nonfeatured" objects like mountains or stones, are conceived of as facing the speaker or the deictic center.[3] Thus, if I say *The rock is in front of the mountain,* then the rock is located between the mountain and me since the mountain is assumed to be facing me. In many African languages, however, such objects are conceived as facing the same direction as the speaker or deictic center.[4] With reference to our example, this means that, since the mountain is in front of me and is "looking" in the same direction as myself, it has its "back" to me; a tree between the mountain and me therefore is behind rather than in front of the mountain. Accordingly, the Swahili sentence

(1)   ng'ombe wako mbele ya mlima
         cattle   are   front of mountain
         'The cows are behind the mountain'

implies that the cattle are invisible to the speaker since they are located on the remote side of the mountain.[5]

Furthermore, a number of objects that are perceived as "frontless" in Western societies are said to have intrinsic fronts and backs in some African societies. The concept TREE, for example, is a much-quoted example of a "frontless" object in psycholinguistic writings, yet in some parts of Africa it is treated as being intrinsically fronted. Among the Chamus, an Eastern Nilotic-speaking group of the Maa people, the front of a tree is located on the side toward which its trunk is inclined. If the trunk is perceived as being absolutely vertical, then the front is in the direction of either where the biggest branch or the largest number of branches are, in that order.

In section 2.2, we attempted to narrow down the range of conceptual structures serving as the input for grammaticalization. The example of adpositions will now enable us to look at this issue in more detail.

The present survey, which is confined to a consideration of the spatial concepts ON, UNDER, FRONT, BACK, and IN, suggests a typology of essentially two do-

mains forming the source of these concepts (cf. Svorou 1986, 1988): one domain we refer to simply as "landmarks," containing entities such as 'earth,' 'soil,' and 'sky;' the other domain is that of "body parts," like 'head,' 'breast,' 'belly,' and 'back.' There is a third group of concepts that appears to be included in Svorou's (1986) object-part class. It contains items such as 'top,' 'front,' 'bottom,' 'back,' and 'inside' that show no distinct physical contours but rather refer exclusively to spatial relations. Items belonging to this group, which we label "relational concepts," are not treated here as source concepts on the same level with body parts and landmarks, in particular for the following reason: wherever there is sufficient historical information available, it turns out that these concepts derive from either landmarks or body parts.[6] The Swahili lexemes *nyuma* 'behind' and *chini* 'bottom,' which also occur as adverbs and prepositions, are examples of such relational terms. On the synchronic level, they do not show any resemblance to other lexemes; they are, however, historically derived from the Proto-Bantu lexemes *-nùmá* 'back' and *-cí* 'earth, soil' (plus the locative suffix *-ni*), respectively. Accordingly, we shall distinguish two kinds of models serving as the source for the expression of the spatial concepts ON, UNDER, FRONT, BACK, and IN, namely the "landmark model" and the "body part model."

Only two landmarks were found in our sample of 125 languages that are of any statistical significance: the concept 'earth' ('soil,' 'ground'), which forms the source for UNDER, and the concept 'sky' ('heaven,' 'space above'), which forms the source for ON. Other concepts, such as 'field' (for FRONT) or 'hole' (for IN), have been found only in isolated instances.

What appears to form the physical base for the body part model is the location of the body parts of a human being in upright position (cf. Reh 1985a:4). Parts of the body offer an obvious potential, and they are in fact exploited as the primary means for spatial orientation. Table 5.2 shows those body parts that are most frequently employed for the expression of spatial concepts. As table 5.2 suggests, there are certain parts of the body that are rarely or never used for the kind of spatial orientation considered here. Among these are parts of the head such as the hair or chin or body parts such as arm, hand, or knee. Others are employed time and again throughout the African continent, some in an almost predictable way.[7]

Spatial orientation as expressed by some body parts, in particular 'head' and 'buttock/anus,' may differ in its reference points. A partial explanation for this difference may be that, whereas, as we have already stated, it is the human body in upright position that is the main source for the type of spatial concepts considered here, there also exists an alternative model, namely that derived from the animal body. Its occurrence appears to be largely confined to pastoralist societies of Eastern Africa, that is, to ethnic groups typically leading a nomadic life whose survival depends on animal husbandry. These include Western Nilotic, Eastern Nilotic, and Eastern Cushitic peoples inhabiting the semiarid and arid lands of

Table 5.2. Source Concepts of the Body Part Model

Body Part	Spatial Concept				
	ON	UNDER	IN	FRONT	BACK
Head	40			6	
Back	2				80
Face	2			47	
Shoulder	2				
Buttock/anus		22			22
Foot		4			1
Belly/stomach			58		
Heart			2		
Eye				14	
Forehead				8	
Mouth				6	
Breast				6	
Chest				2	
Palm of hand			3		

Note: The sample size is 125 African languages. The numbers refer to the frequency of occurrence of the relevant body part within this sample.

East and Northeast Africa. The pastoralist (or zoomorphic) model is said to be present when the relation between a spatial concept and the location of a given body part can be accounted for not in terms of the human body but rather only in terms of the body of a four-legged animal. We will assume that this is the case, in particular, when ON is metaphorically derived from 'back,' FRONT from 'head,' and BACK from 'buttock' or 'anus.'

The following evidence may be added in favor of this model (cf. Reh 1985a:5ff):

a)   In Dinka, a Western Nilotic language, the term *nhom* 'head' refers to both ON and FRONT (Nebel 1954:423).

b)   In Shilluk, another Western Nilotic language, ON is expressed by both the body parts *wic* 'head' and *kwom* 'back.'

c)   In Somali, an Eastern Cushitic language, the term *dul-* expresses both 'back' and ON.

d)   For Western Nilotic, a noun **tha(a)r* 'buttock, anus' can be reconstructed that

frequently turns up with the locative meaning UNDER, although in Shilluk (from *tha*) and Acholi (from *tɛ*) it also refers to BACK.

e)   In Maasai, the nouns *o-siadí* and *ol-kurum,* both meaning 'anus,' have been grammaticalized to adverbs and prepositions denoting BACK, and the noun *ɛn-dʊkóya* 'head' has been grammaticalized to FRONT (Tucker and Mpaayei 1955:43).

It should be emphasized that, while there are languages that derive concepts of spatial orientation exclusively from human body parts, no language has been found that relies entirely on the animal body. In all languages of the pastoralist societies concerned, there are at least some instances where the anthropomorphic model overlaps with the zoomorphic model (see Heine 1989).

Svorou (1988:136–40) observes that evidence for the existence of the pastoralist, or zoomorphic, model is not confined to African languages. On the basis of data presented in Brugman (1983), she points out, for example, that in Chalcatongo Mixtec the human back (*yata*) is lexically distinct from the animal back (*sïkï*) and that, while *yata* is used for the expression of BACK, *sïkï* is used for ON.

Note that the entities figuring in transfers from "concrete" to spatial concepts are also used for other metaphorical transfers. Examples found in many African languages include the following:

'head'	>	'source of river'
'earth, ground'	>	'country, world'
'eye'	>	'face'
	>	'spring (of water)'

Depending on the language concerned, the conceptual transfer from 'eye' to 'face' may be achieved without involving any morphological marking. Thus, in Bambara *nyɛ́* denotes not only 'eye' but also 'face' as well as 'in front' and 'before.' Not infrequently, however, 'face' is derived from 'eye' by adding some locative marker. In Ewe, for example, the noun *ŋkúme* 'face' is composed of *ŋkú* 'eye' plus the locative suffix -*me* 'inside.' Similarly, in Luba the noun *d-îsu* (class 5) 'eye' changes its meaning to 'face' once it enters either of the locative classes 17 (*kù-îsu*) or 18 (*mù-îsu;* Kuperus and Ilunga 1987:82–83).

We are dealing here with a transfer that is also widespread outside Africa. Thus, Brown and Witkowski (1983) note that a common way of lexically encoding the body part 'face' is through expansion of 'eye' terms. It would seem, therefore, that this pattern of transfer deserves the label "universal." On the basis of a worldwide survey of spatial concepts, Svorou (1988:143) argues that under-

TABLE 5.3. Quantitative Distribution of Types of Source Concepts (sample, 125 African languages)

Source Concept	ON	UNDER	IN	FRONT	BACK	Total
Body parts	46	26	63	83	103	321
Landmarks	34	50	1	1	0	86
"Relational concepts"	28	24	30	18	1	101
Other sources	1	4	3	7	2	17
No etymology available	23	24	21	8	15	91
No data available	2	6	9	17	13	47

lying this expansion there is a directionality of evolution from a smaller body part to a larger one: "In that respect, and considering their spatial contiguity, the derivation involves an expansion of the region that the term referred to originally, to include the next largest bounded area."

The frequency of occurrence of the various types of source concepts in our 125 sample languages is summarized in table 5.3. This table suggests that the body part model forms by far the most important source for the expression of the relevant spatial concepts (see below). The grouping "relational concepts" includes concepts like TOP, FRONT, BOTTOM, etc. that are historically derived from either body parts or landmarks, as the available evidence suggests (see above). That the total number of source concepts (134 in all cases concerned) exceeds the number of the 125 sample languages is due to the fact that in some languages a given spatial concept is derived from more than one model.

5.2 Generalizations

The quantitative data presented above indicate some clear-cut patterns. In table 5.4, they are rearranged with reference to the choice of source models. This quantitative distribution allows for the following generalizations:

a)   The five spatial notions considered here may be divided into two types in accordance with their respective source models. On the one hand, there are the concepts ON and UNDER, which are derived in much the same way both from landmarks and from body parts. On the other hand, there are the concepts IN, FRONT, and BACK, which are derived almost exclusively from body parts.

b)   Within these two types of spatial notions, there are further differences with regard to the extent to which these concepts derive from the two source models. Thus, UNDER is much more strongly associated with the landmark model than ON, and BACK is more strongly associated with the body part model than any of the other spatial concepts.

TABLE 5.4. The Choice of Source Models

Spatial Concept	Landmark Model	Body Part Model
ON	34	46
	(27.2)	(36.8)
UNDER	50	26
	(40)	(20.8)
IN	1	63
	(.8)	(50.4)
FRONT	1	83
	(.8)	(66.4)
BACK	0	102
		(81.6)

Note: The numbers in parentheses are percentages and refer to the total of 125 African languages.

c)   The body part model is more predominant than the landmark model. There appears to be no African language that derives all five concepts from landmarks, while a number of languages have been found that rely exclusively on the body part model, that is, that derive all five concepts from this model (see below).

d)   Not infrequently, one and the same spatial concept may be derived from more than one model. For example, we have drawn attention to the fact that the body of humans and that of four-legged animals may provide competing source models. More frequently, such competition can be observed between the landmark model and the body part model. Thus, in Ewe, the postpositions *dzí* (< *'sky') and *ta-́me* (< *'head-in') are derived from the landmark and the body part model, respectively. Both mean 'on, above' and are largely synonymous in certain sentences, such as the following:[8]

(2)   é-le   βu-á   dzí
         3SG-be   car-DEF   ON
         'It is on top of the car'

(3)   é-le   βu-á   tá-me
         3SG-be   car-DEF   ON
         'It is on top of the car'

In conclusion, another far-reaching generalization should be added. We observed in *b* above that the notions ON, UNDER, IN, FRONT, and BACK differ considerably in the extent to which they derive from the landmark and the body part model, respectively. Our survey suggests that they can be arranged on an

implicational scale of the following kind with regard to the choice of these two models:

(4)   UNDER > ON, IN > FRONT > BACK

This scale involves the following implication: if any of these spatial concepts is derived from the body part model, then none of the concepts to its right may be derived from the landmark model. For example, if UNDER derives from a body part, then neither ON, IN, FRONT, nor BACK may have a landmark as their source; that is, they are likely to derive from body part concepts as well. Similarly, if ON and/or IN derive from a body part, then FRONT and BACK are likely to do so as well.[9] In our sample of 125 languages, there is only one language—Newole (Thomann 1905)—that contradicts this pattern.

Finally, our concern is briefly with the kind of cognitive activity leading from the domain of thing-like entities (OBJECT) to the domain of SPACE. As we have shown above (3.1), this activity may extend much further, involving more abstract domains such as TIME and QUALITY, which will not be dealt with here. There is, however, one problem that requires further consideration.

The impression conveyed in the preceding paragraphs is that the process from the OBJECT to the SPACE domain involves a discrete step, one that is characteristic of metaphorical transfer. Although there is good evidence to support a claim to this effect, there is a further alternative perspective that suggests that we are dealing with a gradual, continuous rather than a discrete, discontinuous development (see chap. 3). Accordingly, the transition from concrete objects such as body parts or environmental landmarks to spatial concepts such as BACK or ON is marked by a theoretically indefinite number of intermediate steps. There are, however, a few more salient points on this continuum. In his grammar of Twi, Christaller ([1875] 1964:77–78) identifies three points for each of the eight "nouns of place" found in this language. He defines these points thus:

a)   a place that is at the same time a part of a thing (= "name of a thing");
b)   a place without relation to a particular thing, though with reference to the general space in which we live, to the universe, or to the upright human body (= "nouns of place");
c)   a place with reference to a thing (= "noun of relation" or "postposition"; Christaller [1875] 1964:77).

Thus, it would seem that, in the development from body part to spatial concept, the following more salient stages can be distinguished in African languages:

STAGE		CONCEPTUAL DOMAIN
0	Body part of X	OBJECT
I	Subpart of X, spatially defined	OBJECT/SPACE
II	Space as part of and adjacent to X	SPACE/OBJECT
III	Space adjacent to X	SPACE

An example from Swahili, involving the word *mbele* 'front,' may illustrate these stages. Note that there is no longer a Stage 0 here since the lexeme **-bele* 'breast,' from which *mbele* is historically derived, is now obsolete as a body part term:[10]

Stage I:

       mbele ya gari lake ni nyeusi
       front of car his is black
       'The front part of his car is black'

Stage II:

       taa   ziko mbele ya gari
       lamps are front of car
       'The lamps are on the front part of the car'

or

       mbele ya gari lake ni peusi
       front of car his is LOC.black
       'The space in front of his car is black (e.g., in a garage)'

Stage III:

       gari liko mbele
       car is   front
       'The car is in front/ahead'

5.3 Linguistic Implications

In section 5.1, we were concerned with the kind of cognitive activity leading from concrete objects such as body parts or landmarks to expressions for spatial orientation. This activity is metaphorical in nature. It involves a transfer from one domain of human experience to another, in that spatial reference points are conceptualized in terms of visible, tangible entities. We have referred to these domains by means of the labels SPACE and OBJECT, respectively, and to the cognitive activity linking these two domains as "categorial metaphor" (see 2.4.1; Claudi and Heine 1986). The consequences that this activity has for language structure are considerable. In more general terms, the transition from the OBJECT to the SPACE domain triggers the following linguistic changes:

a)   Since concepts of the OBJECT domain are typically encoded as nouns and those of the SPACE domain as adverbial words, we witness a transition from nominal to adverbial word classes like adverbs and adpositions.

b)   This morphological transition entails a corresponding syntactic transition from a noun phrase to an adverbial phrase constituent.
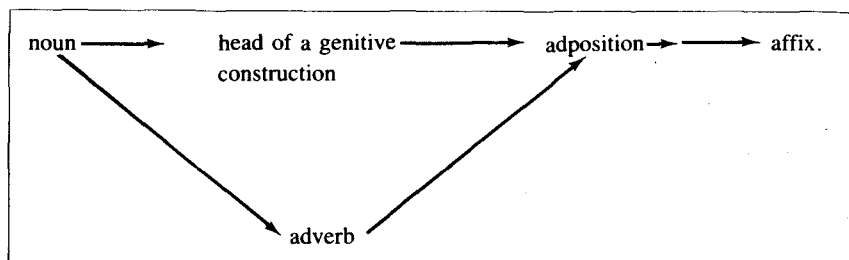
Fig. 5.1 From noun to adposition.

The structure of this process is sketched roughly in figure 5.1 (cf. Svorou 1986). In the present section, we shall look at some aspects of this process; a more detailed discussion of the linguistic implications is reserved for chapter 8.

A number of paradigms have been employed by students of African languages to define the place of adpositions in grammar. The following positions in particular have been maintained:

a)   Adpositions, or "prepositions," are words that can be translated by prepositions in a given matrix language, like English, German, or French.

b)   They are homophonous with or similar to nouns.

c)   They are nouns or form a distinct subclass of nouns.

d)   They are cognate with nouns.

e)   They are historically derived from nouns.

Each of these positions captures some characteristic of adpositions, but none of them would seem to do justice to their nature. Taken together, however, these positions reflect parts of the structure underlying adpositions in many African languages. To account for this structure, the following observations must be taken into consideration.

First, there is an etic/comparative perspective that suggests that "adpositional concepts" such as ON, UNDER, IN, FRONT, and BACK are linguistically distinguished in some way or other, both in European and in African languages (cf. position *a* above).

Second, these concepts are linguistically encoded by means of terms derived from "more concrete" concepts, that is, from nouns for landmarks and body parts, in accordance with the constraints outlined in section 5.2. This accounts for both the synchronic positions *b* and *c* on the one hand and for the diachronic interpretations offered in *d* and *e* on the other.

Third, the more the use of these nouns for "adpositional concepts" is generalized, the more they lose in nominal properties and drift away from their respective lexical source. The result is a continuum of decreasing nominality along which any given adposition may be located (see below).

As we have argued in 3.1, in such cases we are dealing with a linear continuum that should be interpreted more appropriately as a chain rather than as a scale. For present purposes, however, we will be confined to breaking up this linear structure into a number of points, each of which exhibits some kind of distinct linguistic behavior. The postpositions of Ewe, used for the expression of the spatial concepts ON, UNDER, IN, FRONT, and BACK, will serve as an example of such a linear structure.[11] The parameters employed for defining these points (for each parameter, an abbreviated reference label is added) are in particular as follows:[12]

a) ability (+) versus inability (−) to express a morphological number distinction, that is, typically, to take a plural marker (PL);

b) ability (+) versus inability (−) to take a demonstrative (DEM);

c) ability (+) versus inability (−) to take adjectival qualifiers (ADJ);

d) ability (+) versus inability (−) to permit relativization when not being qualified by a genitive noun phrase (REL);

e) ability (+) versus inability (−) to form the sentence subject when not being qualified by a genitive noun phrase (SUBJ; cf. *h* below);

f) ability (+) versus inability (−) to take first- or second-person possessive pronouns as modifiers (PRON);

g) presence (+) versus absence (−) of a genitival/subordinating morphology (GEN);

h) ability (+) versus inability (−) to permit relativization when qualified by a genitive noun phrase (REL GEN);

i) ability (+) versus inability (−) to form the sentence subject as the head of a genitive noun phrase (SUBJ GEN; cf. *e* above);

j) ability (+) versus inability (−) to take third-person possessive pronouns as modifiers (PRON 3RD; cf. *f* above).

On the basis of these parameters, it is possible to set up an index of nominality, that is, to locate a given adposition along a scale ranging from a prototypical noun to a prototypical adposition: the higher the number of pluses, the more nominal traits the relevant adposition has, and vice versa. Accordingly, an adposition showing a plus with respect to all parameters would be largely indistinguishable from a noun, while a "prototypical adposition" would be one that has a minus in the case of all parameters concerned.

The African languages studied by us vary considerably in the extent to which their adpositions have nominal traits. More important, however, variation is also found among the adpositions of one and the same language. The present case of postpositions in Ewe may serve as an example. Table 5.5 shows the degree of nominality for the various postpositions used in this language to denote the concepts ON, UNDER, IN, FRONT, and BACK. These postpositions are arranged according to their relative degree of nominality. Note that three of these concepts, ON, UNDER, and IN, are expressed by means of two postpositions each,

TABLE 5.5. Degree of Nominality of Some Ewe Postpositions

	Postpositions (concept and lexical source)							
parameter	té (under, ?)	me (IN, ?)	dzí (ON, ?)	ŋgɔ (FRONT, ?)	megbé (BACK, 'back')	ta'-me (ON, 'head')	gɔ-me (UNDER, 'anus')	dɔ-me (IN, 'belly')
a) PL	−	−	−	+	+	+	+	+
b) DEM	−	−	−	+	+	+	+	+
c) ADJ	−	−	−	+	+	+	+	+
d) REL	−	−	−	+	+	+	+	+
e) SUBJ	−	−	−	+	+	+	+	+
f) PRON	−	−	−	+	+	+	+	+
g) GEN	−	−	+	+	+	+	+	+
h) REL GEN	+	+	+	+	+	+	+	+
i) SUBJ GEN	+	+	+	+	+	+	+	+
j) PRON 3RD	+	+	+	+	+	+	+	+

Note: When used with a first- or second-person pronoun as a modifier (parameter *f*), these lexemes refer to the human body. Thus, *ŋgɔ nye* (FRONT 'my') means 'the front part of my body,' not 'the front of an object belonging to me.'

which, in turn, are composed of two morphemes each: the second morpheme, *me,* also occurs as a simple postposition ('inside'), while the first denotes a body part, *ta'* 'head,' *(a)gɔ* 'buttock,' and *dɔ* 'belly,' respectively.

The genitival morphology mentioned in parameter *g* refers to the "alienable" genitive marker *pé,* where a plus means ability and a minus inability to associate with this marker.[13] Thus, the lexeme *me* (IN) has a plus since it optionally takes the genitive marker *pé,* as in (5a), whereas *té* has minus since it does not permit the use of the genitive marker, as in (5b):

(5a)   βu' sia (pé) me   le yibɔɔ
       car this (of) inside be black
       'The interior of this car is black'

(5b)   βu' sia té   le yibɔɔ   *βu' sia pé té le yibɔɔ
       car this bottom be black
       'The bottom of this car is black'

The data presented in table 5.5 suggest that all locative lexemes share three nominal characteristics: they permit relativization when qualified by a genitive noun phrase (*h*), they may be used as subject nominals when governing a genitive

noun phrase (*i*), and they may take a third-person possessive pronoun as a modifier (*j*), for example:

(6)   é-dzí   kɔ
         3SG.POSS-ON be.clean
         'Its top is clean'   (*i*)

(7)   míé-le é-té
         3PL-be 3SG.POSS-UNDER
         'We are under it' (*j*)

These lexemes may be distinguished, however, on the basis of their relative degree of nominality. Thus, *té* and *me* show three nominal features, *dzí* shows four, and the remaining lexemes are nominal with respect to all ten parameters; that is, they are virtually indistinguishable from nouns.

One might have expected that among the parameters proposed there is at least one relating to the morphosyntactic status of the lexemes concerned: whether they are used as nominal or as adverbial morphemes and, accordingly, whether they govern noun phrases or adverbial phrases. That there is such a distinction is suggested by examples like the following. The lexeme *me* (IN) forms the head of a noun phrase in (8a) but the head of an adverbial phrase in (8b), as can be deduced, for example, from the fact that *me* would be referred to pronominally by either *ésia* 'this' or *núká* 'what?' in (8a) but by *afímá* 'there' or *afíká* 'where?' in (8b). In most cases, however, *me,* or any of the other postpositions for that matter, may be interpreted simultaneously as the head of a noun phrase and the head of an adverbial phrase, as is the case in (8c), where *é me* can be pronominalized by either *núká* 'what?' or *afíká* 'where?'.

(8a)   asi   á   me kɔ
         market DEF IN be.clean
         'The market is clean'

(8b)   é-le   asi   á   me
         3SG-be market DEF IN
         'She is at the market'

(8c)   me-kpɔ́ é-me
         1SG-see 3SG.POSS-IN
         (i) 'I saw its interior'
         (ii) 'I looked into it'

This is an inherent characteristic of transitional stages in grammaticalization: when a new structure (i.e., an adverbial morphosyntax in this example) is intro-

duced, the old structure (a nominal morphosyntax) is generally still in use, the result being overlapping (see 8.4).

The questions one might wish to raise now are,

> Why are there doublets of postpositions in the case of the concepts ON, UNDER, and IN but not in the case of FRONT and BACK?
>
> Why are there two sets of postpositions, one that consists of one morpheme only and another that is composed of two morphemes?

The data available suggest the following answers. The lexemes *té* (UNDER), *me* (IN), and *dzí* (ON) have been grammaticalized to the extent that they have lost many of their former nominal characteristics. To make up for this loss, the language has developed a new set of lexemes for the expression of the spatial concepts UNDER, IN, and ON, respectively. These lexemes have a number of traits in common: they are derived from body parts,[14] have the "defective nominal" *me* as their head, and are fully nominal, that is, may be used in contexts where *té*, *me*, and *dzí* may not.[15]

It would seem that we are dealing with a kind of "morphological cycle" where nominals are grammaticalized and the grammaticalized lexemes *té*, *me*, and *dzí* are now being replaced by a new set of nominals, thereby starting a new cycle. Thus, there are new means for expressing UNDER, IN, and ON in contexts where parameters *a–f* apply. With reference to parameters *g–i*, however, some kind of "synonymy" results since the old means compete with the functionally equivalent new means. Thus, there are two sets of largely synonymous "postpositions": on the one hand the old set consisting of the "defective nominals" *té*, *me*, and *dzí* and on the other hand the new set of the fully nominal lexemes *gɔ-me*, *dɔ-me*, and *ta-̰me* formed according to a new pattern.

One might ask whether there is any justification for assuming that the postpositions *té*, *me*, and *dzí* are really derived from nouns. That they in fact are can be concluded from evidence like the following. When a lexeme is grammaticalized, it tends to survive in its earlier state in a "frozen" form in certain idiomatic contexts, where its use is no longer "productive." This is exactly what can be observed with these postpositions. For example, according to table 5.5, they may not be pluralized, may not take demonstratival or adjectival qualifiers, or may not occur with first- or second-person possessive pronouns. Sentences like the following are therefore ungrammatical:

(9)   *βu lá   le dzí-nye
          car DEF be ABOVE-1SG.POSS
          'The car is above me'

(10)   *me wo   le kɔ
          IN 2SG.POSS be clean
          'Your interior is clean'

Almost predictably, however, all three postpositions may be used with first-
or second-person possessive pronouns in certain idiomatic expressions, for
example:

(11)   é-le   dzí-nye
        3SG-be ON-1SG.POSS
        'It is (a burden) on me, it oppresses me'

(12)   dzi   le me-wo   a?   ee, é-le   me-nye.
        heart be IN-2SG.POSS Q?   yes, 3SG-be IN-1SG.POSS
        'Are you brave? Yes, I am.

(13)   é-poe-e   ɖé   té-nye
        3SG-beat-3SG toward UNDER-1SG.POSS
        'He forced me'

5.4 Discussion

In the preceding paragraphs, we have tacitly assumed that, given a certain
linguistic form that refers to both concrete, tangible entities (i.e., concepts of the
OBJECT category) and to locative notions (i.e., concepts of the SPACE category),
the latter are derived from the former. We have argued, for example, that, in a
linguistic expression designating both a body part (e.g., 'breast') and a spatial
relation ('ahead'), the former meaning is historically prior to the latter. It would
seem that the only safe way to substantiate this claim is to have recourse to histor-
ical information.

One example, taken from Swahili, may suffice to illustrate the kind of pro-
cedure adopted here. The immediate ancestor of Swahili is Proto-Bantu, which
again is a subgroup of the Niger-Congo family.[16] The Swahili terms for the refer-
ence points ON, UNDER, FRONT, BACK, and IN and their cognates reconstructed
for Proto-Niger-Congo are listed in table 5.6.[17] Table 5.6 suggests that the rele-
vant locative terms of Swahili are with one exception, *ndani,* for which we have
no etymological information, derived from concepts referring to concrete, visi-
ble, rather than locative, entities.[18]

The development from concrete to locative meaning appears to have happened
much later, at the stage of Proto-Bantu, as table 5.7 suggests: the locative terms
of Swahili can be reconstructed as having both concrete and locative meanings in
Proto-Bantu. Essentially the same applies to all the other historically verifiable
instances of the OBJECT-to-SPACE metaphor discussed in this chapter.

In elucidating the processes that are involved when a "more abstract" domain
like SPACE is conceptualized in terms of a "more concrete" domain, we have
been dealing with a unidirectional development from noun to "postposition" that
surfaces in the synchronic state of a language in the form of a linear structure

TABLE 5.6. The Etymological Source of Five Terms of
Spatial Reference in Swahili

Swahili		Proto–Western Nigritic Cognates (Mukarovsky 1976–77)	
juu,	'top, above'	*-gúlu-,	'sky (above)'
chini,	'below'	*-cí,	'country, ground'
mbele,	'front, before'	*-bil-,	'female breast, milk'
nyuma,	'behind'	*-uma,	'back, spine'
ndani,	'inside'	no cognate	

characterized by a decreasing degree of nominality on the one hand and in the
form of frozen relics as they turn up in certain idiomatic expressions on the other.
These examples suggest that a description of "adpositions" in terms of estab-
lished word classes is likely to miss certain insights about the nature of these
units. It would seem that an approach that aims at accounting for "adpositions"
has to take the following observations into consideration:

a)   "Adpositions" used to express concepts such as ON, UNDER, IN, FRONT, and
        BACK owe their genesis to a cognitive process leading from the domain of con-
        crete, thing-like concepts to the domain of space. This process is metaphorically
        structured and has both a discontinuous and a continuous aspect (see chap. 3).

b)   The linguistic result of this process is a development from concrete nouns such
        as body parts and environmental landmarks to locative morphemes, from a
        word class that may be marked for number, referentiality, gender, and case and
        that may be modified by adjectives, relative clauses, etc. to one that lacks all
        these characteristics.

c)   In the synchronic state of a given language, these developments are reflected in
        the form of a grammaticalization chain, that is, a linear structure, that may be
        described as either a continuum, a scale, or a chain. At the one end of this linear
        structure there are full-fledged concrete nouns, and at the other end there are
        invariable locative morphemes that have little in common with nouns. In order
        to describe the morphosyntax of a given "adposition" or of a set of "adposi-
        tions" in a given language, it is necessary to determine its range of possible uses
        along this linear structure. This means, for example, that an Ewe postposition
        like *té* (UNDER) behaves like a noun with reference to parameters *h–j* of table 5.5
        but does not do so with reference to *a–g*. In this respect, *té* contrasts with a
        postposition such as *ŋgɔ* (FRONT), which is nominal with reference to all param-
        eters considered.

TABLE 5.7. The Proto-Bantu Source of Five Terms of Spatial
Reference in Swahili

Swahili		Proto-Bantu Cognates (cf. Guthrie 1967–71)	
juu,	'top, above'	*-gudú,	'sky, top'
chini,	'below'	*-cí,	'country, ground'
		*-cɪ,	'underneath'
mbele,	'front, before'	*-bééde,	'breast, udder, milk'
		*-bede	'front'
nyuma,	'behind'	*-numá,	'back, rear'
ndani,	'inside'	*-da,	'intestines, abdomen, inside'

We have thus far shown the grammaticalization channel leading to the emergence of linguistic expressions for the concepts ON, UNDER, IN, FRONT, and BACK. The evidence available suggests that the reservoir of concepts serving as the input of grammaticalization can be defined more narrowly. Wherever there is etymological evidence available, the source of these spatial concepts turns out to be a physically defined entity, either a landmark like 'sky' or 'earth/soil/ground' or a body part;[19] thus, linguistically speaking, we are dealing with a derivation of spatial concepts from concrete nouns.

In accordance with the implicational scale proposed in section 5.2, it is possible to reduce the range of source items considerably. For instance, if UNDER is derived from a body part item, then the other four concepts may not be derived from landmarks. It would seem that this scale, which has the structure

UNDER > IN > FRONT > BACK,

represents one of increasing "centricity." UNDER exhibits the weakest and BACK the strongest degree of "centricity" in that UNDER, as well as ON, is typically stable, for example, in a speech situation: both have the same reference for speaker and hearer, while BACK and FRONT have a different significance for speaker and hearer and, hence, are more sensitive to spatial "centricity." "Centricity" in this case refers primarily to anthropomorphic predisposition. Thus, Fillmore observes: "The up/down axis is determined by our recognizing the direction of the pull of gravity, and is therefore not to be explained in terms of egocentric or anthropocentric predispositions of language users. . . . I think it would not be misleading to suggest that left/right is essentially egocentric . . . , that front/back is essentially anthropocentric . . . , while the up/down axis is founded on relations existing in the environment independently of ourselves" (Fillmore 1982:36–37).

Since we are not concerned here with the distinction LEFT versus RIGHT, an-

thropocentricity appears to be the focal parameter distinguishing the
FRONT/BACK from the ON/UNDER (= up/down) axis. The degree of "centricity"
correlates significantly with the choice of source models. Thus, ON and UNDER
are most frequently associated with the landmark model, whereas FRONT and
BACK are virtually always derived from the body part model.

5.5 N-Adpositions versus V-Adpositions

In our discussion thus far, we have been dealing with only one type of
adpositional entity, namely noun-based adpositions.[20] Some of the exemplified
languages above, however, have a further adpositional type at their disposal,
where both occur in mutually exclusive environments, have contrasting syntactic
functions, and differ in their grammaticalization behavior. Since the former are
syntactically determined by their relation to the noun phrase they govern, where-
as the latter are defined with reference to the valency of the main verb (see
below), we shall refer to the former as "N-adpositions" and to the latter as "V-
adpositions."[21]

   Since European languages do not mark the distinction between these two
types, the need for differentiating between them has not occurred to many Euro-
pean linguists working on languages for which this distinction is crucial.[22] The
major characteristics of these two types are as follows:

a)   Whereas V-adpositions introduce optional participants or oblique case ex-
         pressions, that is, adjuncts, within the clause, N-adpositions turn noun phrases
         into adverbial phrases. Accordingly, V-adpositions belong to the morphosyntax
         of the clause and N-adpositions to that of the adverbial phrase.

b)   Since V-adpositions serve to introduce adjuncts, they are never found on obliga-
         tory participants of the clause, that is, on complements.[23] N-adpositions, on the
         other hand, may occur either on complements or on adjuncts.

c)   Accordingly, V-adpositions are also used, at least in many languages that mark
         the distinction, to introduce adverbs forming adjuncts, whereas N-adpositions
         do not combine with adverbs.

d)   While the semantic properties of the two types overlap to some extent, N-ad-
         positions typically describe a spatial relation, whereas V-adpositions may
         define either a direction or a point; or, to use Kölver's terminology for Thai, N-
         adpositions express "static local relations," whereas V-adpositions tend to ex-
         press "directional local relations."[24] N-adpositions denote reference points like
         those discussed in the preceding sections, that is, ON, UNDER, FRONT, BACK,
         and IN as well as a number of others, whereas V-adpositions refer to concepts
         such as PLACE, SOURCE, GOAL, PATH, and BENEFACTIVE/DATIVE.

e)   In terms of the framework proposed by Talmy (1985b), one may say that N-
         adpositions tend to provide information on the shape and/or dimensionality of
         the ground, whereas V-adpositions are more likely to describe the relation be-
         tween figure and ground (cf. Brugman and Macaulay 1986).[25]

f)   The size of class membership differs considerably between the two types. The
         number of V-adpositions tends to be highly limited: in some languages, such as
         Maa, an Eastern Nilotic language spoken in Kenya and Tanzania, there exists
         only one (*té*; see Heine and Claudi 1986b:100–109); and, in languages where
         there are a few, one is likely to function as a kind of "multipurpose" adposition
         used to introduce oblique case expressions or optional participants, that is, ad-
         juncts. N-prepositions are much more numerous; in some grammars their
         membership is described as open ended.

g)   As we have seen in the preceding sections, N-adpositions are likely to be de-
         rived from nouns denoting either body parts or landmarks. V-adpositions, on
         the other hand, appear to have a different lexical source (see below).

In accordance with this characterization, optional adverbial phrases in lan-
guages that do not distinguish between the two types of adpositions contrast
sharply with those of languages that do since the latter require two adpositions;
that is, the structure of optional adverbial phrases in languages of the latter type
has the following form:[26]

(14)   V-adposition–N-adposition–NP

Two examples from languages that consistently mark this distinction may illus-
trate this structure:

(15)   *Ewe*:
        é-no   déha   le xɔ   megbé
        3SG-drink palm wine at house behind
        'He drank palm wine behind the house'

(16)   *Maa (Samburu dialect)*:
        k-é-wwón te sedí   ɛ́ n-kají
        k-3SG-stay at behind of FEM-house
        'He stays behind the house'

Both (15) and (16) contain two adpositions, a V-adposition, which is *le* in (15)
and *te* in (16), and an N-adposition, which is *megbé* in (15) and *sedí* in (16). The
sentences would be ungrammatical if either of the two adpositions were omitted.

5.5.1 Two Case Studies

In the present section, we illustrate this distinction by looking briefly at two
languages, Ewe and Hausa.[27] We leave aside all details that are not immediately
relevant to the issue under discussion.

5.5.1.1 Ewe

In his grammar of Ewe, Westermann (1907:52–53) describes N-adpositions as
locative nouns that in some cases have lost their original meaning and now serve

to denote a place. He adds, "Since locative nouns are always placed after the noun or pronoun, they are also called *postpositions.*" Syntactically, they behave like "decategorialized" nouns forming the head of "inalienable genitive constructions";[28] that is, they follow the noun phrase that they govern without any linking particle, they may not be pluralized, and they do not take modifiers. Westermann (1907:53–54) mentions nearly twenty N-adpositions, but this list is by no means exhaustive. A number of them were discussed in section 5.3; other common ones are *ŋuti* 'outside,' *gbɔ* 'at, next to,' *dome* 'between, under,' and *tá* 'on, above, because of.'

V-prepositions are treated by Westermann (1907:96) under the heading "transition from verbs to prepositions," where he mentions that some Ewe verbs have assumed the function of prepositions and tend to lose their verbal characteristics, such as the ability to be conjugated. A list of these "verbids" or "co-verbs", as they have been called more recently (see Ansre 1966; Hünnemeyer 1985), is provided in section 8.6. They express case functions such as PLACE (*le*), GOAL (*ɖé*), SOURCE (*tsó*), PATH (*tó*), and BENEFACTIVE/DATIVE (*ná*).

The most important of them is *le,* which is derived from the verb *le* 'be at' and serves as a kind of multipurpose preposition for introducing various kinds of adjuncts or oblique case expressions. In sentence (17), *le* introduces a prepositional phrase consisting of a noun plus the N-adposition *dzí* 'on, above, top,' while in (18) it introduces an adverb and, hence, does not contain an N-adposition (see *c* above):

(17)   me-ɖi   le sɔ́   dzí
         1SG-descend at horse   on
         'I dismounted the horse'

(18)   me-wɔ dɔ'   le afímá
         1SG-do work   at there
         'I worked there'

Thus, whereas the N-adpositions of Ewe are derived from nouns, all V-adpositions are historically verbs. Both have retained morphosyntactic characteristics of their respective source, or, phrased in terms of a synchronic account, they are part of a grammaticalization continuum ranging from a noun or verb, respectively, at the one end to a function word at the other. Note that, whereas V-adpositions precede the noun phrase that they govern, N-adpositions follow it. We return to this point in Section 5.5.2.

5.5.1.2 Hausa

In Hausa grammars, three kinds of prepositions are usually distinguished: simple prepositions, nominal prepositions, and compound prepositions (cf. Taylor

1959:74). The first, which are also referred to as "nominal phrase introducers" (Kraft and Kirk-Greene 1973:85), largely correspond to our notion of V-adpositions, the most common ones being *à* 'at, in, on,' *dà* 'with,' *gà* 'to, for,' and *dàgà* 'from.' Nominal prepositions, also called "denominal prepositions," "nouns in the construct state," or "relational nouns," have the characteristics of N-adpositions.[29] Most of them are derived from concrete nouns and behave like decategorialized head nouns in genitive constructions,[30] for example, *cikin* 'in, inside' (cf. *cikìi* 'stomach'), *gàban* 'in front of, before' (cf. *gàbaa* 'front part of body'), and *baayan* 'behind, after' (cf. *baayaa* 'the back').[31] Compound prepositions are made up of two markers each, one of them invariably being a V-adposition. They form a more heterogeneous group and will remain out of consideration here.[32]

A slightly different treatment of adpositional concepts in Hausa is presented in Pawlak (1986:4), who argues that spatial constructions in this language have (19) as their basic structure, as exemplified in (20), where *a* forms the "preposition" and *cikin* (= *ciki* 'the inside' + *-n* genitive) the "locative noun":[33]

(19)   preposition–locative noun–noun

(20)   Ya ba   shi takarda a cikin ambulon
          he give him letter   in inside envelope
          'He gave him the letter in an envelope'

Pawlak's term "preposition" corresponds to our notion of V-adposition and "locative noun," which Pawlak (1986:4) defines as "a noun denoting a fragment of space," to that of N-adposition. Thus, (19) is identical to (14), which we have proposed as the basic structure found in languages distinguishing between N- and V-adpositions.

Pawlak adds that locative nouns are suggestive of a "category of neighbourhood" and prepositions of a "category of direction." Whereas the former are derived from concrete nouns, many of which denote body parts, prepositions are said to consist of a restricted set of exponents, which are as follows:

Preposition	Function	Pawlak's Terms	Gloss
a	PLACE	Locative	'at, in, on'
zuwa	GOAL	Adlative	'to'
daga	SOURCE	Ablative	'from'
ta	PATH	Perlative	'via, over'

These prepositions are not used when the relevant function is already contained in the valency of the preceding verb. For example, the PATH marker *ta* does not

occur after verbs such as *wuce* 'pass, walk through' or *k'etare* 'cross' since PATH is inherent in the meaning of these verbs, for example (Pawlak 1986:33):

(21)   Ya wuce gari
          he pass town
          'he walked through the town'

5.5.2 Discussion

Viewed from the perspective of Ewe, Hausa, or Maa, prepositions in European languages may be called *portmanteau* markers since they combine the functions of both V- and N-adpositions. The result is that European languages do not distinguish morphologically between complements and adjuncts whereas Ewe, Hausa, and Maa do so consistently. For example, the morphosyntax of the adverb *here* is the same in (22) and (23), while in Ewe the two sentences would be distinguished, as in (24) and (25), which are translations of (22) and (23), respectively: since *afî* is a complement in (24), it may not take a V-preposition; in (25), however, *afî* forms an adjunct, and the use of the V-preposition *le* is therefore obligatory:

English:
(22)   He lives here

(23)   He works here

Ewe:
(24)   é-nɔ   afî
          3SG-stay here
          'He lived here'

(25)   é-wɔ   dɔ'   le afî
          3SG-do work at here
          'He worked here'

The questions that arise here are in particular the following:

a)   Why do some languages have a morphological distinction between the two types of adpositions, whereas others do not?
b)   Why do V-adpositions consistently precede N-adpositions in the languages considered?
c)   Why do N-adpositions precede the noun phrase they determine in Hausa but follow it in Ewe?
d)   What accounts for the different syntactic behavior of the two types of adpositions?

To answer question *a* would require an extensive typological analysis that is beyond the scope of the present work; we therefore set it aside for the present, reserving it for a separate treatment. It might seem, for example, that a distinction between N- and V-adpositions is particularly widespread in languages of the analytic-isolating type such as Ewe or Thai (cf. Kölver 1984); it is, however, not confined to such languages, as the example of the Maa language, which is characterized by the presence of both agglutinating and inflectional structures, indicates.

The remaining questions, however, can be answered within the framework proposed here. In all cases where adequate information is available, N-adpositions are derived from nouns, especially from nouns denoting body parts and landmarks, as we demonstrated in sections 5.1 and 5.2. Their use as adpositions is the result of conceptual transfer, or, more precisely, it results from the application of a categorial metaphor called OBJECT-to-SPACE, whereby spatial orientation is conceptualized in terms of concrete entities such as parts of the body or other tangible and/or visible items.

The effect of this metaphor is immediately reflected in the morphosyntactic behavior of N-adpositions. Since they are introduced as heads of genitive/possessive constructions, they are likely to retain some exponent of their pregenitive morphology, even if they have been grammaticalized to the extent that they have lost their erstwhile nominal meaning and now express exclusively locative relations. Thus, N-adpositions have the position of head nouns in "inalienable" possessive constructions in Ewe, and in Hausa they have retained their genitive marker, which is *-n* for masculine and *-r* for feminine head nouns. While N-adpositions tend to exhibit some nominal characteristics, they have lost others, such as the ability to take nominal modifiers or markers of number or definiteness.

V-adpositions appear to be of verbal, rather than of nominal, origin. This is most obvious in Ewe, where all five V-adpositions still occur as full verbs and have retained part of their verbal morphosyntax (see Hünnemeyer 1985; cf. 8.6). The only V-adposition found in the Maa language, *tè* 'at,' might be historically derived from the verb *-tíí* 'be at' (Heine and Claudi 1986b:106).

The lexical source of V-adpositions in Hausa is more difficult to trace. There is no etymology available for *a,* which, according to Frajzyngier (1987:89), can be traced back to a stative locative preposition **a* in Proto-Chadic. *Zuwa* 'to' appears historically to be a nominalized verb meaning 'going, coming,'[34] and *ta* 'via, over' might be derived from a verb **tV* 'stop at/in.'[35]

While the history of V-adpositions in Hausa is far from clear, there appears to be no indication that they have a nominal source, and the most plausible assumption would be that they are verbal in origin. Thus, Frajzyngier argues that in Proto-Chadic "the role of marking direction 'to' or 'from' was carried not by prepositions but by serial verb constructions" (Frajzyngier 1987:94).

These observations suggest that the structure "V-adposition–N-adposition–NP," which is found in languages marking the distinction between the two types of adpositions (see [14] above), can be reconstructed as in (26):

(26)   *verb + head noun + dependent NP > V-adposition + N-adposition + NP

On the basis of this reconstruction, it is possible to answer the questions raised above. V-adpositions precede N-adpositions because this is the order of the source structure that gave rise to the development of these two types of adpositions (question *b*).

A similar situation is reported by Kölver (1984) for Thai: in sentence (27), the marker *paj* is of verbal origin and appears to have the function of a V-adposition, whereas *naj* is of nominal origin and serves as an N-adposition (Kölver 1984:27):

(27)   *Thai*:
            khǎw sàj caan paj naj tûu
            he   put plate go in cupboard
            'He put the plate into the cupboard'

That N-adpositions precede the noun phrase they determine in Hausa but follow it in Ewe is due to the fact that Hausa has the order head noun–dependent noun whereas in Ewe the head noun consistently follows the dependent noun (question *c*). Accordingly, the development of Ewe has to be reconstructed as (28) rather than (26):

(28)   *verb + dependent NP + head noun > V-adposition + NP + N-adposition.

These observations also help us understand the differing syntactic behavior of N- and V-adpositions: the former are likely to retain part of their syntax as head nouns in genitive constructions, whereas the latter tend to conserve relics of their erstwhile function as predicates (question *d*). This is no longer apparent in the case of the Hausa V-adposition, which have been stripped of virtually all the characteristics of their lexical source—to the extent that they have developed into "genuine" adpositions (cf. 8.6).

5.5.3 Conclusions

Adpositional concepts may be derived from two distinct cognitive domains—that of time-stable, thing-like entities (our OBJECT category) and that of dynamic entities (our ACTIVITY category)—or, in linguistic terms, from nouns and verbs. While many languages make use of both source domains, in some languages this fact has led to the emergence of two contrasting sets of adpositions having clearly distinctive syntactic functions. Note, however, that, in addition to nouns and verbs, adverbs form yet another important source of adpositions (cf. 5.3 above). This source is not considered here and needs a separate treatment. Furthermore, it is possible that, in the course of time, N-adpositions and/or V-adpositions lose

their distinguishing features and, hence, no longer reflect the syntactic properties of their respective source.

The above discussion has made it clear that the terms "N-adposition" and "V-adposition" may be misleading in a number of ways. In most cases, we were dealing not with categories that correspond to orthodox notions of "adpositions" but rather with morphemes whose functions range from concrete, referential meanings to purely grammatical uses and whose morphosyntax extends from that of lexical items with all their morphological trappings at the one end to that of invariable grammatical markers at the other.

More appropriately, the structure of these categories should be described in terms of grammaticalization chains or continua (see 8.4), where the label "N-adposition" refers to the continuum from noun to adposition and the label "V-adposition" to that from verb to adposition. Only in some cases have these continua reached their final stage or stages, and in such cases we are dealing with discrete grammatical forms corresponding to the traditional notion of adposition. This applies more often to V-adpositions than to N-adpositions, as the examples of Hausa and Maa suggest.

6 From Less to More Grammatical Concepts

In chapter 5, we reconstructed the development from thing-like concepts such as body parts and landmarks to spatial concepts and from nouns to adpositions, respectively. We now look at a more abstract level of grammaticalization: one that leads not from lexical to grammatical structures but rather from already grammaticalized to more grammatical structures. Our concern is with case marking.

Some authors have argued that only the development from nongrammatical to grammatical elements is covered by the term "grammaticalization."[1] Rather than using this term in such a limited sense, we follow Kuryłowicz's classic definition, according to which grammaticalization "consists in the increase of the range of a morpheme advancing from a lexical to a grammatical or from a less grammatical to a more grammatical status" (Kuryłowicz [1965] 1975:62).

6.1 Alienability: His Children Are Not His Children

In Kabiye, a Gur language of the Niger-Congo family spoken in Northern Togo, there are two types of possessive constructions. They differ from one another essentially in that one uses a possessive particle *tɛ́* between the possessor and the possessed noun phrase while the other does not, the two noun phrases being simply juxtaposed.[2] These constructions have clearly contrasting meanings, as can be seen in (1): construction (1a) is an example of alienable possession, (1b) of inalienable possession:

(1a)   kólú   tɛ́ píya
             blacksmith of children
             'the blacksmith's children (typically those living in his compound
             but *not his own*)'

(1b)   kólú píya
             'the blacksmith's *own* children'

The main characteristics of the *tɛ́* construction can be described thus:

a)   Its use is ruled out when inalienable nouns are involved, for example, when the possessed phrase consists of a body part, a kinship, or a relational noun.

b)   This construction may be used only with human possessor nouns.

c)   The possessive particle is "homonymous" with the relational noun *tɛ́* 'home' and the locative postposition *tɛ́* 'at, to,' as can be seen in sentences (2) and (3):

(2)   pɛ -tɛ́   wɛ d̪éu
        their-home be beauty
        'their home is beautiful'

(3)   maa-woki   man-d̪ani   tɛ́
          1SG.NEG-go my-she.friend to
          'I don't go to my girl friend'

A similar situation is found in some other African languages. In Acholi, for example, a Nilotic language of the Nilo-Saharan family spoken in Northern Uganda, which shares with Kabiye neither a genetic nor an areal relation, the genitive particle *pà* does not occur with inalienable nouns, is used only with human possessor nouns, is historically derived from the noun *paàco* 'village, homestead,' and is also referred to in Acholi grammars as a "preposition" (Crazzolara 1955; Savage 1956). Comparable cases have also been observed in some Central Sudanic languages.[3]

These cases of "convergence" appear to be due to one and the same kind of development, which can be reconstructed thus: there exists a noun 'home,' 'homestead,' or 'village' that serves as a vehicle for expressing location, that is, the place where the home, homestead, or village is located. This transfer from the domain of concrete entities, that is, from the OBJECT category, to the domain of SPACE has the effect that nouns assume the function of adverbs ('at home') or, in the present case, of adpositions ('at the home of'). A paradigm case of this OBJECT-to-SPACE metaphor (see 2.4.1, 3.1) was discussed in more detail in chapter 5.

In the present chapter, we wish to demonstrate that conceptual transfer does not necessarily stop here. Our Kabiye example suggests that, once tangible, visible entities receive a spatial interpretation, they may be employed for the expression of more abstract concepts, such as possession.

During the initial phase of this process, the spatial and possessive interpretations coexist side by side; that is, there is some ambiguity as to whether a given expression is to be understood in its spatial or in its possessive sense, although the former constitutes its focal sense.[4] Sentence (1) marks such an initial stage: in its spatial reading, it refers to children living in the blacksmith's compound or village, while, in its possessive reading, the blacksmith is assumed, for example, to have some legal rights over the children concerned.

Second, the spatial/locative sense survives as a nonfocal sense even after the transfer has been concluded. Sentence (4) would be typically interpreted as meaning that the bags in question are the property of the blacksmith; that is, marking possession is the focal sense of *tɛ́* here. Nevertheless, in certain contexts, (4) refers not necessarily to the blacksmith's own bags but rather to the

ones stored at his home. That is, the locative sense has not been lost; it has become a nonfocal one:

(4)   kólú   tέ húyiŋ
            blacksmith   of bags
            'the blacksmith's bags'

Underlying this process, there appears to be a metaphorical equation of the kind "what is at my home belongs to me," which has the following effects:

a)   Since nouns such as 'home' and 'village' are associated with human beings, the use of these nouns as grammaticalized possessive markers is confined to persons.

b)   The notion "what is at my home" implies that the relevant item is not an inherent part of myself; rather, it is separate from me, so that I can physically detach myself from it. The SPACE-to-POSSESSION metaphor therefore is likely to be of the alienable type.

c)   The emergence of this new possessive construction, which is employed only for the expression of alienable possession, has some remarkable implications for the structure of nominal possession: the former pattern of marking nominal possession, consisting simply in the juxtaposition of the possessor and the possessed noun phrases (see [1b]), receives a specialized function, that of referring to inalienable concepts such as body parts, kinship terms, and other relational entities, thereby introducing the grammatical distinction alienable versus inalienable possession, a process that has taken place in quite a number of African languages.[5]

6.2 A Conceptual Network of ALLATIVE Case Marking

This example of spatial concepts serving as structural templates for expressing possessive notions reveals only one of the ways in which the domain of space is exploited for the expression of more abstract relations. In the remainder of this chapter, we look at a wider range of such relations: our concern is with the development of case expressions derived from ALLATIVE markers.

That cases, rather than being purely formal, semantically meaningless entities, have an internal semantic structure that can be described in terms of a family resemblance category has been pointed out by Wierzbicka (1980:xix; see Taylor 1989:143–44). In Heine (1988), an interpretation of the conceptual network of ALLATIVE case functions in two African languages has been presented. These languages are Ik, a language of the Kuliak group spoken in northeastern Uganda, and Kanuri, a language spoken in the Lake Chad basin of Nigeria and Niger. Ik and Kanuri have an ALLATIVE case suffix, which is referred to in the literature as a dative or goal case marker. The suffix, which is -k^e in Ik and -*ro* in
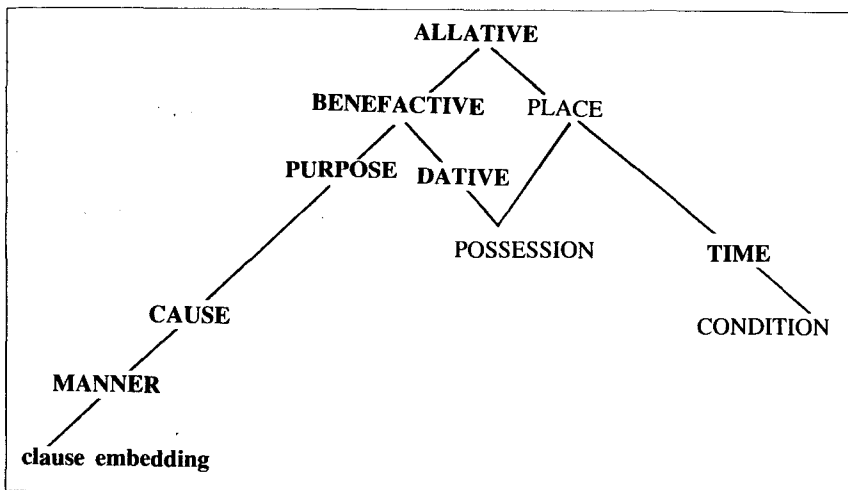
FIG. 6.1 The functions of the ALLATIVE case marker in Ik and Kanuri (functions that are not printed in bold letters are confined to Ik).

Kanuri, exhibits a wide range of related functions. These functions and their conceptual interrelation are summarized in figure 6.1.

A few examples may suffice to illustrate these case functions.[6] The ALLATIVE function is exemplified by (5), while (6) provides examples of the DATIVE, (7) of the CAUSE, (8) of the MANNER, and (9) of the clause subordination function of the relevant case marker:[7]

(5)   *Ik*:
        . . . k'e-esá ntsa awá-*k*ᵉ
            go-FUT he   home-
        '. . . and he will go home'
        Kanuri:
        suro   fato-be-*ro*   kargawo
        inside house-GEN- enter.3SG.PAST
        'He went into/inside the house'

(6)   *Ik*:
        'dó'dá   'yakwᵃ cueé-kᵃ   imá-*k*ᵉ
        show   man   water-ACC child-
        'The man shows the child the water'
        Kanuri:
        Makka-ro   lenəmi-ya   wu-*ro* radio kude
        Macca-ALL you.go.EMPH-SUB I-   radio bring
        'Bring me a radio when you go to Macca'

(7)   *Ik*:
      ńtá k'ó-í-í   ma-í-í-*k^e*
      NEG go-I-NEG be.sick-I-SUBJUNCT-
      'I cannot leave because I am sick'

      Kanuri:
      cida-də   dazenyi-də-*ro*   Kano-lan
      WORK-DET end.3SG.NEG.PERF-DET- Kano-in namngin
      sit.down.1SG-IMPF
      'Because the work isn't finished I'll stay in Kano'

(8)   *Ik*:
      tóda ŋIL-I-*k^e*
      speak be.strong-SUBJUNCT-
      'He speaks strongly'

      Kanuri:
      dəlfu fanyena-*ro*   ruwojigəye
      way hear.1P1.PRF- write.1PL.PAST
      'We wrote it how/in the way that/as we hear it'

(9)   *Ik*:
      ítέtU-ɔ   ro'b-e   I'BAAŋ-át-i-*k^e*. . .
      reach-VEN-COP people-GEN be.stupid-they-SUBJUNCT-
      'and she discovered that the people were stupid . . .'

      Kanuri:
      kərma-ma isemin-də-*ro*   nowoko
      NOW-EMPH come.2SG.IMPERF-DET- know.1SG.PAST
      'I just now found out that you were coming'

That one and the same morpheme may denote a whole range of the case functions listed in figure 6.1 is of course not new. Thus, the English preposition *for* serves, inter alia, for the expression of ALLATIVE in (10), BENEFACTIVE in (11), PURPOSE in (12), and CAUSE in (13)

(10)   Mary left *for* Paris.

(11)   Mary worked *for* her children.

(12)   Mary worked hard *for* her exam.

(13)   Mary couldn't sleep *for* pain.

A structure similar to that sketched in figure 6.1 can in fact be found in a number of languages outside Africa. For example, the data presented by Genetti (in press) for Newari, a Tibeto-Burman language spoken in Nepal, or by Craig

(in press) for Rama, a Chibchan language of Nicaragua, contain the following characteristics:[8]

a)   This development invariably leads from "concrete" to more "abstract" grammatical functions. For example, the extension patterns discussed there include the following, which we also observed in Ik and/or Kanuri: ALLATIVE TO PURPOSE, BENEFACTIVE/DATIVE TO PURPOSE, and PLACE (> TIME) TO CONDITION.

b)   Postpositions have developed into clause subordinators attached to finite verbs. Thus, ALLATIVE or DATIVE postpositions have been grammaticalized to markers introducing PURPOSE clauses.

One of the most remarkable similarities found in all these, as well as in many other languages can be seen in the fact that a nominal case marker serves to introduce subordinate clauses.

One may wonder how it is possible that the use of a morpheme that is strongly associated with nominal morphosyntax is extended to serve as a device for clause subordination. As we argue in more detail in 7.4, we are dealing here, once again, with metaphorical extension inducing grammaticalization. According to this perspective, more complex entities, such as clausal complements, are treated as less complex entities such as objects, typically encoded linguistically as nouns. In short, clauses are treated metaphorically as nouns. This process appears to be facilitated by the fact that the structure of the languages concerned appears to favor such a process. Thus, what Genetti observes for Newari applies in a similar way to Ik and Kanuri: "Syntactic motivation for the development of postpositions to subordinators can be at least partially explained by a strong tendency toward nominalization in these languages" (Genetti 1986:387).

The transition from nominal case marker to subordinate clause marker seems to involve an intermediate stage where the constituent concerned is neither clearly nominal nor clearly causal or, in other words, where that constituent is to some extent nominal and to some extent verbal: it is morphosyntactically a nominalized verb or a verbal noun, a participle, gerundive, infinitival verb, or the like, that is, verb in some nonfinite form. For example, in sentence (14), the ALLATIVE marker *-k^e* of Ik is attached to a noun, while (15) is an example of an intermediate constituent since the phrase *ot-ésí-e* may be interpreted morphologically and semantically as either a nominal ("for the storing of") or a verbal constituent ("in order to store"). Finally, in sentences such as (16), this marker functions as a clause subordinator:

Ik:

(14)   POSSESSION:
        ia ŋóká ńci-k^e
        be dog I-
        'I have a dog'

TABLE 6.1. A Schema of Conceptual Transition: Some Examples from Case
        Marking

A Less Grammaticalized Case Function	B Conceivable Intermediate Stage	C More Grammaticalized Case Function
BENEFACTIVE "X does P for (the benefit of) Y"	"X does P for an inanimate object Y"	PURPOSE "X does P for the purpose of Y"
PLACE "X is at Y's place"	"X is at Y's disposal"	POSSESSIVE "X belongs to Y"
TIME "X happens at the same time as Y"	"When(ever) X happens, Y follows"	CONDITION "if X happens, Y follows"

(15)   PURPOSE:
        . . . bɛr-ɛ-ɔ́   lo'dúrú-iké-e   ni ot-ési-kᵉ e'dí
            build-FUT-COP granary-PL-GEN REL pour INF-grains (GEN)
        '. . . and they will build granaries to store crops in'

(16)   Subordination:
        na   ats-íde-kᵉ mo en-íd-e?
        when come-ye- NEG see-ye-NEG.Q
        'When you (PL) came, didn't you see it?'

In fact, all instances of the transition from one case function to another can be
assumed to be pragmatically determined and to involve a range of intermediate
stages. These stages are connected with one another via conversational im-
plicatures and context-induced reinterpretation (see chap. 3). In table 6.1, a few
examples of the case functions contained in figure 6.1 are presented in order to
illustrate the way this transition has to be conceived. Columns A and C represent
the less and the more grammaticalized stages, respectively, while B forms one of
a number of possible intermediate stages to be observed in the transition from
A to C.

6.3 The Function Contiguity Hypothesis

The various functions of the ALLATIVE markers in Ik and Kanuri, as presented in
the schema of figure 6.1, form a network that is unidirectional in that it proceeds
from more "concrete" functions such as ALLATIVE at the top to more "abstract"
grammatical functions such as MANNER and clause subordination at the bottom.

A number of criteria to account for the structure of this network will be proposed in 6.4 (see also 6.6).

In his survey of DATIVE and ALLATIVE functions, Blansitt (1988) proposes a number of generalizations on case expression. For our purposes, the following are of particular interest:

a)   If an adposition occurs as both OBJECT marker and ALLATIVE marker, it also occurs as DATIVE marker.

b)   If an adposition occurs as both DATIVE marker and LOCATIVE marker, it also occurs as ALLATIVE marker.

On the basis of such observations, he formulates the following hypothesis, called the "function contiguity hypothesis," which is applicable to adpositional marking:

> The functions OBJECT, DATIVE, ALLATIVE, and LOCATIVE can be marked for function identically only if the identically marked functions are contiguous in that order (Blansitt 1988:177–78, 186).

It would seem that this hypothesis can be accounted for on the basis of the framework proposed here. In figure 6.1, we summarized the structure of conceptual expansion, as it can be reconstructed for the ALLATIVE case markers of Ik and Kanuri. That part of the structure that is relevant to the present discussion is reproduced below:
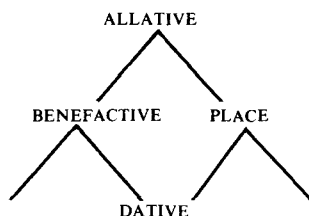
Note that BENEFACTIVE is not distinguished by Blansitt and that our PLACE function corresponds to his LOCATIVE. Furthermore, it is well known that in a number of languages the use of ALLATIVE case markers has been extended also to mark direct objects, that is, Blansitt's OBJECT.[9] The conclusion reached therefore is that the schema of case expansion presented in figure 6.1 can be reconciled with his function contiguity hypothesis.

In addition, however, we wish to argue that this structure is cognitively motivated: all case functions concerned are part of one and the same network of conceptual expansion, leading from a more "concrete" function, ALLATIVE, to a number of more "abstract" functions. The fact that we are dealing here with two different channels, one leading from ALLATIVE to DATIVE and the other leading from ALLATIVE to PLACE, allows us to point out yet another feature characterizing

the relation holding between these case functions, namely that some functions are more closely related to one another than others. For example, according to the tree diagram of figure 6.1, DATIVE is conceptually more closely related to ALLATIVE than it is to PLACE since DATIVE and ALLATIVE are separated by one node only, whereas DATIVE and PLACE are separated by two nodes. This relation is not accounted for in the one-dimensional ordering of case functions presented by Blansitt (1988:177).

6.4 Degrees of Grammaticalization

A question that we have not yet considered in detail, yet that is of central importance for an understanding of the relation between grammatical categories, is, How can we decide whether category *X* is more grammaticalized than *Y*? Why, for example, is CAUSE a more grammaticalized category of case expression than PURPOSE?

While it is not always possible to provide a clear-cut answer, there are some observations that are helpful in determining the relative degree of grammaticalization of a given category. Phonetic and morphosyntactic parameters for describing different stages of grammaticalization have been proposed (e.g., Lehmann 1982; Heine and Reh 1984; Bybee, Pagliuca, and Perkins, in press). The most promising work on this issue has been presented by Bybee and her associates, who have come up with generalizations like the following: "We would then expect grams that are older—i.e. that have undergone more development—to be closer to the stem, more fused and shorter or more reduced in segmental material than younger grams of equal relevance" (Bybee, Pagliuca, and Perkins, in press).

The parameters *a–g* that follow provide a list of hypotheses that may serve as a kind of "discovery procedure" for establishing relative degrees of conceptual/semantic grammaticalization within the domain of case marking:

a)   A grammatical category is more grammaticalized than another category if it is etymologically derived from the latter. This diachronic statement, which can be immediately inferred from the unidirectionality principle (see 1.1), allows us to determine, for example, that CAUSE is a more grammaticalized sense of the English conjunction *since* than TIME as it can be shown to be historically derived from the latter (see Traugott and König, in press; 3.3.1).

b)   If two case functions differ from one another only in the fact that one has a spatial function whereas the other has not, then the latter is more grammaticalized. What this observation amounts to essentially is that, of all case functions considered, SPACE is the least grammaticalized.

c)   If two grammatical categories differ from one another only by the fact that one typically implies some human participant whereas the other implies an inanimate participant, then the latter is more grammaticalized.[10] This means, for

example, that BENEFACTIVE is less grammaticalized than PURPOSE. Both share some feature of goal orientation (Givón 1984b:132), but they differ from one another essentially in that BENEFACTIVE typically presupposes a human partici-pant, as in (17) (*Mary*), whereas PURPOSE requires a nonhuman participant, as in (18) (*the bedroom*).

(17)   I bought a dressing table *for Mary*.
(18)   I bought a dressing table *for the bedroom*.

This also means that the category PURPOSE is less grammaticalized than CAUSE since PURPOSE normally presupposes some human agent and activity, whereas CAUSE does not. On the same grounds, COMITATIVE may be said to be less gram-maticalized than INSTRUMENT because the former typically implies a human participant whereas the latter does not (cf. 4.2; see also below; for more exam-ples, see 7.1).

d)   A category referring to a concept that has potentially three physical dimensions is less grammaticalized than one referring to a concept that has only one possible dimension, which again is less grammaticalized than one whose referent does not show any physical dimensionality. This parameter may help us determine that SPACE is less grammaticalized than TIME and that TIME is less gram-maticalized than a category like CONDITION or MANNER.

e)   If two categories differ from one another only in the fact that one expresses a temporal relation whereas the other expresses some "logical" relation, then the latter is more grammaticalized. In this way, it is possible to establish, for exam-ple, CAUSE and CONDITION as categories that are more grammaticalized than TIME (cf. Traugott and König, in press).

f)   If two categories differ from one another only in the fact that one is more in-clusive, that is, may include the other in certain contexts, then the more inclusive is the more grammaticalized one. This observation is in accordance with the notion of generalization as proposed by Bybee and Pagliuca (1985). Thus, if the categories PERSON and OBJECT (see 2.4.1) belong to one and the same grammaticalization channel, then the latter is more grammaticalized since it may include the former, but not vice versa. For example, the question *What is this?* may refer to an item of the PERSON (e.g., *a boy*) or the OBJECT category (*a car*), while a question like *Who is this?* may only refer to the PERSON category (**a car*). Similarly, MANNER is a more inclusive and, hence, more gram-maticalized category than INSTRUMENT, as can be shown, for example, by the fact that the MANNER interrogative *how* (*How did he do it?*) is used to refer to both MANNER (*carelessly*) and INSTRUMENT expressions (*with a gun*), whereas the opposite (*What did he do it with?*) does not apply (cf. Lyons 1977:722).

g)   If a given morpheme governs both noun phrases and clauses, then the latter use is more grammaticalized than the former. For example, the English morpheme *for* has the functions both of a preposition (i.e., it governs noun phrases) and of a conjunction introducing subordinate clauses (at least in some varieties of En-

glish). On the basis of parameter *g,* we may say that its use as a preposition is less grammaticalized than that as a conjunction (see below).

In many cases, more than one of the criteria listed above apply. We may illustrate this fact by providing a few examples. In many languages worldwide, there is only one morpheme for the expression of both the COMITATIVE and the INSTRUMENT case functions (see 4.2). According to parameter *a,* COMITATIVE forms the source and INSTRUMENT the derived concept: wherever there is historical information available, it turns out that the COMITATIVE use preceded the INSTRUMENT use in time, not vice versa. For example, Priebsch and Collinson (1968:91) remark on Proto-Germanic: "The so-called *instrumental* case appears to have been primarily a comitative or social case, indicating someone or something in connection or association with another person or object. From this arises the notion of co-operation and hence instrumentality." Similarly, in Ewe, COMITATIVE uses of the preposition *kplé* 'with' preceded its INSTRUMENT uses (see 7.2.3). This observation is corroborated by parameter *c.*

According to *a,* the use of English *for* as a preposition is less grammaticalized than that as a conjunction: whenever there is historical evidence available, it turns out that prepositional uses of a given morpheme are likely to precede its uses as a clause subordinator in time. Thus, *for* was first used as a preposition and has been used as a conjunction only since the twelfth century. Additional evidence can be found in *c:* the prepositional uses of *for* include that of a BENEFACTIVE case marker, which typically introduces a human participant. As a conjunction, *for* obviously does not introduce human participants; hence, its use as a BENE-FACTIVE preposition is less grammaticalized than that as a clause subordinator. This fact is also predicted by *g,* which appears to be based on a metaphor to be discussed in 7.4, according to which clauses may be treated as nouns, but not vice versa.

When introducing parameter *c,* we argued that CAUSE is a more grammaticalized category than PURPOSE. This claim is supported by two additional observations. The first is diachronic. In the history of Sanskrit, for example, the marker *íti* acquired the function of a subordinator of PURPOSE clauses at the stage of the Atharva Veda. Only much later, at the Vedic Prose stage, did *íti* also begin to appear in CAUSE constructions. Finally, in the Classical Language, it was established as a subordinator of CAUSE clauses (Saxena 1988b).

The second criterion is typological in nature. On the basis of a sample of forty languages of worldwide distribution, Saxena (1988b) proposes an implicational scale for subordinators derived from either a verb meaning 'say' or a marker to be translated as 'thus.' This scale has the following structure:[11]

(19)   SAY > KNOW > BELIEVE > HOPE > PURPOSE > CAUSE

On the basis of this scale, languages are classified in accordance with the range of functions that they express by means of this subordinator. Thus, in some lan-

guages (Russian, Old Polish, Akkadian, Lhasa Tibetan, Nubian, etc.) the 'say/thus' subordinator occurs only with verbs of saying, while in others (Quecha, Mizo, Kuki, [E] Pomo) it occurs with 'say' and 'know'; in others (Bemba) with 'say,' 'know,' and 'believe'; in others (Thai, Krio) with 'say,' 'know,' 'believe,' and 'hope'; in others (Ewe) with 'say,' 'know,' 'believe,' and 'hope' and as a marker of PURPOSE clauses; and in others again (Lahu, Ladakhi, Bengali) with all these verbs and as a marker of both PURPOSE and CAUSE clauses.

This implicational scale allows for generalizations of the following kind: if in a given language a subordination marker derived from 'say' or 'thus' is used for a particular function on this scale, then it is also used for any one of the functions to the left of that function. This means, for example, that a language that uses the 'say/thus' marker to introduce CAUSE clauses also uses it for PURPOSE clauses, whereas the opposite does not necessarily hold.[12]

Saxena (1988b) interprets this scale as a "diachronic extension space for grammaticalization": the more of the above functions the 'say/thus' marker expresses, the more grammaticalized it is. Thus, a marker that expresses all functions listed in (19) except CAUSE is less grammaticalized than one that expresses all functions including CAUSE. Accordingly, CAUSE is a more grammaticalized function than PURPOSE.

Parameters a–g are not intended to constitute definitional criteria, in particular since some of them present no more than quantitative generalizations. Taken together, however, they provide some guidelines for determining the relative degree of grammaticalization in a given instance. On the basis of such observations, case functions can be arranged along the following chain of increasing grammaticalization:[13]

(20)   ABLATIVE > AGENT   > PURPOSE   > TIME > CONDITION > MANNER
        ALLATIVE   COMITATIVE   INSTRUMENT   CAUSE
        LOCATIVE   BENEFACTIVE   DATIVE
        PATH   POSSESSIVE

Since all case functions listed in the first column (LOCATIVE, ALLATIVE, ABLATIVE, and PATH) have some spatial component, this chain corroborates the localist hypothesis, according to which spatial concepts are more basic than other concepts and therefore serve as a template for understanding nonspatial concepts (Anderson 1971; Lyons 1977:718). Similar positions have been maintained in a number of other works, Jackendoff, for example, argues, "If there is any primacy to the spatial field, it is because this field is so strongly supported by nonlinguistic cognition; it is the common ground for the essential faculties of vision, touch, and action" (Jackendoff 1983:210).

There are some observations that are relevant for understanding the scale presented in (20). First, the spectrum of categories presented there contains only a limited set of the categories figuring in the domain of case marking; that is, more

case functions could be considered. Second, underlying (20) there appears to be a more general structure, essentially involving three cognitive domains, which are as follows:

i)   First is the domain of spatial concepts, reflected in the kind of case relations listed in the first column.

ii)   Second is the domain of anthropocentric concepts, as revealed by case functions of the second and third columns, which typically refer to either some human participant or imply a proposition involving some human agent, or both. Thus, in "prototypical" uses of the case functions COMITATIVE, BENEFACTIVE, DATIVE, and POSSESSIVE, the participant referred to is human, and "prototypical" propositions containing any of the case functions AGENT, COMITATIVE, BENEFACTIVE, PURPOSE, INSTRUMENT, and DATIVE involve some human instigator or agent.

iii)   Third is the domain of inanimate concepts, as reflected in the case functions of the last three columns.

One might wonder why functions such as TIME, CONDITION, CAUSE, or MANNER are located within iii, considering the fact that all of them may, and frequently do, occur in propositions involving human agents and activities. What distinguishes them from the case functions of ii is that they need not refer to human participants. That they, nevertheless, may refer to human participants is due to the fact that the domain of inanimate concepts is more inclusive than that of human concepts: as we have pointed out above, inanimate categories tend to be more general than human categories, in that they may include the latter, but not vice versa.

Thus, the following more general categorization appears to underlie (20):

(21)   spatial relations > human relations > inanimate relations

This scale differs in one important respect from that of metaphorical categories presented in 2.4.1, reproduced below as (22), since in the latter SPACE appears to the right of categories such as PERSON, OBJECT, or ACTIVITY:

(22)   PERSON > OBJECT > ACTIVITY > SPACE > TIME > QUALITY

We are dealing here with two distinct levels of conceptualization. Scale (22) represents the level of "concrete" entities, typically encoded by means of lexical material such as nouns and verbs. This is the level of referential units, of persons, objects, and events in space and time, where tangible, visible units form the most "concrete" taxa, as we saw in chapter 2. Scale (21), on the other hand, is found on the level of relational concepts, including that of case functions, which is expressed in language by means of adpositions, clitics, or inflectional morphology,

and on this level SPACE provides the most "concrete" domain of concepts. We
analyze this distinction in more detail in section 7.2.3.

6.5 On the Significance of Image-Schema Preservation

On the basis of Talmy's (1985b) claim that grammatical meaning is inherently
topological and schematic while lexical meaning is not, Sweetser argues that
grammatical meaning is restricted to the schematic structuring of meaning and
that image schemata are among the most stable structures preserved across meta-
phorical mappings from one domain to another (Sweetser 1988:390). This line of
research may turn out to yield most promising results concerning the nature of the
cognitive processes underlying grammaticalization. At the present stage of re-
search, however, there are still a number of problems to be considered. One of
these concerns the extent to which grammatical functions can be reduced to im-
age-schematic representations.

The following observation in Sweetser's discussion of the grammaticalization
of verbs meaning 'go' to a marker of future tense, which can be observed in many
languages worldwide (see Bybee, Pagliuca, and Perkins, in press), may illustrate
the kinds of problems involved. The schematic inferences that are said to be pre-
served in the metaphorical mapping of 'go' onto futurity (Sweetser 1988:391–
392) as follows:

a)   the linearity of the relation between locations;
b)   The location of ego at the source of the linear path (just as our current location is
        proximal in space, so is the present proximal in time);
c)   movement away from the proximal source location toward a distal goal.

Sweetser therefore concludes that these inferences emanate from the topology
of the image schema for 'go' and that it is this topological structure that is pre-
served in the metaphorical mapping of the image schema from 'go' to future
tense. There are, however, a few observations that make this analysis prob-
lematic. For example, while lexical items denoting 'go' form a widespread
source for future tenses, so do verbs denoting 'come' in many languages of the
world.[14] This would seem to rule out inferences *b* and *c*.

Such observations do not necessarily invalidate the image-schema approach to
grammaticalization. One might simply say that the topological structure in-
volved in the development of future categories has to do neither with deixis nor
with the relation between locations but rather with goal orientation. Sweetser
(1988:393) in fact uses such a schema in order to account for the mapping of
spatial motion, ALLATIVE, onto the domain of intentional actions and directed
motion toward some endpoint, as in the expression of PURPOSE. On the basis of
Genetti's (1986) discussion on the development from postpositions to subor-

dinators in Bodic languages, she proposes the following basic image schemata
for goals, sources, and locations (Sweetser 1988:393):

o →	Ablatives, ergatives
→ o	Allatives, datives
(oo)	Locatives, comitatives

In addition, she remarks, "If the dative were simply a marker of some gram-
matical function not covered by nominative or accusative—a semantics-free
marker left to do as syntactic whims or opposition with other cases might dic-
tate—then we would have no explanation for the regular development of dative
markers into subordinators expressing purpose, *rather than (for example) cause*"
(Sweetser 1988:394–95; emphasis ours).

There are two points that need clarification here. First, according to the frame-
work outlined above, we are dealing with a development not from DATIVE to
PURPOSE but rather from ALLATIVE to PURPOSE: while both DATIVE and PURPOSE
are, or may be, part of the same network of conceptual expansion, they are not
contiguous; rather, they belong to different conceptual branches, as we saw in
figure 6.1. Second, and more important, contrary to Sweetser's expectation, AL-
LATIVE and, hence, PURPOSE markers do in fact develop into subordinators
expressing CAUSE or REASON, as our Ik and Kanuri examples, summarized in fig-
ure 6.1, suggest.

A related observation can be made in English. Radden observes that there are
two sets of prepositions expressing causality. The first set, which exclusively de-
notes causality, consists of the following prepositions: *because of, due to, on
account of, owing to,* and *as a result of.* These prepositions are said to be of
French origin and to have entered the language between the fourteenth and the
seventeenth century (Radden 1985:184–85). The second set includes eleven
prepositions that are referred to by Radden as "spatiocausal prepositions" be-
cause they have both spatial and causal uses: "Causation is viewed as a Place
with the prepositions *with, on, over* and *in,* as a Goal with *for* and *at,* as a Source
with *from, of* and *out of* and as a Path with *by* and *through.* Moreover, causation
is seen in terms of all kinds of spatial dimension" (Radden 1985:184).

Radden argues that this situation reflects a development from spatial senses to
a causal sense, which is the result of metaphorical extension. What is of interest
here is that it is both source and goal prepositions that have developed a causal
sense. Thus, sentence (23) is an example of a causal sense derived from what
Radden calls a goal sense, while (24) shows the causal sense derived from a
source sense:

(23)   I couldn't sleep *for* pain.
(24)   John died *from* his excessive drinking.

This observation, however, raises the question as to whether indeed there is some topological structure common to both ALLATIVE and PURPOSE on the one hand and CAUSE on the other or between goal (ALLATIVE) and source (ABLATIVE), and, if so, how it is to be defined. Neither goal orientation nor any other of the image schemata mentioned by Sweetser appear to be preserved in the development from ALLATIVE or PURPOSE to CAUSE/REASON. It is conceivable, however, that future research will determine links for "abstract" topological structures that allow us to establish that there exists in fact some kind of image-schema preservation even in cases of this nature.

That these functions are conceptually contiguous, as we argue above, is suggested, for example, by the fact that there appears to be a relation of context-induced reinterpretation between them (see chap. 3). In all languages known to us, it is possible, for example, to find contexts in which PURPOSE clauses may invite causal implicatures or in which CAUSE questions such as 'Why did he come?' may trigger either a PURPOSE answer, as in (25), or a CAUSE answer, as in (26):

(25)   He came in order to collect his salary.
(26)   He came because he wanted to collect his salary.

6.6 A Multidimensional Cognitive Space?

Independent support for the chain of grammaticalization presented in (20) can be found in numerous works on case functions. A somewhat similar idea can be seen in the notion of "fields of prepositional meaning" in Quirk, Greenbaum, and Svartvik (1972:320), by which they mean "a range or spectrum of meaning, first as a single category, then as broken up into separate overlapping sections." The chain manner-means-instrument-agentive-stimulus, for example, constitutes such a range or spectrum. In the present section, we look at one study that might present a challenge to the notion of a two-dimensional structure as presented in figures 4.1 and 4.3.

In his analysis of some of the functions of English *with,* Schlesinger presents a number of cognitive continua underlying the uses of this preposition, such as the comitative-instrumental, the comitative-ingredient, the ingredient-instrumental, and the instrumental-manner continuum,[15] and arrives at the following conclusion:

> Postulating a one-dimensional continuum would not do justice to such a state of affairs; instead, we need a space of (at least) two dimensions. The ingredient-comitative continuum, the ingredient-instrumental continuum—provided these can be shown to exist—and the comitative-instrumental continuum will then be axes of this *n*-dimensional space. . . . These examples suggest that our cognitive structures should not be assigned to isolated one-dimensional

continua, but rather to a multidimensional system. [Schlesinger 1979:321]

A review of Schlesinger's analysis reveals in fact that a one-dimensional structure is inadequate to account for the conceptual variation reflected in his data. On the other hand, it suggests that a two-dimensional model such as the one sketched in figures 4.1 and 4.3 is compatible with this data, as we try to demonstrate below.

Schlesinger's presentation shows that the COMITATIVE-INSTRUMENT and the INSTRUMENT-MANNER can be conflated in the following extended continuum:

(27)   COMITATIVE-INSTRUMENT-MANNER

Consider the following sentences:

(28)   She went shopping *with* her husband.
(29)   The blind man crossed the street *with* his dog.
(30)   He did it *with* a crowbar.
(31)   ?He did it *with* intelligence.
(32)   He did it *with* enthusiasm.

In (28), *with* has clearly a COMITATIVE and, in (30), an INSTRUMENT sense. Example (29), however, may be said to be intermediate between these two senses. It may be paraphrased either by (29a), which suggests a COMITATIVE interpretation, or by (29b), which suggests an INSTRUMENT or MEANS interpretation:

(29a)   The blind man crossed the street *together with* his dog.
(29b)   The blind man *used* his dog to cross the street.

Note that the paraphrased sentences are not necessarily synonymous. For example, the *use* paraphrase typically introduces an intentional act, which need not be the case with the preposition *with* (see Nilsen 1973:91).

Sentences (31) and (32) appear to be examples of the MANNER sense of *with,* and both can be paraphrased by replacing the *with* phrase by a corresponding adverb, as in (31a) and (32a).

(31a)   He did it intelligently.
(32a)   He did it enthusiastically.

There is, however, a difference between (31) and (32), in that *with* in (31) may be said to retain some of the INSTRUMENT sense, which appears to be absent in the case of (32). Thus, (31) but not (32) can be paraphrased by a *use* construction, which is typically associated with the INSTRUMENT sense, as in (31b), while (32b) would not seem to be a particularly felicitous utterance:

(31b)   He used intelligence to do it.
(32b)   ?He used enthusiasm to do it.

This is a simplified presentation of the COMITATIVE-INSTRUMENT-MANNER continuum, especially since we were confined to only three points on this continuum; many more intermediate stages could in fact be distinguished.[16] Furthermore, case functions such as COMITATIVE or INSTRUMENT are used in a prototypical sense. Distinctions made by Lambert (1969:131), for example, who divides INSTRUMENT into three cases (Tool, Material, and Force), or by Nilsen (1979:120), who even divides it into four cases (Tool, Force, Material, and Body Part), are ignored here.

As we observed above, Schlesinger claims that there are some alternative continua that suggest that the uses of *with* cannot be reduced to a linear, one-dimensional structure, like the ingredient-comitative and the ingredient-instrumental continua. The function "ingredient" was proposed by Quirk, Greenbaum, and Svartvik (1972:331) for uses of *with* in sentences such as (33) and (34):

(33)   He cooked the meat *with* potatoes.
(34)   He cooked the meat *with* wine.

We do not see any problem in including this function within the COMITATIVE-INSTRUMENT-MANNER continuum, although these two sentences belong to different stages along the continuum. In (33), *with* appears to introduce a sort of "inanimate companion" and, hence, to be close to the COMITATIVE end of the continuum, as is evidenced, for example, by the fact that it can be paraphrased by *together with*, as in (33a), but not by the *use* construction (33b). Sentence (34), on the other hand, is to be located near the INSTRUMENT sense: it can be paraphrased by means of the *use* construction (34a) but not felicitously by *together with* (34b):

(33a)   He cooked the meat *together with* potatoes.
(33b)   *He used potatoes to cook the meat.
(34a)   He used wine to cook the meat.
(34b)   ?He cooked wine together with the meat.

As we emphasized in chapters 3 and 4, conceptual continua, such as the ones we are dealing with here, are determined primarily by pragmatic parameters, in particular by context. It would seem, in fact, that the "ingredient" function of *with* forms a highly context-dependent variant along the COMITATIVE-INSTRUMENT continuum: this function is found only after verbs of 'making' (Quirk, Greenbaum, and Svartvik 1972:331).

Thus, examples like these can be described in terms of a one-dimensional continuum. There are others, however, that suggest that the English preposition *with*
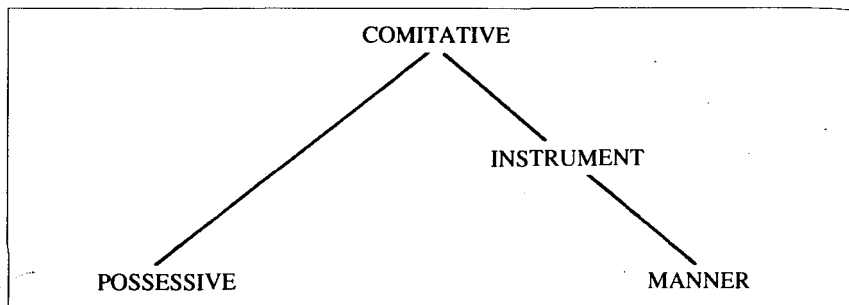
FIG. 6.2 A conceptual network of some of the sense of *with*.

shows the same kind of conceptual network as we observed elsewhere in this work and therefore that a two-dimensional model as proposed in chapter 4 (fig. 4.3) is more adequate to account for the cognitive ramifications underlying the uses of this preposition. We will not pursue this issue here in detail; one example will suffice to illustrate what kind of ramifications we have in mind. Quirk, Greenbaum, and Svartvik (1972:327) mention another kind of use that *with* has, that of expressing 'having,' a kind of "POSSESSIVE" notion, as in (35):

(35)   A man with a red nose.

There is a sense of accompaniment in this use (Schlesinger 1979:320), which links it with the COMITATIVE sense. On the other hand, the context in which this use occurs differs drastically from that of the other uses of *with:* it is governed by noun phrases and thus forms part of time-stable situations. Although the POS-SESSIVE use can be immediately derived from the COMITATIVE sense, it cannot be located anywhere between COMITATIVE and INSTRUMENT and, hence, does not seem to be part of the COMITATIVE-INSTRUMENT-MANNER continuum. Rather, it appears to belong to a distinct branch, and we may therefore set up a conceptual network of *with* as sketched in figure 6.2. Note that this figure is not based on all uses of *with;* it covers only those senses considered above.

To summarize, the evidence available to us suggests that the cognitive structure underlying the uses of *with* appears to be in line with that of case morphologies discussed in the preceding sections as well as with other instances of grammaticalization dealt with in preceding chapters.

6.7 Conclusions

The observations made in this chapter suggest that the similarity exhibited, for example, by the ALLATIVE case markers in Ik and Kanuri is not coincidental but can be interpreted as being due to one and the same process whereby "abstract" meanings are conceptualized in terms of more "concrete" meanings—with the effect that the morphology used to express the latter is extended to be used for the

former as well. This means on the one hand that case markers serving more concrete functions, such as denoting locatives, are also employed to denote more abstract functions, such as marking adverbial derivation or clause subordination; on the other hand it means that a nominal morphology is also transferred to mark the subordination of clauses.

The result is, for example, that, in quite a number of languages, part of the morphology used for encoding nominal case expressions also serves to encode subordinate clauses, like the English particles *after, as, before, but, like, since, till,* and *until,* or that the morphology used for the expression

a)   of SPACE is also used for TIME, CAUSE, MANNER, etc. in certain contexts;

b)   of TIME is also used for CAUSE or CONDITION;

c)   of BENEFACTIVE is also used for DATIVE or PURPOSE;

d)   of PURPOSE is also used for CAUSE etc.

Our concern in the preceding sections has been with conceptual transfer patterns observable in the development of case functions. A different picture now emerges when we look at the relation between case functions and the means employed for their expression. Consider the following case hierarchy, proposed by Lehmann (1983):[17]

(36)   Instrument > Locative > Dative >   Accusative/ >   Nominative/
         (Comitative)   Ergative   Absolute
         Directional   Genitive

Cases to the left of Dative are called "concrete cases," and those to the right of Dative are referred to as "grammatical cases."[18] The Dative, Lehmann (1983:366) argues, is a "concrete case" in some languages but a "grammatical case" in others. The arrangement of (36) strongly correlates with that presented in (37), which is a list of the major means employed for the expression of case functions according to their relative degree of grammaticalization—the leftmost end of (37) marks the initial stage of grammaticalization and the rightmost end the terminal stage:

(37)   lexical > (adverbs >) adpositions > case affixes > zero

Lexical means consist in most cases of either serial verbs or relational nouns. The correlation between (36) and (37) can be described in terms of generalizations such as the following (Lehmann 1983:369). If in a given language a case has zero expression, then this is the Nominative or the Absolute. If there is a further case with zero expression, then this is the Accusative and/or the Ergative or the Genitive etc. The more a given case is located toward the left end of (36), the more likely it is that this case is expressed by means of linguistic forms located toward the left end of (37).

In our treatment in section 6.4, we have not dealt with the rightmost case func-

tions of (36), that is, Accusative, Ergative, etc. It is likely that these cases, while being "less concrete" and "more grammatical," follow conceptual patterns that are similar to the ones discussed with reference to ALLATIVE markers, but more research is required on this point. The same applies to the linguistic forms employed for the expression of case functions. The evidence available suggests that the evolution of case markers usually follows the pattern outlined in (37), leading from nominal and verbal forms via adpositions and case affixes (and adverbs) to the loss of formal case marking. While parts of this evolution have been discussed in a number of works (cf. Kahr 1975, 1976), no overall description of this evolution is available thus far.

7 Some "Abstract Worlds"

In chapter 2, we introduced a number of categories, each representing some elementary domain of human experience, such as PERSON, SPACE, TIME, etc. These categories are linked with each other by means of a cognitive activity that we have referred to as metaphor. As has been pointed out, the kind of metaphor we are dealing with here has a number of specific characteristics, in particular the following: it is of the "experiential" rather than the expressive or taboo type, it has the features of root rather than conveyance metaphors (see 2.4.1), it belongs to the "emerging" rather than the "creative" class of metaphors (2.4.4), and it involves conceptual chaining based on conversational implicatures and context-induced reinterpretation, which are metonymic in nature (chap. 3).

The present chapter has a twofold purpose. On the one hand it provides further evidence for the significance of categorial metaphors proposed in 2.4.1, and on the other hand it wishes to draw attention to some other more abstract levels of metaphorization that appear to be relevant for understanding grammaticalization.

7.1 The World of Probabilities

Personification is one of the main strategies available to us to comprehend the world around us. By treating physical and abstract entities in terms of human sensations, motivations, and activities, we are able to describe phenomena that would otherwise be hard to understand. For example, in order to understand a nonphysical concept like "inflation," we give this concept the characteristics of a human being, in this case those of an adversary, as is evident from sentences like the following (see Lakoff and Johnson 1980): *Inflation has robbed me of my savings, Inflation has given birth to a money-minded generation,* and *Our biggest enemy right now is inflation.*[1] Similarly, the concept "marriage" may be treated metaphorically as a person and an unhappy marriage as a sick person, as the following sentences suggest: *Their marriage is on its last legs, It's a tired affair,* and *The marriage is dead—it can't be revived.*[2]

We now try to demonstrate that the same strategy, which treats nonhuman entities in terms of human properties, can be held responsible for various developments in grammar. One effect can be studied extensively in the lexicon. The verbs *run* or *eat up,* for example, refer to typically human actions and require human subjects, as in (1). By means of metaphorical creativity, however, it is possible to describe inanimate concepts in terms of human properties, as seems to be the case in (2):[3]

(1a)   Harry runs into the woods.

(1b)   Alice ate up all my spaghetti.
(2a)   The road runs into the woods.
(2b)   Inflation ate up all my savings.

Furthermore, the PERSON-to-OBJECT metaphor appears to be responsible for the extension of grammatical meanings. For example, many languages worldwide, including English, use the same case marker to express comitative (3) and instrumental (4) phrases:

(3)   Bill fought with John.
(4)   Bill fought with a knife.

It would seem that, wherever one of these two functions is found to have preceded the other in time, this is the comitative function. This is in line with the conceptual metaphor AN INSTRUMENT IS A COMPANION proposed by Lakoff and Johnson (1980:134–35), according to which accompaniment serves as a metaphorical vehicle to express instrumentality; that is, inanimate items like instruments are conceptualized in terms of human beings (see 6.4, 6.7). In the following two sections, we argue that, by extending the use of certain linguistic structures from human to inanimate concepts, lexemes may become grammatical markers and grammatical markers may acquire an even more grammatical function.

7.1.1 From Volition to Future

In his worldwide survey of future tenses, Ultan (1978a:114ff.) concludes that "future tenses evolve chiefly from modals, especially those expressing obligation, volition, uncertainty or unreality, and to a lesser extent from aspectuals or markers of goal-oriented categories."[4] Next to modal categories, verbs denoting deictic movement, meaning either 'go' or 'come,' form the most important source of future expression (cf. Givón 1973). With regard to this channel of grammaticalization, there are two observations in particular that should be noted since there exists some confusion on this subject in the literature.[5] The first observation concerns the role of deixis in the development of 'go' or 'come' into a future tense marker. All instances recorded thus far suggest that it is not the deictic content of these verbs that is responsible for grammaticalization. Thus, in the worldwide data base of Bybee, Pagliuca, and Perkins (in press), there are eight 'go'-derived as opposed to nine 'come'-derived futures. Neither is it the fact that these verbs express a movement; Bybee, Pagliuca, and Perkins therefore conclude that "the semantics of movement is not sufficient in itself to give rise to the future sense."

    What appears to be decisive is the fact that these verbs are, implicitly or explicitly, marked for goal. Thus, it is not verbs meaning 'go' or 'come' but rather verbs meaning 'go *to*' or 'come *to*' that develop into future markers. Not infre-

quently, these are transitive verbs, as is the case, for example, in the Kru languages (see Marchese 1986).

The evolution from one type of modality to another requires the presence of specific contexts in which the relevant morpheme is employed. The initial stage, where the concept overwhelmingly or exclusively expresses volition, typically shows the contextual constraint that the subject of the proposition is human and willful (cf. Aijmer 1985:13; Bybee and Pagliuca 1985:67). In the final stage, the subject may be inanimate and hence nonwillful; thus, an important restriction on the use of the volitive verb is eliminated.

There are some clear semantic correlates to this change in context restriction. In the initial stage, the relevant concept expresses volition, that is, a deontic or root modality. There is, however, an intermediate stage where the element starts to be used with inanimate subjects and then introduces some sort of "epistemic notion," prediction, for obvious reasons: when used with inanimate subjects, which are typically nonagents, verbs of volition are unlikely to express agent orientation.[6] At this stage, therefore, both types of modality coexist, correlating with the relevant context distinction sketched above: the verb tends to express volition with human subjects but prediction with nonhuman ones. Then, in the final stage, the prediction meaning is generalized, being extended even to propositions with human subjects.

There are, however, a few contexts where the semantics of volition is likely to survive. In fact, according to our observations, it is hard, if not impossible, to find a language having a future marker that does not have some nonfuture senses in addition. It has been observed, for example, that in modern English future tense "is almost the only meaning of *will*" (Aijmer 1985:13). There is hardly any need to demonstrate that English *will* has retained part of its semantics as a verb of volition up to now.[7]

The example considered can be interpreted as yet another result of the PERSON-to-OBJECT metaphor, a root metaphor that has the effect that concepts associated with human behavior are employed to understand or describe typically nonhuman concepts (see 2.4.1). This appears to be the case when volition (*X wants, desires*), which is associated with human behavior, is exploited to express a nonhuman notion, such as making predictions about future states (*X wants to happen* to *X will happen*). The linguistic implications of this transfer from a concept of the PERSON to one of the OBJECT category are considerable. They include the following:

a)   The context in which the verb of volition occurs is no longer one that is reserved for human participants; instead of a willful human agent, there may now be a nonhuman entity incapable of willful actions.

b)   This implies that a concept expressing a volitive, agent-oriented notion turns into one that expresses an "epistemic" notion like prediction. The result is a

future marker, which exhibits the morphosyntactic features of a verb until it is grammaticalized to a clitic and in a number of languages eventually to a tense affix.

While this analysis highlights only one aspect of the relevant process, it accounts for a number of phenomena that are part of the development from verbs of volition to a category of future tense, such as the following:

i)   The transition from verb to tense marker and from agent-oriented modality to prediction is part of a more general human strategy to conceptualize more "abstract" experiences in terms of more "concrete" ones, in this case a tense category in terms of a common human trait of behavior such as volition.

ii)   In the course of this process, there is an intermediate stage where both categories co-occur, before the epistemic meaning of the verb is generalized.

Essentially the same development appears to take place when verbs of motion, rather than verbs of volition, are employed to express prediction. Consider the following example involving *be going to* in English (cf. Bybee, Pagliuca, and Perkins, in press; Coates 1983):

Stage	Example	Prototypical Meaning
I	I am going to draw this . . . so that he can have a full picture.	Intention
II	It's going to be hot today.	Prediction
III	We're going to have a new mum.	Prediction

In Stage I, we are dealing with a human category: the sentence subject is typically a human being who acts intentionally and has control over the situation. In Stage II, the verb expressing intention allows for nonhuman subjects, which have no control over the situation. This rules out the intention meaning and invites an implicature according to which prediction is involved. The new interpretation is generalized in Stage III, the prediction meaning now being extended to sentences having human subjects.

In their latest and most detailed study of this subject, Bybee, Pagliuca, and Perkins distinguish four different channels leading to the development of categories that have future as one of their meaning components or senses. The relevant source structures giving rise to these channels are, according to Bybee, Pagliuca, and Perkins (in press), as follows:

a)   aspectual forms, whose main function is to mark categories like imperfective or perfective;

b)   verbs denoting agent-oriented modalities, such as DESIRE, OBLIGATION, and ABILITY;

c)   verbs denoting movement toward a goal, typically verbs meaning 'go to' or 'come to,' that is, deictic verbs having an allative component;

d)   temporal adverbs.

A few other highly restricted channels that could be added will be ignored here since our main concern is with some salient characteristics of the process.[8] Furthermore, following Bybee, Pagliuca, and Perkins (in press), *a* and *d* will not be considered here. Aspectual markers have future as one of their meaning components, typically in the form of contextual implicatures, that is, future "is just one interpretation of a much broader semantics," but they do not develop "explicit future semantics" (Bybee, Pagliuca, and Perkins, in press). Aspectual markers thus differ in their development from the other types of futures. Temporal adverbs form a relatively rare source of future markers. Superficially, it appears that this channel consists simply in the cliticization of time adverbs, whereby temporal adverbs such as 'tomorrow,' 'day after tomorrow,' 'actually,' 'quickly,' 'soon,' 'then,' or 'afterward' are reanalyzed as a tense category (cf. Heine and Reh 1984:132–33; Marchese 1986:256; Bybee, Pagliuca, and Perkins, in press). A more detailed description of this process has been provided by Marchese (1974) for some Kru languages.

The development of the remaining source structures, *b* and *c*, is sketched in figure 7.1, which is based on the analysis in Bybee, Pagliuca, and Perkins (in press) but offers a slightly different account from theirs. Whereas Bybee, Pagliuca, and Perkins concentrate on distinguishing meaning components of different "future ages" (abbreviated: FUTAGE), our main concern is to present an evolutionary schema. Figure 7.1 shows only their FUTAGES 1, 2, and 3:

FUTAGE 1	Obligation, desire, ability
FUTAGE 2	Intention, root possibility, andative, venitive, immediate future
FUTAGE 3	Future

FUTAGE 4, which includes probability, possibility, imperative, use in complements, and use in protases, is ignored in this figure since it is outside the scope of this discussion. The entities andative and venitive are also left out here; on the basis of the evidence available to us, their grammatical behavior differs from that of the other meaning components.

The findings sketched in figure 7.1 can be summarized thus:

i)   There is some kind of topological structure shared by the two main sources of future tenses. The basic idea seems to be that there is some objective that can, should, must, or is likely to be attained. This is precisely what Ultan (1978a) refers to as "goal-oriented" activity, a term that we will adopt in the present work.
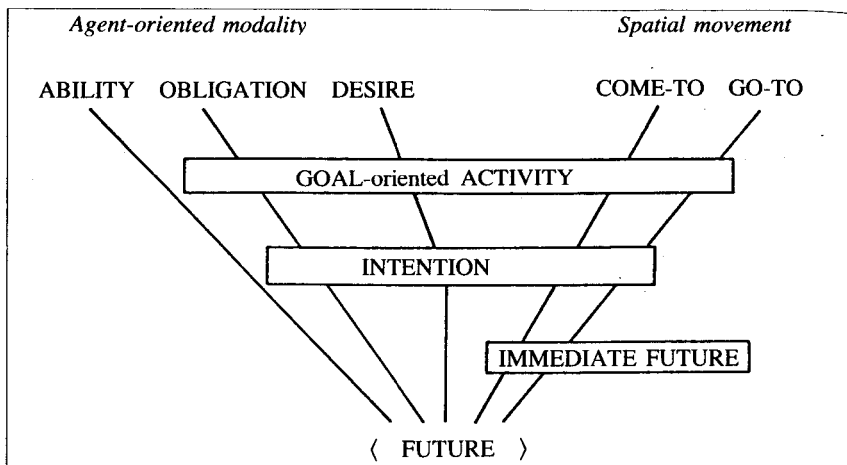
FIG. 7.1 The main grammaticalization channels of future markers (based on Bybee, Pagliuca, and Perkins, in press).

ii)   All source items, with the possible exception of ABILITY, lead to a concept IN-
        TENTION, irrespective of whether they express volition, obligation, or spatial
        direction.

iii)   Six of the nine COME TO futures in the sample of Bybee, Pagliuca, and Perkins
        (in press) have 'immediate future' as their use. This also seems to apply to some
        futures derived from GO TO. We tentatively suggest that this use is located cog-
        nitively between our concepts of INTENTION and FUTURE.

This description would seem to support the analysis proposed above, accord-
ing to which GOAL-oriented ACTIVITY is typically associated with human
behavior: it is human beings who have goals or strive to achieve goals. It is pos-
sible, and in fact does happen frequently, that expressions for GOAL-oriented
ACTIVITY are extended to nonhuman concepts; example (6) (= [2a]) would seem
to provide an instance of such an extension. Whenever this happens, the ex-
pression involved is likely to be decategorialized in some way or other (see
Hopper and Thompson 1984), which means, for example, that it exhibits a re-
duced morphosyntactic behavior. Thus, the verb *run* in (6) is decategorialized in
that it may not be used in certain tenses and aspects (**The road is running into the*
woods) while it is free from such constraints in (5) (= [1a]):

(5)   Harry runs into the woods.
(6)   The road runs into the woods.

Similarly, the Swahili verb *-taka* 'want, wish' typically requires a human sub-
ject and may receive any kind of tense or aspect prefixes, as in (7). In its

grammaticalized form as a future marker, however, it combines with both human and nonhuman subjects but may not receive any tense or aspect prefix, as in (8):[9]

(7)   Juma a-li-taka   ku-ja
        Juma CL1-PAST-want INF-come
        'Juma wanted to come'

(8)   Mvua i-taka-yo-ku-ja   karibuni . . .
        rain CL9-FUT-CL9.REL-INF-come soon
        'The rain that will come soon . . .'

In a similar way, INTENTION typically constitutes a human category. Once, however, the use of GOAL-oriented ACTIVITY and INTENTION is transferred to nonhuman concepts, then the way is free for a reinterpretation as a PREDICTION sense and, hence, the rise of a tense category.

7.1.2 From Deontic to Epistemic Modality

The development from volition or intention to future appears to be part of a more general process that also includes the development of verbal meaning leading from deontic to epistemic modality. We will not look here into the question as to whether, or to what extent, futures are epistemic in nature. Sweetser (1982:489) points out that they have their own distinction between a deontic (9) and an epistemic reading (10), as is suggested by contrasts like the following (see below):

(9)   He will be home soon.
(10)   He will be home by now (since he is usually asleep around this time).

Such contrasts are not confined to English or other European languages; they can be observed in other languages as well, for example, in Swahili:

(11)   a-ta-kuwa nyumbani kesho
        3SG-FUT-be home   tomorrow
        'She will be home by tomorrow'

(12)   a-ta-kuwa nyumbani sasa
        3SG-FUT-be home   now
        'She must be home by now'

The semantics of the deontic versus epistemic distinction have been characterized in various ways. Deontic modality is said to describe "real events" or "real-world forces" imposed by the speaker to act.[10] Epistemic modality on the other hand is concerned with reasoning processes, beliefs, and conclusions reached by the speaker (cf. Sweetser 1982; Traugott and König, in press). We do not wish to review the literature with respect to the various distinctions that have been proposed in order to define these two kinds of modality; some termi-

nological conventions are discussed in Lyons (1977:791ff.). For present purposes, we assume that what they have in common is that both express, respectively, a specific degree of probability or certainty concerning the actualization of events (in the case of deontic modality) or the truth value of the speaker's conclusions (in the case of epistemic modality).

Our concern here is essentially with epistemic modality in the narrow sense of the term, that is, with contents reflecting the speaker's state of knowledge or belief rather than with evidentiality, marking the speaker's information source (see Traugott 1987:2–3). The evidence available suggests that there is a unidirectional process leading from deontic to epistemic modality and that this process is linked to grammaticalization. That structures expressing epistemic modality are more strongly grammaticalized than those expressing deontic modality is reflected, for example, in the morphosyntactic behavior of the relevant linguistic constructions. Thus, Bybee and Pagliuca observe, "While it is very common for agent-oriented [i.e., deontic] modalities to be expressed by non-bound auxiliary or particle constructions, it is extremely rare to find agent-oriented modalities expressed by verbal inflections. Instead, inflectionally-marked modalities are almost always epistemic" (Bybee and Pagliuca 1985:69).[11]

The transition from deontic to epistemic modality has been repeatedly described as being the result of metaphor. Thus, according to Bybee and Pagliuca (1985), the obligation sense of *have to* predicates certain conditions on a willful agent: X is obliged to Y. The epistemic sense is a metaphorical extension of obligation to apply to the truth of a proposition: X (a proposition) is obliged to be true. Similarly, Sweetser (1982) observes that the only possible link between epistemic (e.g., *may* of possibility) and deontic (e.g., *may* of permission) domains is metaphorical since we view logical necessity, for example, as being the mental analogue of sociophysical force and logical possibility as the mental (or epistemic) analogue of permission in the real world. She also observes that deontic modal meanings "can apply in two worlds, the 'real' (sociophysical) world and the epistemic world," and, further, that an epistemic modality is metaphorically viewed as the real-world or root (= deontic) modality (Sweetser 1982:492–95).

The relation between deontic and epistemic modality can in fact be described as being metaphorical in nature, involving a transfer between two domains of conceptualization. The former implies a "dynamic" world of willful human beings who act and are capable of imposing their will on other agents. The latter, on the other hand, essentially implies a "static" world, one that may but need not be associated with human participants. Thus, Lyons (1977:823–24, 843) notes that deontic modality is concerned with the necessity or possibility of acts performed by morally responsible agents while epistemic modality is concerned with the truth of propositions.

Underlying the transfer from deontic to epistemic modality, there appears to be

a process from a world characterized by beings who are able to, allowed to, supposed to, or obliged to act to the world of "static situations" or facts or from what might, could, should, or must happen to what might, could, should, or must be the case.[12] The following sentences may illustrate this:

(13a)   John *may* go.
(13b)   That *may* be true.
(14a)   John *ought to* go.
(14b)   That *ought to* be the right answer.
(15a)   John *needs to* go home.
(15b)   He *needn't* be German, he could be Irish.
(16a)   John *must* leave immediately.
(16b)   John *must* be crazy.

What distinguishes the (a) sentences, which are suggestive of deontic modality, from the (b) sentences, which are suggestive of epistemic modality, are characteristics like the following:[13]

a)   Whereas (a) typically implies processes, (b) implies states.
b)   Similarly, (a) implies (potential) actions and (b) conclusions about (potential) actions or states.
c)   The subject of the (a) sentences is typically human. The (b) sentences do not show this constraint: the subject may be human or nonhuman.

To conclude, deontic modality is concerned with a dynamic world—a world of human beings who act or instigate actions—whereas the world of epistemic modality is essentially static. In this world, it is largely irrelevant whether the participants of discourse are human or not—what is presented are assessments, beliefs, conclusions about states, or actions conceived as states, and the concern is essentially with what a situation is like rather than with what happens.[14] Thus, a sentence like (17a), which is suggestive of deontic modality, receives an epistemic reading once it is associated with "static" aspect forms like the perfective (17b) or the progressive (17c), and in this case it is no longer typically associated with a human subject, as (17d) suggests:

(17a)   He must go immediately.
(17b)   He must have gone already.
(17c)   He must be going around this time.
(17d)   The fever must have gone.

Thus, we agree with the authors mentioned above that the relation between deontic and epistemic modality is metaphorical in nature, where the former serves as a vehicle for understanding and describing the latter. This relation appears to form another instance of the PERSON-to-OBJECT metaphor, according to which the world of epistemic modality, that is, a world that does not imply the presence of a

human category, is conceptualized in terms of deontic modality, which presents a world made up of agents and actions, that is, a typically human world.

If we assume that deontic modality expresses some degree of probability that something will happen, then epistemic modality can be understood as expressing the degree of probability that something is the case, which suggests that the distinction between these two kinds of modalities can be described as one between events and states. This also applies to the use of future tenses. When from a sentence like (18a) an epistemic utterance is derived, as in (18b), then the distinction involved is one between what is going to happen (18a) and what is likely to be the case (18b), that is, between a (possible) event and a (probable) state:

(18a)   He will be home soon.
(18b)   He will be home by now (he is usually asleep around this time).

The transfer from deontic to epistemic modality forms but one example of grammaticalization leading from "concrete" to "abstract" modality. To conclude, another common kind of conceptual transfer should be mentioned. This transfer, which has been described by Suzanne Fleischman (in press), may be called the "time-to-actuality metaphor." It has the effect that temporal distance, more precisely a distinction in deictic time, is employed in order to conceptualize or express distance along axes in other cognitive domains, such as those of modality (epistemic vs. deontic), assertiveness, interpersonal relations (concerning, e.g., degrees of politeness), evidentiality, or "speaker subjectivity" (Fleischman, in press).[15]

Through this metaphor, distance from 'now' within the temporal domain, for example, translates more subjective kinds of distance through which the speaker declines to assert the truth, certainty, or reality of a situation by representing it "as temporally nonactual." One linguistic effect is that, the greater the distance from reality, the more remote the past tense, which is likely to be used to represent epistemic distance. Thus, in the following sentences, the distinction nonpast : past : pluperfect—(19), (20), and (21), respectively—expresses an epistemic distinction roughly of the sort "probable/real" : "improbable/potential" : "impossible/unreal":

(19)   If I have time, I'll write to you.
(20)   If I had time, I would write to you.
(21)   If I had had time, I would have written to you.

This is but one example showing that there is a common pattern in English and many other languages, according to which temporal remoteness is employed as a vehicle in order to conceptualize modal remoteness as well as remoteness in other domains of cognition.[16]

7.2 The World of Text

Thus far, we have been primarily concerned with the emergence of grammatical structures that "express content," that is, that conceptualize human experience of the "real world." This basic language function is referred to as the ideational function by Halliday (1970b:143). Grammatical development is, however, not confined to this function. Not only does one have to verbalize experience; one also has to organize words in such a way that they can be understood as a piece of text rather than as forming a mass of unrelated entities. Halliday calls this the "textual function," according to which "language provides for making links with itself and with features of the situation in which it is used" (Halliday 1970b:143).

One of the elementary metaphors in the development of grammatical categories in fact concerns the transfer from the world of sensory-motor experiences, of visible, tangible objects, of kinetic processes, and of spatial and temporal relations to the world of discourse, from an external situational context to a context created by the intersubjective experience of shared knowledge of speaker and addressee (cf. Lyons 1977:672), or, to use Traugott's phrasing, from "the world being talked about" to "the speaker's organization of that world in the act of speaking" (Traugott 1980:47). This transfer from the "real world" to the world of text, or from a domain *de re* to a domain *de dicto,* as Frajzyngier (in press a) calls it, has a wide range of linguistic manifestations.

In a number of works on this subject, it is argued that spatial items form the main or even the only source of grammatical concepts used for structuring texts. In the present chapter, we argue that there are some further domains that are recruited for this purpose.

7.2.1 From Spatial to Textual Deixis
7.2.1.1 The SPACE-to-DISCOURSE Metaphor

Ger Reesink (1988:17) has proposed a metaphor, referred to as the SPACE-to-DISCOURSE metaphor, that is used to structure the universe of discourse in terms of spatial categorization—with the effect that spatial concepts are employed to designate points and relations in discourse. A paradigm case is provided by demonstrative concepts, whose spatial deixis is exploited for encoding "discourse deixis."

One common effect of this metaphor is that in many languages it is possible to express definite reference by means of spatial demonstratives, and in quite a number of languages this has led to the development of a demonstrative into a marker of definite and eventually of nongeneric reference, as has been described in detail by Greenberg (1978a).

Demonstratives also provide a pool of concepts for the expression of propositional anaphora. As Frajzyngier (in press a) points out, reference to a proposition

as a whole, rather than to a phrase, requires the use of a distal demonstrative, as can be seen in the following example from English, although this phenomenon is by no means confined to English (see below).[17] Note that (23) is ungrammatical since it implies reference to a noun phrase (*a car*):

(22)   John bought a car last night. That proved to be a disaster.
(23)   *That proved to be a lemon.

Another effect can be seen in the use of a demonstrative for cataphora, that is, for anticipatory anaphoric reference, as in (24), with the result that the demonstrative may develop into a complementizer, as in (25), as has happened in English, German, and other Germanic languages:[18]

(24)   John said that: the Bakers have left.
(25)   John said that the Bakers have left.

This evolution can be illustrated from Faroese, a Scandinavian dialect: the initial stage of the development demonstrative to complementizer is retained in (26), where the demonstrative *tadh* still forms the object of the main clause. In (27), the demonstrative has become a complementizer introducing the subordinate clause:[19]

(26)   eg sigi tadh: hann kemur
         I   say that: he   comes

(27)   eg sigi at   hann kemur
         I   say that he   comes

The development from demonstrative to clause subordinator has had at least the following implications. First, it led to the reanalysis of the sentence structure, more particularly to a boundary shift (see 8.2; Langacker 1977:64), since part of the main clause was allocated to the subordinate clause. Second, it probably led to the erosion of the erstwhile demonstrative *tadh*, which lost its initial consonant in unstressed position (**tadh* to *at;* Lockwood 1968:222–23).[20]

The fact that complementizers develop from demonstratives has been a commonplace in linguistics for at least a century. Wegener, for example, has described the evolution of the German demonstrative *that* into a complementizer thus:

> Ebenso sind gewiss die Sätze etymologisch aufzufassen, nach deren Muster sich die vielen deutschen Verbindungen mit *dass* gebildet haben, z.B. *ich glaube dass er kommt.* Zunächst war das neutrale *das* das einzige Object des Verbums *ich glaube,* und wenn es unverständlich war, so setzte man parenthetisch oder appositionell *er kommt* hinzu. Der Gebrauch der Sätze mit *dass* wird ursprünglich gewiss auf die Verbindung mit transitiven Verben beschränkt gewesen sein, doch sobald man das Pronomen nicht mehr als Pro-

nomen fühlte, sondern conjunctionell zum nachfolgenden Satze
zog, war der Ausbreitung der Constructionsweise Thor und Thür ge-
öffnet. [Wegener 1885:36]

One of the questions that the interpretation in terms of metaphorical mapping
between different domains raises is, If there is a choice between markers of dif-
ferent degrees of proximity, which of them is recruited to assume a certain
discourse function? In particular, since space is three dimensional whereas text
can be typically conceived of as a one-dimensional structure leading from a point
that is earlier to one that is later in time, how does this affect the choice of a
discourse marker? Greenberg observes in this connection:

> We see that the third person pronoun or article is derived from dis-
> tance demonstrative or an unmarked demonstrative which is used so
> widely that is includes distance deixis as one of its uses. Probably the
> main factor is that the distance demonstrative is easily extended to
> that which is absent as in narrative, or present but not visible as far
> distant or behind the speaker. It is therefore the natural candidate for
> the expression of that which was previously mentioned which will in
> most cases not be in the actual speech situation. [Greenberg
> 1985:282]

This is also likely to be the case when distal demonstratives develop into relative
clause markers, as has happened, for example, in German (*der/die/das;* Lock-
wood 1968:243–44).

This is also the case when locative adverbs, rather than demonstratives, are
involved, as Frajzyngier (in press a) has demonstrated. Thus, sentences (28) and
(29), respectively, contain a proximal (*here*) and a distal adverb (*there*). The cor-
responding anaphora, however, is invariably derived from the distal adverb, as
Frajzyngier observes in the following examples:

(28)   Put the book here!
(29)   Put the book there!
(30)   If you took the book from this box, put it back there/?here!

Note, however, that there are also exceptions to this general pattern. In Ewe,
which has a clear-cut distinction between a proximal (*si[a]*) and a distal demon-
strative (*ma*), it is the former that has given rise to the general relative pronoun *si,*
for example:

(31)   me-kpɔ́ ɖeví ma si vá   etsɔ   lá
        1SG-see child that REL come yesterday SUB
        'I saw that child who came yesterday'

Observations like these suggest that the transition from the "real world" to the
world of discourse is likely to have the following implications:

a)   Distinctions in spatial reference tend to be eliminated once the relevant lexical
             or grammatical units assume a textual function.
b)   It is usually the distal marker, or one of the distal markers, that is recruited for
             this purpose.
c)   As is always the case in the process of transition from one domain to another,
             there is an intermediate stage of ambiguity, where the reference marker may
             refer to both the "real world" and the world of discourse. We return to this point
             in the following section (7.2.1.2).

Lyons proposes the following relation pattern between spatial and discourse
reference.[21]

                Spatial deixis > temporal reference > textual deixis

This in fact appears to be the main line of grammaticalization involved, though
not the only one. Indeed, it would seem that distance in discourse does not neces-
sarily presuppose temporal distance in the domain *de re;* it may be derived
immediately from spatial deixis. In a number of languages other than English,
such as Latin, Spanish, French, Turkish, or German, the spatial distinction be-
tween a proximal demonstrative ('this') and a distal demonstrative ('that') is
transferred to the world of discourse in order to denote the anaphoric distinction
between an earlier mentioned ("the former") and a later mentioned referent
("the latter"; cf. Lyons 1977:669). This transfer from *de re* space to *"de dicto*
space" does not seem to require an intermediate *de re* time: if text is conceived of
as a one-dimensional space, then the notion of "relative distance from the deictic
center" may be transferred immediately from spatially defined referents to refer-
ents defined by discourse. Thus, the SPACE-to-DISCOURSE metaphor can be
assumed to have a structure more or less as sketched in figure 7.2. There are two
properties in particular that the domain *de re* and the domain *de dicto* share: in
both worlds, there is existence in time, and there is a deictic center. Accordingly,
temporal orientation and deixis constitute areas where transfers from one domain
to the other are especially common.
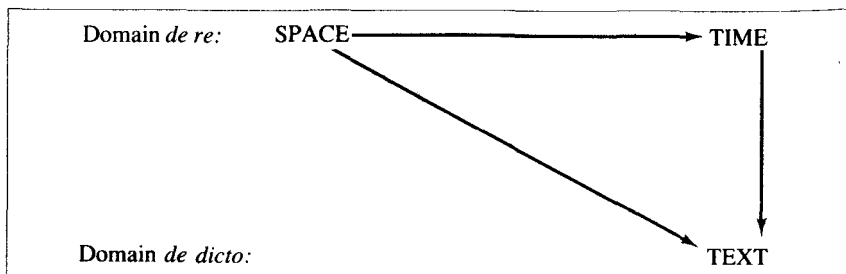
FIG. 7.2 The transfer pattern from spatial to textual function.

7.2.1.2 From Demonstrative to Relative Clause Marker

In the preceding section, we have been dealing with but one example relating to the transition from "real world" concepts to more abstract concepts belonging to the world of text.[22] Our main concern was with the transfer from one domain to another as a discontinuous process. As always happens in grammaticalization, this process also has a continuous component, which we wish to draw attention to in the following section.

We mentioned above that in the transition from "real world" concepts to concepts of the world of discourse there is an intermediate stage of ambiguity where the relevant expression simultaneously refers to both worlds, for example, where a demonstrative pronoun may be interpreted as a marker alternatively of spatial deixis and of clause subordination, that is, a relative pronoun. Traces of such an immediate stage, or "hybrid" form (see 8.5.2), can be found in many languages, even those that have concluded the transfer from spatial to discourse deixis.

Westermann (1907:62), for example, reports that the Ewe marker *si* in (32) can be interpreted alternatively as a demonstrative (32a) or as a relative pronoun (32b):

(32)   atí   si   me-kpɔ́
        tree DEM   1SG-see
        (a) 'This tree, I saw (it)'
        (b) 'The tree that I saw'

We shall now provide an example from Kenya Pidgin Swahili (KPS), a pidginized variety of Swahili spoken in up-country Kenya, to illustrate this process of transition in more detail (see also 8.5.2).[23] For a similar example involving another pidgin, Tok Pisin, see Sankoff and Brown (1976).

Kenya Pidgin Swahili is derived from coastal or "native" Swahili by a process of pidginization. This process took place around the beginning of this century in the urban centers and plantation areas of the Kenyan highlands, where Swahili was used as a lingua franca both within the African population and between African laborers, British settlers, and Asian immigrants. One major result of this process was that almost the entire inflectional and derivational morphology characteristic of Bantu languages was given up, that the agglutinating structure of coastal or Standard Swahili was replaced by an analytic-isolating structure, and that hypotaxis gave way to parataxis as a means of structuring text. With the breakdown of the noun class system and gender-number agreement, the language lost its major means of marking syntactic relations (Heine 1973, 1978). Thus, KPS in its earlier forms can be reconstructed as a "jargon" consisting of several hundreds of lexical items, a smaller number of function words, and a few word-order rules.[24] The following example, taken from a tale that was recorded by Heine 1969, illustrates this kind of highly context-dependent "jargon":[25]

(33)   Hawa hapana jali   na-toa   mtu   huku na-peleka huku na-kufa halafu
         they NEG   mind NF-remove person there NF-take   there NF-die   then
         na-wacha huku halafu fisi   na-chukua yeye
         NF-leave there then   hyena NF-take   he or she
         'They did not care, they pulled the man out, took him there until he died,
         then they left him there, so that a hyena would come and eat him up'

The decline of inflectional morphology also affected the suffix -*o* the only
means of forming relative clauses as well as several other kinds of clause subor-
dination in coastal Swahili. The loss of -*o* resulted in asyndetic relative clauses in
KPS, as exemplified in (34):

(34).   . . .wewe na-pata kila   kitu wewe na-taka
           you NF-get every thing you NF-want
           'you will get everything you want'

In the course of time, however, the pidgin developed a new device for marking
relative clauses. The strategy employed was in line with universal principles of
grammaticalization: a distal demonstrative, *ile* 'that,' was recruited for this pur-
pose.[26] Presumably, the first stage in this development was one where *ile* still had
a demonstrative function but in addition served to introduce a relative clause, as
in (35):

(35)   hakuna baridi sana, kwa sababu ile li-kuwa ndani ya frich   watu   kwisha
         be.not cold   very because   PAST-be inside   fridge people PFV
         maliza yote . . .
         finish all
         'There is no really cold (beer) because that which was in the fridge has all
         been finished . . .'

In the next stage, introducing relative clauses became the primary function of
ile, although a demonstrative reading is not ruled out, as in (36):

(36)   . . . wewe na-weza ona Fort Jesus ile na-jeng-wa   na watu   ya Portugal
         you NF-can see Fort Jesus   NF-build-PASS by people of Portugal
         'you can see Fort Jesus, which was built by the Portuguese' (or, less
         common, 'you can see Fort Jesus, the one built by the Portuguese')

Finally, in the last stage, *ile* exclusively has the function of a relative clause
marker. In (37), for example, it no longer has a demonstrative function: it is a
subordinator introducing a restrictive relative clause:

(37)   kila mtu   ile   na-ambi-wa mambo hii na-shangaa
         each person REL NF-tell-PASS matter this NF-be.surprised
         'everybody who was told this story was surprised'

These are but a few examples of the uses of *ile* that can be interpreted as presenting different stages along a continuum of grammaticalization starting out with a purely demonstrative function and ending with a textual function, that of marking clause subordination. Note, however, that the relative frequency of occurrence of *ile* along this continuum varies considerably. On the basis of a text sample of approximately four thousand words, we counted the following figures for the stages discussed above:

Stage	Type of Use	Number of Occurrences in Texts
0	No relative clause marker	13
I	*Ile* functions simultaneously as a demonstrative and as a relative clause marker	4
II	*Ile* is primarily a relative clause marker, although a demonstrative reading is not ruled out	30
III	*Ile* is exclusively a relative clause marker	9

In all instances of Stage 0, the relative clause is headed by an indefinite noun, while, in all other stages both indefinite and definite head nouns are found. On the basis of the table of stages given above, the following development of *ile* from a demonstrative to a clause subordinator can be assumed:

a)   Stage 0 still reflects the "jargon" situation of paratactic structures, marked, inter alia, by the use of asyndetic relative clause constructions. With the rise of a new device of relative clause marking by means of *ile*, however, the use of asyndetic constructions is narrowed down to clauses headed by indefinite nouns.

b)   The conceptual transition of the erstwhile demonstrative from spatial to textual deixis involved a "hybrid" stage (I), where *ile* simultaneously expresses both kinds of function.

c)   The high frequency of occurrence of Stage II uses suggests that the grammaticalization of *ile* has nowadays proceeded to a point where its main function is that of a relative clause marker, even if a demonstrative function may still be implied.

d)   At the same time, this development has entered the final stage (III), as the figure of nine text occurrences indicates.

This profile of the reference marker *ile* in KPS suggests that the SPACE-to-DIS-COURSE metaphor, which leads to a transfer from "real-world" concepts to concepts that have their existence primarily in the world of text, also has a contin-

uous component that surfaces in language structure in the form of both an evolutional continuum and a range of use patterns, that is, in the form of a grammaticalization chain (8.4) forming a panchronic space (see chap. 9).

7.2.2 Discourse Functions

Another effect of the SPACE-to-DISCOURSE metaphor can be seen in the grammaticalization of motion verbs to markers of discourse functions. Karen Ebert (1987) has demonstrated that in Kera, as well as other Chadic languages of the Afro-Asiatic family, verbs meaning 'come' and 'go' have developed a secondary meaning, that of marking text coherence. Among the discourse functions that these verbs have assumed is the signaling of verbal anaphora and of unexpected event sequences.

In fact, a number of functions expressed by language relate not to constituents such as sentences, clauses, or phrases but rather to larger information units such as narrative texts. Such functions include the foregrounding of event lines, event sequencing, backgrounding, topic continuity, topic shift, etc. According to Hopper, "The encoding of percepts in the world always takes place within a discourse rather than a sentence framework" (Hopper 1982:6).

Markers denoting a certain discourse function may express additional functions that "represent grammaticized semantic extensions of the discourse function" (Hopper 1982:4). Hopper provides the example of the enclitic -*lah* in Malay, which "is not a morphological level form but a discourse particle which serves to individuate a foregrounded verb and hence indirectly to track a set of events along a chronologically sequenced line. If in carrying out this discourse function -*lah* happens to 'convert' an intrinsically statal predicate into a processual one, this is a by-product of its primary function" (Hopper 1982:14). Thus, in oppositions such as the following, -*lah* appears to derive process predicates from state predicates:

(38)   STATE: mati,   'dead' : lemah,   'weak'

(39)   PROCESS: mati-lah, 'to die' : lemah-lah, 'to have become weak'

Another by-product of the uses of this discourse particle is that in isolation from any discourse context it may receive an interpretation identical to a perfect, as in the following Malay sentence:

(40)   Mati-lah anak raja itu
            dead-lah prince   the
            'The prince is (now) dead' or 'The prince has died'

Assuming that discourse functions essentially belong to the "world of text" rather than the "real world" (see above), then the question arises as to how the relation between these two worlds is to be defined with reference to the gram-

maticalization of discourse functions. Hopper's Malay example suggests that tense-aspect meanings may be derived from discourse functions such as focus,[27] a finding that is corroborated by a similar observation made by Herring (in press) in Tamil. Aspect, however, is not a sentence-level but rather a discourse-level function according to Hopper: "I look at Aspect from each end, as it were, suggesting a core function which is discourse-derived and in some sense universal, and a set of additive functions which are not universal (though some of them may be common) and which represent grammaticized semantic extensions of the discourse function" (Hopper 1982:4). It would be interesting to know what the exact status of these "grammaticized semantic extensions" is, that is, whether they still belong to the "world of text" or else are suggestive of a transition to the "real world" and to what extent they have to be viewed as contextually induced implicatures rather than conventionalized grammatical meanings.

While the behavior of discourse-marking devices with reference to the distinction "real world" versus "world of text" is still far from clear, there is some evidence to the effect that, wherever it is possible to trace the etymology of discourse markers, they are likely to originate from lexical material within the "real world." For example, the various discourse-pragmatic functions discussed by Herring (in press) for Tamil are all derived from the verb *vitu* 'leave, let' (see 8.7), and the markers *lá* of Gwari or *á* of Nupe, which both denote simultaneously completed aspect and focus (cf. Smith 1967, 1969; George 1971; Hyman and Magaji 1971; Heine and Reh 1984), have the kinetic process verb *lá* 'take' as their lexical source (for more details, see 8.7).

7.2.3 Localism and the Development of Case Functions

In section 4.5, we drew attention to one approach to linguistics that in a number of ways is related to the one proposed in this work, namely localism (Hjelmslev 1935; Anderson 1971, 1973; Lyons 1967, 1977), according to which spatial expressions are linguistically more basic than other kinds of expressions and therefore serve as a structural template for the latter. As we saw there, the scope adopted by localists appears to be too limited to account for a wider range of grammatical phenomena, essentially since it is confined to only one source domain, SPACE, and since this domain is itself derived from other, more concrete cognitive domains (see chap. 5).

One of the areas where the evidence in favor of the localist hypothesis appears to be particularly strong is that of case marking. In 6.4, we arranged a number of case functions according to their relative degree of grammaticalization. The resulting scale is reproduced below:

(41)   ABLATIVE > AGENT   > PURPOSE   > TIME > CONDITION > MANNER
       ALLATIVE   COMITATIVE   INSTRUMENT   CAUSE
       LOCATIVE   BENEFACTIVE DATIVE
       PATH   POSSESSIVE

According to this scale, all case functions having some spatial base are located within the leftmost column; that is, they may form a vehicle for expressing functions to their right. This is in line with the localist hypothesis. While it is not quite clear at the present stage of research why SPACE forms the primary source for case functions, one could tentatively suggest the following: one of the functions of case marking is to structure texts at the sentence level, and perhaps the most obvious strategy for doing so is to treat texts as a one-dimensional space and to conceptualize case relations in terms of spatial relations.

At the same time, however, the scale of case functions given above is at variance with the ordering of metaphorical categories outlined in section 2.4.1, according to which SPACE is a more abstract category than either PERSON, OBJECT, or ACTIVITY. There is an obvious reason (see 6.4): we are dealing here with two highly distinct levels of abstraction. On the one hand, there is the level of "concrete," referential concepts and kinetic processes that serve as templates for more abstract functions. On this level, thing-like entities such as body parts, for example, serve as vehicles to express spatial concepts. For the sake of convenience, we refer to this level as Level A. On the other hand, there is the level of more "abstract" entities, the level where concepts used to express relations within a sentence or clause are located. On this level, SPACE constitutes the most "concrete" category and is employed for the expression of more "abstract" relations. Thus, temporal relations are conceptualized in terms of spatial relations, causal or conditional notions in terms of temporal notions, etc. This level may be referred to as Level B. The gap between these two kinds of levels is bridged by metaphor: categories of Level B are conceptualized in terms of the more "concrete" categories of Level A. The SPACE-to-DISCOURSE metaphor forms one of the more prominent metaphors that fulfills this function; it is, however, not the only one. Attention should be drawn to an additional metaphor, the ACTIVITY-to-DISCOURSE metaphor.

We may illustrate the significance of this metaphor by looking at the nature of case marking in Ewe. In this language, all case markers having some locative base; that is, all those listed in the leftmost column of (41) are immediately derived from verbs. To describe it in terms of a sychronic framework, the case functions ALLATIVE, ABLATIVE, LOCATIVE, and PATH are all expressed in this language by means of words whose meaning and morphosyntax form a continuum ranging from a fully verbal behavior at the one end to a prepositional behavior at the other (see 5.5; Hünnemeyer 1985; cf. Frajzyngier 1975).

This does not exhaust the range of verbal sources for case markers found in Ewe. The following additional instances may be added: the functions BENEFACTIVE and COMITATIVE also have a verbal source. Since each of these case functions has given rise to other, more grammaticalized case functions, the conclusion reached is that, with the possible exception of CONDITION and

TABLE 7.1. The Main Case Functions of the Co-verbs of Ewe

Verb	Verbal Meaning	Case Functions
ɖé	'reach'	ALLATIVE
tsó	'come from'	ABLATIVE, AGENT, TIME
le	'be at'	LOCATIVE, POSSESSIVE, TIME, CAUSE, MANNER
tó	'pass by'	PATH, AGENT, CAUSE
ná	'give'	BENEFACTIVE, PURPOSE, DATIVE
bé	'say'	PURPOSE
tsɔ	'take'	INSTRUMENT, MANNER
kplé	'meet' + 'reach'	COMITATIVE, INSTRUMENT, MANNER

POSSESSIVE,[28] all case functions listed in (41) are or may be derived from verbs, as table 7.1 shows (see also 8.6).[29]

To conclude, the system of case marking in Ewe is almost entirely verbal in origin; it appears to be based on the conceptualization of case functions in terms of actions and processes, that is, of dynamic situations that are suggestive of the cognitive domain of ACTIVITY. Note that some of these case functions may be derived in individual languages from concepts other than those belonging to the domain of ACTIVITY. The COMITATIVE function, for example, is not seldom conceptualized in terms of nominal entities that are not necessarily suggestive of the ACTIVITY domain. Thus, in Estonian, the comitative marker -ga has its origin in a locative structure meaning 'in the company (of).'[30]

A simplified spectrum of the conceptual ramifications leading to the emergence of case functions is sketched in figure 7.3. As this figure suggests, two dimensions are involved in the development of case functions. The first concerns the level of "real-world" concepts, which includes more "concrete" categories such as ACTIVITY and SPACE. The second dimension extends from the level of "real-world" categories to that of case functions, which essentially belongs to the "world of text" (Level B). What figure 7.3 suggests is that one and the same case function may be derived from more than one "real-world" category.
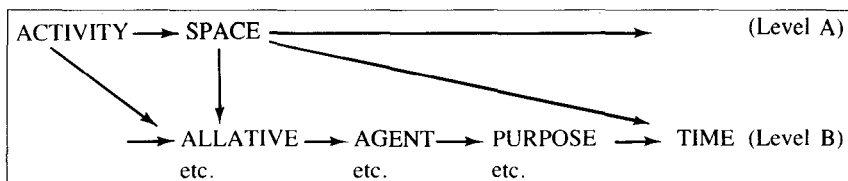
FIG. 7.3 Case marking and the two-dimensional space of abstraction.

7.2.4 From Ideational via Interpersonal to Textual Function

Since Karl Bühler (1934) proposed his tripartite classification of language functions, distinguishing between *Darstellung* ("representation"), *Ausdruck* ("expression"), and *Appell* ("conative, vocative"), a number of studies have been devoted to the question as to how exactly this classification relates to language use and language structure. An attempt to integrate such a distinction within a theory of grammaticalization has been made by Traugott (1982). Her distinction between a propositional, a textual, and an expressive component forms a modified version of that proposed by Halliday and Hasan (1976).[31]

On the basis of findings in a larger corpus of data, she argues that the main change involved in the process is from the propositional via the textual to the expressive functional component: "If there occurs a meaning-shift which, in the process of grammaticalization, entails shifts from one functional-semantic component to another, then such a shift is more likely to be from propositional through textual to expressive than in reverse direction" (Traugott 1982:256). Reverse changes, she argues, that is, changes from expressive through textual to propositional functions, are "highly unlikely in the history of any one grammatical marker" (Traugott 1987:1).

Halliday (1970a, 1970b) uses the terms "ideational" (for "propositional"), "textual," and "interpersonal" (for "expressive") instead, and we adopt his terminology here. The ideational function concerns the expression of "the speaker's experience of the real world, including the inner world of his own consciousness," the textual function concerns the construction of texts, and the interpersonal function serves in the expression and development of the speaker's own personality and enables him to interact with others (Halliday 1970b:143).[32] Note that Halliday refers not to components but rather to functions of language.

Our distinction between a "real world" and a "world of text" roughly corresponds to Halliday's notions of ideational and textual, respectively; in accordance with the observations made in the introduction to section 7.2, we may therefore say that one common transfer pattern to be observed is that grammaticalization leads from the ideational to the textual function. This observation is in line with the findings made by Traugott.

The situation is more complex in the case of the interpersonal function. Within this function, we may distinguish between a "speaker-oriented" and a "hearer-oriented" component. The former concerns "what is in the speaker's mind," that is, his attitudes, judgments, beliefs, etc., and it corresponds to Lyons's expressive function, while the latter serves to establish and maintain social relations and corresponds to the Lyons's social function (cf. Halliday 1970b:159–60; Lyons 1977:50–53). The boundary between the two is fuzzy, however, to say the least.

While we are still far from being able to locate the interpersonal function with-

in the framework proposed here, at least a partial solution seems possible. Traugott's hypothesis mentioned above deals primarily with the speaker-oriented component of this function. A different picture emerges once we look at the hearer-oriented component. The clearest instances of interaction with the listener involve utterances that "serve as directives imposing upon the addressee some obligation" (Lyons 1977:53), most of all questions and commands. Such utterances also exhibit a clear-cut behavior vis-á-vis grammaticalization: they may, and frequently do, develop into structures whose main function is to construct texts, to establish cohesive relations between sentences (cf. Halliday 1970b: 143), and in most cases to introduce subordinate clauses.

The main bulk of evidence in support of a development from hearer-oriented interpersonal function to textual function comes from examples involving the reanalysis of interrogative structures as subordinate structures, which has the effect that question markers are grammaticalized to markers of clause subordination, as has happened in many languages. Thus, in a number of European languages, interrogative pronouns such as 'who?' or 'which?' have developed into textual markers such as relative clause pronouns. Another interesting example concerns the reanalysis of polar questions as conditional protases (cf. Jespersen 1940:374; Haiman 1978:570–72).[33] The result is that interrogative markers are grammaticalized to markers of conditional protasis. Traugott herself (1985a:291ff.) has identified this channel as one of the main sources for the development of conditional morphologies. Another example is provided by Herring (in press), who describes how in Tamil narrative discourse rhetorical questions are reanalyzed as markers of clause subordination.

The development of imperatives, the second major form of speaker-oriented linguistic activity, into markers having a textual function is less common. In a number of languages, there are, however, modally marked structures including imperative verbal forms that happen to acquire textual functions such as marking conditional protasis. English *suppose* may be seen as a typical example (cf. Traugott 1985:291).

Underlying the transfer from the interpersonal to the textual function, there appears to be a strategy employed by the speaker to establish a relation between the listener and the text, for example, by drawing attention to a particular part of the text or by arousing the listener's interest in that part. Reanalysis and grammaticalization have the effect that the relation between listener and text is gradually reinterpreted as one between different parts of that text. Thus, at least with reference to the hearer-oriented component of the interpersonal function, we may say that the development of language functions has the following structure:

ideational function > interpersonal function > textual function

7.3 The World of Expectations
7.3.1 Counterexpectation

In all languages known to us, there is some means for expressing a distinction between situations that correspond to shared norms on the one hand and situations that deviate from these norms on the other. This distinction is encoded typically by using some marker for the latter, while the former remain unmarked. Thus, in the following sentence, the morphemes *too* and *only* may be interpreted as signaling that the statement made is somehow at variance with what the speaker considers to be the norm in that context; that is, it expresses a contrast between what corresponds to and what deviates from the norms and standards characteristic of the world the speaker is familiar with, or has in mind, or thinks the addressee has in mind, in the relevant context. The deviations in (42) concern the size of the house (*too small*) and the number of people living in it (*only two*); that is, the particles *too* and *only* express deviations from what is considered to be "appropriate" (Joan Bybee, personal communication):

(42)   Your house is *too* small, even if you are *only* two.

Particles and sentence adverbs such as *too* and *only* will be referred to as "counterexpectation (CE) markers." In particular, they have the following properties:

a)   Their use implies a comparison between what is asserted on the one hand and what is either presupposed, expected, or assumed to be the norm on the other.
b)   The former is at variance with the latter, and the main function of the CE marker is to relate the assertion to the world of presuppositions, expectations, and norms.

This world of expectations frequently is, but need not be, the same for the speaker and the addressee. It may differ according to age, sex, social status, cultural background, ideology, etc. In (43), the world of expectation differs for speaker (A) and addressee (B) since both have different ways of spending their weekend:

(43)   A: Let us play on Sunday at 8.
         B: That's *too* early; I am *still* asleep at that time.

That B uses two CE markers would primarily seem to be due to the fact that his expectation as to what would be a good time for playing tennis deviates from that of A (*too early*) and that he deviates from the standard proposed by A (*still asleep*).

In (44) again, the difference in expectation is due to the fact that speaker and addressee have a different state of knowledge (cf. Hoepelman and Rohrer 1981:110). While both agree that the situation described is contrary to what one

would expect to be the case, there is disagreement as to the kind of deviation involved:

(44)   A: By 8 A.M., Peter was *already* in his office.
         B: Already? He was *still* in his office; he had worked all night through.

In the following table, a few examples of English words whose functions appear to include counterexpectation are listed with their "prototypical" domains of use:[34]

Marker	Rough Gloss	Typical Domain
too	'exceedingly more than appropriate'	Any domain
nevertheless	'adversative to expectation'	Any domain
only	'less than appropriate'	QUANTITY
already	'beginning earlier than expected'	TIME
not yet	'beginning later than expected'	TIME
still	'end later than expected'	TIME
no longer	'end earlier than expected'	TIME

As we shall see below, such information conceals more than it reveals. Concerning some treatments as to how different uses of one and the same CE marker are to be accounted for, see König (1977) and Hoepelman and Rohrer (1981).[35]

In some cases, it might not be apparent that counterexpectation is involved, as in the following examples (Bybee, personal communication):

(45)   As usual, he was *not yet* up at noon.
(46)   Just as I expected, the meeting was *still* going on at 8 P.M.

It would seem that in such cases there are two different norms involved: one that is established by phrases such as *as usual* or *just as I expected* and another kind of norm underlying the main predictions in (45) and (46). The CE markers *not yet* and *still* in these sentences relate only to the latter.

Attention should also be drawn to the fact that the marking of counterexpectation may involve extremely divergent morphosyntactic or phonological expressions. While adverbs form perhaps the most common means, CE markers can be suprasegmental, as in the following example, where the stress on *not* may signify that the assertion made in sentence (47) is in contrast with the expectation that Dr. Butterfly will come:

(47)   Dr. Butterfly will *nót* come.

In sentence (48), taken from German, counterexpectation is expressed by means of a difference in word order when contrasted with the corresponding question (49), which presents the unmarked question order, or by means of the

interrogative intonation when contrasted with the corresponding affirmative sentence (50):

(48)   Er raucht?
         'He smokes?' (I didn't expect him to smoke)
(49)   Raucht er?
         'Does he smoke?'
(50)   Er raucht.
         'He smokes.'

   Thus, there is a wide range of linguistic forms available to languages like English or German for relating assertions to the world of expectations and norms and presenting them as being counterexpectative. As we shall now see, Ewe has developed a more uniform strategy for marking counterexpectation.

7.3.2 From Verb to Counterexpectation Marker in Ewe

Ewe uses the verb *kpɔ́* 'see' in order to express counterexpectation as a grammatical category. Consider the following sentence:[36]

(51)   A: e-kpɔ́-e   a
             2SG-see-3SG Q
             'Did you see it?'
         B: ɛɛ, me-kpɔ́-e   kpɔ́
             yes 1SG-see-3SG see
             'Yes, I really did'

Another possible interpretation of B's reply to A's question would be 'I saw it with my own eyes (you therefore have no reason to doubt it)'; that is, B wishes to emphasize that he or she physically saw it, even if this is at variance with A's expectation. Thus, the sentence-final *kpɔ́* has the function of a counterexpectation marker.

   While in (51) the sentence-final *kpɔ́* may still carry some verbal sense ('see'), this is excluded for obvious reasons in (52), where *kpɔ́* is used exclusively as a marker of counterexpectation:

(52)   e-se-e   kpɔ́ a
         2SG-hear-3SG see Q
         'Did you really hear that?/Have you ever heard that?'

As is characteristic of grammaticalization processes in general, the transition from the verb 'see' to a CE marker involves an intermediate stage where the use of *kpɔ́* is ambiguous since either the verbal or the grammatical sense may be implied. The following examples are suggestive of such an intermediate stage:

(53)   Kofí á-vá   kpɔ́
           Kofi FUT-come see
           'Kofi will come and have a look'

(54)   Kofí á-vá   kpɔ́ a
           Kofí FUT-come see Q
           (a) 'Will Kofí come and have a look?'
           (b) 'Will Kofí really come? (I doubt it)'

(55)   Kofí á-lolo   kpɔ́ a
           Kofi FUT-be.big see Q
           'Will Kofí really be big?'

While in sentence (53) *kpɔ́* is used in its lexical sense, 'see,' it is ambiguous in (54), which is the question form of (53): either it may mean 'see' (54a), or it may be used in an extended meaning, the sense of (54b) being roughly 'Will Kofí see to it that he comes?' or 'Will Kofí *really* come?' Underlying this use in (54b) there appears to be some metaphorical transfer whereby visual experience serves to express a "factual experience," and *kpɔ́* thus signifies that the assertion made constitutes a fact. Now, emphasizing that something happens 'really' or 'in fact' tends to imply that the proposition is contrary to one's expectation. When used in questions, markers like 'really, in fact' therefore express DOUBT whether the content of the question is "really" true. Thus, the question, *Is John really rich?* implies that the content of the question may be at variance with the speaker's expectation, and the most obvious answer to this question would be no; that is, *really* can be interpreted as a CE marker. In a similar way, the speaker of (54b) wishes to signal that he or she does not expect Kofí to come, and *kpɔ́* therefore has the function of a CE marker expressing strong DOUBT.

In (55), *kpɔ́* no longer has verbal meaning; its function is exclusively that of a CE marker. The presupposition is that someone expects Kofí to grow even bigger than he is now, and with his or her question the speaker expresses doubt as to whether this presupposition is justified.

It is the respective content that decides which of the senses of (54) is implied. As we have argued elsewhere (see 3.3), the introduction of new meanings in the process of grammaticalization is, above all, the result of context-induced reinterpretation. Another example may illustrate this:

(56)   é-xɔ   Máwú dzí se
           3SG-get God   on hear
           'He believes in God'

(57)   e-xɔ   Máwú dzí se   kpɔ́ a
           2SG-get God   on hear see Q
           'Do you really believe in God?'

(58)   me-xɔ   Máwú dzí se   kpɔ́
          1SG-get God   on hear see
          'I no longer do'

(59)   nye-mé-ga-xɔ   Máwú dzí se   o
          1SG-NEG-again-get God   on hear NEG
          'I no longer believe in God'

We have seen that *kpɔ́* is used to present counterexpectative assertions and, when employed in questions, to express DOUBT. The speaker of sentence (57) uses the CE marker *kpɔ́* with the expectation that the addressee is likely to have a different attitude from that of the subject of (56). The tense used in all these sentences is the aorist, which, depending on the context, may refer to either present or past situations. More frequently, it has past significance, and, when followed by the CE marker, the past significance appears to be generalized. A more literal meaning of (58) therefore would be 'I really believed in God (that is, I no longer do).' The combination of a past tense significance and a CE marker has the effect that (57) is interpreted as a negative statement, so that (58) is largely synonymous with the negative sentence (59) and can be translated more appropriately as 'I really did believe in God, that is, I no longer do.' Thus, context-induced reinterpretation has the effect that a statement that is morphologically positive receives a negative reading and that the semantics of the CE marker *kpɔ́* is enriched by another sense, NO LONGER, when used with verbs of state in the aorist tense.

In certain contexts involving state verbs, the sense of *kpɔ́* may proceed from NO LONGER to that of a negation marker (NEG), as in (60), or, when the sentence is already negative, to that of a positive marker, as in (61):

(60)   xɔ   sia k ɔ́   kpɔ́!
          house this be.tall see
          'This house is not tall (I was under the impression it was taller)'

(61)   xɔ   sia mé k ɔ́   kpɔ́ o
          house this NEG be.tall see NEG
          'This house is big indeed (I remember it as being much smaller)'

This, however, does not exhaust the range of functions of *kpɔ́*. We will add some more examples to show the effect of context-induced reinterpretation. As we have seen above, its function is to point out that some event takes place even though it is not expected to. In certain contexts, referring to a nonpast situation, this results in a sense that is best translated by NEVERTHELESS, as in the following examples:

(62)   é-ga-vá   kpɔ́
        3SG-again-come see
        'He comes nevertheless (although he knows it is in vain)'

(63)   Kofí á-nɔ   nú   ɖu-gé   kpɔ́
        Kofí FUT-COP thing eat-INGR see
        'Kofí will continue eating nevertheless' (everybody is convinced that it
        won't help him)'

The sense NEVERTHELESS appears to have given rise to yet another interpreta-
tion, which is also confined to nonpast situations. The assumption underlying the
meaning of sentences like (62) and (63) is that someone performs an action even
though he or she is unlikely to have success. In sentences having a nonpast time
reference, therefore, *kpɔ́* may be used to express the sense 'TRY to do something
(irrespective of whether one succeeds or not).' Sentences (64), (65), and (66) are
examples of such sentences:[37]

(64)   va   kpɔ́!
        come see
        'Try to come anyway (although you might not meet me)'

(65)   m-á-tu   xɔ   kpɔ́
        1SG-FUT-build house see
        'I'll try to build a house (although I don't know anything about house
        construction)'

(66)   m-é-le   é-dí-m̄   kpɔ́ o
        NEG-3SG-COP 3SG-search-PROG see NEG
        'He is not even trying to look for it'

7.3.3 Temporal Uses

While in the majority of examples presented so far the CE marker expresses a
contrast between an expected and an asserted fact or situation, we have also come
across one instance where it receives temporal significance (see [59] above). Our
data suggest, in fact, that the temporal uses of *kpɔ́* by far outnumber the nontem-
poral ones. Once again, the transition from nontemporal to temporal CE marking
appears to be the result of context-induced reinterpretation. In sentence (67), for
example, *kpɔ́* may, in addition to its nontemporal sense (REALLY), receive a tem-
poral interpretation (EVER). Now, in some contexts, the latter may become the
most prominent or focal one, as in (68) and (69). As is characteristic of such
questions involving CE markers, the answer expected is negative, as in (70), the
negative counterpart of EVER being NEVER:

(67)   e-kpɔ́-e   kpɔ́ a
          2SG-see-3SG see Q
          (a) 'Did you really see it?'
          (b) 'Did you ever see it?'

(68)   e-vo   kpɔ́ a
          2SG-be.free see Q
          'Were you ever free?'

(69)   e-se   kpɔ́ bé   amegbetɔ́ wɔ nenémá a
          2sg-hear see CONJ man   do like.that Q
          'Have you ever heard of anybody acting like that?'

(70)   ao, nye-mé-se   kpɔ́ o
          no, 1SG-NEG-hear see NEG
          'No, never'

Sentences like (67)–(70) refer to situations that relate to the past and are non-referential. Now, there are contexts where the fact that a certain event has never happened invites the implicature that that event has NOT YET happened and, hence, that it is still going to happen or, in the affirmative, that it has ALREADY happened. Thus, sentence (67) has a third possible meaning: 'Have you already seen it?' Similarly, sentence (71) may be said to be ambiguous, as is (72), which is a reply to (71):

(71)   e-tu   xɔ   kpɔ́ a
          2SG-build house see Q
          (a) 'Have you ever built a house?'
          (b) 'Have you already built the house?'

(72)   ao, nye-mé-tu   xɔ   kpɔ́ o
          no, 1SG-NEG-build house see NEG
          (a) 'No, I have never built a house'
          (b) 'No, I have not built the house yet'

Note that the object in (71a) and (72a) is nonspecific while in (71b) and (72b) it is definite. That the distinction between EVER/NEVER and ALREADY/NOT YET in Ewe is in fact closely connected with referentiality is suggested by a sentence like (73), where *kpɔ́* can mean only EVER. In order to replace EVER by ALREADY, the complement *Lome* has to receive the definite article *-á,* as in (74):[38]

(73)   e-yi   Lome kpɔ́ a
          2SG-go Lome see Q
          'Have you ever been to Lome?'

(74)   e-yi   Lo-á-me   kpɔ́ a
         2SG-go Lome-DEF see Q
         'Have you been to Lome already?'

There is yet another temporal sense derived from *kpɔ́*: in nonpast situations, typically when the verb preceding it is constructed in the progressive aspect, *kpɔ́* designates, respectively, that the end of a situation has been delayed unexpectedly (STILL) in positive sentences and that it has happened earlier than expected (NO LONGER) in negative sentences:

(75)   e-le   é-dí-ḿ   kpɔ́ a
         2SG-COP 3SG-search-PROG see Q
         'Are you still looking for it?'

(76)   ao, nye-mé-le   é-dí-ḿ   kpɔ́ o
         no, 1SG-NEG-COP 3SG-search-PROG see NEG
         'No, I am no longer looking for it'

7.3.4 *Kpɔ́* as a First Verb

One of the major typological characteristics of Ewe is that its morphosyntax is dominated by a structure of verb serialization. The emergence of the CE marker *kpɔ́* is due to the fact that in a series of two verbs (V1-V2) the second verb (V2) has developed into a grammatical morpheme. This development has had the effect that V2 has lost all verbal characteristics, such as the ability to be marked for tense/aspect, negation, or person or to take an object complement, and that it now behaves like an adverb, that is, a word that is invariable following the verb (V1) it qualifies.

This is, however, not the only way in which the verb *kpɔ́* 'see' has been grammaticalized to a CE marker. There is a second line of development, which can be sketched as follows:

a)   Grammaticalization involves *kpɔ́* as V1 rather than V2.
b)   While *kpɔ́* as V2 has acquired a wide range of functions, the grammatical function that it assumes as V1 is exclusively to express the sense ALREADY/NOT YET.
c)   Although *kpɔ́* as V1 and as V2 exhibit the same degree of desemanticization, the former is only slightly decategorialized; that is, it retains most of the morphosyntactic characteristics of a main verb. This is due to the fact that information such as marking tense/aspect/mood, negation, and subject in Ewe is always on V1 while all following verbs are subject to "equideletion" rules of some kind or other. There is only one clear instance where *kpɔ́* as V1 has been decategorialized: it may not take an object complement. The following are examples of its use:

(77)   e-kpɔ́   le   é-se-ɱ́   a
         2SG-see   COP   3SG-hear-PROG   Q
         'Do you understand (= hear) it yet?'

(78)   ao, nye-mé-kpɔ́ le   é-se-ɱ́   o
         no, 1SG-NEG-see PROG 3SG-hear-PROG NEG
         'No, I don't understand it yet'

(79)   m-é-kpɔ́   wɔ-e   o
         NEG-3SG-see do-3SG   NEG
         'He has not done it yet'

Note also the following sentence where two CE markers derived from *kpɔ́* co-occur, the first as V2 (REALLY) and the second as V1 (NOT YET):

(80)   me-se-e   kpɔ́, gaké nye-mé-kpɔ́ kpɔ́-e   o
         1SG-hear-3SG   see, but 1SG-NEG-see see-3SG   NEG
         'I have really heard it (I could name witnesses) but have never seen it
         myself'

What appears to be noteworthy about this development is, first, that the CE function ALREADY/NOT YET has been introduced twice, in both cases involving the verb *kpɔ́* 'see,' once as V2 and once as V1 in serial verb constructions. Second, with reference to the theory of grammaticalization, this is interesting since it provides a case where one and the same lexical input, the verb *kpɔ́* 'see,' while involving two highly divergent morphosyntactic developments, leads to the same semantic output, the CE function ALREADY/NOT YET; as V2 *kpɔ́* has lost all verbal characteristics and is now largely indistinguishable from an adverb, while as V1 it has retained most of its verbal morphosyntax. As we saw above, this divergent development is the result of the different positions that *kpɔ́* occupies in the clause: in serialized constructions, V1 carries the full verbal morphosyntax,[39] whereas all nonfirst verbs (V2, V3, etc.) appear with a reduced set of verbal inflections. On the basis of such evidence, we are led to assume that there is not necessarily a rigid one-to-one correspondence between conceptual and morphosyntactic grammaticalization.

We now leave aside the V1 channel of CE marking, which would require separate treatment, and return to *kpɔ́* as derived from V2.

7.3.5 Some Conclusions

The verb 'to see' has given rise to various grammatical concepts in many different languages. One of the most common channels of conceptual transfer leads from visual perception to causal interpretation, involving roughly the following stages:

I	Visual perception	e.g., *X sees Y and does Z*
II	Intellectual perception	e.g., *X understands Y and does Z*
III	CAUSE/REASON	e.g., *Because of Y, X does Z*

Reesink (1988:20) provides the following examples from Usan, a Papuan language, to show the relation between the verb 'see' (*gab*) and a coordinating conjunction that may introduce REASON clauses:

(81)   ye munon uter igo   gab   mani aib me n-inei
        I man   fierce be.SS see.SS yam big not eat-1.SUBJUNCT
        'Because I am not a fierce man (= great warrior) I won't eat a lot'

Reesink proposes a metaphor SEEING IS REASON for this kind of transfer. The development of Ewe *kpɔ́* appears to have followed a different line of conceptualization. In this case, one could tentatively propose a metaphorical equation of the kind SEEING IS KNOWING BETTER instead.

The various functions that *kpɔ́* exhibits may be summarized in the form of a network structure, as in figure 7.4. What is common to all senses of this morpheme, which is derived from the mental state verb 'see,' is that they express counterexpectation, that is, that they contrast an assertion made in a given proposition with some standard or norm assumed to hold for the speaker, the addressee, both, or for any other social unit. As our survey suggests, the various senses can be understood as generalized conversational implicatures (Grice 1975; König 1977:192–93); they are the result of context-induced reinterpretation.

Clearly, the most important context feature is deictic time, that is, the distinction past versus nonpast, followed by aspect. Thus, *kpɔ́* receives the sense NO LONGER/STILL with verbs of state in the past only,[40] with the same also applying to the chain EVER/NEVER to ALREADY/NOT YET when derived from the sense REALLY. The senses NEVERTHELESS > TRY, on the other hand, arise typically in situations having nonpast reference, and the development from REALLY to STILL/NO LONGER has been found only in contexts involving the progressive aspect.

Another context feature is referentiality. The sense EVER/NEVER relates to nonreferential questions or assertions, but, once the sentence object is definite, the resulting sense is ALREADY/NOT YET.

Among the remarkable characteristics in the development of the CE marker *kpɔ́* is the emergence of senses having essentially temporal contours. While Comrie (1985:54–55) describes the grammatical categorizations STILL/NO LONGER and ALREADY/NOT YET in terms of tense distinctions, Schadeberg (1987) proposes an account in terms of aspectual parameters. Our analysis of
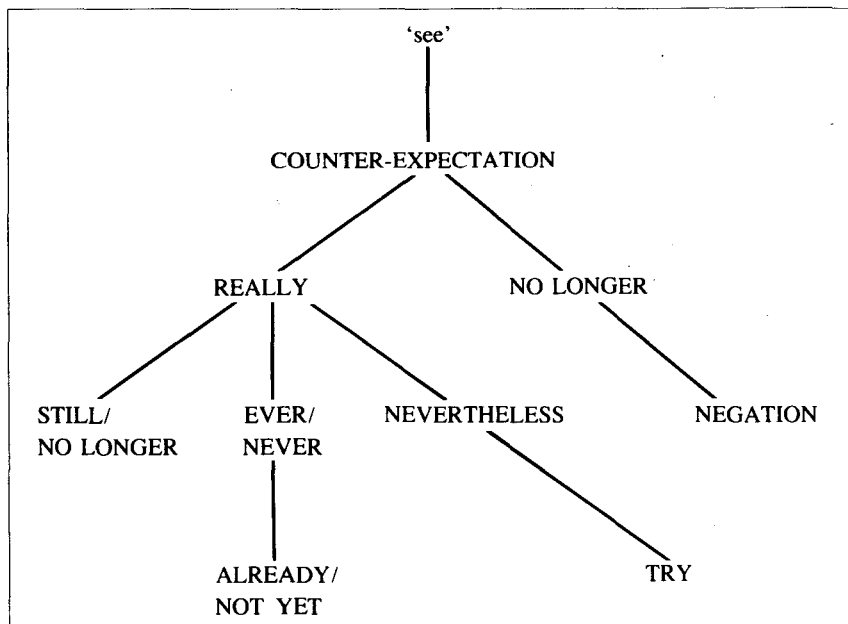
FIG. 7.4 The conceptual network of Ewe *kpɔ́*

Ewe would seem to support that of Schadeberg (1987:10), suggesting the following rough characterizations:[41]

STILL	= unexpectedly delayed end of a situation
NO LONGER	= unexpectedly early end of a situation
ALREADY	= unexpectedly early beginning and duration of a situation
NOT YET	= unexpectedly delayed beginning and duration of a situation

In many languages, counterexpectation markers showing temporal contours, like STILL, NO LONGER, ALREADY, and NOT YET, are derived from verbs. While in most cases this development leads from a verb to an adverb-like invariable word, there are some languages that have grammaticalized the erstwhile verb to a verbal inflection. This has happened in particular in a number of Bantu languages. In Swahili, for example, the verbs *-isha* 'finish' and *-ja* 'come'[42] have developed into verbal prefixes denoting, respectively, ALREADY and NOT YET, as can be seen in the following sentences:[43]

(82)   a-me-sha-ondoka?
         3SG-PFV-ALREADY-leave
         'Has he left already?'

(83)   h-a-ja-ondoka
        NEG-3SG-NOT.YET-leave
        'He has not yet left'

The grammaticalization of a verb to a counterexpectation marker has had re-
markable implications for the morphosyntax of some languages. An example
from Turkana, an Eastern Nilotic language of the Nilo-Saharan family, may illus-
trate this.[44] Turkana has two largely synonymous clause-initial particles, *ɛrɪŋá*
and *erokó,* that are used to express the following three temporal counterexpecta-
tion functions distinguished above:[45]

a)   NO LONGER, when preceded by the negation marker *nyi-;*
b)   NOT YET, when the following verb is preceded by the negation marker *nyi-;*
c)   STILL, when no negation marker is present, for example:[46]

(84)   erokó ayoŋ nyí-m새새j-a
        STILL I   NEG-eat-STAT
        'I have not yet eaten'

(85)   ny-erokó a-cámít
        NEG-STILL 1SG-like
        'I don't need it any longer'

(86)   erokó ayoŋ é-múji
        STILL I   1SG-eat
        'I am still eating'

The use of these particles entails a number of morphosyntactic peculiarities, in
particular the following (see Dimmendaal 1983:457): while Turkana is a verb-
initial (VSO) language, the basic word order is subject-verb-object (SVO) after
these particles. Furthermore, these particles show various verbal characteristics,
for example:

a)   They occupy the clause-initial position.
b)   They are negated like verbs.
c)   Like verbs, they may receive the past tense prefix *a-*, for example, *a-rokó,*
        a-rɪŋá.
d)   Some speakers use the full set of verbal person inflections with these particles,
        that is, *a-rokó* 'I still . . . ,' *i-rokó* 'you still . . . ', and *e-rokó* 's/he still . . .'

Such observations strongly suggest that these particles derive from auxiliary
verbs.[47] In accordance with the common pattern of auxiliary verb–main verb
constructions of Turkana, they precede the verb and are immediately followed by
the subject, which thus stands between the auxiliary and the main verb, for
example:

(87)   . a-bú   ŋesi ny-í-múj
         3SG.PAST-come s/he NEG-3SG-eat
         'He has not eaten'

The original meaning of the hypothetical auxiliary verbs -rokó and -rɪŋá can
no longer be recovered. The presence of the third-person prefix vowel e- or ɛ-,
respectively, suggests that these auxiliaries fossilized in their third-person form
(e-rokó and -rɪŋá, respectively).[48] That fossilization is not yet complete is sug-
gested by the presence of the verbal characteristics mentioned above that the two
particles still exhibit. With the transition from verb to counterexpectation mark-
er, the following structure A was replaced by B, with the effect that the verb-
initial (VSO) syntax has given way to a subject-verb (SVO) syntax.:[49]

A: auxiliary verb–subject–main verb
B: particle   –subject–verb

Thus, the development from verb to counterexpectation marker in Turkana
triggered a process of syntactic reanalysis (see 8.2) leading to a change of word
order. This change, however, was only a concomitant feature of grammaticaliza-
tion. The main outcome was the introduction of the grammatical function STILL
and its "negative counterpart" NO LONGER on the one hand and NOT YET on the
other. The latter is derived from the former via the sequence

erokó + nyi- verb
STILL + NEG- do   →   NOT YET do,

whereby the unexpectedly delayed end (i.e., "STILL being in a situation") fol-
lowed by a negative situation implies an unexpectedly late beginning of the latter
("NOT YET doing").

7.4 On the Ubiquity of Metaphor

The heading of 7.4 stems from the title of a book that attempts to demonstrate that
metaphor permeates virtually all domains of human categorization (Paprotté and
Dirven 1985; see also Lakoff and Johnson 1980). In this section, we argue that
the ubiquity of metaphor extends even to a domain that hardly any linguist would
consider to be within the scope of metaphorization.

7.4.1 Metaphors of Grammar

A number of metaphors have been dealt with in the preceding chapters that were
held responsible for the rise or further development of grammatical categories.
Our concern was exclusively with meaningful structures, that is, with linguistic
forms that have meaning, be it lexical or grammatical meaning. In this section,
attention is drawn to yet another level of metaphorization, one that is more "ab-
stract" than all levels considered hitherto since it does not involve meaning. It

would seem not only that metaphor provides a strategy for structuring experience in the "real world" or some hypothetical world, or the world of discourse, but that it is also extended to the domain of grammatical form. Within this domain, the relation between syntactic categories, for example, may be said to be metaphorically structured.

In an earlier version of this work, we used the name "grammatical metaphor" for the kind of transfer discussed in the present section. We have decided to change the name in order to avoid confusion since Halliday's (1985:321) "grammatical metaphor" refers to a somewhat different phenomenon, as can be exemplified by sentences (88) and (89) below, where (88) presents the literal or "congruent" expression and (89) forms an instance of a corresponding metaphorical or "incongruent" expression (Halliday 1985:322ff.):

(88)   They arrived at the summit on the fifth day.
(89)   The fifth day saw them at the summit.

The level that we have in mind does *not* concern meaning; rather, it concerns the relation between syntactic categories such as word classes or constituent types. We argue that some of these categories stand in a relation to one another that is suggestive of metaphorical transfer. We use two examples to illustrate the nature of this transfer, both of which deal with clause embedding and are suggestive of a reanalysis of nouns as clauses.

Our first example concerns the use of nouns as anaphoric or cataphoric reference markers for introducing clauses. Among the many types of evolution that can be observed in the languages of the world, the following appears to be particularly common. At the initial stage, an noun is followed or, in many SOV languages, preceded by an appositive clause. Both noun and clause refer to the same identity, in that the noun serves as some kind of propositional anaphora (Frajzyngier, in press a). The metaphorical relation consists in the fact that clausal contents are conceptualized in terms of nominal concepts; that is, the relevant clause is referred to by means of a noun.

In a number of languages, this has led to the grammaticalization of the noun as a complementizer and of the appositive clause as a subordinate clause and, hence, to the rise of a new pattern of clause embedding. Thus, a structure like (90a) has been reanalyzed as (90b):

(90a)   verb   +   object noun   —   appositive clause
        (main clause)   (apposition)

(90b)   verb   —   complementizer   +   clause
        (main clause)   (subordinate clause)

One example from Korean, taken from Ransom (1988:356–66), may suffice to exemplify this evolution.[50] In sentence (91), *kes* 'thing' denotes a concrete noun,

while, in (92), it is ambiguous: it may be interpreted alternatively as an abstract noun ("fact") taking an appositive clause or else as a complementizer marking an object clause. in (93), the nominal interpretation is ruled out, and *kɛs* functions exclusively as a marker referring to a clause, that is, as a complementizer:

(91)   Ku kɛs un chayk iey yo
        'That thing is a book'

(92)   na nɨn kɨ ka o-nɨ   kɛs lɨl   al-nɨn-ta
        I   he   come-PRS   ACC know-PRS-M
        'I know (the fact) that he is coming'

(93)   na nɨn kɨ eke ka-l   kɛs lɨl   myɛnglyɛngha-ess-ta
        I   him   go-FUT ACC order   PAST-M
        'I ordered him to go'

Our second example relates to the metaphorical extension of case marking. In some languages, the morphology used to introduce nominal complements has been extended to mark subordinate clauses as well; that is, the latter are treated like nouns. In all instances concerned, noun case markers have been added to the finite verb of subordinate clauses. One of these languages is Newari, a Tibeto-Burman language spoken in Nepal. Genetti describes this development as follows: "The development of postpositions into subordinators occurred repeatedly over the last several centuries. . . . the morphosyntactic mechanism by which the development occurred was nominalization, followed by a reanalysis of originally nominal morphology as verbal morphology, via the reanalysis of unmarked deverbal nominals as erstwhile finite verbs" (Genetti, in press).

Since the pattern of subordination by means of case-marking postpositions is not found in classical Newari, this reanalysis must have happened more recently.[51] Already at the stage of classical Newari, it was common for clauses with fully inflected finite verbs to function as nominals. The use of case-marking postpositions as clause subordinators, however, is a characteristic of modern Newari (Genetti, in press).

Newari in fact appears to be one of those languages where the conceptualization of clauses in terms of nominal structures has become a common pattern. The nominal suffix *-gu,* for example, whose main function lies "in safeguarding the conceptual autonomy of the constituents of an endocentric nominal construction," is used as a device of nominalizing verb phrases or clauses.[52] Thus, sentence (94) is nominalized by suffixing *-gu* to the finite verb, as in (95) (Kölver 1977:6):

(94)   sala   haalaa haaḥ
        horse crying cries
        'the horse is neighing'

(95)   sala   haala   haaḥ-gu   taaḥ laa
         horse crying cries-NOMIN hear Q
         'Do you hear the horse neighing?'

Roughly the same kind of transfer from noun to subordinate clause can also be observed in Ik and Kanuri, as we saw in chapter 6. Thus, the ALLATIVE case suffix -k^e of Ik marks a benefactive noun phrase in (96) but a subordinate reason clause in (97). In both languages, it is the ALLATIVE marker that has been employed for this purpose,[53] and in both languages this case marker has assumed a wide range of subordinating functions (see 6.2; fig. 6.1):

(96)   ıŋarέs-εsa ceká   bi-k^e
         help-FUT   woman you-
         'The woman will help you'

(97)   ńtá k'ó-í-í   ma-í-í-k^e
         NEG go-I-NEG   be.sick-I-SUBJUNCT-
         'I cannot leave because I am sick'

In one point Ik, however, differs from Newari and Kanuri: whereas the Ik verb is constructed in the subjunctive mood whenever the dative suffix is added, in Newari and Kanuri the case marker is placed immediately after the finite verb without any morphological alteration.

One may wonder whether it is justifiable to describe such transfers from noun to clause as metaphorical. The following considerations in particular suggest that in fact it is:

a)   As is common in metaphorical transfers, an entity of one domain (in this case the domain of nouns) is used as a vehicle for an entity of another domain (that of clause structures), which forms the topic.

b)   Assuming that nouns are less "abstract" (and less complex) than clauses, we may say that the vehicle is less "abstract" than the topic.[54] As we have seen in all previous cases, this is a characteristic of all metaphors involved in grammaticalization: a more "concrete" vehicle is employed to conceptualize a more "abstract" topic.

c)   This accounts, inter alia, for the principle of unidirectionality that holds for all metaphors observed thus far in the process of grammaticalization: while subordinate clauses may be encoded like nouns in a number of languages, the opposite does not seem to hold (see Genetti, in press).

d)   One frequently cited criterion used to define metaphor is the presence of some deviant behavior, which conflicts with our expectations and involves some violation of existing rules (cf. Ricoeur 1979:143; Swanson 1979:162; see 3.4.3.1). This is exactly what must have happened when subordinate clauses were encoded as nouns for the first time, for example, in the period between classical

and modern Newari or between Proto-Kuliak and modern Ik.[55] What distinguishes this kind of metaphor from "ordinary" metaphors is that the deviation concerns grammatical form rather than meaning.

Note, however, that this transfer does not happen in isolation; rather, it is part of a more general process leading from lexical-conceptual to symbolic-syntactic contents and from the expression of "concrete" perceptual-motor experiences to more "abstract" forms of expression (Werner and Kaplan 1963:403; Heine and Reh 1988).

This analysis in terms of a conceptual discontinuity between a nominal and a clausal category and of metaphor as a strategy for introducing the latter in a slot that is reserved for the former accounts for only one aspect of the relevant process. As we outlined in chapter 3, there is a second aspect according to which this process is gradual rather than discontinuous. While we are no longer in a position to reconstruct the process from classical to modern Newari or from early to modern Ik in detail, we may, nevertheless, assume that there were a number of intermediate stages involved in the development of case marking from noun to clause. The following more salient stages can be distinguished in this process:

0   Case marking is confined to nouns
I   Case marking is extended to verbs in some nonfinite or nominalized form
II   Case marking spreads to fully inflected, finite verbs. This creates a situation of morphosyntactic ambiguity since the verb contains both a verbal and a nominal (case) morphology (see Genetti, in press)[56]
III The case marker is reanalyzed as a clause subordinator
IV   In accordance with its new function, the clause subordinator is further grammaticalized: it tends to become phonetically dissimilar from the case marker by undergoing processes like erosion, adaptation, etc. (see Heine and Reh 1984:17–27)

These observations are confined to one specific kind of reanalysis. The case marker, however, does not always develop into a clause subordinator. In a number of languages, an alternative development can be observed: with the transfer from a nominal to a clausal complement, the case marker tends to be considered redundant and therefore is eliminated. This is what appears to be happening in Hausa, a Chadic language spoken in Northern Nigeria, Niger, and some adjacent countries. In certain constructions in this language, object complements are introduced as genitive/possessive constituents. Thus, in sentence (98), the object of the verb *so* 'want, like, love' is marked by the genitive suffix -*n* on the verb. When the object is a verbal noun, which itself takes an object noun phrase, then the latter is also presented as a genitive constituent of the former, as in (99) (Bagari 1972:32):

(98)   Audu ya naa   so-n   laabaari-n
        Audu he PROG like-GEN story-DEF
        'Audu likes the story'

(99)   Audu ya naa   so-n   rubuutu-n   wasiik'aa
        Audu he PROG like-GEN writing-GEN letter
        'Audu likes letter writing'

Now, it is possible to replace the complement of *so* by a complement clause. In this case, the genitive marker tends to be omitted; that is, its use is no longer obligatory in sentences such as (100) (Bagari 1972:32):

(100)   Audu ya naa   so (-n)   ya rubuuta wasiik'aa
        Audu he PROG like (-GEN) he write   letter
        'Audu wants to write a letter'

Sentence (100) appears to present an intermediate stage marked by an optional use of the case marker, and one is tempted to predict that future generations of Hausa speakers will eliminate the genitive marker altogether when introducing object clauses. Thus, the noun-to-clause metaphor has a different morphological effect here: it does not lead to the grammaticalization of a case marker as a clause subordinator; rather, the case marker is considered to be inadequate to assume the new function and is therefore dropped.

In other languages, no complement marking is involved, yet it is possible to reconstruct the process from a nominal to a clausal category since some exponents of the nominal structure have survived the transfer. Such exponents may be in particular:

a)   markers of nominalization, including morphemes for forming participles, gerundials, infinitive verb forms, etc.;

b)   case forms in the subordinate clause that are suggestive of a nominal rather than a verbal or clausal syntax (which can be observed, e.g., when the subject or the object of the complement clause exhibits a genitive/possessive morphology, e.g., when a clause like *Paul eats meat* is encoded as something like *Paul's eating of meat*).

An example from Krongo, a Niger-Kordofanian language spoken in the Republic of Sudan, may illustrate this.[57] In the following sentence, the complement clause *(t-)ósí-kò-n-tú ŋàamà à'àŋ* contains two features that can be interpreted as relics from a nominal structure having survived in the subordinate clause: the nominalization marker *t-* and the possessive pronoun *-tù* 'your' to mark the subject of the complement clause:

(101)   n-átàasà à'àŋ (t-)   ósí-kò-n-tú   ŋàamà à'àŋ
        1/2-want I (NOMI-) cook-BEN-TRANS-your things DAT.I
        'I want you to cook for me'

The phrase *(t-)ósí-kò-n-tú* therefore historically means 'your cooking for' rather than 'you cook for.' Note that the use of the nominalization marker is no longer obligatory. This is an exact parallel to the Hausa genitive marker *-n* in sentence (100): both are relics of the nominal structure that in the languages concerned appear to be considered as irrelevant for the new function and hence tend to be dispensed with.

7.4.2 Conclusion

In the introduction to this work, we used the development of the Ewe verb *ná* 'give' to a preposition 'to, for' to illustrate the effects of grammaticalization (sec. 1.1). The sentences presented there include the following:

(102)   me-ná   ga   kofí
         1SG-give money   Kofi
         'I gave Kofi money'

(103)   me-wɔ dɔ́   vévíé ná   dodókpɔ́ lá
         1SG-do work hard give exam   DEF
         'I worked hard for the exam'

Most people we asked agreed that, if an expression like "I work hard give exam" is used to convey the meaning 'I worked hard for the exam,' there must be some kind of metaphorical reasoning involved, whereby, for example, the exam is interpreted as and inanimate receiver profiting from the act of buying. If this interpretation is accepted, then it follows that this type of metaphorical transfer is not confined to semantics; it follows that metaphorical extension is also extended to grammar, as is suggested by the following transfer, or reanalysis patterns:

a)   A verb (*ná* 'give') is reanalyzed as a kind of preposition, in this case as a purpose preposition.

b)   A verb phrase (*ná dodókpɔ́ lá* ["give the exam" >] 'for the exam') is reanalyzed as an adverbial phrase.

c)   The erstwhile bipropositional structure of sentence (103) is reanalyzed as a unipropositional structure.

This suggests that metaphor, at least the kind of metaphor looked at in this work (see sec. 2.4), is not confined to the domain of meaning; rather, it has both a semantic and a syntactic component. Within the latter, verbs serve as metaphorical vehicles, for example, for adverbs, adpositions, markers of tense, aspect, modality, etc., or main clauses as vehicles for subordinate clauses, adverbial phrases, markers of modal and pragmatic functions, etc. As we demonstrated in the previous section, metaphors within the syntactic component have the same formal characteristics as metaphors within the domain of meaning.

It might be argued that metaphorical transfer within the syntactic component is

merely a concomitant feature of metaphor within the semantic component. While in many cases this may be so, as in the Ewe example discussed above, there are other instances, such as those discussed in 7.4.1, where the semantic component appears to be largely irrelevant, that is, where metaphorical transfers appear to be confined to the level of morphological and syntactic categories. At the present stage, we are unable to define the relation between these two components; conceivably, both are part of a much more inclusive range of human conceptualization, one that is truly ubiquitous in nature.

8 The Linguistic Cycle

In the preceding chapters, we have been dealing with the cognitive base of grammaticalization, most of all with the metaphorical manipulation of concepts and context-induced reinterpretation. Although many examples have been adduced to illustrate how these processes affect language structure, our primary concern thus far has been with the extralinguistic forces of grammaticalization. In the present chapter, we leave aside cognitive and pragmatic parameters and look in more detail at language structure itself and the way in which it is affected by these processes. We confine ourselves to a few topics that appear to be of particular relevance in understanding why certain morphosyntactic structures are the way they are.

8.1 Some General Observations

Research on grammaticalization has by now led to a fairly elaborate account of the diachronic and synchronic consequences that grammaticalization has for language structure, that is, the emergence of specific changes, the most important of which are summarized in table 8.1. For more details, the reader is referred to the following works in particular: Givón (1975a), Lehmann (1982), Heine and Reh (1984), Bybee and Pagliuca (1985), and Traugott and Heine (in press).

Research on grammaticalization carried out thus far suggests that a few salient characteristics can be isolated. The characteristics listed below in headings 8.1.1–7 are intended to provide some guidelines as to how grammaticalization processes can be described.

8.1.1 Conceptual Manipulation

The term refers to a process whereby linguistic forms with lexical or less grammatical meanings are used to designate more grammatical meanings.

8.1.2 Unidirectionality

As conceptual manipulation leads from lexical or less grammatical meanings to more grammatical ones, this process is unidirectional, and so are all developments in the process of grammaticalization. Although cases in the opposite direction have been reported, they may be viewed as exceptions to the unidirectionality principle (see 1.1 above).

8.1.3 The Form-Meaning Asymmetry

When a new, more grammatical meaning arises, then the means used to express it tends to retain its original form and morphosyntactic behavior for some time

TABLE 8.1. Some Common Linguistic Effects of Grammaticalization

Sematic	Concrete meaning	>	Abstract meaning
	Lexical content	>	Grammatical content
Pragmatic	Pragmatic function	>	Syntactic function
	Low text frequency	>	High text frequency
Morphological	Free form	>	Clitic
	Clitic	>	Bound form
	Compounding	>	Derivation
	Derivation	>	inflection
Phonological	Full form	>	Reduced form
	Reduced form	>	Loss in segmental status

(cf. Givón 1975a, in press b); that is, conceptual/semantic shift precedes morphosyntactic and phonological shift. This observation has already been made by Sapir, who described it in the following way: "Now form lives longer than its own conceptual content. Both are ceaselessly changing, but, on the whole, the form tends to linger on when the spirit has flown or changed its being" (Sapir 1921:98). The result is a stage of asymmetry where one and the same linguistic form simultaneously offers two different meanings, a lexical or less grammatical meaning on the one hand and a (more) grammatical one on the other. Synchronically, this results in polysemy or in homonymy.

8.1.4 Decategorialization[1]

Morphemes undergoing grammaticalization move away from cardinal categoriality; in particular, they lose the ability to combine with the inflectional and derivational trappings characteristic of their morphosyntactic category. This leads to the emergence of "linguistic hybrids" showing the characteristics of several morpheme classes. Thus, we find nouns that lack nominal characteristics such as the ability of marking definiteness or number distinctions and that may have more in common with adpositions than with nouns, or we find verbs that are no longer inflected for person, tense, aspect, and modality and behave more like tense or aspect markers than like verbs (see 8.5.1).

8.1.5 Recategorialization[2]

Recategorialization is a process whereby language tends to restore iconicity between form and meaning. It has the effect that the "hybrid forms" (8.5.2) resulting from decategorialization develop into new, function-specific morphemes. For example, decategorialized nouns may develop into adpositions or decategorialized verbs into tense/aspect inflections (see 8.6).

8.1.6 Loss in Autonomy

A form that has been decategorialized loses in morphosyntactic autonomy and becomes dependent on other forms. One effect that this may have is that a free form becomes a clitic or a clitic becomes an affix (cf. Lehmann 1982, 1985).

8.1.7 Erosion[3]

The phonetic substance of a grammaticalized form tends to become reduced and/or assimilated to its environment. This may result in allomorphy involving a nongrammaticalized "full" form and a grammaticalized reduced and/or assimilated form. There are at least two possible factors that have been held responsible for erosion. One is described by Givón (1990) as the quantity principle, a principle of iconic coding according to which a larger chunk of information will be given a larger chunk of code: since lexical forms contain more information than grammatical forms, the chunk of code employed for their expression is likely to be reduced when they are grammaticalized. The second factor relates to relative frequency of use: the higher frequency of use of grammatical morphemes favors what Gabelentz ([1891] 1901) has called the *Abnutzung* (abrasion) of their phonetic substance (Heine 1990).

We may now use an example to illustrate how these characteristics can be of use in understanding the process involved. In many languages worldwide, locative constructions of the type 'Peter is at home' have been used to express verbal aspects, in most cases progressive aspects ("Peter is at/in/on working" > 'Peter is working').[4] In such cases, a verb in some nominalized form, such as a participle, a gerundial, or an infinitive ('work-ing'), takes the place of the noun phrase ('at home').

Conceptual manipulation in this case has the effect that a spatial proposition serves to conceptualize a "more abstract" notion, that is, a situation that is ascribed a certain temporal contour. The evidence available suggests that this process is never reversed, that is, that it is unidirectional: a progressive may never develop into a locative construction. The use of the locative construction for a verbal aspect creates a form-meaning asymmetry, at least for some time; since the form "Peter is at/in/on working" is ambiguous, it may mean something like either 'Peter is at his place of work' or else 'Peter is working.' This leads to decategorialization and eventually to recategorialization: 'be' and 'at' no longer behave like an auxiliary verb and an adposition, respectively; they adapt to their new function-specific status and develop into verbal aspect markers. The result is that the erstwhile (auxiliary) verb and the erstwhile adposition turn into clitics and eventually affixes that lose their autonomy as free forms and are integrated within the paradigm of tense-aspect morphology.

The transition from locative construction to aspect marking leaves three types of morphological material behind: the erstwhile auxiliary ('be' in our example), the adposition ('at'), and the nominalization marker of the main verb ('-ing').

This means that there are three forms for marking one function only. Recategorialization now has the effect of restoring "iconicity" by eliminating two of these three parts of the discontinuous morpheme and establishing a one-to-one correspondence between form and meaning. Languages differ considerably as to which of these forms are eliminated. Whereas in some languages the auxiliary verb and the nominalization marker are lost and the adposition survives as the only marker of the progressive aspect,[5] other languages eliminate the adposition and retain the other two markers or else retain only either the auxiliary or the nominalization marker.

Some of the characteristics of a grammaticalization process overlap or else may be viewed as representing different ways of referring to one and the same phenomenon. Others, however, might seem to be in conflict with one another. This applies especially to loss in autonomy and recategorialization, which can lead to opposite results. The former implies that a morpheme or phrase loses in syntagmatic variability and gains in bondedness (see 1.2.2.; cf. Lehmann 1982), that is, that it loses the ability to occur as a free form and/or to be moved to other positions in the sentence. The latter, on the other hand, has the effect that the relevant morpheme or phrase becomes a member of a new category as the result of grammaticalization and acquires the function-specific properties of that new category. There is at least one case where the new category exhibits a higher degree of variability than the old one. This case concerns some languages that have grammaticalized verbs to adverbs or adpositions. In such languages, it may happen that the adverb or adposition comes to enjoy more syntagmatic variability than its lexical source, the verb (see 8.6).

8.2 Reanalysis

Perhaps one of the most spectacular effects that conceptual manipulation has on language structure can be seen in the reanalysis of linguistic structures. Some authors, therefore, have gone so far as to use the terms grammaticalization and reanalysis as synonyms or near synonyms. One of them is Carol Lord (1976:179), who refers to the development from lexical to grammatical entities as "reanalysis." Heine and Reh (1984:95ff.), on the other hand, propose separating reanalysis from grammaticalization, essentially because of the unidirectionality principle, which is an inherent property of the latter but not necessarily of the former.[6] As we will demonstrate below, there are in fact reasons for keeping these two apart—even if they constitute closely related processes.

The term "syntactic reanalysis" has been used for a number of different phenomena. The most elaborate treatment of it is that by Langacker (1977:59), who defines it as "change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation." We more or less adhere to this definition, although there are some problems with it. The term "surface," for instance, is defined in a peculiar way,

and, assuming that a watertight definition is possible, the question is whether indeed that "surface manifestation" remains unaffected by reanalysis.[7] What we consider here to be reanalysis essentially falls under what Langacker (1977:79) calls "syntactic/semantic reformulation."[8]

There are a number of different processes to be observed in grammaticalization that can be referred to as reanalysis. In the present section, we confine ourselves to what in Heine and Reh (1984:110) is called constituent-internal reanalysis, the specific form of the more general process of reanalysis, which has the effect of redefining constituent boundaries.[9] This process turns a structure like (1) into a new structure (2):

(1)   (A, B) C
(2)   A (B, C)

Langacker (1977:64) refers to constituent-internal reanalysis, perhaps more appropriately, as boundary shift, which he treats as one form of resegmentation, the other forms being boundary loss and boundary creation.

A common example of boundary shift can be observed in languages that have grammaticalized a direct speech pattern to a new structure of indirect speech. It frequently happens in such cases that there is a marker to introduce direct speech. This marker is part of the matrix clause. With the transition from direct to indirect speech, however, this marker becomes reanalyzed as a subordinating device that is part of the indirect speech clause. Thus, as our Faroese example in 7.2.1 shows, a sentence like (3) is grammaticalized to (4):

(3)   I say that: he comes.
(4)   I say   that he comes.

In African languages, this marker is mostly derived from a verb 'say.' The Ewe verb *bé* 'say' still has its lexical meaning in (5). In (6), however, which has roughly the same meaning as (5), *bé* has been grammaticalized to an object clause complementizer, and the lexical meaning 'say' is expressed by the largely synonymous verb *gblɔ*. That *bé* is in fact part of the subordinate clause can be seen in (7) (cf. 8.6):

(5)   me-bé: mí-á-yi   apé
         1SG-say: we-SUBJUNCT-go   home
         'I say we should go home'

(6)   me-gblɔ bé mí-á-yi   apé
         1SG-say say we-SUBJUNCT-go   home
         'I say we should go home'

(7)   bé-ná   wó-m-á-ga-tsí   megbé o ŋútí lá . . .
         say-HAB 3PL-NEG-FUT-REP-remain behind NEG FINAL SUB . . .
         'In order that they do not stay behind . . .'

There is a remarkable amount of iconicity between cognitive and linguistic patterning. We have drawn attention to the fact that the metaphorical categories distinguished above are immediately reflected in the lexical structure (2.4.1). There is also a correspondence between these categories and word classes. The following, for example, constitute some prototypical correspondences (cf. 2.4.2):

Metaphorical Category	Word Type
PERSON	Human noun
OBJECT	Concrete noun
ACTIVITY	Dynamic verb
SPACE	Locative adverb, adposition
TIME	Temporal adverb, adposition
QUALITY	Adjective, state verb, adverb

Now, once a transfer from one concept to another takes place, this is also likely to affect the status of the word type used to express that concept. This is typically the case when a given concept is employed as a metaphorical vehicle for a concept belonging to a "more abstract" category. For example, when an entity of the OBJECT category serves to conceptualize an entity of the category SPACE or TIME, then this is likely to trigger a linguistic development from a nominal to an adverbial word, either an adverb or an adposition, as we demonstrated in chapter 3.1. Thus, the change from a noun 'back' to an adposition 'behind' might be viewed as the result of an activity that aims at restoring iconicity between cognitive and linguistic structure. On the morphological level, iconicity is restored through the grammaticalization of the noun 'back' to an adposition 'behind.' This process is paralleled by reanalysis, whereby a noun phrase (e.g., 'back of the mountain') is reanalyzed as a prepositional phrase ('behind the mountain').

Typically, reanalysis accompanies grammaticalization; that is, when a given morpheme is grammaticalized, this affects not only its own pragmatic or syntactic position but also that of the sentence constituent it belongs to; or, conversely, when reanalysis takes place, this is likely to involve the grammaticalization of at least one morpheme within the structure undergoing reanalysis. In such cases, both grammaticalization and reanalysis are the result of one and the same strategy, namely the one that aims at expressing more "abstract" concepts in terms of less "abstract" ones.

That one instance of grammaticalization may trigger several patterns of reanalysis is apparent in the following example, which is taken from Teso (Ateso), an Eastern Nilotic language of the Nilo-Saharan family spoken in western Kenya and eastern Uganda. Teso has a morphological sex gender system and a VSO syntax. In the following sentence, however, Teso exhibits an SVO word order:[10]

(8)   mam petero e-koto   ekiŋok
           not   Peter 3SG-want dog
           'Peter does not want a dog'

This sentence is historically derived from the complex sentence *e-mam pe-tero e-koto ekiŋok 'It is not Peter (who) wants a dog,' consisting of a main clause (e-mam petero) and a subordinate clause (e-koto ekiŋok). The SVO order of this sentence is due to the fact that the main verb -mam 'not to be' was gram-maticalized to a negation marker. This single instance of grammaticalization was responsible for a number of cases of reanalysis, such as the following:[11]

a)   The complex sentence was reanalyzed as a simple sentence.
b)   The subordinate clause was reanalyzed as the main clause.
c)   Due to the grammaticalization of the verb -mam 'not to be' to a verbal negation marker mam, the former main clause was reanalyzed as a grammatical marker.
d)   The subject of the erstwhile main clause was reanalyzed as the subject of the new sentence.
e)   The former VSO structure was reanalyzed as SVO, with the effect that Teso has introduced an SVO word order in negative clauses.

Examples like these, where one instance of grammaticalization triggers a series of reanalyses, are not difficult to come by. It would seem that in English the development of phrases involving verbs of propositional attitude such as I think or I guess into epistemic parentheticals marks the beginning of a similar process, as the discussion by Thompson and Mulac (in press) suggests. In example (9), I think forms the main clause subject and verb, and that introduces a complement clause, while in (10) the main clause subject and object are found at the end of the sentence, and there is no longer a complementizer (= "that-deletion"). According-ing to these authors, in (10) the phrase I think has been grammaticalized to an epistemic phrase expressing the degree of speaker commitment, "functioning roughly as an epistemic adverb such as maybe with respect to the clause it is associated with" (Thompson and Mulac, in press):

(9)   I think that we're definitely moving toward being more technological.
(10)   It's just your point of view you know what you like to do in your spare time I think.

Thompson and Mulac (in press) refer to this case as one involving a blurring of the distinction between main and complement clause. It would seem that the process involved goes even one step further; conceivably, the transition from (10) to (11) can be interpreted as an emergent pattern of reanalysis of the following kind:

a)   There is a "category shift from subject-verb phrase to EP [epistemic phrase], the latter having distributional properties not possible with the former" (Thompson and Mulac, in press).

b)   The main clause (*I think* . . .) is reanalyzed as an epistemic particle "becoming
           a single element behaving as a member of the grammatical category of adverb"
           (Thompson and Mulac, in press).

c)   Reanalysis has the effect that the erstwhile complement clause becomes the
           main clause while the former main clause ends up as a dependent adverbial con-
           stituent of the new main clause. As is the case in many types of reanalysis based
           on grammaticalization, the result is that existing dependency relations are
           turned upside down; that is, governing constituents become dependent constitu-
           ents, and vice versa (see 8.3 below).

There is reason to assume that, while both grammaticalization and reanalysis
appear to be inseparable twins, they must, nevertheless, be kept strictly apart, in
particular because of the following considerations:

a)   Whereas grammaticalization is essentially a unidirectional process, reanalysis
           is not, as has been demonstrated by Heine and Reh (1984). For example, one of
           the many effects that grammaticalization may have is that a main clause turns
           into a subordinate clause. This process—which may happen, for example,
           when a verb is grammaticalized to an adposition or when a direct speech propo-
           sition is grammaticalized to an indirect speech proposition (see chap. 7)—is
           unidirectional. Reanalysis, on the other hand, even when triggered by gram-
           maticalization, may have the opposite effect, that is, that a subordinate clause is
           reanalyzed as a main clause, as the examples just presented suggest.

b)   Grammaticalization need not be accompanied by reanalysis. Thus, when a de-
           monstrative is grammaticalized to a definite article (*this man > the man*), the
           definite article to a nongeneric article etc. (see Greenberg 1978a), or the numer-
           al 'one' to an indefinite article (*one man > a man;* cf. Givón 1981), then we are
           dealing with the grammaticalization of a demonstrative or numeral where no
           reanalysis is involved: the syntactic status of the determiner–head phrase re-
           mains unchanged.[12]

In an example such as (11) below, "reanalysis" might be a useful label, al-
though it does not stand in a one-to-one relation with grammaticalization. In her
discussion on the transition from a periphrastic construction in Latin to an inflec-
tional future construction in Spanish, Fleischman (1982a:115) observes that the
Latin infinitive marker *-re* "has become reanalyzed as a future-tense marker,"
involving the following structural change:

(11)   cant-   a-   re   (h)a(b)- eo   >   cant- a-   r- é
           sing-   1st-   INF   have-   1.SG   sing- 1st- FUT-1.SG
                    CONJ   CONJ
           I'll sing'

Grammaticalization theory would be hard pressed to account for a conceptual shift from infinitive marker to tense category; what we are dealing with here is a restructuring process leading to the reinterpretation of morphological functions.

8.3 Dependency

Throughout this work, a distinction between a cognitive and a linguistic domain is maintained, based on the assumption that certain linguistic structures require an analysis that transcends the limits of linguistic categorization. In doing so, we have ignored the question where the boundary between the two domains is to be located. In the present section, we wish to look at one issue that has been mentioned repeatedly in previous sections (see 8.2), namely the issue of dependency relations.

There are some developments that occur when the unit undergoing grammaticalization is the governing constituent in a given construction but that never occur when it forms the dependent member of the same. The presence of source propositions like those presented in 2.2.2 or of reanalysis structures (8.2) is confined to constructions where the grammaticalized unit forms the governing member or head. Thus, when in a given language the noun 'back' is grammaticalized to a preposition or postposition ('behind', 'after'), this involves both a source proposition, in this case a part-whole proposition, and reanalysis. The effect of grammaticalization in this example is that a genitive construction like 'back of the mountain' is reanalyzed as an adverbial phrase 'behind the mountain.' The result of this process is described by Anttila in the following way: "The original head and attribute have switched places, because the head has become a mere appendix of the attribute, which retains its lexical meaning" (Anttila 1972:149). Nothing of this sort happens when the unit undergoing grammaticalization forms the dependent member, as is the case, for example, when the demonstrative 'this' is grammaticalized to a definite marker ('the'), turning a phrase demonstrative-noun (*this man*) into a phrase definite article–noun (*the man*): neither is a source proposition involved, nor is there any discernible reanalysis pattern (see 8.2 above).

This fact suggests that dependency forms a parameter that is of immediate relevance to our discussion. Whether a given entity governs or is governed by another entity is likely to determine its fate in the process of metaphorical use and of grammaticalization. At the latest since Tesnière (1959), dependency relations have become a central concern of linguistic analysis. Their equivalent in cognitive psychology, however, is less clear. There is reason enough to assume that they are as equally relevant to cognition as to language structure.

8.4 Grammaticalization Chains

The conceptual transfer patterns described in chapters 2 and 3 can be held responsible for what turn up in language structure as grammaticalization chains,

Verb	Secondary verb		Preposition
⟶ high degree of verbality	⟶ decrease in verbality	⟶ low degree of vebality	⟶ no verbal properties
Ex.: loŋ 'descend'	maa 'come'	càak 'depart from'	tɛ̀ɛ̀ 'from'
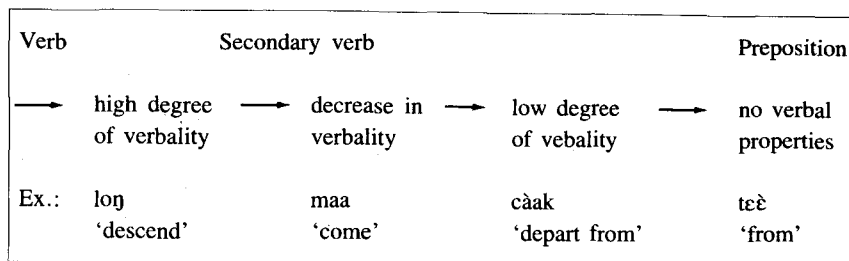
FIG. 8.1 The verb-to-preposition continuum in Thai (according to Kölver 1984).

which we interpret as a somehow frozen result of conceptual manipulation and conversational implicatures. Grammaticalization chains reflect linguistically what has happened on the way from more "concrete" to more "abstract" contents, and they make it possible to reconstruct that process.

8.4.1 On the Structure of Chains

In some previous studies, grammaticalization has been defined as having the structure of a continuum. Thus, Heine and Reh (1984:15) claim that grammaticalization forms "an evolutional continuum" and that "any attempt at segmenting it into discrete units must remain arbitrary to some extent." Similarly, Kölver (1984) has described the morphosyntactic transition from verb to preposition in Thai as a continuum ranging from a pole marked by a high degree of verbal properties or "verbality" at the one end to one of "maximum prepositionality," where the erstwhile verb no longer displays any verbal properties, at the other end. Figure 8.1 illustrates her model. Since Kölver's description suggests that we are dealing with a true continuum, expressions such as "high degree of verbality" etc. are not to be understood as standing for discrete points on that continuum.

Instead of the term "continuum," we shall use here the label "grammaticalization chain," in particular since in the transition from lexical to grammatical category there is always some kind of overlapping of both conceptual and morphosyntactic structures involved, which is suggestive of a chaining process, as we shall demonstrate below (see also 4.3).

It may be useful to distinguish "grammaticalization chain" from some other related terms. The first is "grammaticalization scale," which, according to Lehmann (1982:26), is a descriptive construct involving functionally similar signs. We avoid this term since it remains unclear whether it has any cognitive base.

The second term is "grammaticalization channel," which has found some currency during the past decade (Givón 1979a; Lehmann 1982; Heine and Reh 1984). In Heine and Reh (1984:113), grammaticalization channels are described

as alternative options available to languages for introducing a new grammatical category. The following example may illustrate this distinction. There are many instances where more than one lexical source can be found for one and the same grammatical concept. In English, for example, expressions denoting FUTURE are historically derived mainly from two different lexical source domains, either the domain of agent-oriented modality (i.e., from the auxiliaries *shall* and *will*) or the domain of spatial movement (i.e., from the verb *go to;* cf. Bybee, Pagluca, and Perkins, in press). Another way of describing this situation would be to say that English has made use of two different channels of grammaticalization to develop grammatical markers for FUTURE. Thus, from *shall/will* to FUTURE marker would be a different channel than that from *be going to* to FUTURE. The term "grammaticalization chain" on the other hand refers to what happens on the way from lexeme to grammatical form, that is, to the nature of the process leading from a verb or auxiliary to a FUTURE morpheme, for example, how the process from spatial movement (*go to*) via GOAL-oriented activity, INTENTION, IMMEDIATE FUTURE, to FUTURE is structured (see 7.1.1).

In this example, channels are defined with reference to their endpoint. They may, however, also be looked at from their starting point, or source, where the term "grammaticalization channel" then refers to different development lines of one and the same source concept. These channels have been referred to as "polygrammaticalization" by Craig (in press) in her work on Rama, a Chibchan language of Nicaragua.

Grammaticalization chains concern the internal structure of channels, or parts thereof; they relate to the cognitive, morphosyntactic, and phonetic nature of these channels. They can be interpreted simultaneously as relation patterns, as processes, as synchronic or diachronic phenomena, even as dynamic, panchronic entities (see chap. 9), or simply as a new type of linguistic category that is structured differently from the well-known type of discrete category we all are familiar with (see 8.4.2 below).

To demonstrate in more detail what such a chain is, we return to the development of the Ewe lexeme *megbé* 'back,' which was briefly discussed in section 3.1. As we saw there, this lexeme stands for at least seven different conceptual entities or focal senses, which form a chain of increasing "abstractness" extending from a concrete, visible/tangible entity, a body part, to a nonphysical entity expressing a quality, 'backward, mentally retarded.' The presence of such a chain has considerable linguistic implications; its cognitive structure is immediately reflected in the morphosyntactic behavior of *megbé,* as table 8.2 shows.

This behavior can be described in the following way. As a noun denoting a human body part (OBJECT/NOUN), *megbé* shows all the properties that concrete nouns in Ewe have. It may form the head of a noun phrase (NP) and take any kind of nominal qualifiers. When used as the head of a genitive construction, it is linked with the genitival modifier by means of the "alienable" possessive marker

TABLE 8.2. The Morphosyntax of Ewe *Megbé*

Stage	Conceptual Attributes	Gloss	Word Class	Constituent Type	Morphology
A	OBJECT/ PERSON	'back of body'	N	NP	p
B	OBJECT	'back part'	N	NP	p/-
C	OBJECT/ SPACE	'place behind'	N	NP/AP	p/-
D	OBJECT/ TIME	'time after'	N	NP/AP	p/-
E	SPACE	'behind'	N/A/P	AP	-
F	TIME	'after'	N/A/P	AP	-
G	QUALITY	'retarded'	A	AP	-

Note: N = noun; A = adverb; P = postposition; NP = head of a noun phrase; AP = head of an adverbial phrase; p = presence of the possessive marker *pé*.

pé.[13] At the other end of the chain, *megbé* appears as a grammaticalized word that has developed from a nominal into an adverbial entity and may no longer accept any qualifiers or combine with the genitive marker *pé*.

Between these two extremes, there are a number of intermediate stages, the transition from one stage to the next being gradual. First, it involves the case morphology: once *megbé* no longer refers to a human body part but is still conceived of as an OBJECT concept, the use of the genitive marker becomes optional (stage B). In stages C and D, where *megbé* appears, respectively, as a SPACE and a TIME concept but is still treated as OBJECT, it may optionally form the head of an adverbial phrase (AP), although it behaves like a noun and may take qualifiers such as adjectives, demonstratives, etc. Stages E and F, where *megbé* no longer has OBJECT-like features, are marked by two linguistic innovations: it may no longer be combined with the genitive marker *pé*, and, although it can still be found occasionally with nominal (possessive) modifiers, it has finally developed from a noun into either an adverb or a postposition.

This transition from a full-fledged noun to an adverb or postposition shows some properties that are characteristic of grammaticalization processes. The first is that it is marked by overlapping: there is always a stage where the preceding and the following structure coexist as optional variants, before the former gives way to the latter. In stage B overlapping concerns the case morphology, in stages C and D the constituent type, and in E and F the word class involved. Thus, we meet the same type of chaining in morphosyntactic structure that we observed in the case of conceptual structuring (cf. 3.1).

Cases of overlapping of this type can, however, also be interpreted in a different way. Instead of situations where a preceding and a following structure coexist as optional variants, we may equally well be dealing with intermediate stages that incorporate elements of both structures but cannot be described exhaustively in terms of either of them. In stages E and F of table 8.2, for example, *megbé* is not made up of a combination of the properties of nouns, adverbs, and postpositions, although it exhibits properties of all three word classes; yet *megbé* forms a linguistic "hybrid" that resists categorization according to established linguistic taxonomies and may best be characterized as an entity that is no longer a noun but not yet quite an adverb or postposition—it is just somewhere in between (cf. 8.5.2).

While in cases like these the linguistic situation appears to be an immediate reflection of conceptual manipulation, there is also a decisive difference between the two: conceptual chaining precedes morphosyntactic chaining.[14] This difference is somehow predictable since it can be derived from the nature of the process concerned. As we have tried to demonstrate above, grammaticalization is the result of conceptual manipulation, and cognitive restructuring therefore precedes linguistic change. In table 8.2, for example, we notice that the lexeme *megbé* has a spatial or a temporal significance in stages C and D, respectively, but is still encoded as a noun, and even in stages E and F it still has nominal traits, although it appears as a purely spatial or temporal concept, respectively.

This means that the iconicity between conceptual and linguistic structure alluded to in 8.2 is consistently being manipulated. The result is asymmetry between cognitive and linguistic structure, which appears to be another salient characteristic of grammaticalization chains. This observation has already been made in earlier works. Givón, for example, notes with reference to the verb-to-preposition chain:

> It is highly unlikely that a verb would change suddenly into a preposition by all semantic, morphological and syntactic criteria at once. One thus expects to find, for a long time, many different types of intermediate cases in the language, where by some criteria a 'particle' is already a preposition, while by others it is still 'a verb'. In particular, morphological and syntactic behavior is likely to lag behind the more progressive semantic reanalysis, and thus quite often represent vacuous relics of the older semantic situation. [Givón 1975a:86]

Grammaticalization chains are similar in nature to the meaning chains, radial categories, or lexical networks discussed by Brugman (1981), Lakoff (1982, 1987), Norvig and Lakoff (1987), Hawkins (1988), and others (see 8.4.2), and one of their major implications for language structure is that they create polysemy. This similarity is apparent in the following characterization involving the grammaticalization of adpositions, written in a Lakoffian framework:[15]

> For each preposition, we recognize a central, or prototypical sense. The prototypical sense, rather than being highly general, may well profile a very specific configuration. Polysemy comes about when the preposition is used in a sense which is closely related to, but distinct from, the prototypical instance. For example: a condition which is essential to the prototype might not be met; a feature which is optional to the prototype now assumes central importance, or vice versa; or some additional feature might be required. By the same process, this derived meaning may in turn give rise to a further extension, and so on. The various senses of the word thus radiate out from the central prototype, like the spokes of a wheel. Senses at the periphery might well have little in common, either with each other, or with the central sense; they are merely related by virtue of the intervening members of the meaning chain. [Taylor 1988:301]

These characteristics of grammaticalization chains, or "meaning chains," are immediately relevant to linguistic description.

8.4.2 Chains as Linguistic Categories

One of the axioms cherished by adherents of the natural grammar model is the "one function, one form" principle (see 4.6). In fact, in some linguistic discussions the impression is conveyed that an ideal language would be one where each word has only one meaning and each meaning is expressed by one form only. It is hoped that the preceding chapters have made it clear why such a language state is unlikely to be found. Every instance of grammaticalization can be viewed as a violation of this principle: polysemy, which is a characteristic of grammaticalization chains (see 8.4.1 above), constitutes one of the typical outcomes of grammaticalization.[16]

One major problem, one that requires further investigation, concerns the categorial status of these chains, for example, in linguistic description. As the example of Ewe *megbé* in the preceding section (8.4.1) shows, these chains cut across cognitive domains, conceptual boundaries, constituent types, parts of speech, morpheme types, etc. Common strategies adopted by grammarians are either to force them into the straitjacket of existing categories, to allocate one part of the chain to one of the existing categories, declaring the remainder of the chain to be deviant uses, or else simply to ignore their existence altogether.

There are in particular three recent approaches that appear to be helpful in accounting for grammaticalization chains. They are all based on prototype theory as developed by Rosch (see, e.g., 1973a, 1978). The first is that of radial categories (Lakoff 1987) or lexical networks (Norvig and Lakoff 1987), according to which the various senses of a given linguistic expression form a radially structured category with a central member or subcategory and a network of minimally different senses or subcategories (cf. 8.4.1). The latter are derived

from the former by means of the following kinds of links: image-schema trans-formation, metaphor, metonymy, frame addition, etc. (cf. Norvig & Lakoff 1987:197–98).

What radial categories have in common with grammaticalization chains is, first of all, that both are motivated by a similar kind of cognitive process and, second, that they are described in terms of a chaining principle (Lakoff 1987:91–114). What the radial category approach does not seem to take care of is the transition from one prototype-like category to another or from one word class to another; rather, in that approach we are concerned with a network of subcategories or senses that are all part of one and the same protopye, which again corresponds to one particular lexeme.

A solution to the problem of prototype shift is volunteered by Givón in his prototype extension model. The flexibility and context sensibility of prototypes, he argues, makes it possible for them to change their structure by inducting new members. The strategy employed for this process is metaphor, and the result is a redefinition of the prototype core or a change in the relative ranking of core features (Givón 1989; see also 4.3). For example, with the metaphorical inter-pretation of the sentence *George built a wall around himself,* the membership of the category *wall building* is extended to allow 'defensive and isolating behavior' to join the cluster of features characterizing the category.

This model is also employed by Givón to account for grammaticalization chains, in that peripheral or nonfocal features of a given prototype may become the prototype core of a grammatical morpheme. Givón presents the gram-maticalization of the verb *go* to a future marker as one of his examples. 'Motion in time,' he claims, is an ingredient of motion in space but may not be the core of the prototype of 'go.' In metaphorical extension, however, it became a core fea-ture of the prototype of 'future' (Givón 1989:59). Prototype extension, as perceived by Givón (1989), may in fact be said to account for some of the most salient characteristics of grammaticalization chains, especially the following:

a)   The driving force behind them is metaphor.

b)   Prototype extension may be either category internal or category external. In the former instance, an existing prototype-like category is redefined. In the latter instance, a new prototype develops out of the old one, in that noncore properties of the old one become core properties of the new one.

c)   This means that grammaticalization chains are more inclusive categories than prototypes since one chain may consist of more than one prototype structure, whereas the opposite does not seem to hold. To use Givón's example cited above, in a number of languages the lexeme 'go' forms a chain that includes at least two prototypes, one that has a lexical meaning ('goal-oriented spatial movement') and another that has a grammatical meaning ('future').

Apart from the radial category and the prototype extension approaches, there is a third kind of approach that is helpful in understanding the nature of grammaticalization chains, namely one that treats linguistic entities as family resemblance categories. The notion of family resemblance was introduced by Ludwig Wittgenstein (1953) in his *Philosophical Investigations* and has since been applied in psychological (Rosch and Mervis 1975; Medin, Wattenmaker, and Hampson 1987; Ward and Scott 1987) and linguistic research (Taylor 1989). The classic form of family resemblance is summarized by Rosch and Mervis (1975:575) in the following way: "A family resemblance relationship consists of a set of items of the form AB, BC, CD, DE. That is, each item has at least one, and probably several, elements in common with one or more other items, but no, or few, elements are common to all items." Family resemblance structures have also been referred to as fuzzy categories (Medin, Wattenmaker, and Hampson 1987:243), where "fuzziness" concerns the relation between the various members of the category on the one hand and the boundaries of the category as a whole on the other.

It would seem that grammaticalization chains have all the characteristics of family resemblance categories, as can be illustrated by looking at the morphosyntactic behavior of the Ewe lexeme *megbé,* which was summarized in table 8.2. The behavior of the seven senses distinguished there is described in terms of four parameters: conceptual attributes, word class, constituent type, and morphological behavior. The numbers of attributes shared by the seven senses are summarized in table 8.3; they have been calculated in the following way: full attribute identity between two senses is given an index value of two, partial identity a value of one, and nonidentity a value of zero. For example, on the basis of the parameter "word class," senses A and B share an index value of two (N : N), A and E a value of one (N : N/A/P), and A and G a value of zero (N : A).

As the figures presented in table 8.3 suggest, grammaticalization chains like the one represented by Ewe *megbé* can be described as family resemblance categories of the following kind:

a)   They are linear categories; that is, they have a one-dimensional extension.
b)   No attribute is common to all senses of the chain.
c)   None of the senses combines all the attributes distinguished.
d)   Each sense has several attributes in common with other senses, but the two endpoints, that is, senses A and G of table 8.3, have no attributes in common.
e)   Immediately adjacent senses have significantly more attributes in common than nonadjacent senses. Thus, the average value of attribute identity in table 8.3 is 5.5 in the case of adjacent senses but only 2.9 in the case of nonadjacent senses.
f)   Nonperipheral senses have a higher number of attributes in common with other senses than do peripheral ones. Thus, the value of attribute identity in table 8.3

TABLE 8.3. Numbers of Attributes Common to the Seven Senses of Ewe
              Megbé

Sense	Sense						Average Number Shared with Other Senses
	A	B	C	D	E	F	
A							3.0
B	6						3.6
C	5	6					4.5
D	5	6	7				4.5
E	1	2	4	3			3.5
F	1	2	3	4	6		3.5
G	0	1	2	2	5	5	2.5

Average number of attributes:
   Shared by adjacent senses   5.5
   Shared by nonadjacent senses   2.9
Number of attributes shared by the most distant   0
members (A and G)

is highest in the case of senses C (4.5) and D (4.5), which are located at the center, and lowest in the case of the peripheral senses A (3.0) and G (2.5).

We are now in a position to summarize the characteristics of grammaticalization chains. A simplified form of such chains is presented in figure 8.2 (cf. fig. 4.8), their formal properties being as follows:

i)   Grammaticalization chains are family resemblance categories that are defined with reference to their endpoints (senses A and Z in figure 8.2). These endpoints differ from one another in their relative degree of grammaticalization, in that Z is a grammaticalized form of A.

ii)   Any sense along this chain can be defined with reference to these endpoints: the nearer that sense is to A, the less grammaticalized it is.

iii)   Different senses along this chain can also be defined with reference to one another: a sense to the left is less grammaticalized than any one to its right, and, the closer the two senses are to each other, the less they differ in their relative degree of grammaticalization, and the more similar they are in meaning. Thus, B is less grammaticalized than Y since it is located to the left of Y. Furthermore, on account of their relative distance from one another, B differs from A in its relative degree of grammaticalization less than it does from Z; hence, A and B are more similar in meaning to each other than either of them is to Z.

iv)   The more distant two given senses are from one another along this chain, the more likely it is that they belong to different cognitive domains. Thus, B in fig-
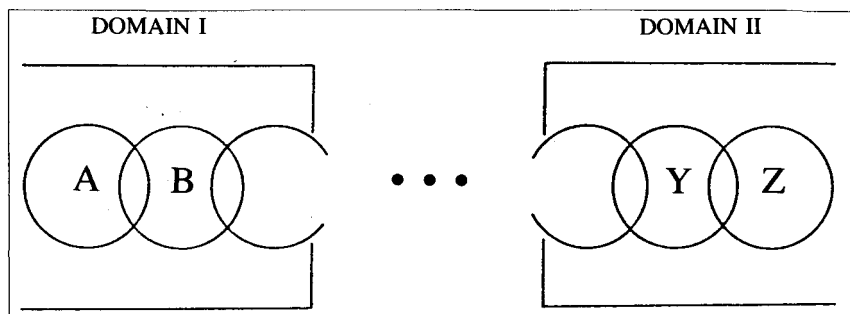
FIG. 8.2 The structure of grammaticalization chains.

ure 8.2 belongs to the same domain as the neighboring A but to a different one
from either Y or Z.

To conclude, grammaticalization chains have a clear internal structure and are
required to describe and account for language structure. What distinguishes them
from other kinds of linguistic categories is that they correspond neither to the
classic notion of a discrete category nor to that of a prototype as defined by Rosch
and her associates (but see Rosch and Mervis 1975).

8.5 Grammaticalization and Discourse Role

Chains such as the one presented above display a predictable correlation with the
discourse pragmatic parameter of referentiality/manipulability: the lexeme
megbé is maximally referential when used as an OBJECT-like entity and mini-
mally referential when associated with the QUALITY category. It would seem,
however, that this relation is complex and that not much is gained by reducing
cognitive-ideational phenomena of the kind under consideration to pragmatic-
textual interpretation, or vice versa.

8.5.1 Decategorialization

We may use another example from Ewe to illustrate this point. Our example
involves the lexeme *ŋútsu.* 'man, adult male,' which can be regarded as a "pro-
totypical noun." Depending on the respective context, however, this lexeme
displays a remarkable range of semantic and morphosyntactic variation. Sen-
tences (12) to (14) are characteristic of some of the uses which are associated
with *ŋútsu.* In (12), *ŋútsu* denotes a concrete noun that exhibits all characteristics
of a "good noun": it fills the syntactic slot of a noun and may take any of the
qualifiers that commonly combine with nouns, such as number markers, deter-
miners, etc. In (13), it also behaves syntactically like an object noun, but it is not
animate as in (12) and may not take any qualifiers. In (14), it occupies the posi-
tion of an object noun, but it is no longer "nominal in meaning," takes modifiers

like *ŋútɔ́*, which are governed by adjectives and adverbs but not by nouns, and
hence behaves more like an adjective or an adverb than a noun:

(12)   me-le   ŋútsu nyúíé áɖé   dí-ḿ
         1SG-COP man   nice   INDEF want-PROG
         'I am looking for a nice man'

(13)   é-de   ŋútsu lã   me ná-m
         3SG-put man   body in to-1SG
         'He has given me courage'

(14)   é-wɔ   ŋútsu ŋútɔ́
         3SG-do man   very
         'He behaved very bravely'

The case of *ŋútsu* is in no way peculiar or idiosyncratic; the Ewe dictionary is
full of cases of a similar nature. The strategy of lexicographers dealing with them
is to list the various uses of the relevant lexeme as "polysemes" or "homonyms"
and leave it at that (cf. Westermann 1905:410–11). One way of accounting for
such cases is suggested by Hopper and Thompson (1984), who analyze varia-
tions in the use of nouns and verbs in terms of their respective discourse roles. In
sentence (12), for instance, *ŋútsu* may be said to form an example of a highly
salient discourse participant that is autonomous and manipulable and represents a
prototypical noun, hence its capability to combine with the whole range of nomi-
nal morphology. In (13) and even more so in (14), on the other hand, *ŋútsu*
appears in a decategorialized form: it may be interpreted as a nonmanipulable,
dependent, and nonindividuated entity that is low in categorial status and there-
fore lacks the morphological trappings characteristic of prototypical nouns.

The present approach may be viewed as complementing that of Hopper and
Thompson (1984); that is, rather than looking at the discourse value, it focuses
on the conceptual manipulation of linguistic units. As we have seen above, con-
crete, visible/tangible objects are employed to conceptualize less concrete
entities. We have proposed a number of cognitive categories such as PERSON,
OBJECT, SPACE, etc. that stand in a metaphorical relation governed by cognitive
distance. This relation is essentially unidirectional, where less distant categories
tend to be employed to understand and/or describe more distant categories. In
this way, concepts associated with the category PERSON may serve to describe
concepts of a higher degree of cognitive distance, such as OBJECT or QUALITY.
Exactly this appears to have happened in the case of *ŋútsu*. In sentence (12) this
lexeme stands for a concrete, human concept. Sentence (13) is an example where
ŋútsu no longer refers to a human being; rather, it refers to a quality associated
with that concept, although expressed as an OBJECT-like entity. Finally, in (14),
ŋútsu exclusively designates a quality, this noun thereby competing with word

classes normally employed by Ewe speakers to encode qualities, such as adjectives and state verbs.

Thus, it would seem that the conceptual range of this lexeme includes three cognitive categories, PERSON, OBJECT, and QUALITY, and, depending on the relevant category it is associated with in a given context, it shows a different morphosyntactic behavior: it takes the full range of nominal morphology when referring to the category PERSON but lacks nominal characteristics when referring to an OBJECT-like entity. Finally, when denoting a QUALITY concept, it has more in common with adjectives than with nouns. This description, however, takes care of only one aspect of the relevant process, as we shall see in the following section.

8.5.2 Hybrid Forms

As we outlined in previous chapters, grammaticalization processes have both a discontinuous (chap. 2) and a continuous component (chap. 3; see also 4.1). Within the former, there is a discrete shift from X to Y, that is, from a lexical or less grammatical to a more grammatical category. Within the latter component, this transition is gradual: rather than dealing with a replacement of X by Y, we observe a continuous decrease of X properties and a corresponding increase of Y properties.

Somewhere halfway between X and Y there is a stage where the entity concerned cannot be described as being either primarily X or primarily Y since it is made up of a proportionate amount of properties of both categories. When such a stage is reached, we propose to talk of intermediate or hybrid forms. Hybrid forms are part of grammaticalization chains; they are found at the intersection of overlapping stages of the "no longer quite X but not yet quite Y" type (see 8.4.1).

The term, as employed here, refers exclusively to instances of grammaticalization, that is, to one particular stage in the cognitive and linguistic development of categories on their way to becoming grammatical markers. This entails that hybrid forms can be defined with reference to both the source and the target structure of grammaticalization: they have retained part of the structure of their source and in addition have acquired part of the structure of their target.

The development from demonstratives to relative clause markers may be said to be a paradigm case of grammaticalization: it forms one of the most widespread grammaticalization chains found in the languages of the world. The hybrid stage in this process is reached when the item concerned on the one hand still retains a demonstrative function and can be interpreted as a constituent of the matrix clause and on the other hand serves as a marker of subordination, being part of a relative clause.

Kenya Pidgin Swahili (KPS), for example, has lost the relative clause morphology of coastal or Standard Swahili and has introduced the noun class 9 distal

demonstrative *ile* 'that (one)' as a new, invariable relative pronoun. That this marker is still in a hybrid stage is suggested by sentence (15), where *ile* can be understood in its use either as a demonstrative (15a) or as a relative pronoun (15b). This ambiguity is resolved in (16), where use of *ile* can be interpreted only as a marker introducing a restrictive relative clause. Thus, whereas *ile* forms a hybrid form in (15), it no longer does so in (16), where it is unambiguously a relative pronoun:[17]

(15)   mimi na-ona ile   gari kwisha fika
        I   NF-see DEM/REL car PFV   arrive
        (a) 'I saw that car, it has arrived'
        (b) 'I saw the car that has arrived'

(16)   kila mtu   ile na-ambi-wa mambo hii na-shangaa
        each person REL NF-tell-PASS matter this NF-be.surprised
        'everybody who was told this story was surprised'

The life span of a hybrid form can be relatively short, as appears to be the case in our KPS example.[18] However, it may also extend over a period of centuries or even a millennium. The grammaticalization of the German demonstrative *der* (m)/*diu* (f)/*daʒ* (n) 'this, that' (> *der, die, das,* respectively) to a relative pronoun began in Old High German, and already at that time it exhibited the characteristics of a hybrid, as can be seen in (17), where *daʒ* can be interpreted alternatively as a demonstrative belonging to the matrix clause or as a relative pronoun:

(17)   sê   dîne gungirun tuoant daʒ   sie ni   môʒun
        behold your disciples do DEM/REL they not must
        tuoan in feratagum
        do   in sabbath
        ' behold thy disciples do that which is not lawful to do upon the sabbath
        day' [Mondsee Matthew; Lockwood 1968:242]

By the sixteenth century, the hybrid form was still in use. It was employed, for example, by Luther, as in (18a), where *den* may be interpreted variously as an object pronoun of the matrix clause or as a relative pronoun. In modern Standard German, the split between demonstrative and relative clause marker has been concluded, as can be seen in (18b), which is a modern translation of (18a). However, the hybrid still survives in certain contexts, particularly when the pronoun is in the nominative, as in (19):[19]

(18a)   habt ihr   nicht gesehen den   meine Seele liebet?
        have you.PL not   seen   DEM/REL my   soul loves
        'Have you not seen the one my soul loves?'

(18b)   habt ihr   den nicht gesehen, den meine Seele liebt?
         have you.PL DEM not   seen   REL my   soul loves

(19)   der · . mir   gefällt ist zu groß
         DEM/REL to.me pleases is too big
         'The one that appeals to me is too big'

Hybrid forms pose a constant problem to students of grammar who have been brought up to analyze and describe language in terms of discrete, clear-cut categories, and a number of scholarly disputes have centered around the question of whether a given hybrid is "basically X," or "basically Y," or a modified form of X or Y. This problem has been discussed in many languages worldwide with reference to the verb-to-adposition chain, involving morphemes that to some extent exhibit verbal characteristics and/or are homophonous or cognate to full verbs but at the same time lack some verbal characteristics and exhibit the morphosyntax and the function of adpositions. A number of terms, such as "verbid," "coverb," "modifying verb," etc., have been proposed for these hybrid forms (cf. Ansre 1966; Lord 1973; Bamgbose 1974; and Clark 1979; for references, see Hünnemeyer 1985).

One might argue, as has been done in the past (see Ansre 1966), that hybrid forms can be taken care of in grammatical descriptions by simply establishing a new category for them. While such a procedure is helpful, it hardly does justice to their actual nature: since they form but one of a multitude of points constituting chains of grammaticalization, their exact structure can be defined only with reference to the entire continuum (cf. 8.4 above). What is required therefore is a framework for linguistic descriptions that is not confined to static, discrete units such as word classes or constituent types but rather includes dynamic entities such as chains of grammaticalization as well as other types of continua, among the fundamental taxa of linguistic analysis.

8.6 Recategorialization

One of the main themes found in works on grammaticalization is that this process can be described as one involving loss in linguistic substance. The generalizations made thus far suggest in particular that grammaticalization leads, for example, to a
ˌ
a)   loss in categorial status;
b)   loss in referentiality;
c)   loss in semantic complexity, functional significance, and expressive value;
d)   loss in pragmatic significance;
e)   loss in syntactic variability;
f)   loss in phonological substance, etc. (see, e.g., Lehmann 1982; Heine and Reh 1984; Bybee, Pagliuca, and Perkins, in press).

As much as such generalizations are justified, they capture only one aspect of the process and tend to ignore that this loss is also compensated for by gains (see Sweetser 1988; cf. 4.4). For example, the loss of existing structures is counterbalanced by the emergence of new, more grammatical structures. Thus, the grammaticalization of pragmatic modes leads to new syntactic modes of expression (Givón 1979), and loss in syntactic variability entails the growth of complex morphological patterns.

There is yet another perspective that suggests that the "loss" hypothesis needs some modification. The Ewe lexeme ŋútsu 'man' no doubt experiences what Hopper and Thompson (1984) refer to as decategorialization when used in certain contexts: it loses the ability to act as an autonomous discourse participant, it loses in "cardinal categoriality," and it no longer behaves like a prototypical noun. But these losses are counterbalanced by gains. First, the lexeme ŋútsu, while forming a "more important" and a "more salient" discourse participant when used as a referential unit, might be cognitively more complex when used nonreferentially. Second, as ŋútsu ceases to refer to a concrete unit, that is, to a visible, tangible entity, at the same time it comes to acquire the contours of an alternative cognitive domain, that of qualities, and its loss in noun-like properties tends to be compensated for by a gain in properties of other word classes such as those of adjectives or adverbs. One might say that we are dealing here with decategorialization followed by recategorialization.

What effects recategorialization can have may be illustrated by looking at another example from Ewe, one involving the grammaticalization of verbs to prepositions. It is commonly assumed, and well documented, that morphemes lose in syntactic freedom when undergoing grammaticalization (see above). With the following example, we wish to demonstrate that such a claim has to be qualified. In the literature on Ewe, five verbs, variously referred to as "verbids" or co-verbs, have acquired a prepositional function (see 7.2.3; table 7.1.).[20] To save space, we consider here only one of these co-verbs, *tsó* 'come from,' but we indicate whenever a given observation does not apply to the other co-verbs.[21] *Tsó* has its full verbal meaning when occurring as the first verb in the sentence, as in (20). It acquires a prepositional meaning only when used as a nonfirst verb, as in (21):

(20)   é-tsó   Lome
         3SG-come.from Lome
         'She came from Lome'

(21)   Kofí mli kpé-á   tsó tó-á   dzí
         Kofi roll stone-DEF from hill-DEF on
         'Kofi rolled the stone down the hill'

When used as a prepositional concept, *tsó* shows a reduced inflectional behavior: it may be marked for some tense-aspect categories, such as future or

habitual (22), but not for others, such as progressive (23), as can be seen in the following sentences:

(22)   Kofí mli-a   kpé-á   tsó-á   tó-á   dzí
        Kofi roll-HAB stone-DEF from-HAB hill-DEF on
        'Kofi usually rolls the stone down the hill'

(23)   Kofí le   kpé-á   mli-ḿ   tsó tó-á   dzí
        Kofi COP stone-DEF roll-PROG from hill-DEF on
        'Kofi is rolling the stone down the hill'

When the prepositional meaning is temporal, rather than locative, *tsó* loses all verbal properties. That is, it may not take any of the tense-aspect or other markers that normally occur with verbs; rather, it behaves like an invariable particle, its morphosyntactic behavior being that of a temporal preposition.

That in its temporal use *tsó* exclusively has the status of a preposition can be derived from yet another observation. Ewe has a relatively rigid word order. One of the few word-order permutations allowed by the language is the topicalization of certain kinds of adverbial phrases from their position after the verb to the sentence-initial position. Thus, the adverb *etsɔ* 'yesterday, tomorrow' in (24) can be topicalized, as in (25):

(24)   m-aá-yi   Lome etsɔ
        1SG-FUT-go Lome tomorrow
        'I'll go to Lome tomorrow'

(25)   etsɔ m-aá-yi Lome
        'Tomorrow I'll go to Lome'

With the grammaticalization of the erstwhile verb to a preposition, *tsó* introduces adverbial phrases and hence can be topicalized. This, the adverbial phrase *tsó é-pé ɖevíme* 'since his childhood' in sentence (26) is topicalized in (27):

(26)   m-é-té   ŋú kpɔ́-á   nú o   tsó é-pé   ɖevíme
        NEG-3SG-be able see-HAB thing NEG from 3SG-POSS childhood
        'He hasn't been able to see since his childhood'

(27)   tsó é-pé ɖevíme m-é-té ŋú kpɔ́-á nú o
        'Since his childhood he hasn't been able to see'

This topicalization rule applies to all co-verbs when used as prepositions, with the exception of *ná* 'give.' *Ná* turns out to be less grammaticalized than the remaining co-verbs in other respects as well in that it has retained a number of verbal characteristics that the other co-verbs have lost; for example, it can be marked, at least optionally, for tense and aspect (see Hünnemeyer 1985:90). The topicalization rule is allowed only where these co-verbs have assumed more

grammaticalized functions. For example, according to our consultants, the rule applies only when *tsó* is used as a temporal preposition, not when it is used as a locative preposition.

Only *le*, which in addition to being used as a locative copula ('be at') has acquired the function of a multipurpose preposition, may be topicalized either as a locative preposition, as in (28), or as a temporal preposition, as in (29):

(23)   le agble-á   me m-aá-wɔ   dɔ´
         at field-DEF in 1SG-FUT-do work
         '(When) in the field, I'll work'

(29)   le ŋkeke atɔ   me-é   wó-wú   é-nu
         at day   three in-FOC 3PL-finish 3SG-edge
         'Within five days they had completed it'

These examples suggest that, with the transition from verb to preposition, *tsó* as well as other co-verbs have come to mark adverbial phrases, and, in much the same way as they have lost their verbal properties, they have acquired the characteristics of prepositions, in fact the only prepositions that Ewe has.[22]

Rather than losing in syntactic variability and independence, these prepositions, with the exception of *ná*, have acquired a new kind of unrestrictedness. Co-verbs are confined in their occurrence to the position after the main verb. In the kind of prepositional use described above, however, they have lost this constraint. Thus, with the "recategorialization" of the erstwhile verbs as prepositions, a development has taken place that superficially seems to contradict an important principle of grammaticalization, namely that of loss in autonomy.

That co-verbs do not constitute an isolated instance of "recategorialization" can be shown by looking at yet another example suggesting that such processes lead not necessarily to a loss of but rather to an increase in syntagmatic variability. In many languages worldwide, verbs meaning 'say' have been, or are being, grammaticalized to clause subordinators. The conceptual expansion involved includes the following stages (see 6.4):[23]

(30)   SAY > KNOW > BELIEVE > HOPE > PURPOSE > CAUSE

Ewe is one of the languages concerned, although it has not gone beyond the PURPOSE stage: the verb *bé* 'say' has been grammaticalized to a clause subordinator after verbs such as 'say,' 'know,' 'believe,' and 'hope,' and it also serves to introduce PURPOSE clauses, though not CAUSE clauses. In sentence (31), the verb *bé* 'say' has its lexical meaning. However, *bé* is used only in the affirmative of the aorist tense, which is the most unmarked tense-aspect category. Elsewhere, for example, in the negative aorist, it is replaced by *gblɔ*, a synonymous verb that has not been grammaticalized, whereby *bé* is added to *gblɔ* as a clause subordinator, as in (32):[24]

(31)   é-bé   Kofí vá
         3SG-say Kofí come
         'He said that Kofí came'

(32)   m-é-gblɔ   bé Kofí dzó o
         NEG-3SG-say that Kofí leave NEG
         'He didn't say that Kofí left'

Sentences (33)–(35) are examples of the uses of *bé* as a subordinator after KNOW, BELIEVE, and HOPE verbs, respectively, while in (36) *bé* introduces a PURPOSE clause:

(33)   me-nyá   bé e-li
         1SG-know that 2SG-be
         'I know that you are there'

(34)   me-xɔ-se   bé áa-vá
         1SG-believe that 3SG.FUT-come
         'I hope that she will come'

(35)   dzidódó le así-nye   bé áa-vá
         hope   be hand-1SG.POSS that 3SG.FUT-come
         'I have hope that she will come'

(36)   me-tsɔ́   ga   nê   bé(ná)wo-á-ple   agbalɛ̃
         1SG-take money give.3SG that 3SG-SUBJ-buy book
         'I gave him money so that he could buy a book'

Sentence (36) differs from the preceding sentences in that *bé* is followed by the habitual marker *ná*.[25] More important, however, the subordinate PURPOSE clause can be frontshifted to the sentence-initial position when marked for completive focus, as in (37), or for theme. In this case, the PURPOSE clause is followed by the particle *ta* (< 'head') as a kind of boundary marker:

(37)   bé(ná)wo-á-ple   agbalɛ̃ ta-é   me-tsɔ́   ga   nê
         that 3SG-SUBJ-buy book   PURP-FOC 1SG-take money give.3SG
         'In order for him to buy a book I gave him money'

Whereas *bé* marks object clauses in sentences such as (32)–(35), it is an adverbial clause subordinator in (36) and (37), and in Ewe syntax adverbials exhibit a more variable constituent order than objects. Thus, with the transition from an object clause subordinator to an adverbial clause subordinator, *bé* has assumed the properties of its new grammatical category and, accordingly, gained in syntactic variability.

It would seem that a comparable development is taking place in English. As

stated above (see 8.2) according to Thompson and Mulac (in press), there are phrases involving verbs of propositional attitude like *I think* (or *I guess*) introducing complement clauses that are being reanalyzed as epistemic phrases, expressing degrees of speaker commitment. This development appears to trigger a reanalysis of the main clause phrase *I think,* which behaves "as a member of the grammatical category of adverb" rather than as a main clause subject-verb constituent (Thompson and Mulac, in press). Like in Ewe, this grammaticalization of the main clause *I think* to an adverbial modifying the complement clause does not involve a loss in syntactic autonomy; rather, the opposite is the case, as Thompson and Mulac observe: "As epistemic phrases then, these combinations are free to float to various positions in the clause to which they are providing testimony, as other epistemic particles in English do, such as *maybe*" (Thompson and Mulac, in press:21).

With these examples, we have drawn attention to only one aspect in the process of recategorialization. Another aspect is highlighted by Stolz when describing the transition from nouns to postpositions in Latvian and Estonian. With the loss of "semantic concreteness," these nouns were decategorialized by losing most of their case forms as well as the ability to express number distinctions. Recategorialization then had the effect that a different type of paradigmatic variability emerged, leading to the growth of a postpositional system that constitutes "a finite but open set of alternating paradigmatic entries" (Stolz, n.d.:15).

In concluding, we can say that concepts not only lose in categorial status but also acquire a new categorial status, which is determined by the nature of the cognitive categories that they enter in the process of grammaticalization.

8.7 From Discourse Pragmatics to Grammar

It is now widely agreed that discourse pragmatics provides much of the substance of syntax, and Hyman (1984:73) uses the term "grammaticalization" to refer to "the harnessing of pragmatics by a grammar."[26] Paul Hopper (1982:6) distinguishes between two kinds of linguistic frameworks, a discourse framework and a sentence framework, and he argues that the encoding of percepts in the world always takes place within the former. Similarly, Susan Herring (in press) argues that there are both "discourse-grammaticalizing" and "lexical-grammaticalizing" strategies at work in language.

The validity of this distinction has not yet been established satisfactorily, especially since terms such as "discourse" and "discourse pragmatics" are used in different ways by different authors. It would seem, however, that at the present stage there is at least some justification in distinguishing between two kinds of approaches to grammaticalization, which may be referred to, respectively, as discourse-based and sentence-based approaches. Adherents of the former use the term "discourse" in a highly inclusive sense (cf. Hopper 1979a, 1979b, 1982,

TABLE 8.4. The Pragmatic and the Syntactic Mode, According to Givón
(1979:223)

Pragmatic Mode	Syntactic Mode
Topic-comment structure	Subject-predicate structure
Loose conjunction	Tight subordination
Word order governed mostly by the principle old-new information	Word order used mostly to signal semantic case functions
Roughly one-to-one ratio of verbs to nouns in discourse	A larger ratio of nouns over verbs in discourse
Verbs are semantically simple	Verbs are semantically complex
No use of grammatical morphology	Elaborate use of grammatical morphology
Several intonation contours	A single intonation contour

1987), while in sentence-based approaches the term tends to refer to only one specific aspect of linguistic analysis.

The position adopted here rests essentially on a sentence-based perspective. Although this probably does not affect the major theme of this work, it has severely limited the scope of analysis and the selection of language material used for exemplification. Our main concern has been with the fate of individual lexical or grammatical items and with morphosyntactic structures rather than with discourse-pragmatic patterning, text structure, and the nature of information flow (cf. Givón, in press b), and we have therefore neglected one important perspective of grammaticalization that we wish to draw attention to in the present section.

8.7.1 The Discourse-based Approach

In his book *On Understanding Grammar*, Givón (1979a) uses the term "syntacticization" for a shift from what he calls a more pragmatic pattern ("pragmatic mode") to a less pragmatic pattern ("syntactic mode") of communication—a process that has substantial implications for grammaticalization. The main characteristics of this process are summarized in table 8.4.[27] A few years earlier, Sankoff had introduced the term "syntacticization" for a slightly different process, one that is reminiscent of Hopper's notion of emergent grammar (see Hopper 1987): "We can describe as syntacticization processes the transition between what initially appear to be ad hoc speaker strategies and what later can be fairly confidently described as syntactic rules" (Sankoff 1977:62).

According to a more extreme position of what we call the discourse-based approach, it is not the "core meaning" associated with a particular grammatical form that gives rise to specific discourse functions; rather, "core meanings"

themselves are claimed to be discourse functions that acquire more grammatical, or more syntacticized, functions. One example may illustrate the perspective adopted by the adherents of this approach (see Hopper 1979a, 1979b, 1982; cf. Sankoff and Brown 1976; Givón 1977).

According to Hopper (1979a), tense and aspect, as well as other analogous grammatical distinctions, have their source in the pragmatics of discourse rather than being "ready-made devices 'deployed' in discourse because they happen already to exist" (Hopper 1979a:217; cf. Fleischman 1983:204): "This introduction has related a view of Aspect as an essentially discourse-level, rather than a semantic, sentence-level phenomenon. I have presented it in this way out of a conviction that morphological and local-syntactic accounts of aspect are either incomplete or, to the extent that they are valid, essentially show the sentence-level correlates of discourse structures" (Hopper 1982:16).

Hopper argues that the sense of completion associated with perfective aspect derives from a need for signaling successive events in narration, which is a discourse notion: when such events are discrete and bounded, they suggest a perfective or completive interpretation. This interpretation may lead to the grammaticalization of that discourse function to an aspect or tense; that is, the marker involved may come to express the notion of a perfect, perfective, or past category.

This accounts, for example, for the fact that conceptually highly divergent functions, such as focus marking and perfective aspect, derive from one and the same linguistic entity, as can be observed, for example, in Nupe and Gwari or in Malay.[28] The focus particle *lah* of Literary Malay, for example, also signals major sequential events in narration. In sentence (38), where it follows the verb, it appears to mark completion. In sentence (39), however, where it is suffixed to a noun in a sentence in isolation, it expresses contrastive focus:

(38)   mati-lah anak raju itu
         die-   prince   the
         'The prince died/has died'

(39)   anjing-lah yang   hilang, bukan kuching
         dog-   which lost   not   cat
         'It was a dog I lost, not a cat'

Similarly, Herring (1988) has shown how the "manipulation" of the Tamil verb *viṭu* 'to leave, let' in narrative discourse appears to have given rise to some highly divergent functions. Figure 8.3 summarizes this evolution.

In a recent book on clause combining (Haiman and Thompson 1988), a number of papers are devoted to the role played by grammaticalization in relating discourse to grammar. According to Matthiessen and Thompson (1988), clause combining "is a grammaticalization of the rhetorical organization of discourse,"
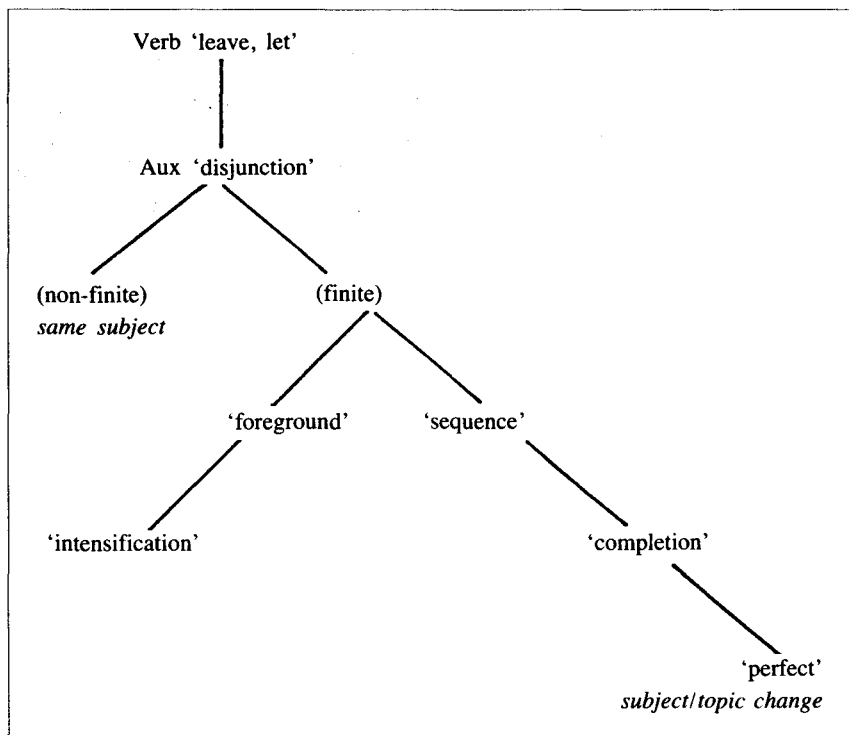
FIG. 8.3 Discourse pragmatic functions of Tamil *viṭu* (Herring 1988:289).

and several authors argue that syntactic strategies such as coordination and subor-
dination are the result of conventionalized discourse structures.

According to an even more extreme position, syntax per se does not exist at all,
and language can be described "exhaustively" by reference to some commu-
nicative principles that underlie the structure of discourse (cf. García 1975).

8.7.2 On Go-Futures

Such a perspective is not shared by all students of grammaticalization. Traugott
(1989), for example, argues that certain devices for organizing discourse have
developed out of "referential," nondiscourse meanings of the linguistic terms
concerned. This is said to apply, for example, to the discourse-organizing rela-
tive marker *where* or the concessive conjunction *where(as),* both of which
developed from the locative interrogative *where?* Similarly, Traugott observes
that tense and aspect, rather than originating in discourse, come to express dis-
course functions only after they have served nondiscourse functions.

The position maintained here is similar to Traugott's. One example (based on

Fleischman 1982b) may suffice to illustrate the kind of interaction between discourse functions and other functions to be observed in the process of grammaticalization. In English as well as in the western Romance languages, there are two types of future tense constructions: the "simplex future" (e.g., *I'll come*), and the "complex" or "go-future," which is based on what we referred to in 2.2.2 as the motion proposition, involving a construction where the verb *go* forms an auxiliary and the main verb is used in an infinitival form (*I am going to come*).[29]

While the two futures are largely equivalent and interchangeable in many contexts, the go-future exhibits some semantic idiosyncrasies that consistently cause problems for students of English or French grammar. Proposals that have been made to define the "basic meaning" of go-futures, Fleischman (1983:189) concludes, can be rejected either as invalid and based on erroneous readings or, alternatively, as valid but based on limited readings that are too narrow to account for a significant portion of the data. Fleischman finds, however, a "lower common denominator" to go-futures, called "present relevance" or "current relevance" by her: "Implicit in all the proposed interpretations of the go-future is a connection between present and future according to which the future situation, irrespective of its real-time distance from 'now,' is *viewed by the speaker* as growing out of, or somehow in relation to, the present world-state. The essential point is the *psychological* rather than chronological nature of this link to the present, which accounts for the ability of go-futures to describe situations located even in the very remote future" (Fleischman 1983:190).

Present relevance is essentially a pragmatic notion; it presupposes "a degree of participation, interest, or personal involvement in the situation" on the one hand and expresses "the speaker's subjective view of the situation at the moment of utterance" on the other. Since the development of go-futures marks out a progression from this pragmatic notion to an aspect (called prospection) and finally to a tense (future) "with or without the aspectual/pragmatic coloration" or present relevance, Fleischman (1983:204) concludes that this example provides further evidence in favor of the pragmatic origins of tense and aspect.[30]

Note, however, that this progression from pragmatic to nonpragmatic function is part of a more comprehensive chain of grammaticalization, which, in accordance with the data provided by Fleischman (1983), can be summarized thus:

(40)   spatial motion $>$ present relevance $>$ prospection $>$ future
          be going to   PRAGMATIC DEVICE   ASPECT   TENSE
          VERBAL ACTION

What (40) suggests is in line with the analysis proposed by Traugott (see above): the discourse-pragmatic function present relevance is derived from what we are inclined to regard as a nondiscourse meaning, that is, from a verb meaning 'go.' Furthermore, it suggests that, in the course of grammaticalization, functions may

emerge that are primarily discourse pragmatic or even strictly textual and that such functions again may give rise to other nondiscourse functions such as aspects and tenses.

These observations corroborate the findings of other students of discourse pragmatics, according to which discourse functions are likely to be derived from lexical entities, most of all from verbs. A typical example is provided by Ebert (1987), who describes how the motion verbs 'come' and 'go' have been grammaticalized in Chadic languages to markers of text cohesion, such as signaling unexpected event sequences or verbal anaphora.[31]

8.7.3 Conclusions

While the discourse-based approach highlights one of the main forces to be observed in the process of grammaticalization, it does not appear to present a perspective that differs drastically from the one described here. Rather, it would seem that it can be covered within the approach adopted in this work, especially for the following reasons:

a)   As far as we are aware, the marking of discourse functions does not evolve ex nihilo; it is subject to the same principles underlying the evolution from lexical to grammatical structures, just as other grammatical functions are. Thus, the rise of a discourse function "change in subject/topic" in Tamil or "present relevance" in English or French appears to be subject to the same kind of evolution from verb to marker of discourse function as many other grammatical functions.

b)   The evidence available suggests that many pragmatic functions are "less abstract" than syntactic functions and that the latter may be conceptualized in terms of the former. The result is syntacticization, a process leading from discourse pragmatic to morphosyntactic coding strategies (Givón 1979a).

c)   Finally, when discourse-pragmatic functions such as "change in subject/topic" or "present relevance" develop from lexical structures or give rise to nondiscourse functions such as marking tense or aspect, the same kind of metaphorical transfer, which we met in other instances of grammaticalization, can be observed, in that "concrete" verbal actions (e.g., *I am going to*) serve as a vehicle for the expression of "abstract" meanings such as discourse-pragmatic functions (*present relevance*). The latter again may form the vehicle for even more "abstract" contents such as the marking of tense/aspect or subject/topic shift.

8.8 The Linguistic Cycle

The data that have by now become available on grammaticalization make it possible to formulate some generalizations, or at least probability statements, on both linguistic development and language use. The development from verbs to tense or aspect markers or from nouns to adpositions, for example, is so wide-

spread in the languages of the world that we are able to state with a high degree of probability that it has also occurred in a given language of which we have no prior knowledge. While this is a diachronic statement, it has synchronic significance as well; for example, in any given language, verbs or auxiliary verbs are likely to be used for the expression of tenses and/or aspects, and certain locative and other adpositions are likely to be derived from nouns.

On the basis of such probability statements, it is also possible to make predictions about language use: if developments from A to B, or the use of A for the expression of B, are regularly found in the languages of the world, then the same is likely to happen again in the future. Thus, the cognitive and pragmatic processes described in the first four chapters, which have enabled English speakers, for example, to use a verbal structure like *be going to* for the expression of future tense or speakers of Chinese to conceptualize case functions in terms of verbs (cf. Li and Thompson 1974a), are likely to be used again for similar purposes by future generations of English and Chinese speakers, respectively.

There are a number of questions relating to predictions that are more difficult to answer. For example, little is known about the time span of grammaticalization processes; that is, how long it takes, for example, for a lexeme to become a grammatical marker. The evidence available suggests that the time involved varies considerably depending on which parts of grammar are involved. The development from an auxiliary verb to a tense or aspect marker or from a noun to an adposition may be achieved within a relatively short period.

Other kinds of grammaticalization, however, take a much longer time. Li and Thompson (1974b:202) report that the development from the Chinese verb *bǎ* 'to take hold of' to an objective case marker began in the late Tang dynasty (ninth century A.D.), and it is still an ongoing process. The use of *bǎ* as a case marker has not yet been generalized in Modern Mandarin Chinese: it is the preferred form when the following main verb is polysyllabic or when the (main) verb is morphologically complex or modified, while it still competes with the old pattern of object marking in sentences having monosyllabic verbs (Li and Thompson 1974b:203).

The observation that grammaticalization is the result of some fundamental cognitive processes leading to the introduction of new grammatical categories at all places and all times might suggest that, the older a language grows, the more grammatical categories it accumulates—with the effect that earlier languages were "less grammatical" than modern languages and that future languages will be "more grammatical" than present-day spoken languages. Such a position has in fact been maintained by some, and it has been refuted by others on equally convincing grounds.

One major argument against the thesis of a consistently increasing grammaticization of human language is that, as new grammatical structures arise, roughly the same proportion of older ones tends to disappear. That there exists

some causal connection between these two developments has been repeatedly claimed, and this issue has provided yet another forum for scholarly controversy; mention should be made, for example, of the discussion of "push chain" and "drag chain" effects in linguistic change.[32]

The question how and why grammatical structures disappear has been a much discussed topic since the early nineteenth century; a framework for dealing with it has been proposed by Heine and Reh (1984), who describe "linguistic decay" in terms of processes such as erosion, fusion, fossilization, and loss.

The observation that the decline, "abrasion" (*Abnutzung;* Gabelentz [1891] 1901), or "weakening" (*affaiblissement;* Meillet 1912) of grammatical morphology tends to be followed by the emergence of new grammatical patterns replacing the old ones has given rise to the idea that linguistic evolution must be cyclic. This view is almost as old as historical linguistics; Franz Bopp is claimed to be one of the early main adherents of it (cf. Hodge 1970:2–3). For Georg von der Gabelentz ([1891] 1901:250–51), however, this evolution takes the shape not exactly of a cycle but rather of a spiral, and Antoine Meillet appears to have borrowed this view from him: "Les langues suivent ainsi une sorte de développement en spirale; elles ajoutent des mots accessoires pour obtenir une expression intense; ces mots s'affaiblissent, se dégradent et tombent au niveau de simples outils grammaticaux; on ajoute de nouveaux mots ou des mots différents en vue de l'expression; l'affaiblissement recommence, et ainsi sans fin" (Meillet 1912:140–41).

A convinced contemporary adherent of the linguistic cycle hypothesis is Talmy Givón (1971b, 1971c, 1979a:208–9), who proposes the following kind of cyclic development:

discourse > syntax > morphology > morphophonemics > zero (> discourse)

Proponents of the linguistic cycle hypothesis frequently do not make it quite clear what kind of evolution they have in mind, that is, whether the evolution concerned refers

a)   only to isolated instances of grammaticalization, for example, when a specific lexical item (e.g., 'want') becomes a grammatical form (a future marker) that is finally replaced by a new lexeme;

b)   or to subparts of language, for example, when the tense-aspect-mood system of a given language develops from a periphrastic into an inflectional pattern and back to a new periphrastic one;

c)   or even to entire languages and language types.

Examples of *a* are not hard to come by; a number of them can be found in this book as well as in many other treatments of grammaticalization (cf. Hagège 1978). Examples of *b* are less frequently found, although a number of cases have been recorded, especially in the history of European languages.[33]

Instances of *c* again are more commonly encountered; in fact, quite a number of treatments of language by nineteenth-century scholars are, implicitly or explicitly, based on the assumption that the evolution of languages or language types is cyclic. A noteworthy contemporary example can be found in Hodge. In a paper entitled "The Linguistic Cycle" (1970), he rejects Jespersen's position according to which early languages were more complex in various ways than later ones,[34] and he concludes that all cases of linguistic development analyzed by him suggest that the evolution of human language is cyclic, proceeding from a predominantly syntactic stage (referred to by the symbol "Sm") to a stage of complex morphology ("sM") back gain to a predominantly syntactic stage ("Sm"). In the evolution of the Egyptian language, for example, the following stages are distinguished by him (Hodge 1970:5):

Proto-Afroasiatic	*Sm
Old Egyptian	sM
Late Egyptian	Sm
Coptic	sM

However tempting such a hypothesis may be, at the present stage it would seem premature to accept that such a cyclic evolution has been proved or, if it can be proved, that it has occurred in other languages and language families, as Hodge implies (cf. Hodge 1970:2ff.); our knowledge about earlier language states, even within the Indo-European family, is still too limited to allow for a clear, uncontroversial reconstruction of typological evolution.

There appears to be more justification to apply the notion of a linguistic cycle to individual linguistic developments. In the literature on grammaticalization, there are indeed many examples suggesting that, once a given grammatical form declines and/or disappears, a new form tends to be recruited on the same conceptual pattern as the old one, with the result that a kind of morphological cycle emerges. If such a development is repeated, the result is a "recursive cycle" (see Lord 1976; Heine and Reh 1984:72–74).

One example of a recursive cycle has been provided by Lord (1976:183ff.; see also Bamgbose 1966), involving the development of a verb meaning 'say' to a clause subordinator. For Yoruba, three consecutive cycles can be reconstructed:

(i) The verb *kpé* 'say' is desemanticized to a complementizer, for example:

(41)   ó   sɔ   kpé   adé   lɔ
        he   say   say/that   Ade   go
        'He said that Ade went'

(ii) Another verb, *wí* 'say,' takes over the function of *kpé* and is grammaticalized to a complementizer in the same way as *kpé* was. Since *kpé* is not lost, the two are compounded into a complex complementizer:

(42)   ó   sɔ   wí-kpé   adé   lɔ
         he say say-say/that Ade   go
         'He said that Ade went'

(iii) A third cycle is now emerging since yet another verb, *ní* 'say,' tends to replace the complex marker *wí-kpé*:

(43)   ó   ní   adé   lɔ
         he say Ade   go
         'He said that Ade went'

Another instance of a recursive cycle has been reported by Voeltz (1980:490–91; see also Heine and Reh 1984:73–74): in the development from Benue-Congo to modern colloquial varieties of Swahili, three different verbs meaning 'finish' have been grammaticalized to a perfective aspect marker:

i)   In early Bantu, the verb form *gid-e* ('finish'–past tense) developed into a verbal perfective suffix.

ii)   Another verb, **mad-* 'finish,' was introduced as a perfective marker, and in some Bantu languages such as Swahili it has ousted the previous perfective marker. In Swahili, **mad-* was fused with the suffix **-ile*, which derives from **gid-e*, to become **meele* and finally *me-*, which is the perfective prefix of modern Standard Swahili.

iii)   In some colloquial varieties of Swahili, *me-* is no longer used as a perfective marker, and its position has been taken by the verb *kw-isha* (infinitive-'finish'), as in the following sentence from Kenya Pidgin Swahili:

(44)   baba   kwisha kwenda
         father PFV   go
         'Father has left'

Morphological cycles of this type are not seldom encountered in the development of grammatical categories. They are, however, not an obligatory feature of grammaticalization processes; the cognitive and linguistic conditions under which they do or do not occur are still largely unclear.

9 Panchronic Grammar

We have interpreted grammaticalization as the result of a process involving a transfer from "concrete" to "abstract" domains of conceptualization on the one hand and conversational implicatures and context-induced reinterpretation on the other. This process leads to the emergence of grammaticalized structures as the conventionalized, frozen, or fossilized product of those cognitive activities. In the present chapter, we wish to investigate how this observation may affect our understanding of grammar.

A number of views have been expressed concerning the contribution that a study of grammaticalization can make to an understanding of language structure. According to such views, grammaticalization may provide new perspectives, for example, for

a) approaching linguistic prehistory and language evolution;
b) reconstructing earlier linguistic structures;
c) detecting regularities and universals of language change;
d) dealing with polysemy and the boundary between polysemy and homophony;
e) accounting for certain types of ambiguity and decategorialization;
f) defining the relation between discourse pragmatics and grammar.

While these perspectives point to some of the areas where findings on grammaticalization may be of use, they do not help us locate grammaticalization within the science of language. In fact, one of the many problems that has not been addressed in the preceding chapters concerns the status of grammaticalization within linguistics. For example, is it part of synchronic linguistics, of diachronic linguistics, of both, or of neither?

What might seem surprising is that this problem has been ignored in most discussions of the subject. To our knowledge, no attempt has been made thus far to determine clearly its relation to the distinction synchrony versus diachrony, and it would seem that there is agreement among many students of the field that grammaticalization does not really belong to either of these subdisciplines of linguistics—or, alternatively, that it belongs to both simultaneously. The following statement, made by a student of grammaticalization, is characteristic of the kind of views that are now emerging as a result of dealing with this subject: "If one's goal is strictly language description, limiting oneself to synchronic facts is understandable. If, however, one seeks to understand why certain aspects of a language system are the way they are, considerations of diachrony may be crucial" (Lichtenberk, in press).

Coseriu (1980:138) points out that synchrony and diachrony are "perspectives

of linguistics, not perspectives of language." In the present chapter, two examples are presented to suggest that the study of grammaticalization is elusive of the synchrony/diachrony dichotomy and that it requires a perspective that is independent of this dichotomy. Both examples concern case marking.

9.1 BACK in So

Our first example once again involves the concept BACK, which has been repeatedly used for exemplification in the preceding chapters. This example is taken from So, a Kuliak language spoken in Eastern Uganda. So is a VSO language distinguishing three cases, referred to as the absolutive (unmarked), dative (-Vk), and ablative (-o, -ɔ, -a) cases. Our example is confined to the ablative (ABL) case marker. The use of this marker is obligatory with certain verbs; the locative copula néke, for example, requires its locative complement to be in the ablative case. There is, however, some variation as to when and where case has to be marked. In (1) below, three sentences are presented, all of which can be translated as 'he is behind the mountain.' The ablative case is marked on 'back' in (1a), on both 'back' and 'mountain' in (1b), and on 'mountain' in (1c):

(1a)   néke íca cú-o   sóg
        be   s/he back-ABL mountain
(1b)   néke íca sú-o sóg-o
(1c)   néke íca sú sóg-o
        'He is behind the mountain'

While (1) is an example of differing morphophonemic structures expressing essentially one and the same meaning, the opposite situation, where several meanings correspond to one form only, also exists. In (2), 'back' denotes either a body part (2a) or a spatial concept (2b). Whenever (2a) obtains, 'back' forms the head of a genitive construction, while in (2b) it has the function of a preposition within an adverbial phrase:

(2)   néke cúc sú-o   ím
        be   fly back-ABL girl
        (a) 'There is a fly on the girl's back'
        (b) 'There is a fly behind the girl'

A grammar of So has to account, inter alia, for questions like the following:

a)   Why are there three optional variants in (1) expressing much the same meaning?
        Why can case be marked either on the head or on the modifier or on both? Are
        there any linguistic facts to explain this situation?
b)   Why is (2) semantically ambiguous;[1] that is, why does the lexeme sú have two
        rather divergent meanings, denoting a body part 'back' on the one hand and a
        preposition 'behind' on the other?

c)   Why is case marking on *sú* obligatory when it occurs as a noun but optional when it occurs as a preposition?

d)   How is the morphosyntactic status of *sú* to be defined?

e)   How is the dependency relation between *sú* and *sóg* to be defined?

It would seem that existing models of grammar are hard pressed when it comes to answering questions like these. What we are dealing with here are structures that are the immediate result of conceptual manipulation leading from a lexical to a grammatical entity, and sentences (1) and (2) represent different stages of this process. On the level of macrostructure (see chap. 4), we observe the effects of a metaphor, more precisely of a categorial metaphor of the OBJECT-to-SPACE type, according to which a concrete object, such as the body part 'back,' serves as a metaphorical vehicle to conceptualize a spatial notion, the prepositional meaning 'at the back of, behind.' On the level of microstructure, there is a continuum of conventionalized implicatures or senses of which we are here taking only a limited range into consideration.

As we demonstrated above (3.1, 8.4), this process does not proceed straight from one category to another but rather involves overlapping, that is, a stage where the former meaning still exists while a new meaning is introduced. The result is semantic ambiguity, as can be observed in (2), where the morphosyntax is still that of the first stage, while the semantics involved may be either that of the first stage (2a) or that of the second stage (2b). Sentence (2b) also exhibits another characteristic of grammaticalization chains, namely asymmetry (see 8.1): whereas the meaning has shifted from body part noun to preposition, the morphology is still that of a noun; that is, the conceptual transfer has not yet affected the morphosyntax.

Asymmetry is even more pronounced in example (1). This example represents a stage where the transfer from the body part noun 'back' to the preposition 'behind' has been concluded yet where morphosyntax has not quite kept pace with this process. Thus, while *sú* clearly has the function of a preposition, it still retains the case morphology of a noun in (1a) and (1b), and only in (1c) is the case marker eliminated.

Sentence (1) exemplifies yet another feature of grammaticalization chains, one that has been described by Heine and Reh (1984:98ff.) under the term "adjustment" and that relates to the strategy of restoring a one-to-one relation between semantic and morphosyntactic structure (see 8.6): with the reanalysis of the genitive noun phrase *sú-o sóg* ('back of the mountain') as a prepositional phrase ('behind the mountain'), the erstwhile head noun ('back') is reanalyzed as a preposition and the modifying genitive noun ('mountain') as the "new head," that is, as the semantic nucleus of the emerging prepositional phrase. Sentence (1) exemplifies the three major stages of the adjustment process. Sentence (1a) represents the initial stage, where the erstwhile head noun still shows the case

morphology. Sentence (1b) marks the typical overlapping stage, where the case morphology is still on the erstwhile head noun but has also been introduced on the "new head," the result being a peculiar instance of case agreement. Iconicity is restored in sentence (1c), where the preposition no longer receives any case marking, that is, where case marking is confined to the "new head."

Another problem the descriptive linguist is confronted with when dealing with sentences such as (1) and (2) concerns the categorial status of the words concerned. In (1) we have isolated a "preposition" that has the shape either *sú-o* or *sú*. It has both nominal and prepositional characteristics, but one might as well argue that it belongs not to either of these word classes but rather to a word class intermediate between nouns and prepositions.

Rather than being a word class that is intermediate between nouns and prepositions, *sú-o* in sentence (2) could equally well be described as belonging to a more comprehensive category, one that includes both a nominal and a prepositional meaning. We alluded to this problem above (3.1; see also 8.4); it may suffice to note here that the continuum-like nature of grammaticalization chains makes it difficult to maintain a heuristic approach that takes discrete word classes for granted. A good part of language behavior takes place between, rather than within, linguistic categories such as word classes.

The discussion about the lexeme *sú* in So concerns only a small segment of a grammaticalization chain, like the one sketched in more detail in 3.1. Such chains are not simply isolated instances occurring in some exotic languages but may be observed in all languages and have to be accounted for in a theory of language description (see 9.3).

How is a theory to be conceived that is able to provide answers to the catalog of questions raised above? One possible solution would be that such a theory, in addition to accounting for "synchronic facts" such as the morphology of case inflections, the syntax of dependency relations, or the polysemy of *sú* (which includes the nominal meaning 'back' and the prepositional meaning 'behind' among its senses), contains some component that takes care of the diachronic situation underlying these "synchronic facts," where this diachronic component provides an explanatory parameter for dealing with these "synchronic facts."

Such a theory would have to account for a number of characteristics of the structure underlying the various uses of *sú*, in particular the following:

a)   The various uses of this lexeme can be arranged along a continuum. One pole of this continuum is marked by uses of *sú* as a referrential/manipulable entity, that is, as a concrete concept in the terminology of Sapir (1921), when referring to the body part. At the other pole, *sú* forms a nonmanipulable entity that is low in cardinal categoriality and refers to a relational concept in Sapir's terminology (cf. Hopper and Thompson 1984).

b)   So speakers are usually aware that the former uses are "more basic" or "more genuine," whereas the latter uses tend to be described as being derived ones.

c) While the continuum mentioned in *a* can also be interpreted as a diachronic one, assuming that the uses of *sú* as a body part are likely to predate those of *sú* as a spatial or temporal notion, such an interpretation is confined to only one aspect of the process involved; it ignores the fact that this process takes place continually when So speakers use their language and each speaker handles this process in his or her own way.

9.2 On Some Case Functions of Four German Prepositions

Our second example relates to different functions of one and the same case marker. In most practical grammars or dictionaries of European languages, information on the various functions that a given case marker fulfills is highly limited. Hardly any information is provided, for example, to account for the fact that some prepositions, such as *after, as, before, like, since, till,* or *until* in English, are "homonymous" with clause subordinators. Furthermore, the fact that the English preposition *for* introduces not only BENEFACTIVE but also, for example, PURPOSE, CAUSE, or MANNER phrases and that the same situation is found in many languages worldwide is disregarded in most textbooks. The following statement, taken from *A Grammar of Contemporary English,* is typical of the way case functions are described in contemporary grammars of European languages: "Of the various types of relational meaning, those of PLACE and TIME are the most prominent and easy to identify. Other relationships such as INSTRUMENT and CAUSE may also be recognized although it is difficult to describe prepositional meanings systematically in terms of such labels" (Quirk, Greenbaum, and Svartvik 1972:306).

In those few grammars, however, that do contain a more detailed treatment of case morphology, some surprising observations can be made with reference to the way case functions expressed by adpositions or conjunctions are ordered. Perhaps the most surprising is that ordering tends to follow one and the same pattern. In many of these works, the ordering presented is implicit; that is, no reasons are given as to why *X* is listed as the first and *Y* is the second function of a given preposition or conjunction, yet the listing tends to be consistent among different authors and across languages. If justification is provided for the ordering, then it is likely to be based on diachronic reasoning, or else it is suggestive of what we would consider as forming a parameter of grammaticalization, as in the following example, taken from an English grammar written for German students: "Originally, prepositions denoted *locative* relations: *She sat by the window.* From this, the *temporal* meaning was derived: *She wanted to be here by ten o'clock.* Once thinking was more refined and new modes of expression were sought, pressure increased to use prepositions in order to express purely *concep-*

tual relations: I know him by name.—She was loved by all girls" (Alpers et al. 1951:179–80).

According to our observations, the pattern underlying the ordering of case functions in grammars and dictionaries of European languages is likely to exhibit the following characteristics (cf. 6.4):

a)   Almost invariably, locative functions (SPACE) are listed first.

b)   The second position tends to be occupied either by the case function TIME or else by functions typically involving a human participant, like AGENT/CAUSER (e.g., *by*), BENEFACTIVE (e.g., *for*), or COMITATIVE (*with*).

c)   This group is followed by another group of functions involving typically inanimate participants such CAUSE or CONDITION.

Thus, in the German grammar by Helbig and Buscha (1986:414ff.), the functions of prepositions and conjunctions are arranged in such a way that, for example, PLACE is mentioned first, followed by AGENT/CAUSER, which are followed by CAUSE, PURPOSE, CONDITION, etc.[2] For the preposition *aus* 'out of,' for example, the following functions are listed, in that order:

(3)   "Local"(SPACE), e.g.:
       Die Spaziergänger kamen *aus* dem Wald
       'The walkers came out of the forest'

(4)   "Causal" (REASON), e.g.:
       Er half ihr *aus* Mitleid
       'He helped her out of pity'

(5)   "Modal" (MANNER), e.g.:
       Ein Haus *aus* Glas, Beton und Aluminium wird gebaut
       'A house (made) of glass, concrete and aluminium is being built'

(6)   "Transferred use" (MANNER), e.g.:
       Er hat lange nicht gespielt, er ist ganz *aus* der Übung gekommen
       'He has not played for some time, he is completely out of practice'

It is unlikely that an ordering of this nature is coincidental. In order to compare the ordering of case functions in synchronic grammar with that observed in the process of grammaticalization in more detail, a short test on the case functions of four German prepositions was carried out. German was chosen as a test language because it provided the easiest way of getting hold of native speakers. The forty-five persons interviewed were students of the University of Cologne. The prepositions selected were *an* 'at,' *für* 'for,' *mit* 'with,' and *zu* 'to.' For each preposition, a set of four sentences, each exhibiting a different case func-

tion, was designed.[3] These sentences were presented to the interviewees in the following order:

			Typical Function
an 'at':			
A1	*Er kam am Donnerstag.*	'He came on Thursday.'	TIME
A2	*Er starb am Alkohol.*	'He died of drinking.'	CAUSE
A3	*Er war am Schlafen.*	'He was sleeping.'	Progressive
A4	*Er wartete am Bahnhof.*	'He waited at the station.'	SPACE
für 'for':			
B1	*Er ging für zwei Jahre nach Afrika.*	'He went to Africa for two years.'	TIME
B2	*Er kaufte den Schlüssel für die Haustür.*	'He bought a key for the house door.'	PURPOSE
B3	*Er kaufte Blumen für Maria.*	'He bought flowers for Maria.'	BENEFACTIVE
B4	*Es ist für die Katz.*	'It's all a waste.'	MANNER
mit 'with':			
C1	*Mit etwas Glück kann sie die Prüfung schaffen.*	'With a bit of luck she can pass the exam.'	CONDITION
C2	*Sie schnitt den Spargel mit dem Messer.*	'She cut the asparagus with the knife.'	INSTRUMENT
C3	*Sie fuhr mit einem Strohhut.*	'She drove with a straw hat.'	MANNER
C4	*Sie fuhr mit Klaus in die Stadt.*	'She drove to town with Klaus.'	COMITATIVE
zu 'to':			
D1	*Es ist zum Heulen.*	'I could just sit down and cry.'	MANNER
D2	*Sie tat es zum Spaß.*	'She did it for fun.'	REASON
D3	*Sie rannte zum Bahnhof.*	'She ran to the station.'	ALLATIVE
D4	*Sie sagte es zum Direktor.*	'She said it to the director.'	DATIVE

For each group of sentences, the interviewees were asked to answer the following questions:

a)   Are all functions within a given group (e.g., A1–A4) related or not?

b)   Which of the four functions of a group presents the "genuine" (or "true") case function of the relevant preposition?

Question *a* aimed at finding clues as to whether, or to what extent, the various functions of a given preposition were considered as instances of "polysemy" or of "homonymy," respectively. The main purpose of *b* was to find out to what extent each of these functions is associated with a given preposition, that is, whether these prepositions could be shown to have a "typical" function, a "less typical" function, etc.

No attempt was made at statistic significance. We were satisfied with finding some quantitative contours to contrast with the nonquantitative observations we had made before this test. Consultants were not pressed to supply answers. If they hesitated or were undecided in a given case, no information was recorded. If more than one answer was provided, all of them were included in the analysis.

The responses to *a* yielded some surprising results: each of the four prepositions was considered as having a number of unrelated functions, and for each preposition there was one predominant response pattern. Thus, 83 percent of the interviewees declared each of the four functions of *an* 'at' as unrelated to any of the other functions of this preposition. In a similar way, 69 percent considered each of the four functions of *mit* 'with' as showing no relation to any of the other functions.

A somewhat different situation was encountered in the case of the prepositions *für* 'for' and *zu* 'to.' In both cases, the majority of interviewees declared that two of the four functions were related: 83 percent indicated that *für* has three mutually unrelated functions, which are BENEFACTIVE and PURPOSE, TIME, and MANNER, and 61 percent stated that *zu* also consists of three mutually unrelated functions, namely ALLATIVE and DATIVE, REASON, and MANNER. In the case of *zu,* there was a minority of 21 percent who declared that not only ALLATIVE and DATIVE but also REASON and MANNER were related functions.

Assuming that *a* provides a parameter for dealing with the distinction polysemy versus homonymy, our findings suggest a remarkable amount of homonymy among German prepositions since for the majority of our interviewees the prepositions *an* and *mit* consist of at least four and *für* and *zu* of at least three different homonyms. Note, however, that neither is our survey statistically significant nor do we use the terms "polysemy" and "homophony" in a strictly defined sense, considering the many problems surrounding their use (for details, see Lyons [1977:550ff]).

The responses to *b* are summarized in table 9.1. On the basis of the relative frequency of these responses, the case functions may be divided into three types. The first type consists of SPACE, COMITATIVE, and BENEFACTIVE, which clearly show the highest percentages as the "genuine" functions of the prepositions concerned. Note that we do not have an example where one and the same preposition has more than one of these three among its functions. The second type includes the functions PURPOSE, DATIVE, and INSTRUMENT, which exhibit lower percent-

TABLE 9.1. On Some Case Functions of Four German Prepositions

Case Function	*an*	*für*	*mit*	*zu*
SPACE	96			95
COMITATIVE			87	
INSTRUMENTAL			17	
BENEFACTIVE		86		
PURPOSE		73		
DATIVE				29
TIME	46	14		
REASON				5
CONDITIONAL			9	
MANNER			4	9
Progressive	4			

Note: Numbers are declaring "genuine" functions of the prepositions considered. The function ALLATIVE is subsumed under SPACE.

ages than the former but higher ones than the remaining functions. Finally, there are functions such as TIME, REASON, CONDITION, and MANNER, which exhibit relatively lower percentages than the two preceding types.

The functions of the first type are of two kinds. There is the ALLATIVE function on the one hand and two functions that are most strongly associated with human participants on the other: both COMITATIVE and BENEFACTIVE typically introduce human participants, and both typically imply human agents. The case functions of the second type also typically imply human agents, whereas PURPOSE and IN-STRUMENT introduce inanimate participants, while DATIVE may but need not have a human participant. The final type exclusively contains functions that may have but do not require human participants.

These observations suggest that there appear to be two major criteria of ordering: the distinction spatial versus nonspatial and the relative degree of association with human participants.

In chapter 6, a number of generalizations were made concerning the grammaticalization of case functions (see sec. 6.4). It would seem that the criteria proposed there for defining degrees of grammaticalization exhibit essentially the same underlying structure as those observed both by grammarians and by speakers of German for rating the "genuineness" of case functions of prepositions. The first of the criteria proposed in 6.4 concerned the distinction spatial versus nonspatial: of all case functions, spatial functions are the least grammaticalized and received the highest ratings as the "genuine" function of the prepositions concerned. This applies to all functions having some locative base, including ALLATIVE, SOURCE, GOAL, and PATH. Note, however, that in the development of

a linguistic unit its locative sense may get lost, as in English *after* and *before* (Joan Bybee, personal communication). In such cases, the next sense on the "scale of abstraction" assumes the role of the most "genuine" function. The second criterion concerns anthropocentrism: case functions that are more strongly associated with human participants are less grammaticalized and are most frequently named as the "genuine" function of the relevant prepositions (see 6.4). This criterion provides a threefold classification of the following kind.

The first grouping includes case functions that are most strongly associated with human participants. This applies to functions such as BENEFACTIVE and COMITATIVE, which typically involve a human agent and introduce a human participant. The second grouping includes functions that are associated with human participants, but less so than functions of the first grouping. Typically, these are case functions, such as PURPOSE and INSTRUMENT, that require a human agent but do not introduce a human complement.[4] The last grouping is made up of case functions that are associated neither with space nor with anthropocentric features. They may but need not involve human agents. These functions include REASON/CAUSE, CONDITION, and MANNER.[5]

These groupings largely correspond to those found along the scale of increasing grammaticalization presented in 6.4, which is based on observations about transfer patterns of case functions. Some of the more widespread of these patterns are summarized in table 9.2 (see also Radden 1985). Languages such as Ik or Kanuri exhibit many of them, as we saw in chapter 6. In other languages, only a limited number of transfers can be observed.

Observations like those summarized in table 9.2 suggest that the parameters underlying grammaticalization are essentially the same as those used by native speakers intuitively when making judgments on "genuine meanings" or by grammarians when ordering the functions of prepositions. These parameters, which are reflected in variables such as spatial orientation and anthropocentrism,

TABLE 9.2. Some Common Transfer Patterns of Case Functions

Source	Target
ALLATIVE	LOCATIVE, BENEFACTIVE, DATIVE, PURPOSE, TIME, CAUSE, MANNER, clause subordination
ABLATIVE	LOCATIVE, AGENT, CAUSE, MANNER
PATH	AGENT, CAUSE
LOCATIVE	TIME, CAUSE, CONDITION, MANNER, clause subordination
COMITATIVE	INSTRUMENT, MEANS, CONDITION, MANNER
BENEFACTIVE	DATIVE, PURPOSE, CAUSE, TIME
INSTRUMENT/MEANS	MANNER
TIME	CAUSE, CONDITION, MANNER

appear to be responsible for the fact that in many languages certain case functions, listed under "Source" in table 9.2, tend to be employed to conceptualize more "abstract" functions, such as those listed under "Target."

This transfer from source function to target function is best conceived of as an activity that is accessible to a diachronic analysis in the form of conventionalized or "frozen" use patterns, as when a BENEFACTIVE case marker has acquired a PURPOSE function, and to a synchronic analysis as a capability, for example, when a BENEFACTIVE marker is also permitted to mark PURPOSE in specific contexts (e.g., when governing inanimate complements).

The importance the domain of SPACE for the conceptualization of grammatical functions has been recognized at the latest since the localist hypothesis was proposed a couple of decades ago, according to which locative expressions are more basic than other expressions and therefore serve as a structural template for understanding nonlocative phenomena (cf. Anderson 1971; Lyons 1977:718). This hypothesis is corroborated by our own findings as far as more "abstract" domains such as that of case functions are concerned (see chap. 6). Once we are dealing with more "concrete" concepts, however, SPACE can be shown to form a domain that itself is derived from other categories such as OBJECT or ACTIVITY, as we saw most clearly in chapter 5 (see also 7.2).

9.3 Conclusions

The term "panchrony" has found a number of different uses. Perhaps the most influential one is that of Saussure (1916:134–35) and Hjelmslev (1928), for whom panchrony relates to the general principles of language that exist independently of time, of a given language, or of any concrete linguistic facts. For Saussure, panchronic principles in linguistics are comparable to laws in the natural sciences. Christie (1982), on the other hand, introduces the term to propose an alternative kind of linguistics. Panchrony, he argues, characterizes the approach of the historian, and linguistic description should be panchronic as well, drawing on any piece of information that might illuminate the nature of language structure.

The notion of panchrony, as understood here, resembles that of Christie, but differs from it in two ways. First, it relates to a more narrowly defined range of phenomena, namely, to phenomena exhibiting simultaneously a synchronic-psychological and a diachronic relation. Second, whereas Christie proposes history as his primary parameter, the present framework rests on two major explanatory parameters, cognition and diachrony (see Heine 1990). Note that Christie's main concern is not with historical linguistics but rather with linguistic history (cf. Christie 1982:7).

All observations made in the preceding sections point in the same direction: they suggest that for a theory of grammaticalization it is both unjustified and impractical to maintain a distinction between synchrony and diachrony.

Similar observations have been made by a number of other authors. For example, in his discussion of some problems of Mandarin Chinese syntax, Li (1975a) notes that some of the explanations of synchronic phenomena, particularly syntactic irregularities, lie in diachronic processes and that synchrony and diachrony are interrelated. The ambivalent status of Chinese co-verbs such as *dào* 'arrive, to,' which appears to be a verb in some instances but a preposition in others, is interpreted by Li as forming one facet of the shift from the SVO typology to the SOV typology that the Chinese language has been undergoing. Certain syntactic constructions, he concludes, can be viewed as structures in transition and the synchronic irregularities as manifestations of the transitional process.

Our observations also appear to be in line with Hopper's notion of emergent grammar and his definition of grammaticalization ("grammaticization" in his terminology) as movement toward structure (Hopper 1987:148): "[Grammar] . . . is not abstractly formulated and abstractly represented, but always anchored in the specific concrete form of an utterance. . . . Its forms are not fixed templates, but are negotiable in face-to-face interaction in ways that reflect the individual speakers' past experience of these forms, and their assessment of the present context" (Hopper 1987:142). Since grammar is "always emergent but never present" (Hopper 1987:148), there is not much use in forcing it into the straitjacket of dichotomies such as that between diachrony and synchrony.

Hopper's main concern is with discourse strategies and discourse functions. In addition to his main variables, however, which are speakers' past experience and their assessment of the present context, there would seem to be at least one other variable: peoples' ability to manipulate concepts in context, which includes the ability to relate different domains of cognition to one another and to express one thing in terms of another.

A theory of grammaticalization, as conceived here, has to take the following kinds of observations into consideration:

a)   Grammaticalization can be viewed on the one hand as cognitive activity mapped onto language structure. This activity is accessible to a diachronic analysis once it is "structuralized," that is, ends up in a conventionalized or "frozen" form. It is also accessible to synchronic analysis in the form of language use patterns or in assessments of conceptual/semantic relation, as we saw in 9.2.

b)   On the other hand grammaticalization can be viewed as a continual movement toward structure or as structure that "comes out of discourse and is shaped by discourse as much as it shapes discourse in an on-going process" (Hopper 1987:142).

c)   The dynamics of this process is reflected, inter alia, in the form of grammaticalization chains that can be described as continua involving both conceptual and contextual variation (see 8.4). An "adequate" linguistic de-

scription has to provide information in particular on the number and types of grammaticalization chains occurring in the language to be described; the internal structure of membership within each of these chains, that is, the nature and size of the membership and the interrelation between individual members; the type of contexts associated with each member; and the semantic, morphological, and syntactic properties of each member.

d)   Grammaticalization chains behave like continua with fuzzy boundaries; they have the structure of family resemblance categories (Taylor 1989) and therefore do not easily lend themselves to a taxonomic approach of language description in terms of discrete categories such as constituent types, word classes, or morpheme types (8.4).

e)   As we saw above, overlapping, whereby an earlier stage coexists with a subsequent stage, forms an intrinsic property of grammaticalization chains. Overlapping has various implications for grammar. One major effect is that it creates ambiguity, whereby either one form shows several meanings or else one meaning is associated with two or more different forms.

f)   A not insignificant part of what turns up in grammar as polysemy or homonymy represents different senses of one and the same chain of grammaticalization. Senses that are close to one another on such a chain tend to be interpreted as polysemes, while more distant members are likely to be interpreted as homonyms. For example, within the grammaticalization chain presented in 3.1, the senses 'back of body' and 'back part of (e.g., a house)' are likely to be regarded as polysemes, while any of these senses and the sense 'mentally retarded' might be regarded as homonyms. Our test on case functions of German prepositions in 9.2 would seem to suggest that the amount of homonymy to be observed along a given chain of grammaticalization is larger than one might expect.

g)   Since conceptual shift precedes morphosyntactic and phonological shift (see 8.1), the result is asymmetry between meaning and form. All languages that we are familiar with show examples of morphemes or constructions that have acquired a new meaning or function even though they still retain the old morphosyntax; for example, in all languages known to us there are entities that have the function of adpositions even though they still exhibit the morphosyntax of adverbial phrases or noun phrases. In this way, grammaticalization may, and in fact frequently does, interfere with the parameters of "naturalness" that have been proposed (cf. Mayerthaler 1981; Wurzel 1984, 1988) or an alleged iconicity principle claimed to hold between form and meaning.

h)   Most linguistic theories are based, implicitly or explicitly, on the "one meaning, one form" principle: a maximally efficient system of communication, it is argued, avoids polysemy and homophony (Anttila 1972:181). While we do not dispute the validity of this principle, we wish to emphasize at the same time that language constantly contradicts this principle, and it does so for good reasons: polysemy, homophony, and ambiguity, as well as other forms of asymmetry be-

tween form and meaning, are a natural outcome of grammaticalization and, hence, form an integral and predictable part of language structure.

In his discussion of the distinction between system and evolution, Ricoeur (1986) comes to the conclusion that, since a linguistic element such as a word is capable of acquiring and retaining new senses without losing the old ones, its study requires a panchronic perspective, like metaphor, that shows the same kind of dual nature: as a new creation it leads to a change in sense and hence concerns diachrony; as an "accepted deviation" it is part of polysemy and hence of the synchronic structure of the relevant language. In a similar way, grammaticalization has to be conceived of as a panchronic process that presents both a diachronic perspective, since it involves change, and a synchronic perspective, since it implies variation that can be described as a system without reference to time.

Notes

Chapter 1

1. Ewe is a tone language having an analytic-isolating morphosyntax characterized by serial verb constructions. Its basic word order is SVO (subject-verb-object); i.e., the verb follows the subject but precedes the object, and the possessor precedes the possessed noun phrase. In the Ewe data presented in this work, low tones are unmarked, while high tones receive an *accent aigu* (e.g., á), high-falling tones an *accent circonflexe* (â), and rising or floating tones an *accent aigu* after the relevant vowel a´). The voiceless bilabial fricative of Ewe is transcribed as *p*.

2. Note that *ná* 'give' is not the only verb in Ewe that has assumed prepositional meanings; *ná* is part of a paradigm of verbs with exactly the same development. (For more details, see secs. 7.2.3 and 8.6; see also Westermann 1907; Ansre 1966; Hünnemeyer 1985; Claudi and Heine 1986.)

3. As early as 1921, Sapir observed, "It is possible for a concrete concept, represented by a simple word, to lose its material significance entirely and pass over directly into the relational sphere without at the same time losing its independence as a word. This has happened, for instance, in Chinese and Cambodgian when the verb 'give' is used in an abstract sense as a mere symbol of the 'indirect objective' relation" (Sapir 1921:102).

4. Compare Lehmann (1982:v): "From the diachronic point of view, it [grammaticalization] is a process which turns lexemes into grammatical formatives and renders grammatical formatives still more grammatical." In a similar way, grammaticalization is described in Heine and Reh (1984:15) as a process or "evolution" "whereby linguistic units lose in semantic complexity, pragmatic significance, syntactic freedom, and phonetic substance, respectively. This is the case, for instance, when a lexical item develops into a grammatical marker."

5. Compare DuBois (1988:15): "I use the term grammaticization rather than grammaticalization for reasons similar to those voiced by Chafe (1988): I am interested in the creation of grammar rather than grammaticality." For a discussion of the term "grammatization," see Lehmann (1982:9) and also Traugott and Heine (in press).

6. "When an adverb splits off from a noun, it has to be learned separately and is thus a new lexical item" (Anttila 1972:151).

7. This development is called "desemanticization" by Lehmann (1982) and Heine and Reh (1984:36ff.).

8. The following statement exemplifies the kind of use to which the term "grammaticalize" is put in many modern linguistic treatments: "Time deixis is commonly grammaticalized in deictic adverbs of time (like English *now* and *then, yesterday* and *this year*), but above all in tense" (Levinson 1983:62).

9. Compare Matisoff (in press): "Grammat(ical)ization is inherently a diachronic concept. It refers to a historical semantic process whereby a 'root-morpheme' with a full *lexical* meaning assumes a more abstract *functorial* or 'grammatical' meaning."

10. A typical example is provided by Comrie (1985:9–10), who calls tense a "grammaticalised expression of location in time" and observes that "grammaticalisation refers to integration into the grammatical system of a language." Whether the term "integration" is meant in a diachronic or in a synchronic sense, or both, does not become entirely clear.

11. A more narrow definition of regrammaticalization would confine the term to forms that have lost a grammatical function and regain that or some other function.

12. Compare Givón's discussion of English *up,* which appears to experience a kind of degrammaticalization to a process verb (Givón 1975a:96). See also 2.4.1.

13. Horne Tooke distinguishes between three kinds of abbreviation: abbreviations in terms, in sorts of words, and in constructions.

14. Subsequent research has established that a number of the etymologies presented by Horne Tooke are untenable. This fact, however, does not invalidate the overall framework that he presented.

15. "A conspicuous branch of the department of figurative transfer, and one of indispensible importance in the history of language, is the application of terms having a physical, sensible meaning, to the designation of intellectual and moral conceptions and their relations" (Whitney 1875:88).

16. According to Meillet (1912:133), Herrmann Paul's *Prinzipien der Sprachgeschichte* [1880] 1920) is essentially a theory of analogy.

17. "Et il y a tous les dégrés intermédiaires entre les mots principaux et les mots accessoires" (Meillet 1912:135).

18. His well-known classification of the concrete-abstract continuum into (I) basic, (II) derivational, (III) concrete relational, and (IV) pure relational concepts correlates with a decreasing degree of concreteness or an increasing degree of abstractness, respectively: whereas I is concrete, II is less so, III is more abstract, and IV is purely abstract (Sapir 1921:101).

19. For many students of linguistics in the nineteenth century and the early twentieth, diachrony was considered to offer the only legitimate perspective for understanding language structure.

20. The term "metaphor" was used by Lambert in a broad sense; it includes, inter alia, the following figures of speech: simile, allusion, synesthesia, metonymy, synecdoche, hyperbole, and analogy (Lambert 1969:1, 494).

21. Compare Hodge's statement, "One man's morphology was an earlier man's syntax" (Hodge 1970:3).

22. Note that this development has not yet been concluded in Chinese. An SVO order is still found when the main verb (= V2) is monosyllabic, although even here the "remaining SVO sentences are now facing the competition of an alternate SOV form" (Li and Thompson 1974b:203).

23. As we shall see below, the situation is more complex. There are many examples suggesting that propositional/ideational structures may give rise to textual or interpersonal structures. It is hard, however, to find clear cases of a shift from textual to interpersonal function, while the opposite appears to be common. For example, the development from an interrogative pronoun (e.g., *Who came?*) to a relative clause marker (*I don't know who came*), which can be observed in many languages, may be seen as an instance of a shift from question to clausal subordination and, hence, from the interpersonal to the textual function. For more examples, involving rhetorical questions in Tamil, see Herring (1988).

24. The term "co-verb" was first used by Hockett et al. (1945:18) in their dictionary of spoken Chinese.

25. As has been pointed out by a number of authors (cf. Dressler 1983; Ramat 1987; Lehmann 1989), in addition to the transition from derivational to inflectional morphology there are also developments in the opposite direction, but the latter appear to form a clear minority.

26. This phenomenon has been described in more detail in Hopper and Thompson (1984) and will be discussed further in sec. 8.5.1.

27. "My view is that we can describe as syntacticization processes the transition between what initially appear to be ad hoc speaker strategies and what later can be fairly confidently described as syntactic rules" (Sankoff 1977:62).

28. Herring (1988:21), e.g., mentions that there are two kinds of grammaticalization, which she refers to, respectively, as "discourse-grammaticalizing" and "lexical-grammaticalizing strategies." It would seem that such a distinction is more in line with differences in the approach adopted for studying grammaticalization than with the actual phenomena studied. For example, a discourse-pragmatic, textual approach is more likely to deal with "discourse-grammaticalizing strategies" and a morphological approach more with "lexical-grammaticalizing strategies."

29. In most cases, the input consists of lexical items and the output of grammatical items. It is,

however, equally possible that the input forms a more complex structure such as a whole proposition (see 2.2.2) or else that both the input and the output are grammatical morphemes, where the former is more grammaticalized than the latter.

30. Lehmann (1987:221) cites the example of the future tense that is formed, e.g., in German with 'become' (*werden*), in English with 'shall/will,' in Spanish with 'go,' and in vulgar Latin with 'have' (*habere*). He argues that, although these verbs do not share a common semantic nucleus, the output in all languages concerned is, nevertheless, a functionally largely equivalent tense category.

31. Hopper (in press) argues convincingly that all five principles he distinguishes for describing grammaticalization can also be observed to have been at work in the development of the noun *mistress* into the title forms *Miss* and *Mrs.*

32. Concerning a discussion of some of these factors, see chaps. 2, 8, 9; see also Traugott (1982:265).

33. Note that for some authors analogy is not an obligatory characteristic of metaphor. Greenberg (1985:277), e.g., observes that there are both metaphors that do and metaphors that do not involve an analogical relation.

Chapter 2

1. Compare Bybee's statement: "Grammatical meaning is the most abstract of all meaning, the least accessible to native-speaker intuition, and the most difficult for linguists to characterize" (Bybee 1985b). Note that "abstract" concepts are not necessarily grammatical ones (see 2.3.2 below). While the term "abstract" figures in numerous semantic treatments, no satisfactory noncircular definition of it has as yet been proposed. This also applies to our use of the term (see 2.3.2).

2. Compare also Sapir's distinction between material content, or lexical meaning, on the one hand and relational content, or grammatical meaning, on the other.

3. This statement needs qualification, as we shall see in the following chapters. Fillmore (1983:318) argues that it is possible to think of "closed classes" as operable within one of the classes of content words. In a number of Germanic languages, e.g., verbs like *sit, stand,* and *lie* seem to form a closed-off, well-defined set.

4. The five genuinely causal prepositions, which entered the English prepositional system between the fourteenth and the seventeenth centuries, are *because of, due to, on account of, owing to,* and *as a result of.* The following is Radden's catalog of spatial prepositions that have grammaticalized causal uses: *with, on, over, in, for, at, from, of, out of, by,* and *through* (Radden 1985:184–85).

5. We are aware that this characterization covers only one aspect of the phenomenon. Newell, Shaw, and Simon (1963), e.g., suggested four criteria for creativity, and at least one of them must be satisfied for an answer to be considered creative: (1) the answer has novelty and usefulness, for either the individual or the society; (2) the answer demands that we reject ideas we had previously accepted; (3) the answer results from intense motivation and persistence; (4) the answer comes from clarifying a problem that was previously vague.

6. Creative people are said to be relatively unconventional, to be more at home with disorder and complexity, to rely more on their own resources, to be particularly steadfast in maintaining their independence of judgment, etc. (cf. Manis 1971:218ff.).

7. Kuryłowicz (1964:245) draws attention to the following: "Fundamental categories directly based on the speech-situation (*ego* or *hic, nunc*) are the starting-point of the elaboration of higher (grammatical) categories."

8. Svorou (1986:526) has shown that there are three kinds of nouns that develop into locative adpositions: (1) *body part nouns:* head, heart, anus, mouth, face, neck, ear, forehead, back, loins, rib, body, breast, chest, blood, foot, waist, belly, and stomach; (2) *object-part nouns:* front, edge, top, back, bottom, side, flank, end, middle, entrance, circumference, outside, interior, exterior, upper space, space in between; (3) *environmental landmarks:* field, ground, canyon, sky, house.

9. These examples are taken from Lehmann (1982:41).

10. We are grateful to Thomas Stolz for valuable suggestions concerning the following distinctions.

11. Nominalization can be achieved with the help of morphological forms such as infinitives, gerundials, participles, *nomina agentis*, and the like.

12. The phrase "at *Y*'s place" may be rendered in individual languages as "at *Y*'s home," in *Y*'s hand," etc.

13. So also has a third future marker, *ko-* (Tepes dialect), whose etymology is unknown. Note that the *ac* future is largely confined to be Tepes dialect, whereas the *gá* future occurs in the Kadam dialect of So. What the So verbs *ac* and *gá* have in common, in spite of their opposite deictic content, is that both require a goal case.

14. This verb has been grammaticalized to a negative infinitive marker *to-*, e.g., *ku-to-sema* 'not to say' (cf. *-sema* 'say').

15. The noun *mwana* 'child' has acquired a limited degree of productivity as a derivative prefix in nouns such as *mwana-maji* 'sailor' (cf. *maji* 'water'), *mwana-sheria* 'lawyer' (cf. *sheria* 'law'), etc.

16. Whereas Heine and Reh (1984) define desemanticization essentially as a shift from a "lexical" to a "grammatical" meaning, Greenberg (in press) applies this term to a process whereby a given morpheme loses its grammatical (or lexical) meaning, thereby becoming a "functionally empty" segment.

17. Lehmann (1982:125) is aware that there is yet another perspective that is characteristic of grammaticalization scales: "However, the quantitative differences between adjacent items sum up when the distances on a scale become greater, and there must certainly come a point where quantity changes to quality. For example, although a demonstrative pronoun may, in the long run, be grammaticalized into an affixal noun marker (sign of nominality), we would probably not want to say that the difference between these two signs is merely of a quantitative nature. Nevertheless, they still have a common functional basis, which is, so to speak, laid bare in the most grammaticalized member of the scale (e.g. the noun marker), but superposed by more specific functional aspects in the less grammaticalized members (e.g. the demonstratives)."

18. Traugott's notion of "bleaching" appears to be similar to Greenberg's definition of "desemanticization" (Greenberg, in press; see n. 17).

19. This does not mean that the relevant nouns, such as 'step,' 'person,' 'point,' or 'thing,' did not undergo "bleaching," but on the basis of the "bleaching hypothesis" it is hard to account for the fact that these erstwhile nouns exclusively denote negation in certain uses of modern French.

20. "Since the initial meaning is richer, more specific, it is also more palpable, more accessible to the imagination ('anschaulich') and, in this sense, more concrete; whereas the meanings of strongly grammaticalized signs, such as 'of,' 'will,' or 'and,' do not yield mental images, cannot be illustrated and are, in this sense, more abstract" (Lehmann 1982:128).

21. A number of these distinctions are closely interrelated; some may be viewed as expressing essentially the same thing in different ways. The division into an ideational, a textual, and an interpersonal domain is based on Halliday (1970b:143).

22. As we shall see in chap. 3, this interpretation captures but one aspect of the relevant development. The second major component in this development concerns processes that are described in chap. 3 in terms of notions such as context-induced reinterpretation, continuity, and metonymy.

23. We are ignoring here the fact that there are phonetic means of differentiation; cf. the distinction in *I'm going to work* with *I'm gonna work* in spoken American English (Bybee, personal communication).

24. All three work by similarity, but, while diagrams exhibit an analogous relation of parts, metaphors and images are said to resemble or share properties with their signata.

25. A slightly different scale has been proposed and discussed by Claudi and Heine (1986).

26. In a number of languages, an additional metaphor. TIME-to-QUALITY, has been applied, with the result that the lexeme for 'back' has also acquired the meaning 'mentally backward, dull' (see below).

27. Concerning these markers, which we propose to call counterexpectation markers, see 7.3.

28. This change involved a resegmentation of the morpheme boundary, whereby the final vowel of the root was reinterpreted as part of the suffix and eventually as the only vowel of the new adverb (Ariste 1973:37; Campbell, in press).

29. Mac Cormac uses "basic metaphor" as a substitute for the term "root metaphor."

30. Compare the conceptual metaphor AN INSTRUMENT IS A COMPANION mentioned above (Lakoff and Johnson 1980:134–35).

31. A number of scholars have made observations of a similar kind. Fleischman, for example, argues that human language is "fundamentally *egocentric*" since "people tend to talk about themselves and about things directly 'relevant' to them: objects, events, and other people in their immediate worlds" (Fleischman, in press).

32. For an alternative position, see Lyons (1967). The fact that locative structures form perhaps the most common source of possessive concepts, however, does not necessarily make the latter themselves locative.

33. Croft (1984:59–60) mentions that only core members display the full grammatical behavior of their category, which is, e.g., number, definiteness, gender, case, and NP-movement for nouns; tense/aspect, modality, subjects, objects, agreement, and predicate word order for verbs; and comparison, gradability, and modifier morphosyntax for adjectives.

34. Only languages that we had immediate access to were considered. They include six Indo-European languages (Dutch, English, French, German, Italian, and Swedish), seven Niger-Congo languages (Bambara, Baule, Ewe, Gwari, Igbo, Koranko, and Swahili), one Afroasiatic language (Amharic), and one Malayo-Polynesian language (Tonga). We wish to express our gratitude to Jürgen Broschart for providing us with data on Tonga.

35. Keith Allan (personal communication, 28 September 1987) suggests that ACTIVITY implies a proposition and is itself a sort of abstract object.

36. Ultan (1978c:229) points out, however, that in a few languages there are interrogative verb substitutes, like *gannma* in Mandarin or *ya.ltji-* in Western Desert.

37. The Swahili pronoun *vi-pi* 'how?' for example, may be analyzed as consisting of the noun class prefix *vi-* (class 8) plus the interrogative root *-pi* 'which?'

38. Cases like the English interrogative pronoun (*why?*), which consists of one morpheme only, form a small minority among the languages of our sample.

39. As Jackendoff observes, this list does not exhaust the possibilities: "These simply happen to be the categories for which linguistic and visual evidence are both present most prominently" (Jackendoff 1983:56).

40. As we shall see in chap. 9, however, this does not mean that we are dealing here with phenomena that belong exclusively to the realm of diachrony.

41. This distinction largely corresponds to that between *schöpferische Metapher* and *Gebrauchsmetapher* or *Gewohnheitsmetapher* of Cohen (1966) and Ricoeur (1986:90, 111).

Chapter 3

1. Our concern will be exclusively with the cognitive structure of this lexeme. Its morphosyntactic correlates will be discussed in 8.4; see also 5.3.

2. "A characteristic of virtually all developments is that when a given linguistic unit undergoes a certain process then it does not do so in all its uses; it tends rather to be retained in its former status as well, so that there are two coexisting forms of that unit: one that still represents the old status and another that marks the new status resulting from grammaticalization" (Heine and Reh 1984:57).

3. The label "OBJECT/PERSON" stands for an OBJECT concept that is typically associated with human beings, though less typically also with animals (see Heine 1986).

4. A problem not addressed here concerns the role played by stereotypical associations when concepts are used in their type dimension. With the distinction "token" vs. "type," we are highlighting only one aspect of the relevant phenomenon. Alternative aspects are associated with terminological distinctions like denotation vs. connotation and intension vs. extension. Compare Kittay (1987:179): "The *intensionalist*, like the emotivist, takes the view that metaphorical interpretation involves attending to a sense distinct from that which is taken as the denotative or designative sense of the metaphorically used words, and that this connotative sense, which is latent, becomes prominent when the denotative sense is blocked. But the intensionalist believes that the meaning we attend to is still cognitive. For the intensionalist, metaphorical interpretation involves an incongruity which causes the suppression of the designative sense of the vehicle in favour of the connotative meaning; connotations generate predicates which are then available to be attributed to the topic of the metaphor."

5. As we have pointed out elsewhere (sec. 2.4.5), however, metaphor does not always presuppose metonymy.

6. Elizabeth Traugott (personal communication) draws attention to the fact that such a structure is not confined to grammaticalization but can be observed in all kinds of linguistic change.

7. Compare Traugott (1987:6): "So long as *since* had to have a temporal interpretation, it is inappropriate to speak of a temporal-causal polysemy. However, a polysemy arose in ME [Middle English] when what was formerly only an inference had to be construed as the actual meaning of the form, as in *Since I am leaving home, my mother is mad at me*. At that stage *since* became polysemous: in one of its meanings it was temporal and could have an invited inference of causality; in the other, it was causal."

8. In the cases to be considered here, it might be more appropriate to talk of a special kind of implicatures, which Geis and Zwicky (1971) refer to as "invited inferences," rather than of conversational implicatures.

9. We are not concerned here with the sense of 'creativity' as used by Chomsky (1966:11), which relates to the speaker's ability to produce new sentences, i.e., "sentences that are immediately understood by other speakers although they bear no physical resemblance to sentences which are 'familiar,' " What Chomsky has in mind appears to have more to do with productivity (cf. Lyons 1970:12; Lyons 1977:77–78) than with creativity as understood here, which is present, e.g., when new metaphors are introduced. Rather than being rule governed, creativity, as we understand it here, typically involves some kind of rule breaking or rule violation (cf. 2.1.2).

10. The transition of the morpheme *a* in Polish from a marker of topic change to one of switch reference is claimed to have been effected by context: "What we are dealing with here is therefore not a metaphorical extension and not even a syntactic reanalysis. It is rather a logical conclusion about the utilization of certain functional properties of a morpheme in a new environment" (Frajzyngier, in press b).

11. As we will show in 5.1, the choice of body parts crucially depends on the kind of model serving as the metaphorical vehicle. Conceivably, in languages where the lower part of a mountain is referred to as the 'anus' or 'buttock,' the model may be one of a person in a sitting position, whereas reference to the 'foot' of a mountain may imply that a person in a standing position serves as a model. There is considerable cross-cultural variation as to which location, or in relation to which location, a mountain is defined by these body part notions.

12. More correctly, the metaphor in these cases appears to apply to a phrase, e.g., *wɔ ŋútsu* ("make man"), rather than to the noun (*ŋútsu*) alone (cf. Claudi and Heine 1986:308–9).

13. The symbol *p* stands for a voiceless bilabial fricative.

14. According to Westermann (1905:562), *apé-ví* denotes a small hut where rich people store their sacks of cowry shells.

15. The label YOUNG, as used here, stands for a cluster of characteristics like 'sexually immature' or 'not yet having reached adult status.'

16. There is one remarkable exception, which we will come back to later: *ame-ví* ('person-child') means not 'young person' but rather 'person of small size.'

17. Concerning other animals, see below.

18. Some informants do not consider *ha′metɔ-ví* to be acceptable; they use *ha′me-ví* instead.

19. The literal meaning of *po* is 'beat, hit,' but it occurs also as a pro-verb, i.e., a semantically empty substitute for a verb, in hundreds of constructions like the following.

20. Concerning the term "decategorialization," see Hopper and Thompson (1984).

21. Compare *sukû ví* 'small school' with *sukû-ví* ("schoolchild") 'student.' As an adjective, *ví* occurs only with few nouns.

22. Note that *amegá-ví* can also mean 'child of a respected person,' in which case *-ví* has retained its lexical meaning.

23. More precisely, the primary meaning of *logo-ví* is 'slim *logo*' rather than 'small *logo*,' while *logo suɛ′* ("*logo* small") refers to a small, and in specific contexts also to a young, *logo*.

24. In the majority of cases, it is noun class 12/13 (**ka-/tu-*) that has a diminutive function, although other classes, like 7/8, 12, or 20, are also recruited for this purpose.

25. Baule is a Volta-Comoe language spoken in the Ivory Coast. Like Ewe, it belongs to the Kwa branch of the Niger-Congo family.

Chapter 4

1. According to Norvig and Lakoff (1987:195ff.), the link between two senses involves "minimal variation" and "simple differences": "When we say that sense A is a minimal variant of sense B, we mean that, even though A and B may differ in many ways, all their differences boil down to a single difference from which the others can be predicted" (Norvig and Lakoff 1987:197).

2. In the wording of Bybee, Pagliuca, and Perkins (in press), "Aspectual futures develop as imperfectives or perfectives, which happen to accomodate future readings, but they do not develop explicit future semantics."

3. Whether pragmatics forms a branch of linguistics (Taylor 1989), of cognitive psychology (Sperber and Wilson 1981), or of any other discipline need not concern us here.

4. Lambert (1969:131), e.g., divides INSTRUMENT into three cases (Tool, Material, and Force) and Nilsen (1973:120) even into four (Tool, Force, Material, and Body Part).

5. Clear cases of divergence between cognitive and linguistic categorization have been pointed out, inter alia, in the literature on folk botanic taxonomy (cf. Kay 1971; Berlin, Breedlove, & Raven 1973; Heine and Brenzinger 1988).

6. It may be interesting to note that Schlesinger also volunteers an interpretation that comes very close to that of Lakoff and Johnson (1980): "If anything, the instrumental might have been assimilated by the comitative; one performs an action, so to speak, 'together with' an instrument" (Schlesinger 1979:319), Schlesinger's notion of "semantic assimilation" implies some kind of metaphorical process (see 2.4.1; Schlesinger 1979:317–18).

7. This also applies to a third variant, *hā′ -me-tɔ-ví,* that combines both derivative suffixes.

8. For a recent example, see Svorou (in press).

9. Compare, e.g., Anderson (1973:11), who argues that "'dative' inflections like those in Latin *Mihi est liber* and *Mihi librum dedit* represent a subtype of the locative function, synchronically as well as historically."

10. "Investigating whatever type of periphrasis you like, it surely will turn out to be no longer sufficient to exclusively apply principles developed within the framework of natural morphology to this subject-matter because of two reasons: First of all, the relevant criteria, save the basic conceptions, are tailor-made for phenomena of inflectional and derivational morphology. As a consequence, their applicability to problems that go beyond word-boundaries is, in general, rather restricted. Sec-

ondly, this cannot be remedied by just combining ideas of natural morphology with those of natural syntax, because neither of these approaches provides for adequate means to better understand the intermediate level of morpho-syntax. . . . With respect to such problems and the like, the explanatory power of the model of grammaticalization seems to be most promising. The idea suggests itself to adopt part of this model for laying the foundation of natural morpho-syntax" (Stolz, n.d.:14).

11. A paradigm case is presented in sec. 3.1.

12. A reduced form of (10), e.g., would be *he's gonna come soon.*

Chapter 5

1. We wish to express our gratitude to Manuela Noske for having provided us with part of the linguistic data used in this chapter.

2. For not a few linguists, the distinction between a cognitive and a semantic perspective is irrelevant. Research on language acquisition and language development has established, however, that such a distinction may be significant (cf., e.g., Nelson 1974).

3. The opposite to "frontless" objects would be "fronted" or "inherently featured" reference objects like animals, houses, cars, or chairs.

4. Such languages are, e.g., Hausa, Swahili, Turkana, Karimojong, and Massai.

5. No information is available as to exactly how many languages behave in this way. In So, a Kuliak language of northeastern Uganda, there is one dialect (Tepes) that does, while a second dialect (Kadam) has the same deictic orientation as Western languages.

6. The contrary can also be observed, but this seems to be due to a different kind of cognitive activity that we refer to as "taboo metaphor." To take an example, the Swahili word for FRONT, *mbele,* which derives from a combination of the locative class 18 prefix **mu-* and the noun stem *-wele* 'breast,' in some dialects has acquired the meaning 'male sexual organs.' Although we are dealing here with a hypothetical metaphorical development **body part > spatial concept > body part, this development appears to be due to two different types of metaphor (cf. Claudi and Heine 1986:299–300).

7. Timberlake and Matisoff (personal communication) point out that this does not necessarily apply to languages outside Africa.

8. In other contexts, these postpositions differ slightly in their semantic functioning.

9. In a number of cases, "relational concepts" such as 'top,' 'inside/interior,' 'front,' or 'behind,' as opposed to either of the two models, appear as the source of these spatial notions. As we observed above, there is reason to assume that they derive historically from either landmarks or body parts. Since frequently we do not know which of the two models is involved in such cases, "relational concepts" for which no etymology is available are ignored in this implicational scale.

10. This lexeme is retained, however, in the animal body part noun *ki-wele* 'udder.' In some Swahili dialects, *u-bele* or *u-wele* still occurs as a noun denoting 'breast.' The initial consonant *m* of *mbele* is derived from the locative prefix **mu-* of noun class 18 (Derek Nurse, personal communication).

11. In his reference grammar of Ewe, Westermann (1907:52–53) calls these postpositions "local nouns," adding, "Since the local nouns are always placed after a noun or pronoun, they are also called postpositions." In order to save space, the meaning of these lexemes is referred to by means of conceptual labels. Depending on the context, each of them may be translated in various ways, i.e.:

dzí, ta´-me (ON)	= 'top, above, on'
té, gɔ-me (UNDER)	= 'bottom, below, under, down'
me, dɔ-me (IN)	= 'inside, in, within'
ŋgɔ (FRONT)	= 'front, before, ahead'
megbé (BACK)	= 'back of, after, behind'

For a more detailed analysis of the postposition *megbé*, see 3.1.

12. The following ordering is based on observations of relative degrees of grammaticalization, as is evident, e.g., in table 5.5 below.

13. Note that body parts belong to the "alienable" category in Ewe. Concerning the peculiar way in which this language treats the morphological distinction "alienable" vs. "inalienable," see Claudi and Heine (1986:316–18).

14. As we have seen in 5.1, the body parts selected are, in fact, the most common ones used in African languages for the expression of the spatial concepts UNDER (< 'buttock'), IN (< 'belly'), and ON (< 'head').

15. In a number of cases, particularly in contexts where parameters *a–f* apply, our informant gave us responses like the following: "*Té* cannot be used in this sentence; the right word would be *gɔme*."

16. According to Greenberg (1963a), who has proposed this classification, Niger-Congo itself belongs to a more inclusive genetic grouping, called Congo-Kordofanian or Niger-Kordofanian by him.

17. The Niger-Congo reconstructions presented are taken from Mukarovsky (1976–77), who uses the term "Western Nigritic" instead of "Niger-Congo." Note that this difference is not only terminological: Western Nigritic is a less inclusive grouping; in particular, it excludes the Mande branch, which Greenberg had allocated to Niger-Congo. This fact, however, does not seem to invalidate the point made here.

18. According to the reflexes in the various Western Nigritic languages listed by Mukarovsky, even meanings such as 'sky (above)' and 'country, ground' refer to primarily concrete entities, i.e., to visible "landmarks."

19. Whether a source unit like 'sky' indeed forms a "physically defined entity" might be controversial, but this does not seem to invalidate the overall observation.

20. We wish to thank Zygmunt Frajzyngier, Phil Jaggar, and Joe McIntyre for valuable comments on this section.

21. In cases where it is desirable to subdivide adpositions further into prepositions and postpositions, we shall extend this terminology and accordingly talk of N-prepositions, V-prepositions, etc. In an earlier treatment of this subject (Heine 1989:82–86), the terms "VA-" and "AN-adpositions" were used instead of "V-" and "N-adpositions," respectively. We have now changed these terms because they have in the past given rise to misunderstandings.

22. Frajzyngier (1987:88), e.g., describes the V-adposition **a* of Proto-Chadic, which is both cognate and functionally similar to the V-adposition *a* of Hausa (to be discussed below; 5.5.1.2), in the following terms: "The only function of the locative preposition in PC [Proto-Chadic] was to indicate that the following NP is a locative phrase; i.e., it denotes the place at which something happened, toward or from which the movement is directed. Note that although this hypothesis may sound trivial, the function of the locative preposition in Proto-Chadic would actually differ significantly from the functions of locative prepositions in IE [Indo-European] languages, which not only indicate that the following NP is a locative complement, but also indicate the spatial configuration of an event with respect to some argument in the sentence, such as 'below', 'above', 'inside', 'outside' of an object." There is no clear evidence on the lexical source of the Proto-Chadic **a*.

23. A V-adposition can, however, be lexicalized as a part of a verb, and in this capacity it may introduce a complement of that verb.

24. Note that the situation in Thai differs in some ways from that of the languages described here (see Kölver 1984).

25. In English, however, the nature of the relation between figure and ground appears in prepositions, according to Brugman and Macaulay (1986:323).

26. As we shall see below, the order of constituents may vary in accordance with certain language-internal constraints.

27. Hausa is a Chadic language of the Afroasiatic family spoken in northern Nigeria and Niger and, as a lingua franca, in a number of other African countries.

28. Concerning the term "decategorialization," see Hopper and Thompson (1984); cf. 8.5.1.

29. There are a few problematic cases. The preposition *zuwàà* 'to, toward,' e.g., would appear to be a V-adposition according to Pawlak (1986) but an N-adposition according to other treatments. On the basis of the criteria provided above, we are inclined to agree with Pawlak.

30. They are "decategorialized," e.g., because in their adpositional uses they may not be pluralized and do not combine with modifiers (cf. Pawlak 1986:6; see 5.1.1 above).

31. Note that the nouns from which these N-adpositions are derived have a final long vowel whereas the adverbial forms derived from them have a short vowel. An explanation for this fact is volunteered by Greenberg (1978a). The situation is, however, more complex, as has been demonstrated by Newman (1979) and Newman (1984).

32. Brauner and Ashiwaju (1966:110) also treat combinations of V- and N-adpositions such as *a kan* 'on' or *a cikin* 'in' as compound prepositions.

33. There is yet another type of construction (Pawlak 1986:5–6), which we will not consider here. Note that Pawlak's data are not marked for tone and vowel length.

34. Perhaps a more adequate translation would be 'proceeding (toward)' (see Parsons 1971/72:97; McIntyre 1989:109, 115–16).

35. Frajzyngier (1987:93–94), who proposes this reconstruction, admits that it is speculative. This also applies to his reconstructed verb **dV* 'go,' which might be cognate to Hausa *daga* 'from.' Nevertheless, he concludes, "Thus, in Chadic as in many other languages, the original locative expressions would have had a form of a serial verb construction of the type 'X goes stops at Y' for constructions that eventually gave the preposition *tV* and 'X goes leaves Y' for constructions that eventually gave the preposition *dV*" (Frajzyngier 1987:93).

Chapter 6

1. Thus, Sweetser remarks, "The Bodic example is not, strictly speaking, an instance of grammaticalization, in that the postpositions were presumably highly grammaticalized entities before they developed a new semantic and syntactic role as subordinators" (Sweetser 1988:394).

2. The matter is slightly more complicated; for details, see Lébikaza 1985; Claudi and Heine 1989. Kabiye is an SVO language that places the possessor before the possessed constituent.

3. For a more detailed discussion, see Claudi and Heine (1989).

4. Concerning the term "focal sense," see 4.3.

5. See Claudi and Heine 1989. That this may lead to the emergence of peculiar categorizations of alienability has been demonstrated for Ewe (Claudi and Heine 1986). Note that the development as sketched here is but one of a number of ways in which the alienable/inalienable distinction may arise.

6. For examples of the remaining case functions, see Heine (1988).

7. The Kanuri examples are from Hutchison (1976:80, 105, 124, 92, 95).

8. We are leaving aside all information provided by these authors that is not immediately relevant to our discussion.

9. This extension has not taken place in either Ik or Kanuri, though it has in a number of other languages. When it does take place, there are usually constraints with regard to the contexts in which the new function is marked by the relevant case marker. Thus, according to Blansitt (1988:173), the Spanish allative/dative preposition *a* marks objects only "when the referent is specific . . . and belongs to a level of the animacy hierarchy equal to or greater than that of the subject referent."

10. But see *b* above; these parameters are hierarchically ordered; i.e., *c* presupposes *b*, which again presupposes *a*, etc.

11. We are leaving out a few categories that are not relevant to the present discussion; for details, see Saxena (1988b). Furthermore, our "CAUSE" corresponds to her "BECAUSE" category and includes both CAUSE and REASON. The labels "SAY," "KNOW," "BELIEVE," and "HOPE" refer to the meaning of the matrix verb. "PURPOSE" and "CAUSE," on the other hand, signify that the complementizer introduces PURPOSE and CAUSE clauses, respectively.

12. The latter applies, e.g., to Ewe, which uses the marker *bé* 'say' for all functions including PURPOSE, but not CAUSE. Examples are provided in 8.6.

13. The symbol > employed in (20) signals that what stands to its left is less grammaticalized than what stands to its right.

14. In their worldwide data base of seventeen future markers whose lexical antecedents are verbs of movement, Bybee, Pagliuca, and Perkins (in press) observe that eight were derived from 'go,' as opposed to nine that were derived from 'come.'

15. For a treatment of the comitative-instrumental continuum, see 4.2.

16. For further details, see Schlesinger (1979).

17. Lehmann distinguishes yet another two cases to the left of Instrument, Directional and Ablative, which he calls "more specific nonlocal case" and "more specific local case." The slash stands for "either/or."

18. Lehmann's hierarchy of case marking does not fully correspond to the scale of case functions presented in 6.4 above, but this point need not concern us here.

Chapter 7

1. Lakoff and Johnson (1980:33–34) propose a conceptual metaphor that they call INFLATION IS AN ADVERSARY for this behavior.

2. Compare Lakoff and Johnson (1980:49), who introduce a conceptual metaphor LOVE IS A PATIENT.

3. It is obvious that "metaphorical creativity" in all examples discussed has been conventionalized or "idiomatized"; i.e., we are dealing here with "dead" or "frozen" metaphors.

4. In our use of the term "future," we follow Bybee, Pagliuca, and Perkins (in press). A prototypical use of future markers is one signaling a prediction or an assertion about future time. A prediction is "an assertion by the speaker that the state of affairs in the proposition will be true at some future time, or will be known to be true at some future time."

5. Both observations have been pointed out in Bybee, Pagliuca, and Perkins (in press) as well as in other works by these authors.

6. Regarding prediction, however, see sec. 7.1.2 below.

7. Compare the following example provided by Strunk and White (1972:51): "The formula to express the speaker's belief regarding his future action or state is *I shall; I will* determines his determination or his consent. A swimmer in distress cries, 'I shall drown; no one will save me!' A suicider puts it in the other way, 'I will drown; no one shall save me!' "

8. BECOME futures, as in German (*werden*), e.g., constitute a small minority of all future categories found in the languages of the world.

9. As a future marker, *-taka* is reduced to *-ta,* except in relative clause constructions.

10. Instead of "deontic," the term "root modality" is used by certain authors and/or linguistic schools. Coates (1983:20–21), e.g., observes, "The modal logic term 'deontic', used by some linguists (e.g. Lyons 1977:823) seems to me inappropriate, as it refers to the logic of obligation and permission. . . . Typical Root modals, such as MUST and MAY, cover a range of meaning, of which 'Obligation' and 'Permission' represent only the core."

11. Our use of the term "deontic" includes the "agent-oriented" modality of Bybee and Pagliuca (1985) and Bybee, Pagliuca, and Perkins (in press) and corresponds to the "root" modality of other authors (cf. Sweetser 1982). Bybee, Pagliuca, and Perkins (in press b) distinguish between agent-oriented and speaker-oriented modality, and they argue that the former develops into both speaker-oriented and epistemic modalities.

12. Needless to say, we are ignoring other aspects of the process, such as speaker involvement, shift in scope, etc.

13. Concerning some more detailed treatments of such distinctions, see Sweetser (1982), Bybee and Pagliuca (1985), Bybee, Pagliuca, and Perkins (in press), and Traugott (1987).

14. While Antinucci and Parisi (1971) suggest that epistemic modals express beliefs, Sweetser (1982:491) prefers to talk about conclusions instead "since conclusions are precisely that class of beliefs which we are bound to adopt or not to adopt by our reasoning processes."

15. With regard to the latter interpersonal relations, Taylor (1989:150–53) proposes a metaphor that applies the schema of (spatial or temporal) distance to the domain of involvement: the past tense is used as a "pragmatic softener," in that it helps the speaker distance himself from the speech act that he is performing. Thus, the past tense sentence (ii) is a more tactful way of intruding on a person's privacy than (i):

     (i) Excuse me, I want to ask you something.
     (ii) Excuse me, I wanted to ask you something.

16. For a slightly different interpretation, see Lyons (1977:819–20): "It might even be argued that what is customarily treated as being primarily an opposition of tense—past *vs.* non-past—in English and other languages, should be more properly regarded as a particular case of the distinction, remote *vs.* non-remote ("then" *vs.* "now" being a particular case of "there" *vs.* "here"). Under this interpretation, tense would be a specific kind of modality; and modality would be more closely related to deixis."

17. In terms of markedness theory, the distal demonstrative can be described as being unmarked, while the proximal demonstrative is marked in such languages (see Lyons 1977:647).

18. For more details, see Lockwood (1968:223).

19. Historically speaking, it is likely that (27) is older than (26). However, as Lockwood indicates ("History is repeating itself" [1968:223]), there appears to be a cycle involved, where (27) marks an advanced stage of the earlier and (26) the beginning of a later cycle. Concerning the relevance of cycles in such evolutions, see 8.8.

20. Concerning "erosion" in grammaticalization, see Heine and Reh 1984:21–25.

21. "It is the notion of relative proximity in the co-text to the moment of utterance that connects anaphora and textual deixis with temporal reference; and it is the more general principle of localization . . . that relates temporal reference, in many languages at least, to the more basic notion of spatial deixis" (Lyons 1977:669).

22. A systematic treatment of the relation between the two domains is urgently required. For a somewhat more detailed discussion, see Traugott (1982) and Frajzyngier (in press).

23. Kenya Pidgin Swahili is not the only pidgin form of Swahili spoken in Kenya. Other varieties include those of Indian and European immigrant communities, respectively. More recently, KPS is giving way to Standard Swahili (*Kiswahili sanifu*), which is spreading via the education system and the radio programs of the Voice of Kenya as well as other non-Kenyan radio services. Note that KPS is far from being a uniform dialect; rather, it may be described more appropriately as a continuum ranging from Standard Swahili at the one end to a maximally pidginized form at the other. The data discussed here present a variety of the language that is located close toward the latter end of that continuum. The data were collected by Heine in 1968 and 1969 in Nairobi and various other towns of central and western Kenya (see Heine 1973). Our main informant was Juvenalis Inya, a bank employee from western Kenya whose mother tongue was Teso (Ateso), an Eastern Nilotic language of the Nilo-Saharan family. All examples presented below are from narrative texts volunteered by him. Mr. Inya died around 1980, the victim of a bank robbery in Uganda.

24. The following remark by Carol Scotton on pidginized Swahili as spoken in Kampala also applies to earlier development stages of KPS: "What is actually missing are the relative constructions and other forms of subordination which mark complex sentences in the Standard dialect. The result is an 'abbreviated' syntax consisting mainly of content words, with the listener left to make the connections" (Scotton 1969:101).

25. The abbreviation "NF" stands for nonfuture, a tense category referring to present and past situations.

26. *Ile* is derived from coastal Swahili *i-le*, which is composed of the noun class 9 prefix *i-* and the distal demonstrative stem *-le*. In KPS, *ile* is an invariable marker.

27. "Typologically the *possibility* of a diachronic change from a focus marker to a tense marker exists" (Hopper 1979b:48). Compare also: "In at least one case—Malay—it is possible to trace the beginnings of a process whereby a discourse particle has become a tense-aspect marker in some environments" (Hopper 1979b:37).

28. The CONDITION marker is *né*, for which there exists no convincing etymology. For the POSSESSIVE function, there are two major sources: the marker *pé* of nominal possession is derived from a noun ('place'), while verbal possession is mainly expressed by the phrase *le . . . (ame) sí* 'be (in someone's) hand.'

29. We are leaving aside a number of details that are relevant to a better understanding of the linguistic structure of the lexemes considered. They differ, e.g., considerably with regard to their verbal status. Thus, the morphosyntax of *tsɔ* 'take' is fully verbal in almost every respect, whereas *é* 'move to' has lost most of its verbal characteristics. The verbal evidence for *kplé* is exclusively diachronic; synchronically *kplé* functions as a conjunction and preposition.

30. "As late as the 16th century, there still dominated a case periphrasis of the type *sen Issan KAES* 'WITH this father' which comprised a (head-)noun in the genetive (= *Issan* 'of the father') and a (dependent) noun in the inessive (= *kaes* 'in the company'). The next step in its grammaticalization process, completed by the early 19th century, has lead to morphologization after the formerly distinctive *-n* of the genetive had been lost, quite regularly, via sound-change. The agglutinated morpheme itself was reduced, gradually, to its initial syllable, while the voiceless *-k-* underwent assimilation to voiced *-g-* in intervocalic position. Eventually, a kind of conspiracy of these changes has yielded the modern Estonian case suffix *-ga* as e.g. in *isaga* 'with the father' " (Stolz, in press).

31. Note that her use of the term "expressive" does not fully correspond to Bühler's notion of *Ausdruck*.

32. Instead of "ideational" or "propositional," terms such as "descriptive," "cognitive," "referential," or "designative" have been proposed (Lyons 1977:50–51).

33. Haiman comments on this fact thus: "The explanation for the similarity of conditionals and questions, it seems to me, is that conditionals (like other topics) are established in a discourse as given facts or entities with a formal device whereby the speaker seeks the agreement of his interlocutor as to their validity. This common formal device is the question 'You know ——?' Hence the common interrogative morphology of conditionals and topics" (Haiman 1978:572).

34. These examples are representative of only one type of CE marker in English. Levinson (1983:162), e.g., draws attention to "the English discourse particles *well, oh, so, anyway, actually, still, after all,* and the like: these might be described as 'maxim hedges' that indicate for recipients just how the utterance so prefaced matches up to co-operative expectations."

35. Some earlier accounts are discussed in König (1977:174ff.).

36. Note that, preceding the object pronoun *e,* the open vowel *ɔ* of *kpɔ* becomes closed, i.e., *kpó*.

37. The reinterpretation of the verbal meaning 'see' as meaning 'try' in specific contexts can be observed in a number of languages; cf. English *I'll see if I can do it* (Bybee, personal communication).

38. While the definite article *(1)á* follows the noun it determines, in the case of the noun *Lome* it is infixed, i.e., *Lo-á-me*.

39. This also applies to other verbs such as *tsɔ* 'take,' which as a VI has been grammaticalized, to some extent, to an instrumental case marker.

40. Note, however, that the resulting meaning refers to the present time, e.g.,

> é víví   kpɔ
> it be.sweet see
> ('It was/has been sweet' >)
> 'It is no longer sweet'

41. The term "situation" in the following listing summarily refers to actions, events, and states.

42. The latter only in connection with negative verb forms.

43. Note that -sha- (< -isha) is immediately preceded by the perfective marker -mé, while -ja- occurs only in combination with the negative prefix h-.

44. Instead of Turkana, any other language of the Ateker group of Eastern Nilotic, such as Toposa, Karimojong, or Teso, could have been chosen. For a similar example, see 8.2.

45. Note that these particles also serve as temporal subordination markers ('before'). We will not deal with this function here (see Dimmendaal 1983:458).

46. The following examples involve the particle erokó. In all cases, ɛrɪŋá could be used instead.

47. Dimmendaal (1983) in fact refers to them as auxiliaries, while Novelli (1985:152) lists them in his Karimojong grammar under "adverbs of time." In other languages of the Ateker group, erokó and ɛrɪŋá exhibit additional verbal characteristics. In Teso, e.g., they may be used with the verbal "prepositional" suffix (Hilders and Lawrance 1956).

48. The choice between the two vowels is determined by the cross-height vowel harmony of Turkana, which appears to be based on the position of the tongue root (see Dimmendaal 1983:19ff.).

49. The auxiliary *-mam 'not to be' belongs to the same paradigm as -rokó and -rɪŋá, yet it exhibits a more advanced stage of grammaticalization: although it can still be conjugated in some Ateker dialects, it usually occurs as an invariable clause-initial negation marker mam (see 8.2).

50. Note that Korean is an SOV language that places the appositive clause before the anaphoric noun.

51. "Classical Newari" covers the period roughly from the fourteenth to the nineteenth century, for which written documents are available.

52. This suffix occurs only on inanimate nouns. It is replaced by -mha (singular) and -pɪṃ (plural), respectively (Kölver 1977:2).

53. In Kanuri, the associative case marker has experienced a similar fate (see Hutchison 1980).

54. Concerning "abstractness," see 2.3.2.

55. Apart from Ik, no other Kuliak language has experienced this innovation, which must have taken place after the second split of Proto-Kuliak, the hypothetical ancestor language of the group (see Heine 1976).

56. Situations like this have been described in Heine and Reh (1988:248–51) under the label "hybrid structures"; see also 8.5.2.

57. Greenberg's classification of Krongo as Niger-Kordofanian has been questioned; it is possible, in fact, that it belongs to the Nilo-Saharan family instead.

Chapter 8

1. We have taken this term from Hopper and Thompson (1984), who use it in a much broader sense.

2. Concerning the use of a related term, "adjustment," see Heine and Reh (1984:97ff.).

3. See Heine and Reh (1984:21–25).

4. Instead of 'be,' various other verbs may be used, such as 'stand,' 'stay,' 'remain,' 'keep,' or 'sit,' and 'at/in/on' stands for a number of possible adpositional concepts used in such constructions.

5. Compare Claudi and Heine (1986:325–26) for Ewe.

6. One of the effects of grammaticalization is, e.g., that it turns governing/head into governed/modifier constituents. This process may trigger an opposite development of the erstwhile governed to a governing constituent (cf. Heine and Reh 1984:95, 104–5). Both developments involve reanalysis but only the former grammaticalization (see below).

7. Langacker's discussion of the term is not entirely clear. He defines the "surface level" as the "phonemic level of representation, together with indications of word boundaries, but with no indication of constituent structure or boundaries smaller than word boundaries (such as morpheme or clitic boundaries)" (Langacker 1977:61). The term "boundary" forms a key concept in Langacker's discussion, one of the two types of his syntactic reanalysis, which he calls "resegmentation," being

concerned entirely with boundaries. It remains unclear why, in particular, word boundaries belong to the surface level while all other types of boundaries do not.

8. In Langacker's terminology, reanalysis is further classified into resegmentation and reformulation.

9. Compare the following: "Another well-known source of grammaticalization is reanalysis . . . in which old boundaries are reinterpreted" (Traugott 1980:49).

10. The sentence is taken from Hilders and Lawrance (1956:xix); see also Heine and Reh (1984:104–5).

11. The way in which the various manifestations of reanalysis in such examples are interrelated would seem to require separate treatment.

12. Note, however, that examples such as these are not fully satisfactory, especially since there exists a wide range of different opinions as to how "reanalysis" and "grammaticalization" are to be defined. For those, e.g., who treat the two terms as synonymous, the grammaticalization of a demonstrative as a definite article would also be an instance of reanalysis.

13. Concerning the peculiar way in which the distinction "alienable"/"inalienable" in Ewe is structured, see Claudi and Heine (1986:316).

14. See 8.1 under "form-meaning asymmetry."

15. Within this framework, the term "prototypical sense" largely corresponds to our notion of "source concept."

16. Frequently, allomorphy is involved as well (see Heine and Reh 1984).

17. The abbreviation NF stands for nonfuture, i.e., a tense category referring to present or past situations. For a more detailed discussion, see 7.2.1.2.

18. This Swahili dialect developed less than a century ago during the early colonial period.

19. All examples are taken from Lockwood (1968:242–44).

20. In addition to these five co-verbs, there is another preposition, *kplé* 'with' (COMITATIVE, INSTRUMENT), which is not part of such a continuum. *Kplé* is also of verbal origin, being derived from the complex verb *kpé ɖé* ("meet with"), but it has been cut off from its source and functions exclusively as a preposition.

21. There exists some variation in the morphosyntactic behavior both between these co-verbs and between different speakers—or between authors who have written on Ewe grammar, especially Westermann (1907) and Ansre (1966). The following data are based on Hünnemeyer (1985).

22. We have to be aware, however, that the term "preposition" is grossly misleading; more appropriately, one should say that we are dealing here with a continuum ranging from verbal to prepositional use. When calling these entities "prepositions," we are referring only to one stage along this continuum.

23. The labels "SAY," "KNOW," "BELIEVE," and "HOPE" refer to the semantics of the verb of the main clause preceding the complementizer derived from the verb 'say,' whereas "PURPOSE" and "CAUSE" refer to the function of the complement clause concerned. For a more detailed treatment, see Saxena (1988a, 1988b).

24. Note, however, that these constraints do not apply when *bé* introduces direct speech, for example:

(i)   é-bé: m-aá-vá   etsɔ
           3SG-say: 1SG-FUT-come tomorrow
           'He said: I'll come tomorrow'

25. This marker is commonly used in PURPOSE clauses, although it is not obligatory.

26. According to Hyman, there are two processes whereby "substance" becomes part of the linguistic code: phonologization and grammaticalization. He proposes "codification" as a term to cover these two, although he adds that this term "does not sound linguistic enough for my taste" (Hyman 1984:73).

27. Note that our arrangement differs slightly from that presented by Givón.

28. Nupe and Gwari are two closely related Kwa languages of the Niger-Congo family spoken in southern Nigeria. In these languages, there is a morpheme *á* or *lá,* respectively, that has the function of both a completed/perfective aspect and a focus marker, and, in both languages, this morpheme appears to be derived from a verb, *lá* 'take' (Smith 1967, 1969; George 1971; Hyman and Magaji 1971; Heine and Reh 1984).

29. In Heine and Reh (1984:115), this type of construction is described under the label "PP-periphrasis."

30. We are leaving out here a second, parallel, example provided by Fleischman, involving the "complex past," which has undergone essentially the same development as the go-future (Fleischman 1983:193ff.).

31. The Chadic languages are spoken in north-central Africa and form one of the branches of the Afro-Asiatic family.

32. According to the former, grammaticalization results from the phonetic weakening of inflections and the consequential need for unambiguous markers, while the latter is present in particular when the emergence of new constructions, such as periphrastic forms, leads to the decline and subsequent loss of existing inflectional or derivative structures (cf. Samuels 1971; Brinton 1988:96).

33. Perhaps a less known case is that of the Hungarian case system, which Stolz describes thus: "Im belegten altung. Deklinationssystem lag noch eine geringe Zahl von distinktiven Kasusformen vor, die nachweislich durch Agglutination von flektierten Postpositionen seit dem 13. Jahrhundert ständig erhöht wurde und wird; die neuen Kasus erscheinen dann wieder als paradigmatische Distinktionen von Nomina, die erneut die Funktion von Postpositionen übernehmen—und die . . . zu neuen nominalen Kasussuffixen werden können" (Stolz, in press).

34. "Primitive linguistic units must have been much more complicated in point of meaning, as well as much longer in point of sound, than those with which we are most familiar" (Jespersen 1922:425). With this claim, Jespersen argued against the opposite thesis, which was prevalent then at least since the time Humboldt (1825) formulated his *Agglutinationstheorie.*

Chapter 9

1. One might argue that the difference between (2a) and (2b) is not one of meaning but rather one of translation. As the reactions from our consultants suggest, So people are fully aware of the ambiguity in (2); it may, for example, figure in jokes capitalizing on it.

2. Some functions, such as TIME and MANNER, are more difficult to locate within this structure.

3. This means that only a selected range of four functions is considered for each of the four prepositions. In one case, A3, instead of a case-marking expression, a progressive construction, which is not tolerated in Standard German but common in many forms of colloquial German, was added.

4. Note that this does not apply to the DATIVE, which also belongs to the second grouping. Apart from the DATIVE, TIME also shows some peculiar behavior.

5. Mention should be made here that we are concerned with "prototypical usages" only. Given the right context, functions like COMITATIVE or BENEFACTIVE may have nonhuman and functions like REASON or CONDITION human referents.

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Name Index

Language Index

Subject Index