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Metonymy and Metaphor in Grammar

Edited by
Klaus-Uwe Panther
Linda L. Thornburg
Antonio Barcelona

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Metonymy and Metaphor in Grammar

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Volume 25

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Edited by Klaus-Uwe Panther, Linda L. Thornburg, and Antonio Barcelona

Metonymy and Metaphor in Grammar

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*We dedicate this volume
to the next generation of cognitive linguists*

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Preface

The papers in this book continue and elaborate a research program that began with a theme session organized by two of the editors (Panther and Thornburg) at the 7th International Pragmatics Conference in Budapest (2000), which resulted in the volume *Metonymy and Pragmatic Inferencing* (2003) edited by Panther and Thornburg and published in Benjamins' Pragmatics & Beyond New Series. A related topic was pursued at the 7th International Cognitive Linguistics Conference (Santa Barbara, CA, July 22–27, 2001) in a theme session (with the same organizers) *How Universal are Conceptual Metonymies? A Cross-Linguistic Comparison*. These papers were published in a special issue with the same title in the journal *Jezikoslovlje* (4.1) in 2003, guest-edited by Panther and Thornburg. The current volume grew ultimately from a theme session *Metonymy and Metaphor in Grammar* organized by Klaus Panther, Linda Thornburg, Antonio Barcelona, and Günter Radden at the 8th International Cognitive Linguistics Conference (Logroño, Spain, July 20–25, 2003) and contains substantially revised and updated papers by participants in the theme session as well as a number of original invited papers.

We are grateful to the organizers of the 8th ICLC in Logroño for the opportunity to present our panel, to our panel participants and volume contributors, and to the discussants of the theme session, Laura Janda and George Lakoff. Special gratitude is extended to the authors of invited contributions, particularly Ronald Langacker, who supplied the lead chapter, Gary Palmer and his co-authors, Mario Brdar, Rita Brdar-Szabó, and Debra Ziegeler and Sarah Lee. We are indebted as well to Günter Radden for his editorial assistance at an early stage of this volume.

We thank Seline Benjamins, who showed interest in the project from its inception; Jan Nuyts and the co-editors of the series Human Cognitive Processing and two anonymous reviewers, who, through various drafts provided constructive criticism and encouraging feedback; Hanneke Bruintjes, Acquisition Editor, and Martine van Marsbergen and her colleagues in the Production Department, for making the final stages of the project easy for us. Finally, to the authors of *Metonymy and Metaphor in Grammar* we offer our deepest appreciation for your patience, for your commitment to the project, and for your contribution to furthering an understanding of the important role of figuration in grammar.

Klaus-Uwe Panther, Hamburg, Germany
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May 2009

Introduction

On figuration in grammar*

Klaus-Uwe Panther and Linda L. Thornburg

University of Hamburg / Independent researcher

1. Introduction

Many linguists, if not most, would answer the question “What does figuration have to do with grammar?” by shaking their heads and retorting “Nothing whatsoever”. Given the widespread skepticism of linguists about finding any connections between figuration and grammar, a book on metonymy and metaphor in grammar requires a sufficiently clear conception of grammar, on the one hand, and of figuration, on the other, to make a case for the interaction between the two. In the sections that follow we suggest some answers to the question of how figuration relates to grammar, focusing in particular on how figurative thought might *influence* grammar. In Section 2, we start out with a brief overview of some overarching features of cognitive linguistics, contrasting it with its main competitor, generative grammar, from and against which it historically emerged. In Section 3, we continue the discussion of generative and cognitive linguistic models focusing on how these models view the position of grammar in the overall architecture of language. In Section 4, we develop a reference frame for analyzing the relation between figuration and grammar. Sections 5 and 6 present data in support of the hypothesis that conceptual metaphor and conceptual metonymy motivate the distributional properties of grammatical elements. Section 7 characterizes the contributions to the present volume and relates them, where possible, to the framework developed in Section 4. Section 8 closes this introductory chapter with some suggestions for future research – stressing in particular the importance of figuration for the diachronic development of grammatical categories and its relevance to typological studies.

2. Cognitive linguistics

Cognitive linguistics is by no means a uniform theoretical paradigm. Some scholars even believe that the term ‘cognitive linguistics’ has been usurped by a group of California linguists from Berkeley and San Diego and their disciples in Europe and Asia in an

illegitimate way. This accusation can be heard, for instance, from generative linguists who claim that they are as much concerned with language and cognition as the representatives of the “California” or “West Coast” school of linguistics mentioned above. It is therefore useful and even necessary to clarify our understanding of the term ‘cognitive linguistics’ in this introductory chapter and to make explicit what we think are the basic tenets about the relation between language and cognition shared by the contributors to this volume.

There is certainly a sense in which otherwise quite divergent theoretical paradigms can be characterized as ‘cognitive linguistic’. We use the spelling ‘cognitive linguistics’ with lower case *c* and a lower case *l* for this kind of theoretical orientation. In this broad sense, cognitive linguistics is a breakaway from a purely structuralist and deliberately non-psychological perspective that characterized much of synchronic 20th century linguistics in Europe and the United States up to the 1950s. Under this interpretation, Noam Chomsky is clearly a cognitive linguist. His famous review article (1959) on B. F. Skinner’s book *Verbal Behavior* (1957) is often seen as the cognitivist turn in 20th century linguistics. For Chomsky, linguistic research is a tool for exploring an important aspect of the human mind (see Taylor 2002: 8). A central dichotomy in Chomsky’s linguistic thinking is the distinction between competence and performance, and his tenet that the central object of inquiry of linguistics should be competence, i.e. the subconscious linguistic knowledge of native speakers, which, despite “poverty of stimuli” develops in normal children thanks to a richly structured innate language faculty.¹ As a result of the focus on competence, the role of performance in shaping grammar was considered to be a *quantité négligeable*.² The language faculty is metaphorized by Chomsky as a “mental organ” that functions according to its own rules and principles. In this framework, the language faculty is thus not derivable from more general human cognitive abilities. It is regarded as a module, an encapsulated mental “container” that is not shaped by other mental capacities of the human mind such as intelligence, perception, experience, or the interaction of humans with their environment.

Cognitive linguistics in the *narrow* sense, or ‘Cognitive Linguistics’ with a capital *C* and a capital *L*, as we are going to refer to it in order to distinguish it from ‘cognitive linguistics’, provides radically different answers to questions regarding the nature of the linguistic sign, the architecture of grammar, and the language faculty. Most of these answers are incompatible with the basic tenets of Chomskyan grammatical theory. The only common denominator of cognitive linguistics in the Chomskyan sense and Cognitive Linguistics is an antibehaviorist stance; i.e., both schools of thought consider language to be a *mental* phenomenon that cannot be adequately accounted for in behaviorist terms of stimulus and response patterns.

However, even Cognitive Linguistics cannot be considered as a homogeneous theoretical framework. There are several subparadigms that, on the surface, seem to coexist in peaceful harmony but, on closer inspection, turn out to be not always compatible with one another. We will not discuss such disparities among different subparadigms of Cognitive Linguistics in this section but focus on the underlying theoretical assumptions that these subparadigms share. These are briefly summarized in the following paragraphs.³ Some important differences with regard to the overall architecture of these subparadigms are described in Section 3.

For most Cognitive Linguists human languages are *semiotic* systems in which forms are conventionally paired with meanings (including pragmatic meanings such as illocutionary potentials, generalized implicatures, etc.).⁴ The semiotic character of language holds not only for individual lexemes but also for grammatical constructions, which code more or less abstract (schematic) contents and communicative functions. Constructions, or more generally, simple signs and complex signs, are not considered to be epiphenomena of universal grammatical principles, e.g. language specific instantiations of the X-bar schema (plus parameter settings) as assumed in one influential version of generative grammar; rather, they are the basic units of linguistic description and explanation (Lakoff 1987; Langacker 1987, 1991, 2000, 2008; Goldberg 1995, 2006). Constructions are organized in networks, not unlike the semantic networks formed by words (lexical fields), as known from structural linguistics. From the symbolic nature of constructions it follows that they have meaning. An important question concerning the meaning of a construction is how much of it can be compositionally derived. There is agreement among Cognitive Linguists that meanings of the parts of a construction contribute to the meaning of the whole, but the meaning of the whole is often not predictable, but holistic and idiomatic. Cognitive Linguistics also rejects the hypothesis that there exists an innate language faculty of the sort postulated by generative grammar. Rather, it is assumed that general cognitive faculties and learning mechanisms suffice to account for language acquisition (Tomasello 2003; Croft & Cruse 2004).

Another distinctive trait of Cognitive Linguistics is its emphasis on authentic linguistic data as the basis of linguistic analysis. In theory, although certainly not always in practice, Cognitive Linguists discard introspective data as unreliable, whereas the use of native speaker intuitions about well formedness is considered to be legitimate in generative linguistics.⁵ In his monograph *Syntactic Structures* Chomsky (1957) dismisses the study of corpora as irrelevant for the formulation of linguistic generalizations. In contrast, Cognitive Linguists postulate that the study of language-in-use is a prerequisite to adequate linguistic accounts. Grammars should be “usage-based” (Langacker 1987: 46).⁶ As a consequence, and facilitated by the availability of large electronic corpora and search tools, corpus linguistics has seen an enormous upsurge since the 1990s.

Cognitive Linguistics also differs from other cognitivist theories in the significance it attributes to (conceptual) metaphor and (more recently) to conceptual metonymy in the construction of meaning. It is now firmly established that these tropes are not merely ornamental figures of speech and writing but that they are crucially involved in human conceptualization. Metaphor and metonymy have been shown to be rooted in human bodily experience and interaction with the environment, a property that is often referred to as *embodiment*. For instance, humans use experientially grounded *image schemata* such as the ‘container schema’ or the ‘path schema’ as the basis for the creation of numerous conceptual metaphors and metonymies (see e.g. Lakoff 1987; Panther & Radden 1999; Panther & Thornburg 2003). The cognitive psychologist Ray Gibbs and his collaborators have conducted numerous experiments that strongly support the hypothesis that many metaphorical concepts are embodied (see Gibbs 1994, 2003; Gibbs & Colston 1995; Gibbs, Costa Lima, & Francozo 2004). It has also been shown that there exists culturally determined variation in the use of metaphor within the limits set by the “human condition”

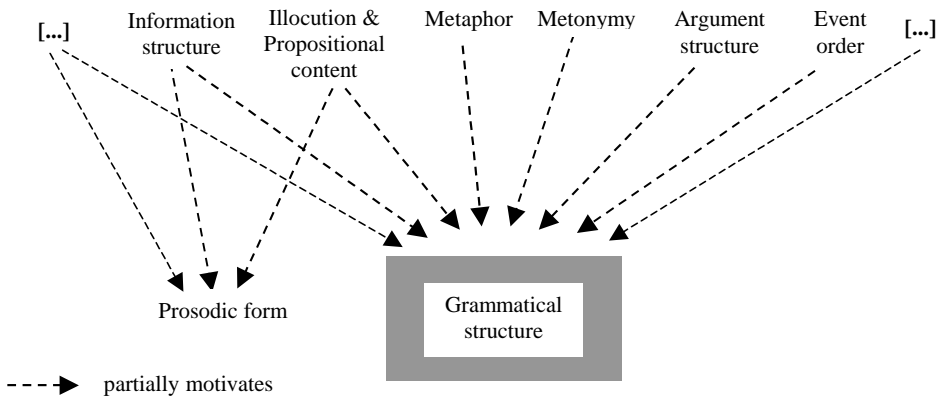


Figure 1. Conceptual-pragmatic factors influencing grammatical structure

(Kövecses 2005, 2006; see also Barcelona & Soriano 2004). The same can probably be said of the uses of high-level metonymies, some of which have been compared cross-linguistically not so much from the perspective of cultural variation as from the vantage point of grammatical differences among languages.⁷

A fairly widespread assumption in Cognitive Linguistics and functionalist theories of language that informs many of the contributions of the present volume is that grammatical patterns are *motivated*, at least partially, by conceptual and pragmatic factors.⁸ In Figure 1 semantic-pragmatic phenomena are given that have been shown to have an impact on grammatical structure. For example, it seems almost a truism to point out that the subcategorization frame of verbs, adjectives, and nouns, i.e. the syntactic arguments they take, is not completely independent of their *conceptual* argument structure – even if syntactic argument structure cannot be fully predicted from conceptual argument structure. It is also clear that information structure has syntactic and prosodic effects and that the force and propositional content of illocutionary acts is, at least to a certain extent, mirrored in their syntax.⁹ Work on sentence types would not make much sense if it were not assumed that there are correlations between the pragmatic function (illocutionary potential) of sentence types and their morphosyntactic properties. Another often observed case of (iconic) motivation is the correspondence between event order and the sequential order of (narrative) clauses.¹⁰

In contrast to the phenomena mentioned in the preceding paragraph, it is less clear that figurative thought, specifically, metonymy and metaphor, may have some impact on grammatical form. To show that this is indeed the case is one of the main purposes of the present volume. But before providing evidence for the claim that grammatical structure may be motivated by metonymy and metaphor, we must elucidate the notion of grammar itself.

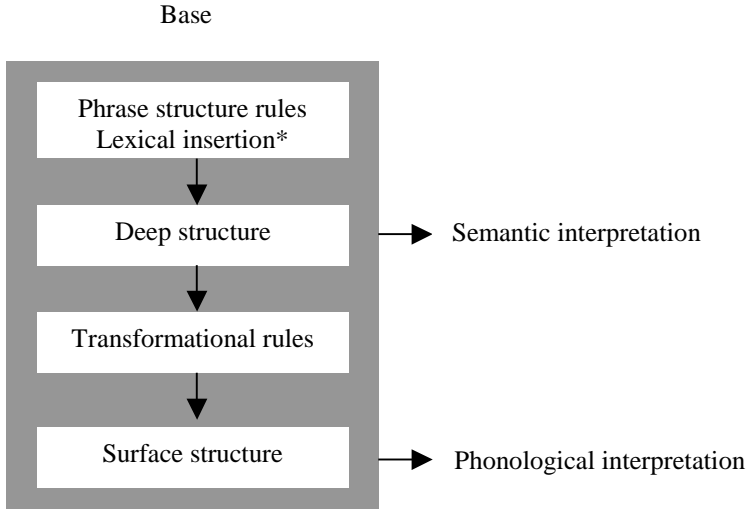
3. The place of grammar in the architecture of language

What grammar is seems, at first glance, to be self-evident, but it turns out that the notion of grammar is highly theory-dependent. The term 'grammar' is often understood as referring to the overall architecture of language, as e.g. in Steen's book *Finding Metaphor in Grammar and Usage* (2007). In this broad sense, the grammar of a language consists of a set of components and the relations obtaining among them. Such components are the lexicon, the phonological, morphological, syntactic, and semantic systems, and possibly even pragmatics, as long as pragmatic meanings are lexically and grammatically coded in language (e.g. speech act functions of sentence types or politeness markers (honorifics)). In a narrow sense, which is the one that interests us here, grammar is concerned with formal (morphosyntactic) regularities of languages. We use 'grammar' in this narrow sense and, in what follows, consider its place in the overall architecture of language. For our purposes, we ignore the division between syntax and morphology (if it exists), but collectively refer to both components as *morphosyntax*.¹¹

On the surface, the notion of grammar as morphosyntax seems straightforward: Grammar is concerned with the rules and principles governing the construction of words, phrases, and sentences in natural language. As will become clear however, no explication of the concept of grammar can be given that is not dependent on the theoretical framework in which it is couched.

In what follows we briefly review some linguistic models whose design features make reference to grammar and its relation to other linguistic components and, possibly, other non-linguistic mental abilities, such as perception and motor activity.¹² We restrict ourselves to the basic features of the linguistic models described. We do not consider (presumably universal) *constraints* on grammatical structure, which play an important role in the overall architecture especially of generative theories of language. Since such constraints do not seem relevant to the issue of whether and to what extent metonymy and metaphor are reflected in grammar, we feel entitled to ignore this feature of many linguistic models in the present context.

Our starting point is Noam Chomsky's classic *Aspects of the Theory of Syntax* (1965), which, in its time, was hailed as a groundbreaking theoretical achievement and strongly influenced the thinking of many linguists for at least a decade. In this work, Chomsky uses 'grammar' in the relatively broad sense as sketched in the preceding paragraph.¹³ His version of generative grammar, often referred to as the *Standard Theory*, assumes that, on the sentence level, syntax assumes a mediating function between meaning and sound: syntactic deep structure is the input for semantic interpretation, syntactic surface structure provides the basis for phonological representations. Lexical insertion, which takes place on the level of deep structure, is guided by the syntactic properties of lexical items (e.g. word class, subcategorization frames, and selectional restrictions). The two syntactic levels of deep structure and surface structure are connected by formal, i.e. non-meaning bearing, transformations, which are themselves governed by a number of constraints restricting their generative power. Chomsky's position is known as the *autonomous syntax hypothesis*. This hypothesis states that syntax functions according to its own rules and principles; semantic and pragmatic information cannot figure in it; in fact, it is assumed to be irrelevant



*constrained by subcategorization and selectional restrictions

Figure 2. Standard Theory (Chomsky 1965)

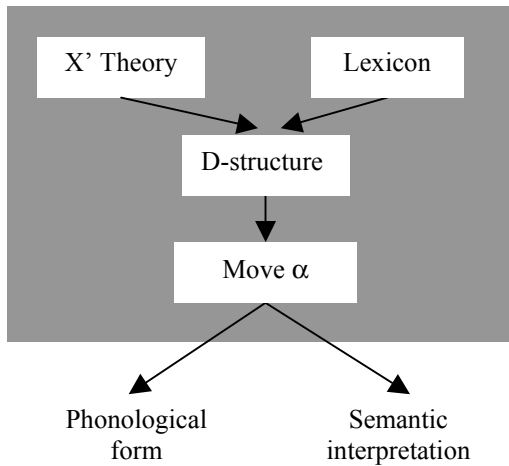


Figure 3. GB theory (adapted from Jackendoff 2002: 109)

to the formulation of syntactic generalizations. Chomsky's model is derivational in the sense that some components are fed by other components. These input-output relations are indicated in Figure 2 and the subsequent figures by means of solid arrows. In this figure, as in the ensuing diagrams, the grammatical component(s) and rule systems (in the narrow sense of 'grammar' defined above) are shaded in grey to distinguish them from non-grammatical components.

The next major innovation in generative grammar in the early 1980s was *Government-Binding Theory* (GB) (e.g. Chomsky 1981). For our purposes, it is sufficient to point

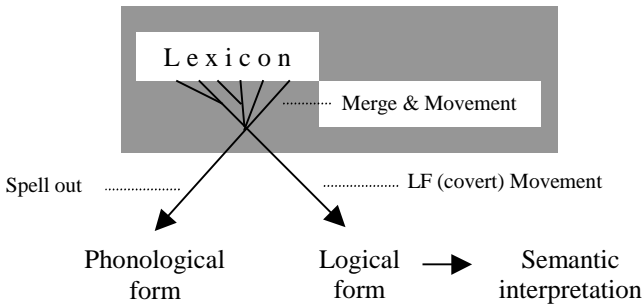


Figure 4. Minimalist Program (adapted from Jackendoff 2002: 109)

out that morphosyntax preserves its central position in the model: as in the Standard Theory, the logico-semantic and the phonological components are dependent on the autonomous syntactic component. The basic dogma, viz. the autonomy of syntax, stands as firm as ever (see Figure 3).

Finally, the *Minimalist Program* developed by Chomsky in the 1990s (see e.g. Chomsky 1995), in an effort to reduce the complexity of the GB model, also assigns a central position to syntax: syntactic structures are created through the operations of *Merge* and *Movement* and phonological form, logical form, and semantic interpretation are again dependent on syntactic structure (see Figure 4).

Among generative grammarians, Ray Jackendoff represents a minority position because he has explicitly abandoned the doctrine of the *centrality* of syntax, which characterizes all of the models diagrammed in Figures 2–4. Jackendoff (2002) regards the syntactic component, the conceptual component, and the phonological component as parallel and autonomous. This view diverges sharply from the orthodox position sketched above that logical form (and meaning) and phonology are parasitic on syntax. However, Jackendoff remains committed to the generative enterprise in assuming that syntax (alongside with phonology and semantics) is autonomous, i.e. supposedly functioning according to its own rules and principles. Phonology, syntax, and the conceptual system are interconnected via “interface rules”. Furthermore, the phonological and conceptual components are linked to non-linguistic modules such as “hearing and vocalization” and “perception and action” (see Figure 5).

An interesting feature of Jackendoff’s model not explicitly represented in Figure 5, is the assumption that there exist “aspects of meaning that are relevant in determining grammatical structure” (Jackendoff 2006: 353; see also Pinker 1989; and Mohanan & Wee 1999 for the same view). Despite this acknowledgment, which in generative grammar can be traced back to at least Chomsky (1985: 87), even in Jackendoff’s model, syntax retains a central position.¹⁴ While the phonological and semantic components are linked to and receive input from non-linguistic modules, syntactic rules and principles are not directly connected to cognitive capacities outside the language faculty. Finally, Jackendoff also remains true to the generative enterprise in his belief that there exists a specifically designed human language faculty.

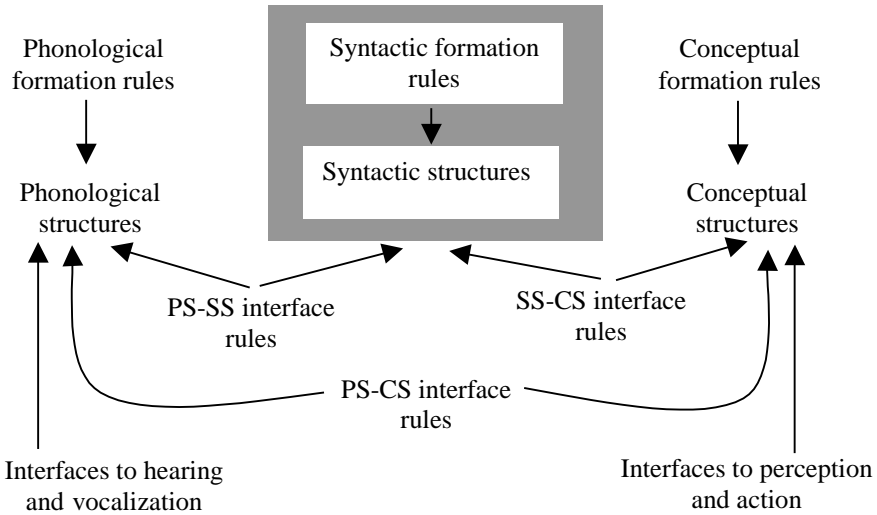


Figure 5. Jackendoff's architecture of grammar (Jackendoff 2002)

We now turn to two models that can be regarded as representative of Cognitive Linguistic thinking about the architecture of language. In what follows, we restrict ourselves to what we think are essentials, at the risk of oversimplifying the overall picture somewhat. The following diagrams are partially based on Ronald Langacker's (2005:102) discussion of what he sees as the most important differences between *Cognitive Grammar* (in his sense) and what is usually referred to as *Construction Grammar*.

Let us first consider the architecture of Construction Grammar. We rely here on the model developed by Goldberg (1995), adding a few features that she does not discuss in great detail in her monograph but that we think are implicitly assumed to be part of this model (see Figure 6).

Construction Grammar is a non-derivational theory, i.e., linguistic expressions are not generated by a set of rules (interacting with constraining principles). We indicate this non-derivational property by means of lines connecting different components of the model, rather than arrows as in the derivational theories sketched in Figures 2–5. Most construction grammarians would probably readily embrace the view that perceptual, experiential, and motor activities (modes of interaction with the “outside” world) (at least, partially) feed into the conceptual system.¹⁵ Clausal constructions reflect what Goldberg (1995:5) calls “scenes basic to human experience”. Construction Grammar starts from the axiom that constructions are conventional form-meaning pairs with at least one non-predictable formal and/or semantic property (see also Goldberg 2006: Ch. 1).¹⁶ The use of the term ‘conventional’ in this definition of course does not imply that Construction Grammar views the relationship between form and meaning as *arbitrary* in the Saussurean sense. Rather, it remains an open question how much of grammatical structure is actually *motivated* by conceptual structure, in particular, conceptual metaphor and metonymy. In Goldberg's well-known monograph *Constructions: A Construction Grammar Approach*

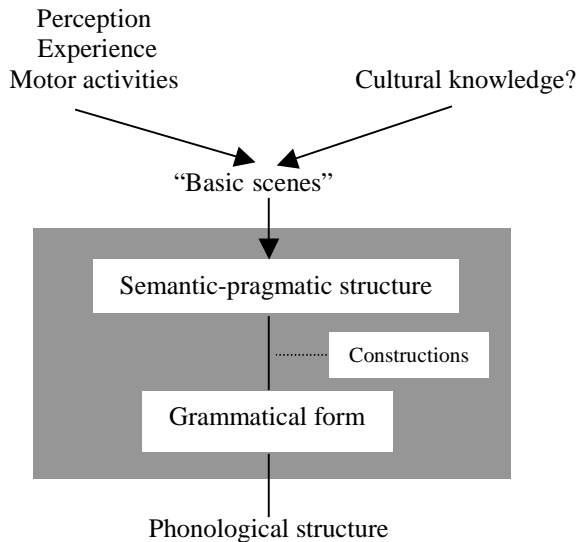


Figure 6. Architecture of Construction Grammar

to *Argument Structure* (1995), conceptual metaphors, alongside other principles, account for the polysemy of individual constructions such as the Resultative Construction, which is based on another construction, the Caused Motion Construction.¹⁷ To our knowledge, Construction Grammarians do not say much, if anything, about the reflection of cultural knowledge in grammar, that is, what has been termed in other more anthropologically inspired frameworks as *ethnosyntax*.¹⁸ Nonetheless, Construction Grammar is certainly not incompatible with the hypothesis that conceptual structure and cultural knowledge may shape the grammatical structure of languages to a certain extent.

Among Cognitive Linguists, George Lakoff stands out as one of the surprisingly few scholars who has *explicitly* argued that grammar (syntax) is, at least partially, conceptually-based (e.g. Lakoff 1987; Lakoff & Johnson 1999). In their book *Philosophy in the Flesh* Lakoff and Johnson (1999: 481) characterize syntax as “the study of generalizations over the distributions of [...] syntactic elements.” With the syntactocentric and autonomous syntax view of generative grammar in mind, these authors emphasize that it is “an empirical question whether semantic and pragmatic considerations enter into [...] distributional generalizations” (482). In other words, the autonomy or non-autonomy of syntax cannot be stipulated by fiat. Note that the focus here is as much on the question of what grammatical (syntactic) constructions mean, as on how much of meaning and pragmatic function is actually reflected in the distributional properties of syntactic (i.e. formal constructional) elements. Figure 7 sketches some important features of the architecture of Lakoff’s model.

Lakoff’s own work provides good evidence for the impact of perception, experience, and action on conceptual and, ultimately, grammatical structure. Lakoff has also repeatedly pointed out that *sociocultural* factors may shape conceptual categorization and, derivatively, the grammar of languages. Well-known examples are his studies of the noun

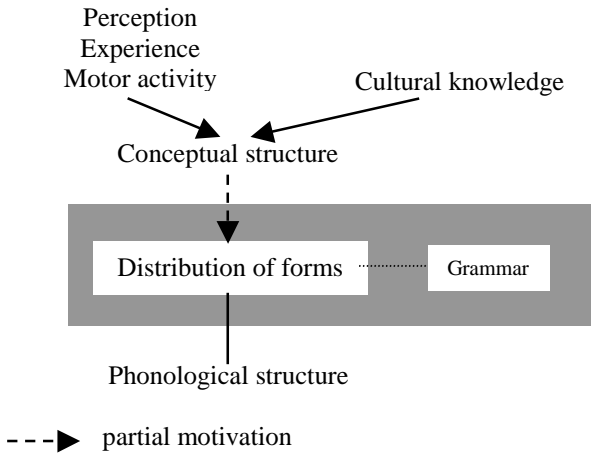


Figure 7. Lakoff's architecture of language (Lakoff & Johnson 1999)

classifier system in Dyirbal and of the Japanese noun classifier *hon* (Lakoff 1987:92–109). Lakoff argues quite convincingly that the seemingly arbitrary class of nouns in Dyirbal, which comprises, among other things, lexemes denoting ‘women’, ‘fire’, and ‘dangerous things’, is conceptually motivated, and much of this motivation, one might add, must be rooted in cultural norms and views about women in Dyirbal society.

Lakoff thus has a strong bias towards conceptually motivated grammar. Ronald Langacker (2005:103) seems to be more cautious in this respect. In his brief discussion of generative grammar and the autonomous syntax hypothesis, he distinguishes between what he calls the ‘strong autonomy hypothesis’ and the ‘weak autonomy hypothesis.’ ‘Weak autonomy’, in his parlance, means “that grammar cannot be fully predicted from meaning and other independent factors (e.g. communicative constraints)” (103). In contrast, the strong autonomy hypothesis implies “that grammar is distinct from both lexicon and semantics, constituting a separate level of representation whose description requires a special set of irreducible grammatical principles” (103). Langacker embraces the weak autonomy hypothesis but is strongly opposed to the strong autonomy hypothesis. Langacker’s conception of grammar can be roughly diagrammed as Figure 8.

An important feature of Langacker’s model is that syntax, or more generally, grammar, is not viewed as a separate level of linguistic organization, in contrast to all of the other linguistic models we have reviewed thus far, including Construction Grammar. As Langacker (2005) himself points out, Construction Grammar, including Croft’s (2001) Radical Construction Grammar, *does* assume a level of grammar that is distinct from phonological form. In contrast, in Langacker’s model, the semantic pole of a linguistic symbol or structured assembly of symbols is directly linked to phonological form. For Langacker, grammar, which forms a continuum with the lexicon, is by definition meaningful. It is this tenet that Langacker’s Cognitive Grammar shares with other branches of Cognitive Linguistics, but Langacker is more radical than other Cognitive Linguists in denying the existence of a distinct level of morphosyntactic organization.¹⁹

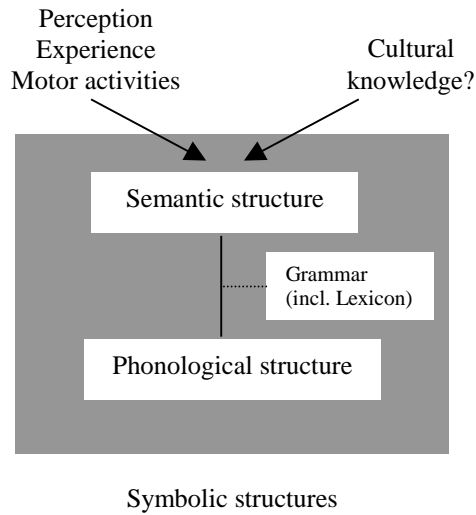


Figure 8. Architecture of Cognitive Grammar (adapted from Langacker 2005: 105)

In the lead article to the present volume, titled “Metonymic grammar”, **Ronald Langacker** makes another important contribution to the debate on the nature of grammar. He challenges the prevalent view in structuralist and formal (generative) linguistics that linguistic elements are discrete and combined in well-defined ways to yield more complex structures. This presumption of discreteness and determinacy of grammar, Langacker argues, is undermined by research in Cognitive Linguistics. For example, there exist no clear boundaries between linguistic meaning and encyclopedic knowledge (two domains that are usually kept strictly apart in formalist models). Also, the ubiquity of *active zones* (as in *My cat bit your dog*, where strictly speaking it is not the cat but the cat’s teeth that can bite (part of) the dog), metonymy, metaphor, and conceptual blending speak against the idea that grammar is discrete and determinate. Note that Langacker uses the term *metonymy* in a narrow sense and a broad sense here. When talking about the nature of grammar, what he has in mind is the wide sense of metonymy as a property characterizing grammar *in general*. In his contribution, he argues that grammatical relationships between two elements are not precisely determined. In other words, Langacker claims that “[e]xplicit linguistic coding gets us into the right neighborhood [...] but from there we have to find the right address by some other means” (46). A case in point is the relationship between POSSESSOR and POSSESSED in an expression such as *Mary’s book*, which without further context, remains indeterminate as to what kind of relationship obtains between Mary and the book. In other words, the exact relationship between *Mary* and *book* has to be metonymically inferred.²⁰

It is important to note at this juncture that we have in mind a narrower notion of metonymy than Langacker has when we talk about ‘grammatical metonymy’. We view metonymy as a *conceptual* phenomenon, and ask ourselves how this phenomenon interacts with, or influences, grammatical structure. Metonymy is contrasted here with figures of thought and communication like metaphor, on the one hand, and conceptual phenomena

such as argument structure (participants and their roles), figure-ground organization, etc., on the other (see Figure 1 above).

To conclude this section, we have argued that grammar cannot be defined properly without consideration of its relations to other linguistic and cognitive components. As we have seen, even within Cognitive Linguistics there exists internal variation with regard to the position grammar occupies in the overall architecture of language and thought. Our task is thus to develop a theoretical reference frame that defines in sufficient clarity the relation of grammar to other linguistic and non-linguistic components. It is only then that we can tackle the problem of how metonymy and metaphor contribute to grammatical structure. We turn to this issue in the following section.

4. Figuration and grammar

4.1 Setting the stage

In a framework like Chomsky's Standard Theory, as sketched in Figure 2 above, Romeo's exclamation in Shakespeare's *Romeo and Juliet* (II, 2)

- (1) But soft! What light through yonder window breaks?
It is the East, and Juliet is the sun!

would be judged as a piece of deviant language use. The second predicate nominal in the second line, *the sun*, selects the feature [-ANIMATE] for the subject of the clause, which clashes with the feature [+HUMAN] of the subject *Juliet*.²¹ *Juliet is the sun* exemplifies a violation of a selectional restriction on lexical insertion, which can be resolved only by a pragmatic interpretation strategy.²² On this view, metaphor, and more generally, metaphorical language is usually outside the linguistic system, i.e., it is simply ill formed. Metaphors can of course be given some interpretation, but they belong to the realm of "performance" rather than "competence". An analogous analysis would hold for standard referential metonymies such as

- (2) The pen is mightier than the sword.

that violate selectional restrictions of the lexical item *mighty*.

The Chomskyan solution to the problem of figurative language is in some sense analogous to the pragmatic approach proposed in Grice's (1975) theory of rational communication.²³ In Grice's view, the figurative interpretation of e.g.

- (3) You are the cream in my coffee. (Grice 1975:53)

is based on an inference (conversational implicature) triggered by the semantic anomaly of utterance (3), which is literally false (in terms of Chomsky's Standard Theory it is a violation of a selectional restriction). The flouting of the first Maxim of Quality 'Be truthful' is the point of departure of a reasoning (inferential) process in the addressee's mind, which leads to an understanding of what the hearer believes to be the speaker's intended

meaning (see also Reimer & Camp 2006). Grice's approach to metaphor and other tropes is based on the assumption that figurative language is deviant and needs to be pragmatically adjusted to make sense. In this case, the deviance manifests itself in the fact that, literally, metaphorical and other figurative utterances often exhibit a categorial falsehood. In essence, this does not seem to be very far removed from a Chomskyan account in terms of a violation of selectional restrictions.

Neither formalist theories, such as generative grammar, nor Gricean pragmatics see any connection between grammar and figuration. But there are theories that assume such a connection, one of them being *Systemic Functional Linguistics* (SFL), which makes use of the notion of *grammatical metaphor* (Halliday 2004; Taverniers 2004, 2006).²⁴ To illustrate the concept of grammatical metaphor in SFL, consider the italicized expression in (4):

- (4) They started a *letter writing* campaign. (Taverniers 2004: 7)

In terms of SFL, the expression *letter writing* codes a *process*. Now, SFL stipulates that the *default* coding of a process is a finite clause (e.g. *They wrote letters*). The coding of this process as in (4) involves a *transfer* from the default coding to another coding – here a nominalization. It is this transfer that is called 'grammatical metaphor'.

One might be tempted to assume that the notion of grammatical metaphor in SFL finds its analogue in Cognitive Linguistics. The nominal compound *letter writing* is also regarded as a (conceptual) metaphor in Cognitive Linguistics: it could be named ACTIVITIES ARE SUBSTANCES. Nominals prototypically denote THINGS (e.g. *pencil*) or SUBSTANCES (e.g. *powder*). The conceptual system treats the activity 'write letters' as if it were a substance and this conceptualization is reflected in the grammatical system: the activity is syntacticized as a nominal (see Figure 9).

The metaphorical mappings from the source domain SUBSTANCE into the target domain ACTIVITY are quite straightforward. Both substances and activities have no inbuilt boundaries; both are divisible into smaller parts without losing their *essential* property of being substances or activities, respectively. Smaller quantities of powder are still powder, and, analogously, the activity of letter writing does not cease to be letter writing when it is divided into smaller events (at least up to a certain point). There are thus important correspondences between substances and activities, but not all properties of substances are mapped onto activities. For example, substances are fairly stable across time, but we know from experience that activities are usually more short-lived than substances and often have an uncoded beginning and end. For a subset of attributes there is thus a *structure-preserving mapping* from the source domain SUBSTANCES into the target domain ACTIVITIES, but this mapping does not work for all attributes.²⁵

On closer inspection, it becomes clear that Cognitive Linguistics and SFL do not share the same notion of grammatical metaphor, as examples (5) and (6) illustrate (from Taverniers 2006: 322):

- (5) John *must* have left. (not metaphorical)
 (6) *I think* John has already left (because the lights are off). (metaphorical)

In SFL sentence (6) is considered a grammatical metaphor because the modal sense "is expressed not within the clause, but through a separate expression" (Taverniers 2006: 322).

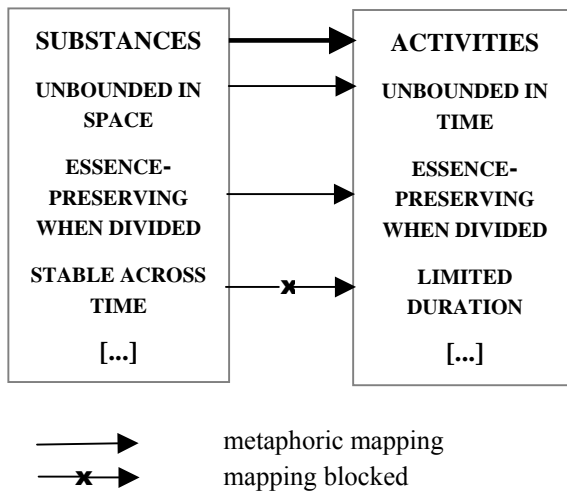


Figure 9. Grammatical metaphor: ACTIVITIES ARE SUBSTANCES

In other words, (6) is a “metaphorical” expansion of the “basic clause” (5) (Taverniers 2004:7). The grammatical metaphor here really amounts to a shift from one construction type to another construction type. In Cognitive Linguistics, metaphor involves a set of correspondences (mappings) between a source domain and a target domain. In this framework, the relation between sentences (5) and (6) would not be regarded as metaphorical. Moreover, neither (5) nor (6) in isolation exemplify cases of conceptual metaphor in the sense of Lakoff and Johnson.

Traditionally, the distribution of individual lexical items in the clause would not be considered to be part of grammar. But since Cognitive Linguists have adduced good reasons for the claim that lexicon and grammar form a continuum, it makes good sense to replace the term ‘grammar’ with ‘lexicogrammatical system’, or, *lexicogrammar*, *tout court*. If it is assumed that the lexicon and grammar form a continuum, there is no clear-cut distinction between individual lexical items, and more “grammatical” or “functional” elements such as determiners and aspectual morphemes, or parts of speech with an abstract type (class) meaning such as nouns, verbs, adjectives, etc. All of these units are meaning-bearing and are thus potentially subject to metonymic and metaphoric operations.

In what follows, we suggest a characterization of grammatical metaphor and grammatical metonymy that is inspired by, but not completely identical with, Lakoff and Johnson’s conception of grammar (morphosyntax) as described in Section 3 above. We assume the following:

- (7) i. Lexicogrammar is concerned with the distribution of meaning-bearing units, viz. individual open-class lexical items, function words/morphemes, and word classes (parts of speech) in constructions (and possibly in discourse).
- ii. We speak of *lexicogrammatical metonymy/metaphor* if and only if the distributional properties of a meaning-bearing simple or complex linguistic sign is motivated, i.e. at least partially determined by conceptual metaphor/conceptual metonymy.

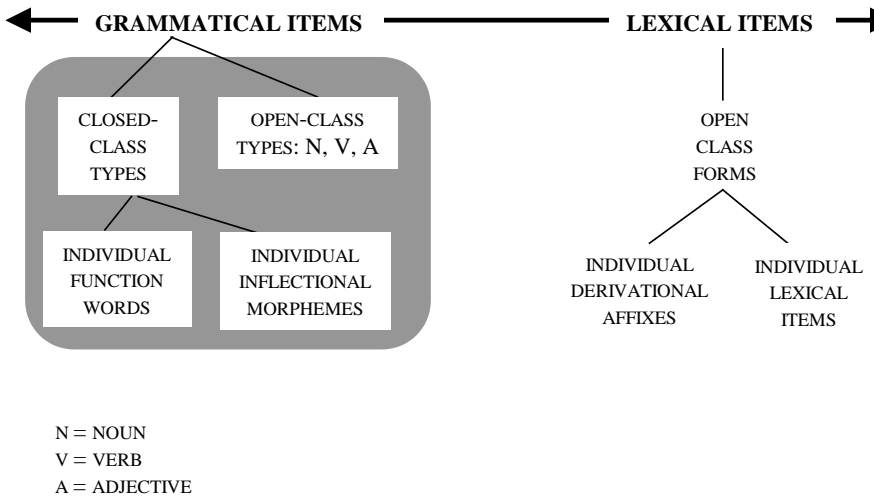


Figure 10. Lexicogrammar continuum

The notion of lexicogrammar assumed in (7i) and (7ii) allows for the possibility of some linguistic phenomena being more “grammatical” than “lexical”, and vice versa. Figure 10 represents some clear cases of elementary grammatical and lexical units whose distributional properties in constructions and discourse are studied by “ordinary” grammarians.

There is nothing unusual about the content of Figure 10; it is commonplace to distinguish between e.g. open-class and closed-class forms and to assume that inflectional morphology can have important *syntactic* functions (e.g. case morphemes in highly inflected languages), in contrast to derivational morphemes, which are usually regarded as functional means to enrich the lexicon. Furthermore, parts of speech such as nouns, verbs, and adjectives are abstract types with no phonological specification; they are felt to be grammatical units rather than belonging to the lexicon. In contrast, at the other end of the spectrum, there are the individual words that make up the lexicon of a language. As long as one keeps in mind that the distinction between grammatical elements and lexical units is not binary, but gradable, it is not harmful to distinguish between grammar and lexicon.

Talmy (2001:28) advances the interesting hypothesis that topological or topological-like concepts such as ‘point’, ‘linear extent’, ‘locatedness’, ‘singularity’, and ‘plurality’ tend to occur as grammatical elements. Among the non-topological notions that he has found that grammaticalize easily, are ‘material’, ‘space’, ‘time’, ‘motion’, ‘medium’, and ‘entity currently indicated/communicating’. Other concepts seem to resist coding as grammatical elements – e.g. ‘absolute/quantified magnitude (of distance, size, etc.)’, ‘shape/contour of line’, and ‘color’. If Talmy’s observations are correct, they support the view that a distinction between grammar and lexicon can be made even if the boundaries between the two are fuzzy.

Before analyzing linguistic phenomena in terms of how figurative meanings interact with grammatical structure, we briefly characterize the notions of metaphor and

metonymy that underlie grammatical metaphor and grammatical metonymy conceptually (for a more detailed discussion of our approach to conceptual metaphor and metonymy, see e.g. Panther 2006, Panther & Thornburg 2007). For our purposes, it is sufficient to define conceptual metaphor as a case of *structural* similarity, i.e. a set of correspondences (mappings) between two conceptual structures (source and target). The relation between source and target can be seen as *iconic* (isomorphic): the target meaning is, mostly, conceptually organized in the same way as the source meaning, although certain correspondences may be blocked due to the inherent conceptual structure of the target meaning. An example of such an isomorphic mapping is the ACTIVITIES ARE SUBSTANCES metaphor discussed in Section 4.1 and diagrammed in Figure 9.

In contrast to (most cases of) metaphor, conceptual metonymy is characterized by exactly *one* link between source and target. The semiotic relation between metonymic source and target is *indexical*, i.e., the source meaning functions as a thought vehicle that more or less automatically evokes the target meaning. We regard the metonymic target meaning as a conceptual elaboration of the source meaning, in which the latter remains an integral part of the target meaning, but becomes backgrounded as a result of the metonymic operation. The relation between source and target meaning in both metaphor and metonymy is contingent. By ‘contingent’ we mean that this relation is not logically or conceptually necessary; rather it is shaped by experiential, perceptual, and motor interactions of humans with their environment, and their culture-specific beliefs and practices.²⁶

On the basis of the preceding discussion, we characterize grammatical metonymy/metaphor as follows:

- (8) *Grammatical metonymies/metaphors* are *conceptual metonymies/metaphors* that motivate distributional properties of function words, grammatical morphemes, and word classes (nouns, verbs, adjectives, etc.). To the extent that the boundaries between lexicon and grammar are fuzzy, the boundaries between lexical metaphor/metonymy and grammatical metaphor/metonymy will also be fuzzy.

4.2 Source or target: What motivates grammatical structure?

If a range of phenomena, albeit with fuzzy boundaries, exists that can rightfully be called ‘grammatical metonymy’ and ‘grammatical metaphor’, it remains to be determined what exactly shapes the distribution of grammatical elements. The possible factors are

- (9) i. the source meaning,
 ii. the target meaning,
 iii. a combination of both source and target meaning

of the figure of thought in question.

Which of (9i–iii) is the crucial factor shaping the grammatical system is an empirical question in the sense of Lakoff and Johnson (1999) (see Section 3 above). As a first approximation, we formulate two working hypotheses:

- (10) i. In the case of grammatical metaphor the relevant factor shaping lexicogrammatical structure is typically the *source* meaning of the metaphor.

- ii. In the case of grammatical metonymy the relevant factor shaping lexicogrammatical structure is typically the *target* meaning of the metonymy.

With regard to grammatical metaphor, we thus would expect the distribution of lexicogrammatical elements to be more sensitive to the source meaning of the metaphor in question. In contrast, with regard to grammatical metonymy, we would expect the distribution of lexicogrammatical elements to be more sensitive to the target meaning of the metonymy in question. These are of course empirical hypotheses and must be systematically tested against empirical data. All we can do in this introductory chapter is to illustrate and support them with some examples in the subsequent two sections.

5. Grammatical metaphor

To illustrate hypothesis (10i), we start with a phenomenon known in many languages as the Historical or Narrative Present, which is based on the conceptual metaphor PAST IS PRESENT, i.e., events that are situated in the past are reported by a narrator as if they happen at the moment of speaking (see e.g. Brdar 2007:47).²⁷ Consider the following oral narrative collected by Nessa Wolfson (1982:98):

- (11) Mom! You wouldn't believe what Mark just *did*. I *was* in my room reading and he *comes* in and *starts* telling me about Merry. I *didn't listen* so he *grabs* my book, *closes* it, *pushes* me down in my chair and when I *hit* him he *complains* that I'm *bothering* him! [italics ours]

The metaphorical structure of a clause such as [...] *so he grabs my book* in (11) can be represented as in Figure 11.

The pragmatic and sociolinguistic complexities of the Conversational Historical Present (CHP) cannot be exhaustively described by the term 'grammatical metaphor'. Ultimately, the function of grammatical metaphors and metonymies must be studied in a broader discourse context. For our purposes, it suffices to note that in ordinary conversational discourse the CHP usually alternates with the Past Tense and that the switch from one tense to the other often occurs within the same sentence (as in example (11)). The main point in the present context is that the PRESENT (source) is metaphorically mapped onto the PAST (target), and the grammatical reflex of this mapping is that the Present Tense is used where – non-metaphorically – the Past Tense would occur. From this simple observation one might infer that in grammatical metaphors the source meaning is *prominent*, i.e. leaves its mark on grammatical form. To see that this conclusion needs some modification, consider utterance (12), another example from Wolfson (1982: 30). We have enclosed the clauses in numbered brackets and italicized the relevant verb forms and time adverbials:

- (12) [*This morning* he *came by* and *waved*]₁ and [he never *comes by* and *waves*]₂ but [*this morning* he *comes by* and *waves*]₃.

The first (narrative) clause in (12) contains only past tense forms and the time adverbial *this morning*, which here refers to a (recent) past time and functions as a temporal setting

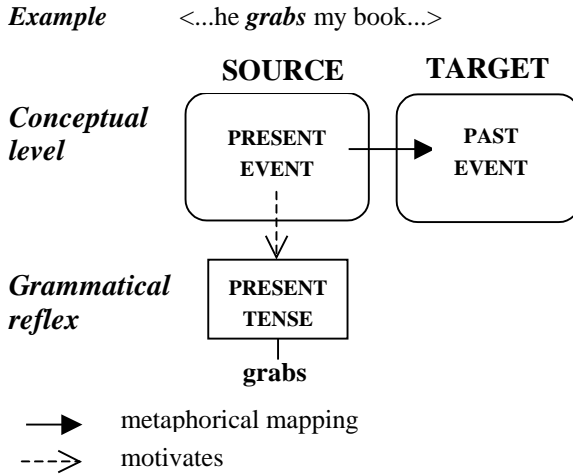


Figure 11. The grammatical metaphor PAST IS PRESENT

for the events reported. The first clause refers to two specific events in the Past Tense; in the second clause the Present Tense is used in a habitual sense; and the third clause reports two specific past events ('coming by' and 'waving') in the CHP. The third clause is especially interesting because the past time adverbial *this morning* and the CHP *co-occur* in it without creating a feeling of *contradiction* in the minds of language users.²⁸ The third narrative clause shows that it is possible for elements that belong to two distinct temporal frames to be used together in the same clause. The use of the Present Tense is a reflection of the source domain of the metaphor, viz. PRESENT; the time adverbial, which here is not affected by the metaphor, is a reflection of the temporal domain PAST. This situation is diagrammed in Figure 12.

However, the time adverbial itself may also be affected by the metaphor PAST IS PRESENT, as in (13):

- (13) But *now* he *comes by* and *waves*.

which, we assume, is an acceptable alternative version of the third clause in (11). In sentence (13) all temporal elements (time adverb and verb forms) are consistently metaphorized. The past is consistently talked about as if it were the present. In other words, in example (13), the metaphorical source domain PRESENT determines the present tense forms of the verbs as well as the selection of a time adverbial with present time reference. We represent this state of affairs in Figure 13.

As a second set of more complex examples, let us consider instantiations of a grammatical metaphor that underlies a type of subject–predicative nominal agreement in German (cf. Köpcke, Panther, & Zubin 2008). The phenomenon is illustrated by the sentences in (14) and (15):

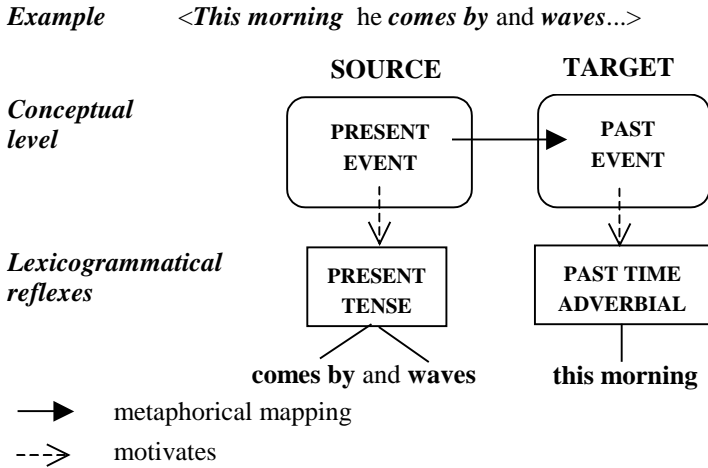


Figure 12. The metaphor PAST IS PRESENT and past time adverbial combined

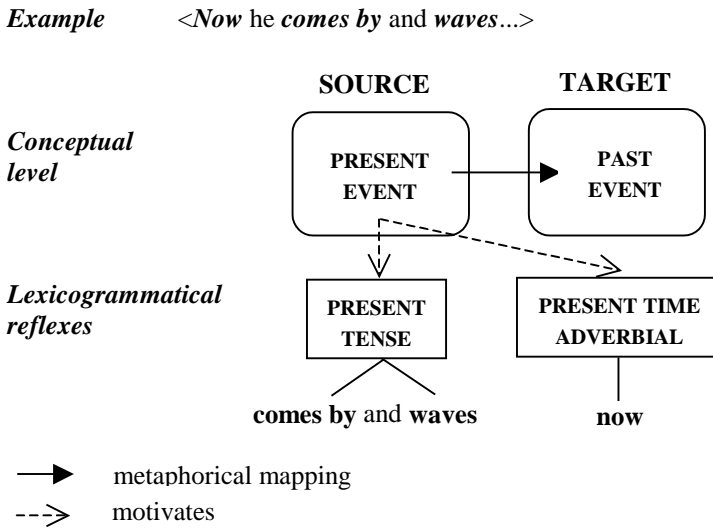


Figure 13. The metaphor PAST IS PRESENT and present time adverbial combined

- (14) a. Beate ist Eigentümerin dieses Grundstücks.
Beate.FEM is owner-FEM of.this property
'Beate is the owner of this property'
- b. Die Stadt ist Eigentümerin dieses Grundstücks.
the.FEM city.FEM is owner-FEM of.this property
'The city is the owner of this property'

Example

<Die Stadt ist **Eigentümerin** dieses Grundstücks>

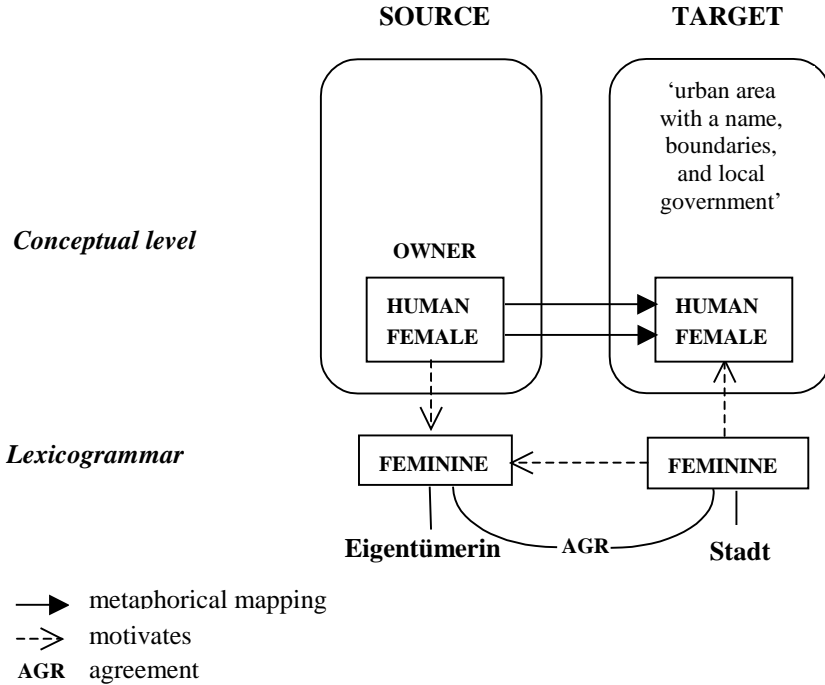


Figure 14. Metaphor and gender interaction

- c. Die Stadt ist Eigentümer dieses Grundstücks.
the.FEM city.FEM is owner.MASC of.this property
'The city is the owner of this property'
- (15) a. Der Landkreis ist Eigentümer dieses Grundstücks.
the.MASC county.MASC is owner.MASC of.this property
'The county is the owner of this property'
- b. *Der Landkreis ist Eigentümerin dieses Grundstücks.
the.MASC county.MASC is owner.FEM of.this property
'The county is the owner of this property'

The suffix *-in* in German refers by default to FEMALES of the category (usually humans) denoted by the stem; their grammatical gender is without exception FEMININE. In (14a), there is agreement between the grammatically feminine and conceptually female noun *Beate* and the predicate nominal *Eigentümerin* 'female owner', which is also grammatically feminine and conceptually female.²⁹ There is nothing metaphorical about this sentence.

Sentence (14b) is constructionally parallel to (14a); its subject is *die Stadt* 'the city', the article and noun of which exhibit the grammatical feature FEMININE, but *Stadt*, by definition, has no natural gender. In (14b) the city is conceptualized *as if* it were a female human being and, accordingly, it is possible to have the grammatically feminine and conceptually female noun *Eigentümerin* in the predicate nominal position, although this is



Figure 15. Daniel Berger nach Angelika Kauffmann, *Die drei Bildenden Künste*, Kupferstich, 1786 (Source: <http://www.uni-potsdam.de/u/fea/kunst/projekt3.htm>)

not necessary, as can be seen from (14c), where the grammatically masculine predicate nominal *Eigentümer* ‘owner’ is used. Sentence (14b) exemplifies metaphorical personification that could be dubbed CITIES ARE HUMAN FEMALES. How does this metaphor come about? First, we assume that the grammatical gender FEMININE of the subject *die Stadt* “encourages”, or more technically *licenses*, an interpretation of the city as female-like. This interpretation motivates the use of a predicate nominal that is itself grammatically FEMININE (grammatical agreement). The predicate nominal *Eigentümerin* is conceptually HUMAN and FEMALE and projects these features metaphorically onto the meaning CITY, thus reinforcing a conceptualization of *Stadt* as a female human being. The interesting point, which, to our knowledge has not been made yet in the literature on metaphor, is that a *grammatical property* (here: the gender feature FEMININE), which is *culturally* associated with the semantic property FEMALE, enables a metaphorical process. Figure 14 summarizes the analysis we propose.

Additional support for our analysis comes from the fact that a masculine noun such as *Landkreis* ‘county, district’ *requires* the masculine predicate nominal *Eigentümer* – the use of the feminine form *Eigentümerin* in (15b) is ungrammatical.

The cultural association of many feminine German nouns with the semantic property FEMALE is especially evident with abstract nouns like *Kunst* ‘art’, which is grammatically FEMININE.³⁰

- (16) Kunst ist die Vermittlerin des Unaussprechlichen.
 art.FEM is the mediator-FEM of.the unspeakable
 'Art is the mediator of the unspeakable'

In (16)) art is metaphorized as a woman, which results in grammatical and conceptual agreement with the predicate nominal *Vermittlerin* 'female mediator'. This conceptualization of art as a woman seems in turn to be motivated by the tradition in Western culture to represent the arts (muses) as young females. For example, the three plastic arts are often depicted allegorically as women, as in the 18th century copperplate engraving in Figure 15.

The grammatical and metaphorical structure of (16) is exactly the same as that of (14b). The feminine grammatical gender of *Kunst* 'art' combined with the traditional Western conceptualization (ART IS A YOUNG WOMAN) and pictorial representation of the arts as human females motivate the use of the grammatically FEMININE and conceptually FEMALE form *Vermittlerin* 'female mediator' in the predicate nominal position of (16), which thus agrees both grammatically and conceptually with the subject *die Kunst* 'the art'.³¹

In conclusion, the grammatical and metaphorical analysis of increasingly more complex examples seems to support our view that metaphorical processes have an impact on grammar and that the source domain plays a crucial role in structuring the grammatical properties of the target. However, as (14) and (15) have revealed, grammatical features themselves sometimes have cultural correlates, gender being a case in point, and such grammatical properties may trigger metaphorical processes, which, in turn, feed back into the grammatical system.

6. Grammatical metonymy

To prepare the stage for the discussion of grammatical metonymy it is useful to recall the notion of grammatical metaphor in Systemic Functional Linguistics (SFL) discussed in Section 4.1 above. In a recent article, Taverniers (2006:322) contrasts utterances with a directive illocutionary force like the following:

- (17) a. Could you send your proposal by email, please?
 b. Please send your proposal by email.

For Taverniers (2006:32–33) the "default encoding of a command" is the imperative, as exemplified in (17b). Sentence (17a), she says, contains additional codings, such as the address form *you* and the modal auxiliary *could*. She proposes that (17a) is a "metaphorical variant" of (17b), i.e. a grammatical metaphor.

It is clear that Taverniers' view of grammatical metaphor is very different from the conception of figurative thinking in grammar that we have thus far developed. Typically, the utterance of (17a) with the intended interpretation as a request, rather than a question, is considered an instance of a conventionalized indirect speech act with a directive force. Panther and Thornburg (e.g. 1998, 2007), inspired by Gibbs' (1994) work, have argued that indirect speech acts involve *metonymic* reasoning within frames that are called *speech act*

scenarios. The syntax of indirect speech acts is also considered in SFL; in SFL “grammatical metaphor” constitutes a relation between sentences. In contrast, we consider the impact that *cognitive mechanisms* like metaphor and metonymy bring to bear on (lexico)grammatical structure. For conventionalized indirect illocutionary acts like (17a), there is very strong evidence that the distribution of *lexicogrammatical* elements like the adverb *please*, in particular its preverbal position in conventionalized indirect speech acts like (17a) above, is dependent on the metonymic *target* meaning of the illocutionary act (what Searle 1975 calls the ‘primary illocutionary act’).³² Consider example (18), a line by pop singer Chan Marshall in her song “Song to Bobby”, addressed to her idol Bob Dylan.³³

(18) Can you please be my man?

This utterance, like (17b), contains the preverbally located *please*, which pragmatically makes sense only if a target sense ‘I ask you to be my man’ is assumed. Moreover, the verb phrase *be my man* is literally *stative*; but directive speech acts impose the condition on their propositional content that a future *action* is predicated of the hearer. Thus, more precisely, the target sense of (18) is ‘I ask you to do something to the effect so that you are my man’. This kind of target sense coercion is effected by the metonymic principle RESULT FOR ACTION.

Finally, one might wonder what the status of the modal *can* is in indirect speech acts such as (17a) and (18). It has often been suggested (e.g. Searle 1975) that the use of *can* in indirect requests is *idiomatic* – although Searle emphasizes that conventional indirect requests with *can* are *not* idioms. Others, e.g. Sadock (1972), have characterized utterances like (17a) and (18) as ‘speech act idioms.’ The claim that conventional indirect requests are idiomatic or even idioms is usually justified by the observation that alternatively available expressions such as *be able to* or *have the ability/possibility to* are not used conventionally to convey indirect requests. Also, different from *can*-requests, they do not freely collocate with *please*:

- (19) a. *Are you *please* able to be my man?
 b. *Do you *please* have the ability to be my man?
 c. ?Are you able to be my man, *please*?
 d. ??Do you have the ability to be my man, *please*?

In contrast to Searle and Sadock, we suggest that the use of *can* (*you*) as a conventional illocutionary indicator of (indirect) requestive force is motivated. Panther and Thornburg (2006) have argued that *can* is the “leftmost” member of a *manner scale* of the sort <*can, be able to, have the ability to*>. The term ‘manner’ is inspired by Grice’s (1975) Maxim of Manner, one of the principles that guides rational conversation. A manner scale is a scale consisting of terms that are (approximately) synonymous, but differ in the kind of pragmatic effects (implicatures) they produce. The members of the scale are distinguished in terms of length (number of syllables/morphemes) and their degree of grammaticalization (or, conversely, lexicalization): *can* is the shortest and phonologically most reduced element in the scale (often pronounced [kən]), and we claim that, in this quality, it is the most likely candidate for acquiring a *grammatical* function. In fact, it has become a quasi-grammatical marker for a sentence type with a directive illocutionary potential. Moreover, as is well known, *can* belongs to a closed set of elements (modal auxiliaries)

with specific morphological characteristics. To conclude, the use of *can* (and *could*, for that matter) in conventionalized indirect directives is not an unexplainable idiosyncrasy, as Searle's and Sadock's accounts in terms of idiomaticity suggest, but a motivated lexicogrammatical reflex of the combined effects of the conceptual metonymy ABILITY (to act) FOR REQUEST (to act) and the value of *can* relative to other synonymous expressions on a manner scale.

The structure and functioning of conceptual metonymy have been explored for about ten years now (see the seminal articles by Kövecses & Radden 1998 and Radden & Kövecses 1999; see also Brdar 2007 and Panther & Thornburg 2007 on recent research), but it has not received the same attention as metaphor, even though metonymy is arguably more fundamental than metaphor (see e.g. Barcelona 2000, Radden 2002 for insightful discussion of this point).

We assume that prototypical conceptual metonymies highlight or make *prominent* the target meaning of the metonymic process while at the same time backgrounding the source meaning. Diachronically, the source meaning might eventually vanish, i.e. result in what Riemer (2002) calls a post-metonymy. With regard to grammatical metonymy, one would thus expect the target meaning to shape the distribution of at least some lexicogrammatical elements in a construction. In what follows, we discuss two sets of examples to support this hypothesis.

The impact of metonymy on grammar has been demonstrated convincingly by a number of researchers: a nonexhaustive list includes Barcelona (2003, 2004, 2005, in press), Ruiz de Mendoza Ibáñez and Pérez Hernández (2001), Ruiz de Mendoza Ibáñez and Mairal (2007), Ziegeler (2007), and Brdar (2007), whose monograph contains case studies from various grammatical domains and an excellent bibliography for further reference. In what follows, we present two additional sets of data that, in addition to the already accumulated evidence, provide further support for the impact of metonymy on grammar.

Grammatical metonymy is ubiquitous in cases that involve the interaction of constructions and the aspectual meanings of verbs used in them. As an illustrative case consider the following text from an American newspaper:³⁴

- (20) Democrat Otis Hensley [...] promised to *find* a way to get legislators not to tie up coal severance tax dollars [...].

Sentence (20) contains what can be called an *Action Construction* (Panther & Thornburg 2000, 2007). The verb *promise* conceptually requires a propositional content that is subsequent in time to the time of promising, viz. an action to be performed by the promiser. As is well known, one way of coding the propositional argument of *promise* is an infinitive clause with an understood subject referent, as exemplified in (20). Given the conceptual constraint that the propositional argument of verbs such as *promise*, *pledge*, *request*, *order*, *advise*, *persuade*, *convince*, etc., involves a future action, one would expect that only verbs denoting actions be used in the infinitive clause. The use of the verb *find*, which has the basic sense 'discover or perceive by chance or unexpectedly', seems to falsify this prediction.³⁵ One usually encounters *find* in constructions like the following:

- (21) Mary found a ten-dollar bill in the gutter.

Vendler (1957: 147) calls punctual verbs of the *find* class *achievement terms*, and distinguishes them from *states*, *activities*, and *accomplishments* (146). Accomplishments are often (though not necessarily), goal-directed *actions*, and *find* in (20), in contrast to *find* in (21), denotes an accomplishment rather than an achievement. The difference between the two verb senses, the achievement sense (*find*₁) and the accomplishment sense (*find*₂), can be illustrated in more detail by the following (made-up) utterances:

- (22) a. When/at what time did Mary *find*₁ (by chance) the ten-dollar bill? (achievement)
 b. Mary *found*₁ the ten-dollar bill (by chance) *at two o'clock*. (achievement)
- (23) a. How long did it take Otis Hensley to *find*₂ a way to get legislators not to tie up coal severance tax dollars? (accomplishment)
 b. Otis Hensley *found*₂ a way to get legislators not to tie up coal severance tax dollars *in ten days*. (accomplishment)

In (22a, b) the interrogative expressions and the time adverbial refer to a time point; if the speaker had used an expression such as *how long did it take* or *in five hours*, respectively, the notions of action and intentionality would have been conveyed, i.e., *find* would have an accomplishment sense. In (23a, b), the meaning conveyed in the two utterances is clearly that of an accomplishment. It is not impossible to use *When/at what time did Otis Hensley find a way [...] or Otis Hensley found a way [...] at two o'clock [...]*, but such a change in the wording would result in the interpretation that the politician happened to come across a solution by chance, not by thoughtful planning. Thus (23a, b) invite the inference that a time period of goal-directed activity leads to the culmination point of ‘finding’.

We are now in a position to describe how the senses of *find*₁ and *find*₂ are related. First, the previous discussion has revealed that the achievement sense of *find* is a conceptual part of its accomplishment sense. The accomplishment meaning of *find*₂ can be paraphrased informally as ‘look for/seek (intentionally) x with the envisaged goal/result of finding x’. Second, we observe that the sense of *find*₂ is a metonymic elaboration of the sense of *find*₁, and it is this elaborated sense that becomes prominent in sentences like (20). Whereas ‘looking for something’ is a goal-directed (telic) activity that does not necessarily lead to a successful result, when the activity does lead to a result, as in the case of *find*₂, it becomes an accomplishment. The metonymy involved can be called RESULTANT ACHIEVEMENT FOR ACCOMPLISHMENT, which is a subtype of the RESULT FOR ACTION metonymy. Finally, the Action Construction exemplified in (20) *coerces* the meaning of *find*₁ into adopting the meaning of *find*₂. We diagram this analysis in Figure 16, representing the conceptual structure of the source and target meanings by means of semantic tree diagrams (of the sort found in Tenny & Pustejovsky 2000).

The lexicogrammatical repercussions of the RESULTANT ACHIEVEMENT FOR ACCOMPLISHMENT metonymy are further illustrated with the following sentences, which again demonstrate the differing distributional properties of *find*₁ and *find*₂:

- (24) a. How to find a solution to the problem. (accomplishment)
 b. ?How to find a ten-dollar bill by chance. (achievement)
- (25) a. Find a solution to the problem! (accomplishment)
 b. *Find a ten-dollar bill by chance! (achievement)

Conceptual structure of find₂

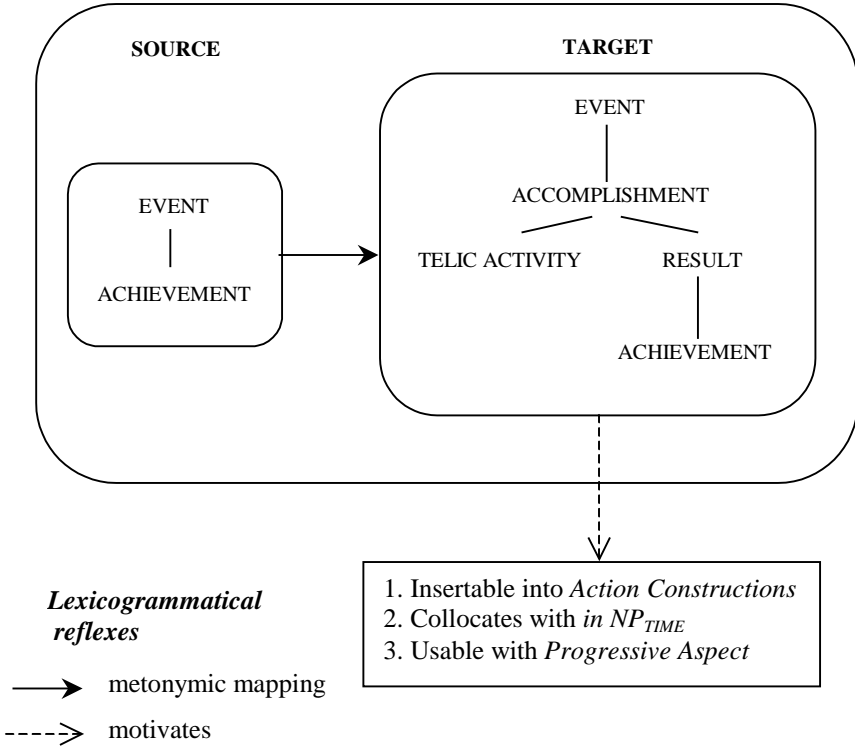


Figure 16. Metonymic coercion from RESULTANT ACHIEVEMENT to ACCOMPLISHMENT

- (26) a. Jane was (in the process of) finding a solution to the problem. (accomplishment)
- b. ³Mary was finding a ten-dollar bill by accident. (achievement)

Sentences (24a) and (25a) are examples of Action Constructions, which enforce an interpretation of *find* as an accomplishment. In contrast, (24b) and (25b) are not acceptable because *find* can only be understood as a punctual (accidental) achievement; the sentences denote unintended happenings and are thus barred from Action Constructions. Sentences (26a) and (26b) are especially interesting; they demonstrate the interaction of grammatical aspect, here the progressive, with lexical aspect. Example (26a) strongly suggests that Jane was *looking for* a solution and ultimately *found* it. Example (26b) is normally not considered acceptable because it does not express a durative situation and it cannot be given an iterative interpretation like e.g. the semelfactive *flash*.³⁶

As a second set of examples of grammatical metonymy we briefly discuss an English construction with verbs of perception.³⁷ Some examples illustrating the construction at issue are given in (27)–(31):³⁸

- (27) You look tired. (You should go to bed.)
- (28) Her voice sounded very young.

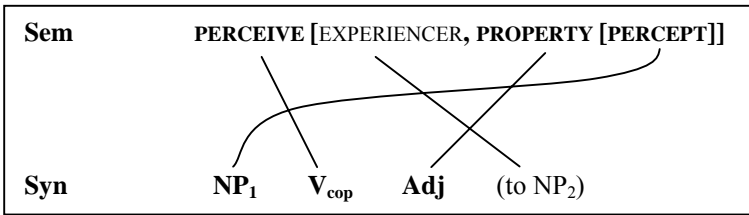


Figure 17. The syntax and semantics of the Percept Subject Construction

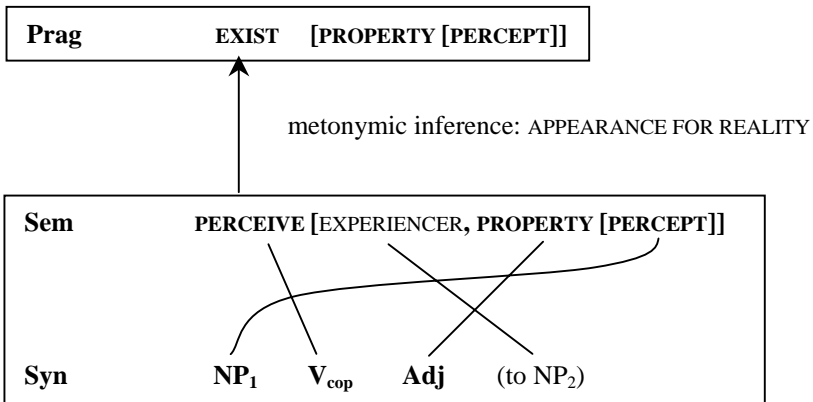


Figure 18. The syntax, semantics, and pragmatics of the Percept Subject Construction

- (29) The liver tasted awful ...
 (30) The stew smelled delicious.
 (31) Her hands felt rough.

The syntactic and semantic properties of this construction can be characterized as follows:

- (32) i. The subject (figure, trajector) is a PERCEPT (perceived entity), i.e. the object, person, scene, etc. of perception.
 ii. The EXPERIENCER (OR PERCEIVER) is backgrounded, i.e. optionally expressed as a prepositional phrase of the form *to NP*.
 iii. The PROPERTY of the PERCEPT is expressed by a predicative adjective.
 iv. The (copular) verb of PERCEPTION has a passive experiential meaning, which is roughly paraphrasable as ‘is perceived as’.

The syntactic and semantic characteristics of the construction (henceforth: *Percept Subject Construction*) are diagrammed in Figure 17, in which the foregrounded elements are in bold and the lines link conceptual elements to corresponding syntactic constituents.

An interesting additional feature of the Percept Subject Construction is the *pragmatic* implication it conveys that the property denoted by the predicative adjective *exists*. This slight meaning shift from perception to reality often goes unnoticed, but there is clearly

a difference between merely perceiving a property and assuming its reality. For example, when a person *looks* tired, it is quite natural to infer that the person in question *is* tired. The pragmatic implication that the sense impression corresponds to something “real” is especially strong with visual impressions, as expressed by the verb *look*. The association between “appearance” and “reality” is perhaps less tight in the case of the olfactory and the gustatory sense impressions, but it is still possible to infer from e.g. (28) that the liver *is* awful. In Figure 18 the metonymic inference that leads from perception to the assumption that the properties of the world *are* like they are perceived is named APPEARANCE FOR REALITY.

The next step in the analysis of examples like (27)–(31) is to determine whether the metonymic inference from appearance to reality has any grammatical reflexes. The answer is “yes”, although these grammatical effects are not manifest in the same clause in which the metonymic inference operates, but show up in the subsequent clause. To see this consider (33)–(35):

- (33) The police officer *looked puzzled* and so *was* I for that matter because I considered our food preparation to be trouble enough. [Google search, March 3, 2005]
- (34) The American girl *looked puzzled*, and so *was* Minwoo and Cristel. [Google search, March 3, 2005]
- (35) Hwanhee *looked puzzled* and so *was* everyone else. [Google search, March 3, 2005]

In the above examples the morphosyntactic reflex of the metonymy ‘looked puzzled’ for ‘was puzzled’ manifests itself in the anaphoric continuation *and so was NP*, which resumes the verb phrase in the preceding clause. We contend that the first clauses in (33)–(35) already convey the metonymic implications that the respective referent of *NP₁* – viz. *the*

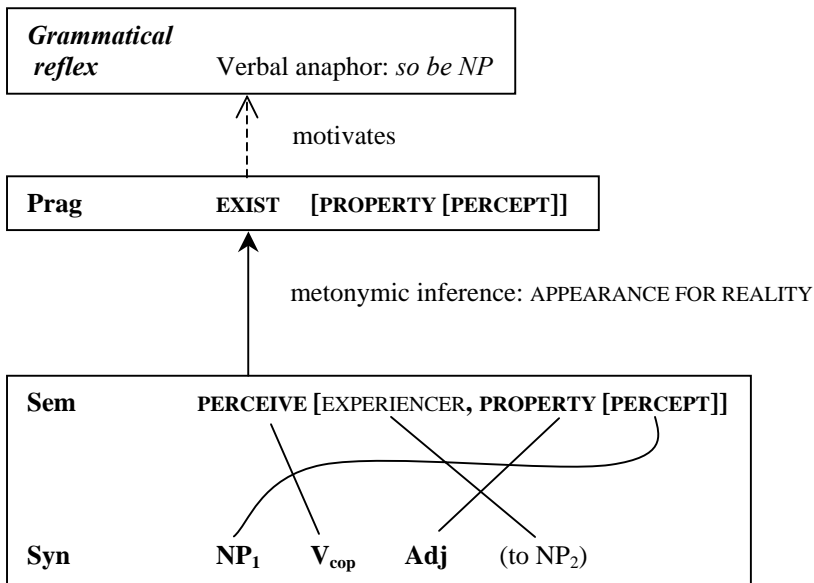


Figure 19. Grammatical reflections of the metonymic inference APPEARANCE FOR REALITY

police officer in (33), *the American girl* in (34), and *Hwanhee* in (35) – *was* puzzled, and the verb phrase anaphor *and so was X* agrees with this metonymic target. In other words, in these examples *look* (APPEARANCE) is anaphorically resumed by *was* (REALITY), and the discourse develops on the basis of this target meaning.

Utterance (36) provides an example of an inference from the domain of sound to the ontological domain of reality:

- (36) You *sound angry* about your friend's response. *Is that so?* You won't believe what she said and did to me. I'll never be her friend again! [Google search, October 8, 2007]

The speaker here draws a more tentative metonymic inference than in sentences (33)–(35) from the source meaning 'sounding angry' to the target sense 'being angry'. The overt indicator that supports this interpretation is the subsequent question *Is that so?*, by means of which the speaker seeks confirmation that his/her inference is correct.

Figure 19 summarizes the properties of the Subject Percept Construction we have identified: (i) the syntax and the "literal" meaning of the construction, (ii) the default metonymic inference from APPEARANCE to REALITY, and (iii) the grammatical reflex of the metonymic target meaning, which manifests itself as a subsequent verb phrase anaphor.

As a final point, we add one more observation about the conceptual metonymy APPEARANCE FOR REALITY. As mentioned above, there is a tight connection in the mind of speakers between what they perceive and what they automatically believe to be the case in the real world. One might therefore be tempted to consider the metonymic relation to be based on an entailment relation, i.e. a conceptually necessary connection between two concepts. However, the relation between source meaning and target meaning is defeasible, and is, in fact, sometimes overtly canceled by language users. To see this, consider the following utterance found on the Internet:

- (37) I *look* damn angry, but I'm really not. [Google search, March 15, 2005]

The speaker explicitly denies the validity of the default inference that s/he *is* angry and, despite the tight connection between appearance and reality, (36) is not at all felt to be a contradictory statement.

7. The contributions to this volume

The contributions to the present volume cover a variety of linguistic phenomena that exhibit interactions between metonymy and metaphor and lexicogrammatical structure. We have organized the contributions into five parts, largely on the basis of the kinds of lexicogrammatical phenomena investigated by the authors. Languages and language varieties analyzed in some depth include: Aghul (East Caucasian), Brazilian Portuguese, Croatian, English, Singaporean and Malaysian English, French, German, Hungarian, Russian, Spanish, Tagalog, and Udi (East Caucasian). In the subsequent sections, we provide brief summaries of the content of the contributions.

7.1 Part 1: Word class meaning and word formation

The three contributions in Part 1 are dedicated to grammatically relevant metaphoric and metonymic operations on the word level. Wiltrud Mihatsch considers the empirical evidence for postulating a metaphorically based **THING** schema for nouns. Margarida Basilio discusses the metonymically motivated sense extensions of agent suffixes in Brazilian Portuguese, and Gary Palmer, Russell S. Rader, and Art D. Clarito provide an in-depth analysis of the Tagalog prefix *ka-*, which functions as a “metonymic operator”.

In her chapter “Nouns are THINGS: Evidence for a grammatical metaphor?” Wiltrud Mihatsch takes up the age-old question whether parts of speech, here nouns, have a conceptual basis. Her point of departure is Ronald Langacker’s postulate that nouns exhibit a **THING** schema that is metaphorically derived from the concept **PHYSICAL OBJECT**. Mihatsch discusses morphological, typological, semantic, and psycholinguistic properties that distinguish nouns from other parts of speech, as well as paths of lexical change that provide evidence for the **THING** schema. She also shows that nouns derived morphologically from other parts of speech are not semantically equivalent to their bases, but acquire lexicogrammatical and conceptual properties of nouns as a result of the nominalization process. This observation is in line with the hypothesis (10i) outlined in Section 4.2. that the source meaning of (grammatical) metaphors has an impact on the grammatical (distributional) properties of their targets. Thus, for example, in a verb-based nominal, the **THING** schema metaphorizes a **PROCESS** as a **PHYSICAL OBJECT**-like entity. Finally, Mihatsch analyzes overt manifestations of the noun schema, i.e. the use of lexemes such as *thing* as placeholders. Although the grammaticalization paths of these placeholder nouns do not reveal any metaphorical extensions from the concept **PHYSICAL OBJECT**, the synchronic properties of these nouns point to a metaphorical noun schema **THING**.

Margarida Basilio, in her chapter “The role of metonymy in word formation: Brazilian Portuguese agent noun constructions”, investigates the workings of conceptual metonymy in the creation of polysemy. Basilio’s aim is to show that metonymy is fundamental to the functioning of the lexicon as a dynamic storage system of symbolic forms. The author demonstrates that agent nouns in Portuguese are interpreted on the basis of metonymic models.³⁹ Agent nouns in this language include formations in *-dor* (e.g. *governador* ‘governor’), *-nte* (e.g. *estudante* ‘student’), *-eiro* (*porteiro* ‘doorman’), and *-ista* (e.g. *neurologista* ‘neurologist’). These suffixes are polysemous, i.e., they form families of metonymically related meanings. The term ‘agent noun’ of course does not cover the full range of meanings of these nouns, but it is motivated to the extent that e.g. the use of *-dor* for **INSTRUMENT** nouns (as in e.g. *refrigerador* ‘refrigerator’) is metonymically derivable from the source meaning **AGENT** (see Panther & Thornburg 2001, 2002 on *-er* nouns in English). The derived **INSTRUMENT** sense is conceptually *prominent*, but the source meaning **AGENT** is still a (backgrounded) part of the foregrounded instrumental reading; thus the distributional properties of such metonymically derived *-dor* nouns would be expected to follow from their metonymically derived meaning (Hypothesis (10ii) in Section 4.2).

The closing paper of this part is Gary Palmer, Russell S. Rader, and Art D. Clarito’s contribution “The metonymic basis of a ‘semantic partial’: Tagalog lexical constructions with *ka-*”. The authors’ analysis of constructional polysemy manifested by Tagalog *ka-*

and its variants finds that *ka-* is a metonymic operator. It evokes and marks what the authors term a ‘semantic partial’, which they define as “the conventionalized profiling of an element that is selected or abstracted from the conceptual base evoked by a linguistic root or stem”. Subsumed by the PARTIAL schema are the categories of INDIVIDUATION and ABSTRACT QUALITY. When the analysis of *ka-* as a semantic partial is applied to complex constructions, it reveals motivations missed by other approaches. Their findings are compared to Panther and Thornburg’s (2001, 2002) analysis of metonymy in the English nominalizer *-er*.

7.2 Part 2: Case and aspect

The papers of this section are dedicated to two kinds of core grammatical phenomena – case and aspect. Wolfgang Schulze offers a new approach to the analysis of case in East Caucasian languages, arguing that it has a metaphorical basis. Klaus-Uwe Panther and Linda L. Thornburg analyze conceptual conflicts between grammatical aspect and lexical aspect in French, their resolution through coercion (semantic shift), and their translation equivalents in English.

The first paper in this section is **Wolfgang Schulze’s** “A new model of metaphorization: Case semantics in East Caucasian”. This contribution takes the case systems of two East Caucasian languages (Aghul and Udi) as a point of departure for elaborating a model of metaphorization that is embedded in the framework of Cognitive Typology. Based on the assumption that metaphorization represents a procedural continuum including both metonymic and metaphorical output types, Schulze argues that this continuum can be modeled in terms of a ‘Mirror Hypothesis’. According to this hypothesis, metaphorization represents an entrenched cognitive routine that is characterized by fractal-like processes of inflation in language production as well as by deflation processes in comprehension. The Mirror Hypothesis itself makes strong reference to Neurocognitive Linguistics without, however, abandoning the camp of Analytical Cognitive Linguistics.

In their chapter “Aspect and metonymy in the French *passé simple*”, **Klaus-Uwe Panther** and **Linda L. Thornburg** discuss a case of semantic conflict resolution between two linguistic units. One possibility of resolving such a conflict is to *shift* or *coerce* the conceptual content of one unit so that it becomes conceptually compatible with the other unit. Panther and Thornburg argue that the availability and activation of high-level metonymies facilitate the resolution of semantic conflicts. The focus of their chapter is on cases in which the grammatical aspect marking of a verb (here: the *passé simple*, a perfective aspect in French) conflicts with the aspectual meaning (*aktionsart*) of the verb itself. The conflicting grammatical-aspectual and lexical-aspectual meanings can be avoided either (i) by selecting the “right verb”, or (ii) by shifting the meaning of the verb metonymically so as to accord with its grammatical-aspectual meaning. Relying on various parallel French-English corpora, Panther and Thornburg explore how these two languages differ as to which of the two coding strategies they tend to use with regard to the construction of aspectual meaning. The results of such an investigation shed light on conceptual metonymy as a typologically relevant parameter.

7.3 Part 3: Proper names and noun phrases

The chapters of Part 3 are mostly concerned with the metonymic interpretation of proper names and noun phrases. Günter Radden develops an account of generic reference in English in terms of metonymy and conceptual blending theory. Mario Brdar and Rita Brdar-Szabó consider metonymic uses of place names in four languages. Mario Brdar argues in his contribution that there are metonymies “we live without” and, like the preceding chapter, focuses on cross-linguistic differences in the exploitation of metonymies.

Günter Radden’s contribution “Generic reference in English: A metonymic and conceptual blending analysis” argues that generic reference in English is conceptually motivated by way of the metonymies *INSTANCE FOR TYPE*, *TYPE FOR SUBTYPE*, and the conceptual blending of instance and type. These conceptual processes motivate the particular uses of four types of generic reference in English. Radden’s contribution supports Hypothesis (10ii) proposed in Section 4.2 and exemplified in Section 6 above that metonymic *target* meanings have an impact on the distribution of lexicogrammatical elements. As has often been observed, the choice of tenses and aspects in generic statements is limited. Thus, in a sentence such as *The tiger had been hunting by night*, the noun phrase *the tiger* is a definite description that refers to a specific tiger; the sentence cannot receive a *TYPE* interpretation, a restriction that follows straightforwardly from the fact that the progressive past perfect blocks *the tiger* from being interpreted generically.

Mario Brdar and Rita Brdar-Szabó’s contribution “The (non-)metonymic use of place names in English, German, Hungarian, and Croatian” investigates the function of metonymy from a cross-linguistic and typological perspective. The authors begin with the observation that much recent research seems to indicate that referential metonymies are relatively unconstrained. However, in their corpus-based study on metonymically used place names, in particular the *CAPITAL FOR GOVERNMENT* metonymy in the language of the media, Brdar and Brdar-Szabó find that, while this type of metonymy is ubiquitous in English and German, it seems much less frequently used in Hungarian and Croatian. The constraints appear to be due to cognitive, discourse-pragmatic, and cultural factors. A detailed analysis reveals that some of the contrasts can be attributed to the fact that English and German metonymically-used locative NPs that function as subjects often find their counterparts in Hungarian and Croatian in prepositional phrases, or in attributively used adjectives. Brdar and Brdar-Szabó claim that such phrases, which maintain topic-continuity, are also full-blown referential metonymies. Their paper points to the importance of considering not only how metonymy influences grammar, but also how a language’s typological properties may influence the syntactic form and function of a metonymic vehicle.

In his contribution “Metonymies we live without”, **Mario Brdar** starts from the assumption that one of the central properties of metonymy is the contingency of the relationship between the metonymic source and its target. One of the less obvious corollaries of this claim is that metonymy can in general be dispensed with in language: the intended or targeted meaning can always be expressed by some alternative means and not necessarily by means of a metonymic source. In one case study Brdar discusses metonymic extensions from nouns denoting countable entities to a mass/substance sense. A second case study on

the metonymic interpretation of manner-of-speaking predicate adjectives concerns itself with clausal grammar, paving the way to the papers in Part 4 of this volume. Brdar's chapter focuses on metonymy avoiding and metonymy marking strategies, which, according to him, are used to different degrees in languages such as English, German, Hungarian, Croatian, and Spanish in order to restrict the proliferation of metonymy-induced polysemy. Brdar attempts to correlate these strategies with the grammatical features of these languages, showing that the relation between metonymy and grammar is bidirectional.

7.4 Part 4: Predicate and clause constructions

The chapters in Part 4 are concerned with the impact of metonymy and metaphor on predicate and clause structure. Rosario Caballero postulates a fundamental bias in humans to view static arrangements as dynamic configurations, a tendency that finds metaphorical expression in the way architecture is described in specialized magazines. Debra Ziegeler and Sarah Lee investigate a causative construction found in Singaporean and Malaysian English whose properties are motivated by metonymy. Rita Brdar-Szabó takes a typological stance, analyzing stand-alone conditionals with a conventional directive function in four languages.

In her chapter "FORM IS MOTION: Dynamic predicates in English architectural discourse", **Rosario Caballero** investigates the high frequency of terms such as *crouch*, *meander*, *clamber*, or *melt* to characterize built forms in their sites. This frequent construal of inherently static spatial arrangements as events involving motion is consistent with what Cognitive Linguists have suggested is the human cognitive bias towards dynamism. Caballero's chapter illustrates the ways architectural texts differ from general discourse in the use of motion predications, paying attention to the types of trajectors, landmarks, and verbs employed in the description of architectural artifacts. As well, she undertakes to reveal the figurative motivation underlying the use of motion predications in these descriptions. Specifically, it is proposed that dynamic relational predications are motivated by visually informed metaphors subsumed under the formula FORM IS MOTION, in which particular layouts or appearances (i.e. the targets in the mapping) are seen as reminiscent of the kind of movement encapsulated in motion verbs – i.e. the metaphorical sources. Furthermore, the paper explores a more innovative and complex way of describing spatial arrangements. In this particular kind of motion predicate the cross-domain mapping goes the other way round: that is, it is the shape of well-known functional objects together with the directional sense of the accompanying particle that is mapped onto and specifies the kind of movement suggested by built space. This metaphor might be formalized as SHAPE (MOTION) IS FORM, and is illustrated by expressions portraying buildings as *fanning out* or stairs as *scissoring down through space*. Both metaphors underlie the figurative and graphic construal of the relationship between buildings and sites responding to architects' visual concerns and it is proposed that these metaphors may themselves be metonymically motivated.

In their chapter "A metonymic analysis of Singaporean and Malaysian English causative constructions" **Debra Ziegeler** and **Sarah Lee** investigate a causative construction in Singaporean and Malaysian English. A common feature of these varieties of English – found to a lesser extent in British and U.S. English – is the 'conventionalized scenario'

(Goldberg 1995), i.e. a causative construction in which an intermediate causee is neither expressed nor necessarily recoverable from context and common ground. The authors' study provides empirical data on the use of conventionalized scenarios in Singaporean and Malaysian English and explains their link with resultative constructions in terms of a reversal of the RESULT FOR ACTION metonymy (Panther & Thornburg 2000), i.e. an ACTION FOR RESULT grammatical metonymy. In this metonymy, the passive action implied in the resultative participle becomes reactivated in a simple transitive construction and the causer now stands for both the causer and causee together. Language contact features in the dialects may also influence the extent of its usage.

A study that analyzes the role of metonymy in a speech act construction from a cross-linguistic perspective is Rita Brdar-Szabó's chapter "Metonymy in indirect directives: Stand-alone conditionals in English, German, Hungarian, and Croatian". Brdar-Szabó's paper is concerned with cross-linguistic variation in the exploitation of illocutionary metonymy in conventional indirect speech acts, specifically with indirect directives in English, German, Hungarian, and Croatian. The focus is on one special construction type – stand-alone conditionals used as indirect directives as e.g. English *If you could come to order now*. This construction type is productively exploited in English and German, but apparently not used in Hungarian and Croatian. In a search for an explanation for this distribution, metonymy is pointed out as a central motivating factor. It is argued here that metonymy as motivation can be approached from at least three perspectives: (i) correlation with the productivity of other metonymic models in general, (ii) differences in the availability of various functional types of metonymies, and (iii) the complexity of metonymic layering.

7.5 Part 5: Metonymic and metaphoric motivations of grammatical meaning

The first chapter in the last section relates metonymic and metaphoric processes to their experiential correlates while the second contribution explores metonymy as an inferential device in meaning creation. Sandra Peña Cervel and Francisco Ruiz de Mendoza Ibáñez argue that two image-schema transformations are metonymically and metaphorically grounded, reversing (at least partially) George Lakoff's (1987) assumption that image schemas are the input for many metaphoric processes. Antonio Barcelona investigates how metonymic reasoning shapes the meaning and form of a variety of constructions, including morphemes, lexical items, and syntactic constructions.

M. Sandra Peña Cervel and Francisco J. Ruiz de Mendoza Ibáñez's chapter "The metonymic and metaphoric grounding of two image-schema transformations" provides evidence for the claim that at least some image-schema transformations have a metaphoric and metonymic basis. Lakoff (1987, 1989) proposes image-schema transformations as cognitive mechanisms in the creation of radial structure in conceptual categories. Image-schema transformations are natural relationships between image schemas, grounded in experience. There is, for example, a natural relationship between the path of a moving object and the static position of the object when it stops (path-end-of-path transformation). In Peña Cervel and Ruiz de Mendoza's view, underlying image-schema transformations there is high-level (i.e. abstract) metaphoric and metonymic activity. In order to substanti-

ate this point, the authors examine the cognitive grounding in metaphor and metonymy of two image-schema transformations: path-end-of-path and multiplex-mass. The former is explained in connection to the high-level metonymy ACTION FOR RESULT, while in the latter the authors distinguish two subcases. In one subcase there is metaphorical activity whereby groups of entities are perceived as substances. This subcase often exploits the high-level metonymy PROCESS FOR ACTION as a natural consequence of the fact that substances are characteristically seen as exhibiting non-intentional behavior. In the second subcase there is a necessary combination of metaphor and metonymy, where the heterogeneous parts of an individual entity (or any group of entities of the same kind) are seen as a single unified object (without parts) that is further perspectivized through a metonymy in terms of its constituting material. All these phenomena are seen as natural manifestations of what Langacker (this volume: 49) refers to as “profile/active-zone discrepancy”. Finally, Peña Cervel and Ruiz de Mendoza discuss the syntactic and morphological consequences of the high-level metonymies proposed in their application to image-schema transformations.

In the final chapter “Motivation of construction meaning and form: The roles of metonymy and inference” **Antonio Barcelona** resumes the topic of the ubiquity of metonymy in lexicogrammar expounded by Langacker in this volume. Barcelona argues for a metonymic motivation of “prototypical” and “non-prototypical” meanings of a number of constructions, among them some morphological constructions (derivation, conversion, compounding), the quantifier *a lot*, instances of polysemous extension, and a clausal construction (the epistemic conditional). The paper also discusses several cases of metonymy-motivated non-prototypical lexical meaning that often involve a change in grammatical behavior (e.g. the emergence of the intransitive “slimming” sense of the verb *reduce*). Barcelona demonstrates that metonymy can also motivate constructional form (a number of instances are discussed in the chapter). If the set of forms of a construction is regarded as a small cognitive category where canonical forms have prototype status, then it should be subject to (some of) the same cognitive operations (among them metaphor and metonymy) as other categories. Finally, the author argues that metonymy is fundamentally inferential and that its motivational and referential roles follow from its inferential nature.

8. Figuration in grammar: Prospects for future research

We have argued in this introductory chapter that the widespread view in modern linguistics, which considers lexicogrammar and figurative conceptualization as completely unrelated areas of study, is misguided. The present volume can be regarded as an invitation to skeptical readers to reconsider this kind of “modular” thinking and to envisage the possibility that figuration has an impact on lexicogrammar. For the lexical portion on the lexicogrammatical continuum, this claim is almost a platitude – at least in Cognitive Linguistics. However, as far as grammatical structure is concerned, the “figuration-motivates-grammar” hypothesis is less firmly established, although a number of studies provides evidence that this is indeed the case (see Section 6). We believe that the contributions to this volume present not only robust evidence for metaphorical and metonymic motivation in the lexical portion of the lexicogrammatical continuum, but also perhaps

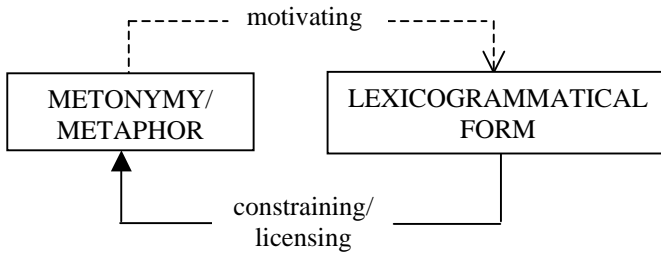


Figure 20. Mutual dependency of metonymy/metaphor and lexicogrammar

even more importantly in the current research context, make a case for the metonymic and metaphoric motivation of elements traditionally seen as “grammatical”, rather than “lexical”. We have suggested that the metonymic target meaning and metaphoric source meaning have potential impact on grammatical structure.⁴⁰ This is most probably an oversimplification, but it may serve as a useful heuristic guiding future research in grammatical metonymy and grammatical metaphor.

In this introductory chapter we have discussed mainly how figurative thought motivates lexical and grammatical properties, but there are good reasons to believe that the influence can go in the opposite direction (see Brdar 2007). For example, with regard to metaphor, in Section 5 we presented data that suggest a bidirectional interaction of grammatical gender and conceptual (natural) gender in German. There is a culturally grounded conceptualization of the arts as females, but this metaphorical personification is *licensed*, i.e. “encouraged”, by the grammatically feminine gender of the noun *Kunst* ‘art’. Grammatical *constraints* on metonymy have been postulated e.g. by Brdar and Brdar-Szabó (2003). Whereas in English the RESULT FOR ACTION metonymy is exploitable, i.e. *licensed*, in what we have called ‘action constructions’ (Panther & Thornburg 2000), e.g. *Know thyself*, where a stative verb is coerced into an actional meaning ‘do something to the effect so that you know yourself’, in German the RESULT FOR ACTION metonymy is much more *constrained* in comparable action constructions. Thus, *Know thyself* must be rendered in German with a dynamic mental verb in the expression *Erkenne dich selbst*, literally ‘Recognize yourself’. It is thus possible that figuration and lexicogrammar are mutually dependent and accommodate each other (see Brdar 2007: 205). This presumed interaction between figuration, i.e. metonymy and metaphor, and grammar is diagrammed in Figure 20.

The findings collected in this volume thus lead to a conception of the relation between grammar and figuration that is at odds with much of formalist linguistics, especially generative grammar, and they open up new avenues of research, which scholars have begun to explore only recently. To conclude this chapter, we name two such areas that, to our mind, are especially promising and will, it is hoped, increasingly attract the attention of cognitive and functional linguists. The first area of research concerns the crucial role of conceptual metaphor, conceptual metonymy, and figuration in general, in the evolution of grammatical (functional) words and bound morphemes. The importance of metaphor and metonymy in grammaticalization has been recognized for some time (see e.g. Traugott and Dasher 2002 for a good overview), but there are still many open questions

regarding the motivational links between conceptual metonymy/metaphor and grammatical structure, in particular, the problem of directionality of the motivational processes. The second research area constitutes largely uncharted territory, despite some important work conducted by various scholars (see Note 7). It concerns cross-linguistic variation in the exploitation of metaphor and metonymy, and the grammatical factors that license, constrain, or block the exploitation of high-level metonymies and metaphors. Such work takes a fresh perspective on the field of linguistic typology and promises to yield new and important insights into the structuring of language and languages.

Notes

* We would like to thank two anonymous referees for many constructive questions, comments, and suggestions, which we hope we have put to good use towards improving this chapter. Of course we ourselves are liable for any remaining infelicities and errors.

1. More recently Chomsky seems to have abandoned the idea of a richly structured human language faculty (with interfaces to sensorimotor and conceptual abilities). In Hauser, Chomsky, and Fitch (2002: 1578) the human language faculty is characterized as “the power of recursion to create an endless and limitless system of communication”.
2. It is only recently that generative linguists and typologists have turned their attention to performance and its possible impact on grammar (see e.g. Newmeyer 2000, Jackendoff 2002, Hawkins 1994, 2004).
3. It would be a useful enterprise for the field of Cognitive Linguistics in the narrow sense to pin down explicitly these differences among subparadigms, and assess them. So far this has not been done in a systematic way. A notable exception is Langacker (2005), who discusses in some detail the differences between Construction Grammar (including Radical Construction Grammar) and his own framework.
4. In what follows, we intentionally use the noun *sign* and the adjective *semiotic* instead of *symbol* and *symbolic*, respectively. The reason is that the latter terms are not used in a uniform way in contemporary linguistics. This issue is discussed further in Section 2.
5. This methodological requirement does however not apply without restrictions. First, quite typically, leading Cognitive Linguists in the narrow sense, such as George Lakoff and Ronald Langacker, use introspective data quite systematically, although the latter is, to our knowledge, the inventor of the term ‘usage-based grammar’. Second, Leonard Talmy (2007) has argued in a recent talk that introspective methods in the elicitation of data have a place in Cognitive Linguistics.
6. See also the volume edited by Barlow and Kemmer (2000), which is dedicated to usage-based models.
7. A non-exhaustive list of scholars who have compared metonymies and their grammatical repercussions across languages includes Barcelona (2003, 2004), Brdar (2007), Brdar-Szabó and Brdar (2004), Hilpert (2007), Panther and Thornburg (1999, 2000), Ruiz de Mendoza and Pérez Hernández (2001), Ruiz de Mendoza Ibáñez and Mairal (2007).
8. For a discussion of the notion of linguistic motivation, see Radden and Panther (2004).
9. An anonymous reviewer has questioned why in Figure 1 we do not treat prosodic form as part of grammatical structure. We assume that both grammatical structure and prosodic form belong to the level of linguistic form. In Langacker’s more radical view, phonological form, including prosodic structure, are part of the ‘phonological pole’, but we have taken a more conservative stance, as in e.g. construction grammar.
10. For motivation in syntax, see e.g. Haiman (1985).
11. An approach that comes closer to what the authors of the present volume are concerned with is Sullivan (2007), who analyzes the relationship between metaphor and grammar from the perspective

of Construction Grammar. In her dissertation the author discusses a number of metaphorical constructions, such as modifier-head constructions exemplified by *bright student*. This expression is based on the conceptual metaphor KNOWING IS SEEING: the attributive adjective lexicalizes the source domain (SEEING) and the head noun evokes the target domain (KNOWING). Sullivan notices an interesting constraint on which of the two grammatical functions ‘modifier’ and ‘head noun’ may assume the role of source and target, respectively. *Bright* (source domain) *student* (target domain) is fine, whereas the reverse case *intelligent* (target domain) *light* (source domain) is impossible. In the latter case the modifier cannot evoke the target domain of the metaphor KNOWING IS SEEING. Sullivan’s dissertation investigates “grammar in metaphor” (these words actually occur in the title of her work). The present volume is concerned with “metaphor (and metonymy) in grammar”, i.e. the way that metaphor *shapes* lexicogrammar. The two perspectives sometimes overlap, as can be seen from the above discussion.

12. For much more detailed comparisons of the architecture of various functionalist and cognitivist models than we can provide here the reader is referred to the useful overview of González-García and Butler (2006).

13. Notice that Chomsky is concerned not with morphology in his model and that pragmatics is outside the realm of linguistic competence altogether.

14. Chomsky (1985:87) introduces the notion “canonical structural realization” of semantic categories selected by a syntactic head. For example, the canonical structural realization of the semantic role PATIENT is a noun phrase; the canonical structural realization of the role PROPOSITION is either a clause or a noun phrase. The term ‘canonical’ implies that there is a fairly robust correspondence between semantic roles and specific realizations of these semantic roles; in other words, syntactic realizations of semantic roles seem to be motivated (though not completely predictable).

15. There is in fact a model that incorporates the term *embodiment* in its name: Embodied Construction Grammar (Bergen & Chang 2005).

16. González-García and Butler (2006:71) point out however that Goldberg (2006:214–215) has abandoned the criterion of non-predictability for fully compositional high-level constructions.

17. Metonymy is not mentioned as a process relevant to the computation of construction meaning. We argue below that metonymy does in fact play a major role in the creation of grammatical meaning.

18. The relation between culture and grammar (“ethnosyntax”) has received increasing attention lately in edited volumes such as Enfield (2002).

19. At this point, a brief comment is in order about the use of the term *symbol* in the sciences of language. Unfortunately, this notion is not used uniformly in linguistics, semiotics, and the philosophy of language. On the one hand, many linguists have adopted the threefold distinction between symbols, indices, and icons, which goes back to the philosopher and semiotician Charles S. Peirce (1955). Peirce uses the term *symbol* to refer to signs that exhibit an arbitrary relation between form and content, whereas indices and icons are motivated signs. On the other hand, in Langacker’s Cognitive Grammar, the term *symbolic assemblies* (this volume: 54) does not appear to imply any commitment to the *nature* of the semiotic relation between the phonological and the semantic pole, i.e., it is left open whether this relation is arbitrary, partially motivated, or motivated. Finally, the adjective *symbolic* is sometimes also used in the sense of ‘formal’, i.e. ‘meaningless’ or ‘uninterpreted’, a usage that is downright incompatible with the sense the term is given in Peircean semiotics. An example of such usage is found in Searle (1997:9): “A computer is by definition a device that manipulates formal symbols,” where “formal” means ‘uninterpreted, meaningless’.

20. The relationship between *Mary* and *book* could be many things from true ownership to ‘the book that Mary is currently reading’, ‘the book that Mary likes best’, or even ‘the book that Mary stole from the library’. Taylor (2005:228–231) assumes a basic sense, but recognizes a multiplicity of relations between possessor and possessed. The vagueness of the possessor-possessed relation has been noted also by relevance theorists Sperber and Wilson (1996:188).

21. For ease of presentation selectional restrictions and syntactic subcategorization frames are not built into Figure 2.
22. Note that Chomsky (1965) regards such higher-level selectional restrictions as syntactic, not semantic – a somewhat counterintuitive consequence of the Standard Theory.
23. We use the phrase “Chomskyan solution” here in the sense of ‘solution in the spirit of generative grammar’. To our knowledge, Chomsky has never published anything on figurative language.
24. In this context, Andrew Goatly’s *The Language of Metaphors* (1997) deserves special mention. He devotes three chapters to the syntax of metaphor that “develop a functionally oriented linguistic theory of metaphor which cross-fertilizes pragmatic theory with the Hallidayan analysis of register [...]” (4). Our perspective is different in that we explore the distribution of grammatical elements as reflexes of conceptual metonymy and metaphor.
25. Lakoff’s (1990) *Invariance Principle*, which is supposed to hold for metaphors based on image schemata, includes a constraint that blocks a mapping if the inherent conceptual structure of the target is incompatible with mapping. Ruiz de Mendoza Ibáñez (1998) formulates a more general *Extended Invariance Principle*, which also holds for non-image-schematic high-level metaphors.
26. Our approach to metaphor and metonymy is different from Roman Jakobson’s (2002: 42–43) famous conception of these tropes. Jakobson relates the metaphoric mode of thinking (based on similarity) to the paradigmatic axis of language, in contrast to the metonymic mode of thinking (based on contiguity), which he assumes to be related to the syntagmatic axis. We maintain that metaphor and metonymy manifest themselves both on the paradigmatic and on the syntagmatic axis of language. This position is defended in Panther (2006: 149–150).
27. There is a huge literature on the pragmatic functions of the Narrative Present that we ignore here. For a recent account see Bernardo i Mansilla (2006).
28. That *this morning* is a past time adverbial can be demonstrated by the fact that it can be replaced with another past time adverbial such as *yesterday morning* without resulting in ungrammaticality.
29. For the sake of simplicity, the abbreviation FEM collapses grammatical and natural (conceptual) gender here.
30. Example (16) was accessed from the Internet on February 6, 2008, at the following URL: <http://www.videoforum.de>.
31. The issue of metaphorization of feminine nouns as women is possibly also related to what Lakoff and Turner (1989: Ch. 4) call the *Great Chain of Being*. At the top of this chain are human beings, at the lower end are inanimate objects. Also, as well known from conceptual metaphor theory, the directionality of metaphorization is from ‘less concrete’ to ‘more concrete’. Finally, the anthropomorphic *Me First* principle suggested by Cooper and Ross (1975) can be interpreted as a preference for conceptualizations from the perspective and *in terms of* human beings, here female humans.
32. See Sadock (1974) and Stefanowitsch (2003) for a summary of previous work and additional observations on the distribution of *please* and other elements in indirect requests.
33. From an interview with the singer published in the German news magazine *Der Spiegel*, February 11, 2008.
34. From the *Appalachian News Express*, April 23, 2007. Accessed on February 17, 2008, at: http://www.news-expressky.com/articles/2007/04/28/top_story/01hopefuls.txt.
35. Dictionaries vary in what they present as the first sense of *find*. For example, the online *Oxford American Dictionaries* gives ‘discover or perceive by chance or unexpectedly’ as the first sense, and ‘discover (someone or something) after a deliberate search’ as the second sense. Similarly, the 3rd (paperback) edition of *The American Heritage Dictionary* gives as first and second senses ‘To come upon, often by accident’ and ‘To come upon after a search’, respectively. In contrast, the 4th edition of the *Longman Dictionary of Contemporary English* lists ‘get by searching’ as the first sense and ‘see by chance’ as the second. We

do not make any claims about which of the two meanings is more frequent, but argue that, on conceptual grounds, it makes sense to derive the more complex second meaning 'come upon by searching' from the conceptually simpler meaning 'come upon'.

36. The only and rather far-fetched interpretative option would be a 'slow motion' reading of (26b).

37. See Grezka (2006) for an overview of research on perception verbs and the constructions they occur in.

38. The data are taken from the *Dictionary of Contemporary English*.

39. Cognitive analyses of word formation are relatively rare. An important recent study, Benczes (2006) – like Basilio – relies on metonymic (and primarily metaphoric) models for the interpretation of what are termed 'creative' English noun-noun compounds. The focus of Benczes' work is more on conceptual structure rather than on the interaction of meaning and form. In contrast, an earlier study of noun-verb compounds ("subject" vs. "object" incorporations) by Thornburg and Panther (2000) investigates the relation of conceptual structure to the relative productivity of these different types of compound forms, uncovering an ergative-absolutive pattern in their distribution. An even earlier study by Rice and Prideaux (1991) of object incorporations in English provides an account of not only the meanings of these compounds but also their "skewed categorial distribution", i.e. relative acceptability along a noun-verb continuum.

40. In the case of grammatical metonymy, this generalization holds for what we call *prototypical metonymies*, i.e. metonymies that conceptually foreground their target meanings. In other words, the more conceptually foregrounded or *conceptually prominent* the target meaning, the more likely the grammatical properties of the linguistic unit (word, phrase, clause) in which the metonymy operates will be shaped by this meaning (see e.g. Panther & Thornburg 2004).

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Metonymic grammar

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1. Introduction

In linguistic theory and practice, it is commonly assumed that particular elements combine with one another in very specific and determinate ways. Reflecting this notion is the presumed adequacy of simple formulaic representations, whether in the classic style of (1) or its modern congeners. It is taken for granted that such formulas capture what needs to be said about how a sentence is put together syntactically and semantically. Syntactically, a sentence involves a specific structural configuration, with lexical items inserted in particular slots. Semantically, a predicate has a certain number of arguments corresponding to roles. Whatever the specific details, such formulas represent what a linguistic description is thought to look like.

- (1) a. [[Alice]_{NP} [[likes]_V [Bill]_{NP}]_{VP}]_S
b. LIKE(x,y) x=Alice y=Bill

I will refer to this supposed property – that it is possible to give a definite and precise specification of the elements connected to one another and how they are connected – as *determinacy*. The doctrine of determinacy is not necessarily an explicit claim, but more like a background assumption, part of the tacit world view in terms of which questions are formulated. It is not necessarily adopted as a rigid principle with no exceptions, but may simply be taken as representing the canonical situation, from which any departures are surprising if not problematic. The doctrine of determinacy reflects a broader conception of language, mind, and meaning. It holds that language is a separate mental “module”, that syntax is autonomous, and that semantics is well delimited and fully compositional. As a consequence, syntactic description is insulated from semantics, which in turn is insulated from the open-ended problems posed by pragmatics, general knowledge, and imaginative capacities (such as metaphor).

This conception is very attractive. If correct, it makes linguistic investigation seem relatively straightforward. The task of grammatical description should prove quite tractable if the subject matter is circumscribed and self-contained, consisting of discrete elements arranged in determinate fashion to form well-defined structures. A neat and tidy system of this sort has the almost irresistible advantage of being susceptible to rigorous,

digital, algorithmic formalization. But is this conception in fact correct? One is hardly being scientific just by virtue of rigidly adhering to it on an a priori basis and imposing it on the subject matter when it does not fit.

Over the last few decades, the incorrectness of this basic conception has become quite evident. In particular, research in Cognitive Linguistics has demonstrated – conclusively, in my opinion – that grammar is not autonomous from semantics, that semantics is neither well delimited nor fully compositional, and that language draws on more general cognitive systems and mental capacities from which it cannot be neatly separated. Since Cognitive Linguistics rejects the broader conception from which determinacy arises as a natural assumption, from this perspective there is no basis for expecting syntax to exhibit this property. Yet the issue has not been clearly formulated or carefully examined. My intention here is to explore it in reasonable depth and detail, though necessarily in preliminary fashion.

My general suggestion is that the canonical situation is not one of determinacy, but rather *indeterminacy* (Langacker 1998). Although precise, determinate connections between specific elements are certainly possible, they represent a special and perhaps unusual case. More commonly, there is vagueness or indeterminacy in regard to either the elements participating in grammatical relationships or the specific nature of their connection. Grammar, in other words, is basically metonymic, in the sense that the information explicitly provided by conventional means does not itself establish the precise connections apprehended by the speaker and hearer in using an expression. Explicit indications evoke conceptions that merely provide mental access to elements with the potential to be connected in specific ways, but the details have to be established on the basis of other considerations. Explicit linguistic coding gets us into the right neighborhood, in other words, but from there we have to find the right address by some other means. Perhaps Figure 1 captures the spirit of this proposal. If diagram (a) reflects the archetypal conception of classic syntactic theory (everything being black and white), diagram (b) is more reflective of linguistic and cognitive reality (gray areas are crucial).

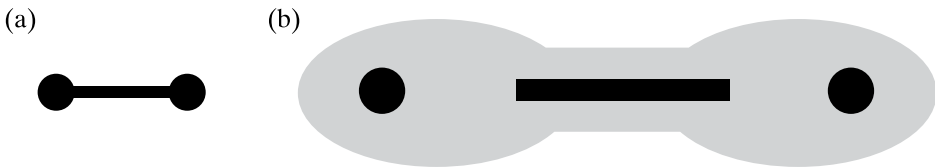


Figure 1. Determinacy vs. indeterminacy

With respect to meaning, indeterminacy follows directly from the conceptualist semantics adopted in Cognitive Linguistics. If meaning resides in conceptualization (in the broadest sense), all of our knowledge and mental abilities are relevant to linguistic semantics. Most generally, it reflects our capacity to construe the same situation in alternate ways. An expression's meaning is therefore not reducible to objectively discernible properties of the situation described. Since conception is grounded in perception and bodily experience, it is largely imagistic (rather than propositional). Moreover, conception and linguistic semantics are crucially dependent on various imaginative capacities: metaphor, metonymy,

blending, fictivity, and mental space construction (Fauconnier 1985; Fauconnier & Turner 2002, Kövecses & Radden 1998, Lakoff & Johnson 1980, Langacker 1999b, Talmy 1996). Also crucial is the “encyclopedic” nature of lexical meanings (Haiman 1980, Langacker 1987:4.2, but cf. Wierzbicka 1995). This itself rules out any claim of strict compositionality: the meaning of the whole cannot be predicted from the meanings of the parts unless the parts themselves have definite, limited meanings.

With respect to grammar, indeterminacy follows from the indeterminacy of semantics. This would not be so if grammar constituted a separate, autonomous “component” or “module”. I will however be assuming the framework of Cognitive Grammar (Langacker 1987, 1990, 1991, 1999a), where grammar is seen as inherently meaningful. The central claim of this theory is that grammar forms a continuum with lexicon, both residing in assemblies of symbolic structures. A symbolic structure is simply the pairing of a semantic structure and a phonological structure (its two “poles”). Grammar is therefore not autonomous vis-à-vis semantics but rather incorporates it. An expression’s meaning is just the semantic pole of the symbolic assembly comprising it. Semantic composition is thus an aspect of grammatical composition.

Symbolic structures form *assemblies* by virtue of being connected to one another. A symbolic assembly – also known as a *construction* (Langacker 2005) – consists of *component* symbolic structures that are “integrated” to form a *composite* symbolic structure. At each pole, correspondences are established between component structure elements, whose specifications are “unified” at the composite structure level. Figure 2, for example, depicts a basic version of the prepositional phrase construction, in which a preposition is integrated with its nominal object. Their semantic integration hinges on a correspondence between the schematic landmark of the preposition and the thing profiled by the nominal. The composite conception profiles the same relationship as the preposition, with the landmark inheriting the nominal’s semantic specifications (Y). At the phonological pole, integration hinges on a correspondence (not shown) that identifies the preposition (X) with the element directly preceding the nominal (Y) in the speech stream.

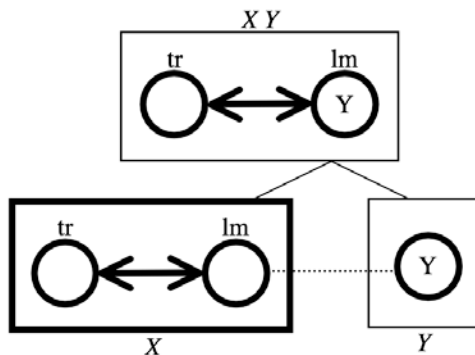


Figure 2. Prepositional phrase constructional schema

The semantic correspondences are the connections whose determinacy is at issue. As represented, the semantic connection appears to have the sharp definition of Figure 1(a), the points of connection being the preposition’s landmark and the nominal profile. This

appearance is however deceiving. Though not incorrect, the specific configuration shown fails to reflect the varied details of particular examples. It is better regarded as a target (or prototype) that many do not hit, or equivalently, as an idealization where the connection looks precise only by being viewed at a high level of abstraction (or schematization). In and of themselves, therefore, representations like Figure 2 do not provide a complete account of how expressions are actually put together.

In standard approaches to syntax and semantics, indeterminacy fails to become apparent because there is no real attempt to deal with conceptual structure. Assumptions made in truth-conditional semantics specifically exclude from its scope of concern the very factors that are most responsible for indeterminacy – factors like construal, imaginative phenomena, and encyclopedic semantics. Formulas like (1b) say nothing about the actual conceptualizations they represent. There is no attempt, for instance, to spell out the internal conceptual structure of a predicate; however complex this may be, it is simply represented by means of an atomic, unanalyzable symbol (e.g. LIKE). And obviously, syntactic structures like (1a) are not intended, and not able, to capture the specific details of the conceptualizations evoked by the expressions described.

Indeterminacy starts to become apparent as soon as one adopts a conceptualist semantics and a symbolic view of grammar that incorporates semantics as one of its poles. Instead of merely saying that elements combine with other, as unanalyzed wholes, it becomes necessary to say precisely *how* they combine, in terms of their conceptual integration. Here too, things look determinate under certain conditions that are quite common given practical constraints: for selected examples; in preliminary analyses that do not go into very much conceptual detail; and in describing general patterns, where the whole point is to abstract away from the specifics of individual expressions. But these are matters of practicality. As a matter of principle, indeterminacy in grammar is no excuse for vague or imprecise description. If a construction is indeterminate in some respect, we still have to describe the construction, including its indeterminacy, and we still want our characterization to be explicit and precise, even in regard to the nature and extent of the indeterminacy. We must not confuse indeterminacy at the level of the *phenomenon* with indeterminacy at the level of its *description*.

2. Active zones

Indeterminacy rears its ugly head even in mundane examples of the most basic and seemingly straightforward constructions. Early encounters with it led me to the notion of an *active zone* (Langacker 1984). An entity's active zone, with respect to a profiled relationship, is that facet of it which most directly and crucially participates in that relationship. The reason for defining this notion is that the entity that most directly participates in a relationship is often not precisely the same as the one profiled by the nominal expressing its trajector or landmark. A case in point is the subject in (2):

- (2) *The cigarette in her mouth was unlit.*

The head noun *cigarette* specifies the trajector of *in*, and the nominal *her mouth* specifies its landmark. Thus, if *in* has the spatial meaning shown in Figure 3(a), the expected import of (2) is that the entire cigarette (fortunately unlit) was inside the cavity identified as her mouth. Of course, we do not take the sentence to mean that the cigarette and the mouth participate in the locative relationship as undifferentiated wholes. Instead we interpret it as meaning that a particular portion of the cigarette (one end) was contained in a particular portion of the mouth (a segment of the lips). Those portions constitute the active zones of the cigarette and of the mouth with respect to the *in* relationship. There is in each case a *discrepancy* between the active zone and the nominal profile. One end of a cigarette is not what we take to be the referent (profile) of *cigarette*. Nor is part of the lips what we identify as the referent of *mouth*. The entities we explicitly mention with the subject and object nominals are not the ones most directly and crucially involved in the profiled relationship.

The situation of *profile/active-zone discrepancy* is quite common, even typical. The examples in (3), diagrammed in Figure 3, are all quite normal (cf. Vandeloise 1991: Ch. 13). The expressions in (3a) exemplify full spatial inclusion: the entire trajector is inside the landmark, and no one portion of the landmark stands out as the only one directly involved. In other words, the entities profiled by the subject and object nominals participate as wholes in the profiled relationship. In (3b), on the other hand, only a portion of the trajector is spatially included in the landmark (and in some cases only part of the landmark is involved). This portion of the trajector, indicated by shading, constitutes its active zone with respect to the *in* relation. The examples in (3c–d) have the further wrinkle that in each case the landmark is a container open at the top. In the narrowest sense, the trajector is not included within the spatial confines of the landmark (not embedded in its physical substance), but only within the spatial region obtained by adding a virtual (imagined) boundary at the top. This spatial region, not strictly speaking part of the container per se, nonetheless functions as the landmark's active zone for the *in* relation. In (3d) the landmark and trajector both exhibit a discrepancy between profile and active zone.

- (3) a. *the cake in the oven; the letter in the envelope; the air in the balloon; the dresser in the bedroom; the food in my stomach*
 b. *the swan in the water; the axe in your hand; the arrow in the target; the sword in the scabbard; the cork in the bottle*
 c. *the water in the cup; the fish in the bowl; the dirt in the planter; the groceries in the bag; the ice cubes in the tray*
 d. *the man in the bathtub; the straw in the glass; the flowers in the vase; the cat in the litter box; the oarsmen in that boat*

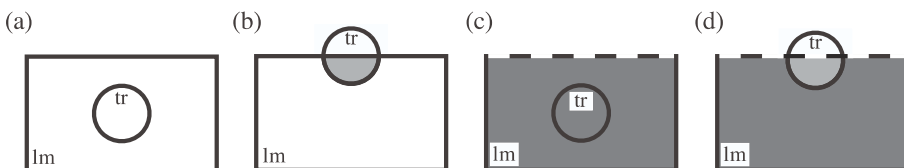


Figure 3. Active zones

Comparable discrepancies are typical for the subject and object of a verb (for adjective + noun combinations, see Sweetser 1999). The verbs in (4a), for example, designate processes involving different parts or aspects of a person, yet the subject nominal refers to the person as an undifferentiated whole. A verb like *hit* is quite vague as to which portions of the trajector and the landmark participate directly. Any part of the landmark might be affected. If necessary, we can overcome this indeterminacy by adding a prepositional phrase to specify the active zone, as in (4b). Of course, that does not completely resolve the indeterminacy. If she hit me in the arm, was it the left arm or the right? And just where on the arm did she make contact? One can never be totally precise, and usually we do not even try. As for the trajector of *hit*, the active zone is typically the fist, but that is only the default. Here too the options can be spelled out more precisely with a prepositional phrase, as in (4c). Observe that the active zone does not even have to be a subpart of the subject. It might be a stick that the subject is holding, or even a projectile that she throws, like a baseball. In (4d), what is actually perceived – a sound or a cloud of dust – is merely associated with the entity profiled by the object nominal, not a subpart of it. And as for the subject, only certain facets of the speaker (the perceptual apparatus) are directly involved in the profiled relationship.

- (4) a. *The boy {blinked/waved/coughed/meditated/ached/stretched/smiled/urinated}.*
 b. *She hit me (in the {arm/stomach/mouth/back/leg/knee/neck}).*
 c. *She hit me (with {her left hand/her right elbow/the top of her head/a stick/a baseball}).*
 d. *I can {hear a piano/see the elephants in the distance [only a cloud of dust being visible]}.*

Hence the only requirement is that the active zone be *associated* with the nominal referent in some evident fashion. Naturally, being identical to the profiled entity and being a subpart of it are special cases of association. We are not at all bothered by the imprecision and indeterminacy inherent in profile/active-zone discrepancy. In fact, we do not even notice it. The reason is that we are able to make sense of discrepant expressions by exploiting general knowledge. For example, every expression in (3) evokes a basic scenario, a familiar aspect of everyday life in our culture. This encyclopedic cultural knowledge – not any narrow, dictionary-type definitions of the component lexical items – gives us what we need to properly understand the expressions. We know that the whole cake goes in an oven, but that only part of a swan is below the surface of the water. Of course, this default knowledge can always be overridden in special contexts. If we see a swan diving to the bottom of a pond, *the swan in the water* would be interpreted along the lines of Figure 3(a), not 3(b).

So we can easily overcome the effects of profile/active-zone discrepancy. But why does it occur in the first place? It is actually both natural and often even necessary from the cognitive standpoint. It is necessary because in many cases complete precision and accuracy in describing a relational participant is simply not possible. Linguistic descriptions are always schematic to some degree, abstracting away from countless fine details. Profile/active-zone discrepancy is natural because it profiles, and thus makes linguistically prominent, entities that have greater cognitive salience. Usually, for instance, a whole is more salient than its parts.

How do we describe all this from the technical standpoint? The matter is complex, and no single analysis is appropriate for all examples. In some cases we probably want to say that the nominal element is understood metonymically. In (4d) for instance, the phrase *the elephants* refers metonymically to the cloud of dust they raise. For nouns that profile containers, like the ones in (3c–d), we probably want to posit a metonymic sense in which they profile not just the physical container itself but also the containing region it partially encloses. In other examples we can reasonably suppose that the relational element has an established meaning which incorporates the profile/active-zone discrepancy. The verb *blink*, for example, consistently takes as its subject a nominal describing a person or animal, even though only the eyelids actually do anything. With verbs of perception like *hear* and *see*, the discrepancy between a person as a whole and the sensory system involved is clearly built into their conventional meanings. In general, though, it is not always possible or even appropriate to attribute a specific aspect of an expression's global meaning to any one component element to the exclusion of others.

The situation is also fluid and subject to change. Suppose we start out with a predicate where there is no profile/active-zone discrepancy, as shown at the top in Figure 4. In particular uses, it might be applied to situations where there is reason to highlight a whole rather than a directly involved part, or something associated with the entity directly involved. Such uses imply the correspondences indicated in the diagram. It represents a predicate being applied to a situation in a manner that does not strictly conform to its original semantic value. The result of applying it to such a situation is the blended structure shown on the right. This constitutes the understood semantic import of the expression on a particular occasion. The nominal profiles correspond to the trajector and landmark in the blended structure, not the original one. But as this usage recurs, the entire configuration is likely to become entrenched and conventional, giving rise to a new, established meaning of the predicate. The verb *hear*, for instance, has an established meaning analogous to this blended structure – it is quite usual to say things like *I hear a piano*.

I can mention only in passing another source of indeterminacy that figures in these problems, namely the general question of what in particular should be identified as a nominal referent. The question is often posed in relation to sentences like (5), which indicate

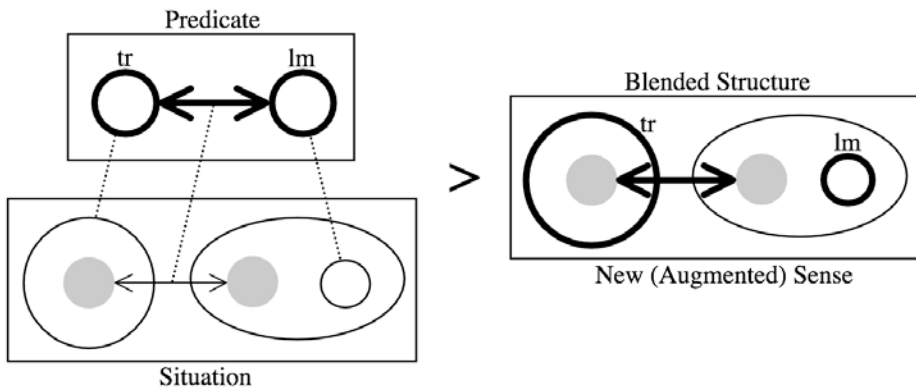


Figure 4. Development of profile/active-zone discrepancy

that entities like books are equally well identified with either their physical or their textual aspect:

- (5) *I have to review this book, which weighs 5 pounds.*

And what should we identify as a person? The physical body? The persona? The soul? All of these? I do not believe there is any single correct answer. The characterization of a nominal referent is multifaceted, with certain facets being more relevant than others in a given context. Our willingness to accept a particular facet as the referent is a matter of degree, with certain options more familiar and conventional than others. Less familiar uses strike us as metonymic, or as cases of profile/active-zone discrepancy.

In such cases a nominal expression focuses attention on a thing, its profile, which the grammatical construction connects with the trajector or the landmark of a profiled relationship. Usually, though, the specific nature of that connection is indeterminate. The nominal profile evokes an array of associated entities, and all we know for sure is that one of those entities can supposedly be identified as a direct participant in the relationship. But which one? This is often apparent from the content of the relational component. In (5), the verbs *review* and *weigh* respectively direct our attention to the textual and physical aspects of the book; evoking these as active zones makes the sentence coherent. Quite commonly, however, the relational element fails to resolve the indeterminacy. For instance, the sentence *I like the book* could equally well pertain to its content or its physical appearance. In such examples we rely on context and general knowledge. Thus in (3), it is only through standard cultural scenarios that we can determine the specific configuration most likely intended.

3. Reference points

Profile/active-zone discrepancy involves our *reference point* ability (Langacker 1993). This is our ability to invoke one conceived entity as a reference point in order to establish mental contact with another, i.e. to mentally access one conceived entity through another. The entity accessed in this way is called the *target* in the reference point relationship. The set of entities accessible through a given reference point (the set of potential targets) are collectively referred to as its *dominion*. The basic elements of a reference point relationship are sketched in Figure 5(a), where dashed arrows indicate the path of mental access.

Diagram (b) shows how profile/active-zone discrepancy constitutes a particular application of our reference point ability. Functioning as reference point is the profile of a subject or object nominal, which the construction puts in focus as trajector or landmark of a profiled relationship. Directing attention to the nominal profile activates or makes accessible an array of associated entities, which constitute the reference point's dominion. The task is then to find a target that can serve as its active zone for participating in the profiled relationship. The active zone usually remains implicit (as in e.g., *David* [active zone: his eyelids] *blinked*), since it is not sought for its own sake, but merely as a way of connecting the nominal referent with the profiled relationship.

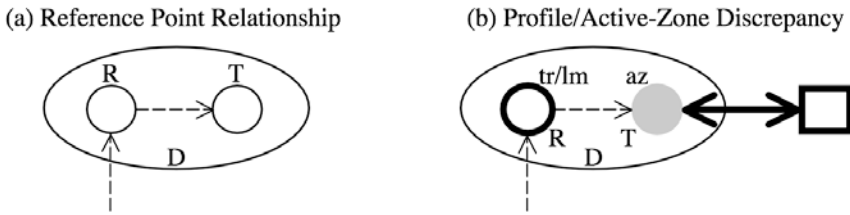


Figure 5. Reference point and active zone

In another class of cases, the kind of indeterminacy inherent in profile/active-zone discrepancy is not just a complicating factor in describing a construction, but actually represents a construction's basic motivation and central conceptual import. Often these constructions do not even have an explicit relational component. They are simply concerned with invoking a nominal profile in order to direct attention to another, associated entity. This target is sought for its own sake, not just as active zone for a profiled relationship. In these reference point constructions, the target is therefore made explicit, often being focused as profile.

One construction plausibly analyzed in this manner is that of noun + noun compounds in English, illustrated in (6). Consider *fishing pole*. There are many kinds of poles, with different properties and used for different purposes. The noun *fishing* functions as a reference point to tell us what sort of pole is intended. It designates a particular kind of activity, evoking an encyclopedic array of supporting knowledge, one facet of which pertains to the equipment employed. By evoking this body of knowledge, its dominion, the noun *fishing* provides mental access to a certain kind of pole, which is thus a target. The pole accessed through the first noun, *fishing*, can then be identified with the one profiled by the second noun, *pole*. The general pattern for English compounds is that the second element is the profile determinant. Taken as a whole, therefore, the compound *fishing pole* profiles the pole (not the activity).

- (6) *fishing pole, mosquito net, baseball glove, bicycle seat, axe handle, window shade, jar lid, book cover, fingernail, trout stream, pencil sharpener, tree root, movie theater, tomato worm, checkbook, rose petal, mailman, arrowhead, sheep dog, wine bottle, elephant table, chimney squirrel, airplane diaper*

This reference point organization is characteristic of all the compounds listed (and countless others). It represents the dominant pattern for the meaning of noun + noun compounds in English. Hence the compound construction itself imposes this organization as the central aspect of its meaning. The constructional schema for the basic compounding pattern specifies the configuration in Figure 6 as its semantic pole at the composite structure level. It further specifies that the profile of the first noun corresponds to the reference point, that the profile of the second noun corresponds to the target, and that the target is profiled by the composite expression. Thus a *fishing pole* is a kind of pole (not a kind of fishing), a *mosquito net* is a kind of net (not an insect), etc. In an alternate pattern, illustrated by *spider monkey*, the first noun would not itself evoke a dominion for the second, but rather specifies a salient property (e.g. shape) allowing one to pick out a particular subtype. This

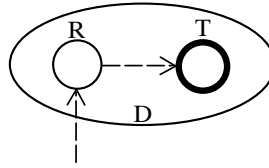


Figure 6. Nominal reference point constructions

secondary (but common) pattern represents a more abstract manifestation of reference point organization – via the property one is able to access the subtype in question.

It is often noted that the meaning of a compound is non-compositional. For example, the meaning of *mosquito net* cannot be computed algorithmically from the meaning of *mosquito*, the meaning of *net*, and the specifications of the constructional schema. A *mosquito net* is not just a net associated with mosquitoes, but specifically one that protects us from mosquitoes while sleeping. In principle, though, it might just as well indicate a net used to catch mosquitoes (cf. *butterfly net*), or even a net used by mosquitoes to catch (very tiny) fish. Compounds are non-compositional because of the indeterminacy of reference point relationships. A reference point provides mental access to a wide range of potential targets, so there may be more than one option even with a particular noun, like *net*, as the second element. How we actually interpret a compound depends on such factors as context, familiar scenarios, and our ability to imagine new ones (like mosquitoes fishing).

Due to this indeterminacy, compounds are often considered to be lexical rather than grammatical in nature. This is not a tenable distinction from the standpoint of Cognitive Grammar, which posits a continuum between lexicon and grammar rather than discrete components. If there is anything we can reasonably identify as lexicon, it consists of the kinds of symbolic assemblies listed in dictionaries, i.e. fixed expressions learned as conventional units. Thousands of English compounds are lexical items in this sense, but it is also true that new ones are created all the time. Compounding is thus a productive grammatical pattern used for constructing novel expressions, which may or may not achieve the status of established lexical units. And the new compounds we freely create in accordance with this pattern clearly display the kind of indeterminacy just described. We readily understand them in context, but they cannot be considered fully compositional.

To show this, I have included three novel compounds in (6): *elephant table*, *chimney squirrel*, and *airplane diaper*. They are products of grammar, yet the grammatical construction itself cannot tell us precisely how the profiled entities are connected – the construction merely instructs us to find a connection based on any resources at our disposal. In the case of *elephant table*, I might imagine a souvenir shop at the San Diego Zoo. The compound could refer to the table on which carved wooden elephants are displayed. A *chimney squirrel* might be interpreted as a squirrel that lives in a chimney. However, it might also indicate a trained squirrel used to clean a chimney by running up and down inside it. The term *airplane diaper* could well refer to diapers carried on an airplane for infant emergencies. But another conceivable interpretation is that it designates a large piece of cloth wrapped around an airplane to soak up leaking fuel.

If one insists on treating compounds as a lexical phenomenon, there are other reference point constructions where this is hardly an option. I have argued, for example, that

possessive constructions have the reference point relationship as their schematic semantic value (Langacker 1993, 1995, 2004). While particular kinds of relationships are prototypical – notably ownership, kinship, and part-whole relations – expressions like (7) indicate that possessive constructions are extremely varied in the specific kinds of relationships they are used for. What they all have in common is merely the abstract commonality of the possessor functioning as conceptual reference point providing mental access to the entity possessed.

- (7) *the mayor's cell phone, Joe's mother, my foot, the baby's diaper, their office, his problems, your candidate, my bus, the student's qualifications, our displeasure, her migraine, the dog's fleas, the bank's current interest rate, Oswald's assassination [of Kennedy], Kennedy's assassination [by Oswald]*

In English possessives like (7), the possessive morpheme 's evokes the configuration in Figure 6 as its schematic meaning (Taylor 1996). When the reference point and the target are specified by the possessor nominal and the possessed noun, the full expression has the same organization and the same profiling, except that at this level the reference point is identified as a particular individual and the target as a specific instance of the type evoked by the noun, an instance identified by virtue of being located in the reference point's dominion. But even here there is anything but complete determinacy in regard to their relationship or, as a consequence, in regard to the target's identification. Does *my foot* refer to the left foot or the right foot? Or is it even part of my own body? If I am an artist, it might be the foot that I am currently drawing. If I am a surgeon, it might be the foot that I am responsible for operating on (as opposed to the one my partner is going to operate on). *My bus* could be the bus I am scheduled to take, but it could also be the bus I drive, the one I designed, the one I am betting on to win the cross-country bus race, and so on indefinitely. Despite certain conventionally established defaults, the construction leaves open the precise nature of the connection between possessor and possessed. Minimally, it merely indicates that one is mentally accessible in relation to the other.

Another grammatical manifestation of reference point relationships are topic constructions, exemplified in (8). These sentences consist of a nominal, which functions as topic, followed by a clause that expresses a proposition that somehow pertains to the topic. In cases where the topic and the clause are separated by an intonation break, there are two successive "windows of attention" (Chafe 1994: Ch. 5; Langacker 2001), each with its own profile: the nominal profiles a thing, and the clause a process.

- (8) a. *Your uncle, he should really get married.*
 b. *That color, I just don't like it.*
 c. *The lottery, I never have any luck.*

What does it mean to say that the proposition "pertains to" (or "is about") the topic? It means that the proposition is supposed to fit somewhere within the body of knowledge evoked by the topic nominal. Accordingly, we can characterize the nominal profile as a reference point, the associated body of knowledge as the dominion accessible through it, and the proposition as a target, i.e. as one element in the reference point's dominion. This is shown in Figure 7. If the proposition is "about" the topic, it must also be the case that

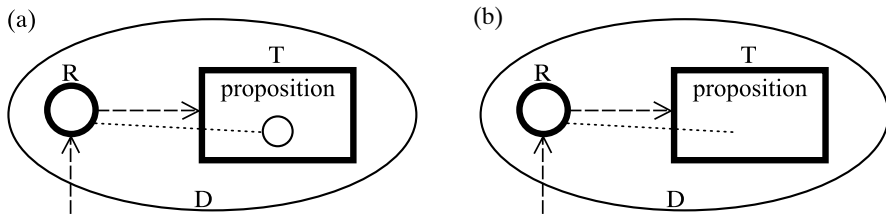


Figure 7. Topic constructions

the nominal referent somehow figures in the proposition expressed by the target clause. It plays some role in this proposition, often a central one. In English, this is usually indicated explicitly by means of coreferential pronoun, like *he* in (8a) and *it* in (8b). This is shown in Figure 7(a), where a small circle represents the nominal referent in its role within the clausal proposition (coreference is shown as a dotted correspondence line).

In many languages, the topic construction does not employ a resumptive pronoun. Occasionally we can do without one in English, as in (8c). In this case there is no way to know for sure what role the topic plays in the proposition, only that it has *some* role in it, which could be quite peripheral. This is shown in Figure 7(b). Such expressions exhibit indeterminacy in regard to how the topic and the clause are connected, and where the proposition fits in the topic's dominion. There is often a default, supplied by context or general knowledge. Thus (8c) would normally be interpreted as meaning that I never have any luck at winning the lottery. But that is certainly not the only possibility. It might instead mean that I never have any luck in getting the winner of the lottery to marry me, or – if I am in charge of the lottery – that I never have any luck in running it successfully.

4. Complex things and relationships

We have focused thus far on grammatical relationships involving what are primarily conceived as being single, unitary entities. Obviously, though, many expressions pertain to collections of entities, or to single, higher-order entities clearly recognized as consisting of individual elements. These complex entities are a major source of indeterminacy.

Plural nouns are an obvious example. Plurals function as mass nouns in many respects, but have special properties within this class because the individual elements constituting the profiled mass are made fairly salient. When a plural noun specifies the trajector or landmark of a relational expression, there is usually some indeterminacy as to how the profiled relationship engages the complex entity. This indeterminacy is especially acute in English because predicates give no morphological indication of whether the profiled relationship is simple or complex.

With some predicates, a default interpretation follows directly from their meaning. For example, the adjectives in (9) induce the respective interpretations sketched in Figure 8. *Intelligent* ascribes to its trajector a property that is usually characteristic of individuals. Barring special circumstances (cases of group intelligence), sentence (9a) implies

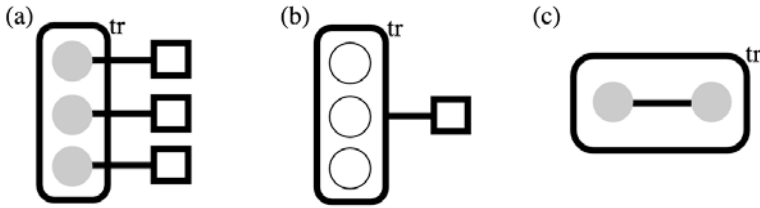


Figure 8. Engagement of complex trajector and profiled relationship

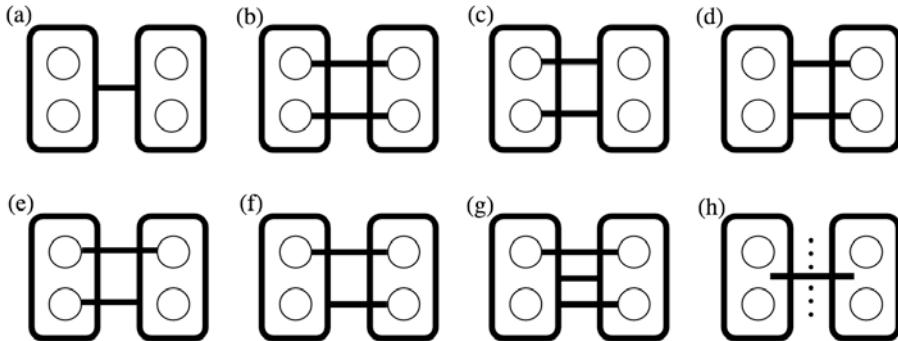


Figure 9. Indeterminacy of engagement with complex participants

that each woman individually displays a certain property (represented as a box), that of intelligence. Hence the profiled adjectival relationship comprises multiple “atomic” relationships, each projecting to a single woman. By contrast, the property of being *numerous* can only be ascribed to a set of entities viewed collectively, as a single but complex whole. So (9b) implies only one atomic relationship. The adjective *alike* also requires a complex trajector, but with a different twist. While the property ascribed to the trajector is in a sense a collective one, it also connects them as individuals. Yet there are also many predicates that fail to impose a default interpretation. For instance, *The boxes are heavy* is readily interpretable along the lines of either Figure 8(a) or (b): the property of being heavy can plausibly be ascribed to each box individually, or to all the boxes taken collectively.

- (9) a. *Those women are intelligent.*
 b. *The problems with that idea are numerous.*
 c. *These two proposals are very much alike.*

With multiple plural participants, the indeterminacy is much greater. Consider (10):

- (10) *The two men lifted the two boxes.*

To keep things simple, there are only two plural nouns, and each profiled set comprises just two individuals. The nouns are definite in order to exclude the problem of quantifier scope (hence each nominal refers to exactly two actual individuals). I am also ignoring the possibility of a repetitive construal, in which the profiled event occurs indefinitely many times. Even with these limitations, the number of possible interpretations is quite large.

Moreover, the differences are hardly trivial in terms of classic semantic concerns, since each interpretation has a distinct set of truth conditions.

One interpretation, represented in Figure 9(a), is that the two men, acting together, lifted the two boxes together. Hence there is only one atomic event of lifting, in which both the men and the boxes participate collectively. Alternatively, each man may have lifted a single box, implying two atomic events, as shown in diagram (b). Another possibility, shown in (c), is that each man individually lifted the two boxes together. Or conversely, the men may have collectively lifted each box individually, as in (d). It is also conceivable that one man lifted one box, while the other lifted both boxes, as in (e). Or conversely once more, one box was lifted by a single man and the other by both men, as in (f). Yet another option, shown in (g), adds to (f) a further atomic event in which the men jointly lift the boxes together. Other possibilities are easily imagined. In sum, all we know for sure is that lifting was done and that two men and two boxes were somehow involved as agents and patients. We do not know how many atomic events there might have been, nor how any such event projects to the individuals subsumed by the subject and object nominals. I have tried to indicate this indeterminacy in diagram (h).

I noted that English verbs and adjectives give no morphological indication of whether they profile a single, atomic relationship or a complex relationship consisting of multiple atomic ones. What about the singular/plural contrast induced by so-called “verb agreement”? This does not itself indicate the number of atomic relationships, as we see in (9)a–b, where the plural form *are* occurs with both configurations. Nor does the verb mechanically agree with the subject. Rather, the verb inflection makes an independent semantic contribution (Reid 1991; Barlow 1992), emphasizing either the trajector’s unitary nature or its internal multiplicity. This specification does of course encourage a corresponding construal of the profiled relationship as being either simple or complex, but does not itself strictly determine that choice.

Quite a variety of nominal expressions display ambivalence as to whether the collective entity they evoke is apprehended in a way that emphasizes its unitary or its multiplex character. This aspect of their construal is mostly independent of profiling and basic grammatical organization (like constituency). It is however a source of indeterminacy regarding the specific connection between the nominal referent and a profiled relationship.

Exemplified in (11) are three sorts of nominal expressions that display this ambivalence. The collective noun *faculty* lends itself to either of two construals: as a deliberative body capable of joint decisions; or as a set of individuals who make individual decisions. While in either case the subject in (11a) profiles a collective entity consisting of all faculty members, the choice of singular *has* vs. plural *have* indicates which aspect of its decision-making capacity engages the profiled process of acceptance. The contrast in (11b) hinges on whether drinking and smoking are seen as two distinct vices, each of which fails individually to improve one’s health, or whether they are construed as two facets of a single unhealthy behavioral complex. And in (11c), the flying is attributable to either the individual geese or the flock as a whole. Obviously, a flock can fly only by virtue of its individual members doing so, but we can still choose to highlight either the individual or the collective aspect of the motion.

- (11) a. *The faculty {has/have} accepted the new curriculum.*
 b. *Drinking and smoking {does/do} not improve your health.*
 c. *A flock of geese {was/were} flying overhead.*

It is thus the verb inflection in (11) which, by emphasizing either the unitary or the multiplex nature of the trajector, gives an indication of how the subject links up with the profiled clausal relationship. The subject nominal does not itself impose a choice, for with either construal it has the same form and the same grammatical structure (i.e., there is no difference in component elements, correspondences, or constituency). How the nominal referent engages the profiled relationship is therefore indeterminate when there happens not to be any verb inflection to indicate it, e.g. in (12):

- (12) a. *The new curriculum has been accepted by the faculty.*
 b. *Drinking and smoking will not improve your health.*
 c. *We saw a flock of geese flying overhead.*

Let us look more carefully at (12c). A flock and the geese constituting it are coextensive and referentially identical. Yet *flock* is a count noun, and *geese* a plural mass noun. What about the subject nominal as a whole? In an objective sense, it has the same profile with either the unitary or the multiplex construal – in either case, it refers to the same set of objects in a real or imagined world. Conceptually, however, a unitary entity like a *flock*, a *stack*, or a *week* is just as real to us – just as much a single, bounded object – as is a *goose*, a *plate*, or a *day*. We can therefore say that a *flock of geese* has two alternate profiles. It can either designate the flock, construed as a single, discretely bounded entity, or else it can designate the mass coextensive with (and delimited by) that entity. These two options are respectively shown in diagrams (a) and (b) of Figure 10, using circles for intrinsically bounded entities and an ellipse for a mass (where bounding is extrinsic). The small circles represent geese, the large one a flock. The ellipse represents a mass consisting of geese. The construction tells us that this mass is limited in extent – specifically, it is coextensive with the flock (the double line is meant to indicate their coincidence).

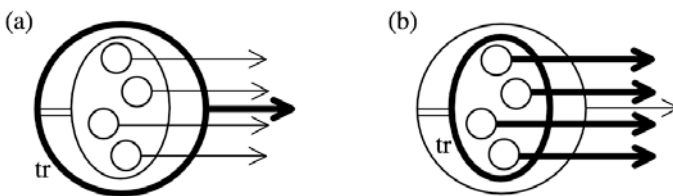


Figure 10. Unitary vs. multiplex construal

The proposal, then, is that the nominal profile can fall on either of two *conceived* entities that are *objectively* coincident. Depending on whether it is construed as designating the referent's unitary or multiplex aspect, the nominal is compatible with either a uniplex or a multiplex interpretation of *fly*, as shown in the diagram by arrows. But since *fly* itself is morphologically the same under either interpretation, the choice between 10(a) and (b) is indeterminate unless verb inflection should happen to indicate how its trajector is construed.

I want to emphasize that, in Cognitive Grammar terms, this is not a matter of how the nominal is put together syntactically. Under either interpretation, the phrase *flock of geese* consists of the same elements, connected by the same correspondences, and with the same constituency (cf. Langacker 1992, 1997). The difference is solely a matter of which aspect of the referent is singled out for profiling at the composite structure level. The predominant pattern in English grammar suggests the constituency [*flock [of geese]*], with the profile of *flock* being inherited at the composite structure level. But evidently the profile sometimes shifts to the geese coextensive with the flock, as an instance of metonymy in a fairly narrow sense of the term (shift in profile). The shift and the resulting indeterminacy are likely to go unnoticed, for the difference has no practical consequences with respect to the situation described, and often no linguistic consequences. The shift in profile does not entail a change in constituency to [[*flock of*] *geese*], since it is not the case in Cognitive Grammar that the composite structure profile has to be inherited from any particular element or structural position. I posit the basic constituency [*flock [of geese]*], where *flock* combines with the prepositional phrase *of geese*, regardless of whether the composite meaning focuses the flock or the geese coextensive with it.

Expressions of this sort are however susceptible to grammaticization and eventual reanalysis, so that everything before the final noun is reinterpreted as a quantifier. This has happened to various degrees with a number of nouns, such as *number*, *handful*, *ton*, *bunch*, and *lot*. To the extent that they lose their original, generally physical import (e.g. *bunch* as a cluster of objects bound together), they are no longer able to impose their own profile on the composite expression. Thus in contrast to (11c), where *a flock of geese* occurs with either a singular or a plural verb, in (13) the verb can only reflect the multiplex nature of the following, quantified noun:

- (13) *A {number/handful/ton/bunch/lot} of geese {*was/were} flying overhead.*

But even for *a lot of*, which has progressed the farthest along this path of grammaticization, there is evidence that the basic constituency has been preserved, at least as one option. That is, it can still be [*a lot [of geese]*] rather than [[*a lot of*] *geese*], even when the profile of *geese* is inherited at the composite structure level. Examples like (14) and (15) indicate that *a lot of* is not simply an unanalyzable quantifier like *several* or *many*, and that the major constituency break still falls between *a lot* and *of geese*.

- (14) a. *She loves ducks and geese. Right now she has several. Geese, that is.*
 b. *She loves ducks and geese. Right now she has a lot. Of geese, that is.*
 c. **She loves ducks and geese. Right now she has a lot of. Geese, that is.*
- (15) a. *Geese? {Many/A lot/*A lot of} are eaten every Christmas.*
 b. *She saw a lot, maybe even a whole flock, of geese.*
 c. *Three, a dozen, a lot, or even hundreds of geese are flying overhead.*

The lesson I draw is that the key factor in this path of grammaticization is metonymic: specifically, variation in the choice of composite structure profile. As it moves along this path, an expression with the same structural configuration is susceptible to alternate interpretations with respect to what it designates, and at least in early stages there is often no way to tell – the choice of profile is indeterminate.

5. Buried connections

In a grammatical construction, component structures are integrated to form a composite structure. Their integration depends on correspondences being established between component structure elements. It is natural that the corresponding elements should tend to be highly salient, functioning as either a component structure profile or a focal participant in a profiled relationship. Perhaps the most typical situation is for the profile of one component structure to correspond to the trajector or landmark of the other. We have seen, however, that the corresponding elements are not always so easy to identify. If we want to determine the specific connection between two component structures, we often have to “dig”. The points of connection are commonly non-salient or somehow “buried”, if they are not simply indeterminate.

Let us start with the sentence *I saw her in the park*, where the clausal component *I saw her* combines with the prepositional phrase *in the park*, as shown in Figure 11. Canonically, the trajector of a prepositional phrase corresponds to the profile of the other component structure. If we interpret the sentence in this manner, the trajector of *in the park* is identified with the profiled event *I saw her*. That is, the entire relationship – comprising the participants and their interaction – was located within the spatial expanse of the park. Under this interpretation, the two component structures are linked by correspondence (a). The clausal component participates as a whole in the relationship profiled by the prepositional phrase, connected to it via its profile.

There are however two other interpretations, effected by correspondences (b) and (c). It may be that *she* was in the park when I saw her, but I was not. Or alternatively, *I* might have been in the park and seen her outside it, e.g. on the roof of a building across the street. Under these interpretations, to find the connecting element we have to look inside the clausal relationship, burrowing down to a correspondent that is not individually profiled at the clausal level. Very different composite meanings are obtained depending on which correspondence is established. These are respectively shown in diagrams (a)–(c).

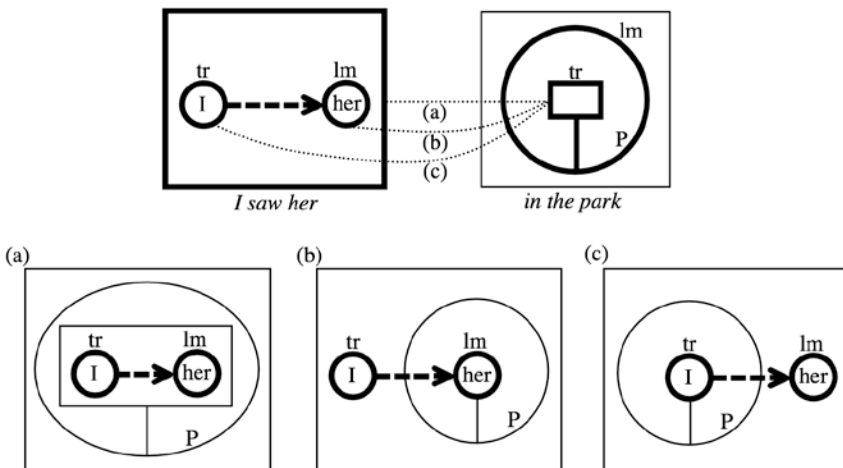


Figure 11. Points of connection for locative

In this example, of course, we do not have to dig very far to find the corresponding element. If it is not the profiled relationship, it is one of its focal participants, explicitly mentioned by the subject or object nominal. In other cases the specific point of connection is not so evident. What, for instance, should we identify as the trajector of the prepositional phrase in the sentence *I pounded on the door*? It can hardly be the entire event – the door’s surface is not the global setting for my pounding in the same way that, in the previous case, the park’s interior is the global setting for my seeing her. Hence the awkwardness of (16b) in comparison to (16c). The trajector of *on the door* is not me, at least not all of me, for only my fist makes contact with the door. Intuitively, I am inclined to identify the trajector of *on* as being the blow or the force transmitted. In any case the point of connection is vague or indeterminate. Descriptively, I would probably take the verb *pound* as being the trajector of *on the door*, without specifying any particular active zone for its participation in the *on* relationship. The point of connection is *sublexical*, an aspect of the scene not individually singled out for explicit mention.

- (16) a. *I pounded on the door.*
- b. *??On the door, I pounded.*
- c. *In the park, I saw her.*

When the point of connection is explicitly mentioned, to find it we must sometimes dig through levels of constituency. Providing an example is a relative clause construction in which the relative clause is not adjacent to the noun it modifies. Usually a relative clause and the modified noun combine directly, as in Figure 12. Their integration to form a complex nominal constituent, shown at the lower left, is effected by a correspondence between the schematic landmark of the relative clause *you ordered* and profile of the head noun *book*. It is thus a canonical construction, in which the pivotal correspondence identifies a nominal profile with a focal participant of a profiled relationship. The resulting nominal – *the book you ordered* – is a grammatical constituent that can function as subject in a higher-level clause. Here it specifies the trajector of *arrived* in another canonical construction.

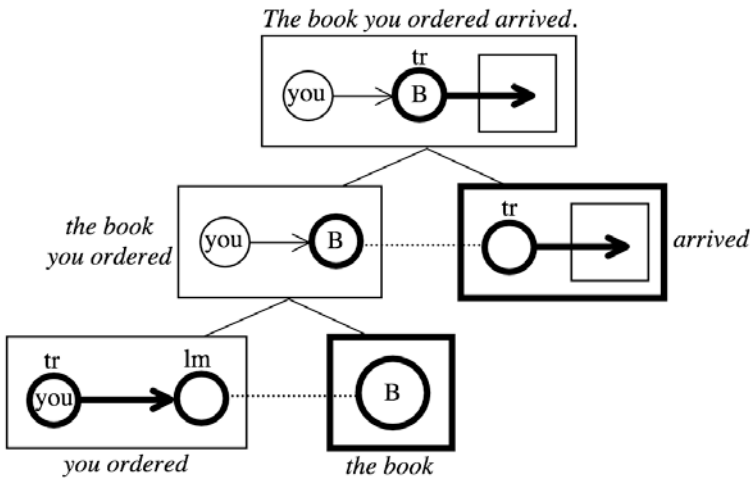


Figure 12. Canonical relative clause construction

But we also have the variant in Figure 13: *The book arrived that you ordered*. Here the relative clause is not adjacent to the noun it modifies, so in terms of overt form they are not a grammatical constituent. They are sometimes claimed to be a constituent at the level of “deep” or “underlying” structure, from which the “surface” form derives by means of a “transformation” that moves the relative clause, “extraposing” it to the end of the main clause. However, derivations from underlying structures are not permitted in Cognitive Grammar, nor are they necessary. To handle this construction, we need only recognize that to find the point of connection one sometimes has to dig, in this case burrowing down to a lower level of organization in the symbolic assembly.

Working up from the bottom in Figure 13, we first observe the integration of *the book* and *arrived* in a canonical subject construction. This produces the nuclear clause *the book arrived*. At the higher level, this nuclear clause combines with the relative clause *that you ordered*. We can look at their integration in either of two ways, which are both valid and essentially equivalent. On the one hand, we can say that the landmark of the relative corresponds to the trajector of the main clause, *the book arrived*. This is the correspondence labeled (a). It is not the clausal process as a whole that is identified as the landmark of *order*, but only its focused participant. (This is how I described the second two interpretations of *I saw her in the park*.) Equivalently, we can say that the landmark of the relative clause corresponds to the profile of a nominal component it does not combine with directly. To find a nominal profile that corresponds to the landmark, we have to look inside the main clause structure, where we find it as a subconstituent. That gives us the correspondence labeled (b). It is not a matter of choosing between (a) and (b) – these are simply two facets of the same symbolic assembly (an array of symbolic structures linked by correspondences).

As in the case of *I saw her in the park*, not much digging is required here to find the buried connecting element. That element is explicitly mentioned, being profiled at a lower level of organization. But sometimes one has to dig further. This is so for certain relative clause constructions in Japanese. The following discussion, pertaining to “internally headed relative clauses”, is based on the data and description in Nomura 2000.

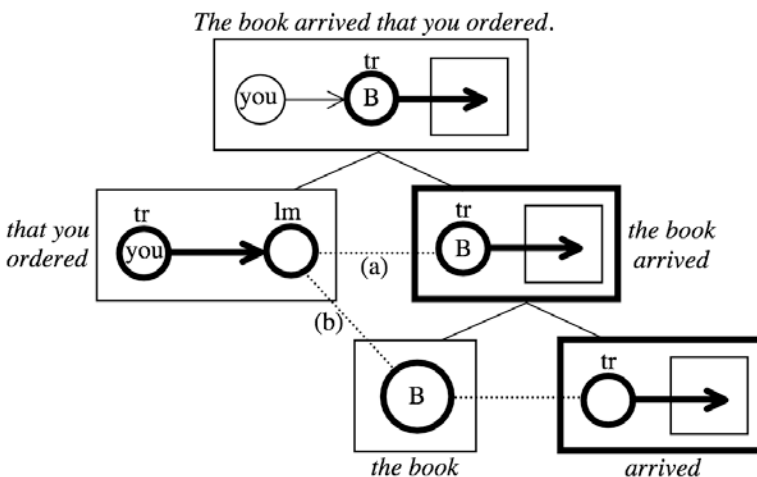


Figure 13. Discontinuous relative clause construction

Consider first the complement clause construction in (17a). Here the clause *Ziroo-ga ryoori-o tukuru* ‘Jiro will make a meal’ is nominalized and functions as the object of the main-clause verb *kitaisuru* ‘expect’. The nominalizing suffix, *-no*, is translated here as ‘thing’. When *-no* combines with a clause, its effect is to construe the proposition expressed by that clause as an abstract thing, so that the composite expression – in this case *Ziroo-ga ryoori-o tukuru-no* – is grammatically a noun. As such it can serve as the object of a verb (indicated by the object ending *-o*). The composite meaning of (17a) is thus as shown in Figure 14(a). The landmark of *kitaisuru* ‘expect’ is an abstract thing, represented by the large ellipse, characterized in terms of the proposition *Ziroo-ga ryoori-o tukuru* ‘Jiro will make a meal’.

- (17) a. *Taroo-wa [Ziroo-ga ryoori-o tukuru]-no-o kitaisuru.*
 Taro-T [Jiro-S meal-O make]-thing-O expect
 ‘Taro expects that Jiro will make a meal.’
- b. *Taroo-wa [Ziroo-ga ryoori-o tukuru]-no-o taberu.*
 Taro-T [Jiro-S meal-O make]-thing-O eat
 ‘Taro eats a meal which Jiro makes.’
- c. *[Yakan-ga huttoosita]-no-o yunomi-ni sosoida.*
 [kettle-S boiled]-thing-O cup-in poured
 ‘I poured the boiling water into a cup.’

Next consider (17b). It is just the same as (17a) except that the verb is *taberu* ‘eat’ rather than *kitaisuru* ‘expect’. Normally, of course, a verb like *taberu* ‘eat’ takes a concrete object – one can eat a meal or an apple, but not an abstract entity like a proposition. Grammatically, however, the sentence appears to state that Taro eats the proposition that Jiro will make a meal. But semantically it is understood as meaning that Taro eats the meal referred to inside the subordinate clause. This is what is called an internally headed relative clause construction. The label reflects the notion that the nominalized subordinate clause designates the meal, since the meal is what is eaten. If it profiles the meal, it properly translates into English with a relative clause construction, where the head noun is *meal*: ‘a meal which Jiro makes’. But in Japanese, the noun *ryoori* ‘meal’ is internal to the so-called relative clause, in contrast to the more usual situation where the head noun is external to the relative.

I suggest, however, that describing (17b) as a relative clause construction is primarily based on the false presumption of determinacy in grammar. It presumes that the landmark of *taberu* ‘eat’ has to be identified with the entity that directly participates in the eating relationship, namely the meal, and that this in turn has to be identified with the referent of the object nominal *Ziroo-ga ryoori-o tukuru-no*, which must therefore profile the meal. Once we recognize the extent of indeterminacy in grammar, the basis for this analysis evaporates. From this perspective, the landmark of *taberu* ‘eat’ does not necessarily have to be the thing eaten, nor is it necessary to claim that the nominalized clause *Ziroo-ga ryoori-o tukuru-no* has a different profile (hence a different meaning) in (17a) and (17b). We can simply acknowledge that in both sentences it profiles an abstract thing defined in terms of a profiled event.

What, then, is the difference between examples like (17a) and (17b)? It is just a matter of the latter exhibiting profile/active-zone discrepancy. With a predicate like *kitaisuru* ‘expect’, the abstract thing designated by a nominalized clause can itself participate directly,

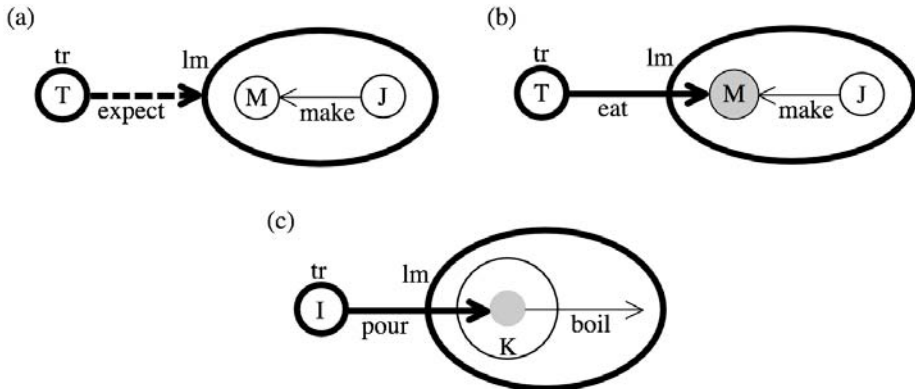


Figure 14. “Internally headed relative clauses”

and as a whole, in the profiled relationship. With a predicate like *taberu* ‘eat’, a conceptually reified event cannot itself directly participate in the process of eating, but an aspect of that event – namely the meal – can do so. The meal is thus the active zone of this abstract thing with respect to *taberu* ‘eat’, as shown in Figure 14(b). In principle, this is no more unusual than a sentence like *I can hear a piano*, where what is actually heard is only a sound. To account for the Japanese data, we need only recognize a conventional pattern in which the complement clause construction of (17a) is extended to predicates whose usual landmark (the point of connection with the profiled process) has to be sought within the reified event imposed as landmark by the construction itself.

But that is not the end of it. In (17b), the landmark’s active zone is explicitly mentioned at a lower level of organization. This is not invariably the case, however. An example is (17c), where only a kettle is mentioned in the nominalized clause, but the kettle per se neither boils nor is poured. In this expression the subordinate clause itself exhibits profile/active-zone discrepancy: the kettle is focused as trajector of ‘boil’, but only the water it contains directly participates in this process. As shown in Figure 14(c), therefore, the active zone of the nominalized clause with respect to ‘pour’ is totally implicit. It is however evoked metonymically by the reference to the kettle and boiling.

6. Anaphoric connections

Since I have focused on the connections between predicates and their arguments, let me briefly note a few other manifestations of indeterminacy in grammar, where one has to “dig” in order to find a connecting element. An obvious case is the relationship between a pronoun and its antecedent. In a given language, of course, particular structural configurations are conventionally established as typical ones for a pronoun-antecedent relationship. Commonly, for example, the antecedent nominal functions as a topic, with the coreferential pronoun appearing as subject or object of the comment clause. In such cases a grammatical construction tells us precisely where to find the corresponding elements (i.e. the referentially identical profiles of the pronoun and the antecedent nominal) in

relation to one another. But knowing precisely where to look is not the typical situation. It is usually possible for the antecedent to lie at some distance from the pronoun, in a wide variety of structural positions with respect to it. Rather than being in the same sentence, it is often found somewhere in the prior discourse. At the most schematic level, we merely know that a pronoun's reference can be ascertained because it occurs in the dominion of a nominal serving as reference point for its interpretation (van Hoek 1995, 1997).

We face other sorts of indeterminacy in the varied cases where a pronoun lacks an explicit nominal antecedent. Personal pronouns are sometimes used for individuals not otherwise mentioned in the discourse at all, but merely evident from the discourse context (Hankamer & Sag 1976). Of course, many languages carry indeterminacy one step further by not even using a pronoun in certain circumstances. A vacant argument slot can be just as effective as a pronoun in prompting the search for a referent. And despite the indeterminacy, we usually manage to find the intended referent in the discourse or the context of speech. The referent is commonly the speaker or the hearer, since these are always accessible in the discourse context to serve as point of connection. An example from Japanese is (17c), where the main clause trajector is left implicit but is understood by default as being the speaker. To cope with the indeterminacy of unexpressed arguments, a language develops particular, conventionally sanctioned patterns for interpreting them. The pattern invoked in (17c) is very roughly sketched in Figure 15. It specifies that the implicit trajector of a profiled relationship can be identified with the speaker. By the definitions of Cognitive Grammar, such patterns – pertaining to how expressions are *applied* in the ongoing discourse – are an integral part of the structure of a language (Langacker 2001).

Further kinds of indeterminacy are commonly encountered in anaphoric relationships. For one thing, the pronominal referent is sometimes accessible only via metonymy, rather than being directly mentioned (Langacker 1996). A few examples are given in (18). In (18a), *they* refers to a certain set of ducks. But in the first sentence, *duck* is a bare noun, not a full nominal, and merely names a *type* of creature. There is no direct mention of the set of *instances* of this type referred to by the pronoun. In (18b), *all three* refers to a set of languages (languages can be ergative, women are not). Again, the set referred to is not explicitly mentioned in the prior sentence. The nominal *an interesting language* is singular, not plural, and the instance it profiles is a fictive one, invoked in order to make a generalization about what the women have in common. And in (18c), *there* refers to France. The

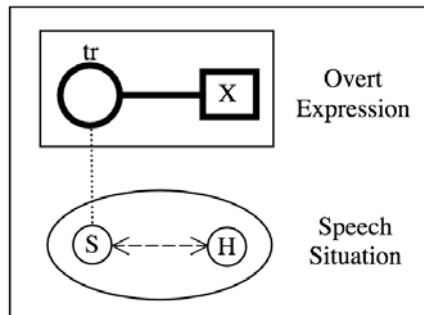


Figure 15. Covert grounding

word *French* evokes France through general knowledge and partial morphological resemblance (Postal 1969), but strictly speaking there is no explicit antecedent.

- (18) a. *The duck situation is getting serious. They leave droppings all over my floor.*
 b. *Each of those women speaks an interesting language. All three are ergative.*
 c. *He speaks excellent French even though he's never lived there.*

The example in (19) is once again from Japanese (Yamanashi 2003). It is not dissimilar to (17c), as diagrammed in Figure 14(c). The pronoun *sore* refers to the food in the bowl, but only the bowl is mentioned directly. (Also, the main clause trajector is left implicit, being identified with the speaker.)

- (19) *Donburi-ga detekita node, suguni sore-o tabeta.*
 bowl-S served since instantly it-O ate
 'As soon as the bowl was served, I ate it [the food].'

Yet another kind of indeterminacy in pronominal reference is actual vagueness as to the intended referent (Gensler 1977; Langacker To appear). Especially with the pronoun *it*, there are times when even the speaker – though clearly referring to something – would not be able to say just what. Suppose, for example, that a teenage girl is denied permission to go to the movies with her boyfriend. One can imagine her protesting to her parents by saying *It's just not fair!*. What does the pronoun *it* refer to in this context? The decision? The fact that permission was denied? The prospect of staying home on Friday night? The general circumstances? The misery of being a teenager? The plight of not being in control of her life? All of these? Some combination of them? In all likelihood the speaker has no single, precisely delimited referent in mind. This vagueness of reference is not however the same as absence of reference.

Similar vagueness occurs with other deictic elements, such as demonstratives. Here we can imagine a long-winded speaker, almost at the end of his talk, trying to calm his restless audience by saying *That brings us to our final topic*. What does *that* refer to? Once more there are many possibilities, e.g. the prior sentence, the last paragraph, the previous topic covered, or the last point established. Although the word *that* is clearly pointing to something, it would be hard to say just what, and probably wrong to assume that it has to be one option to the exclusion of others.

That brings us to our final topic, namely indeterminacy associated with reference to *types* rather than *instances* of those types. In English, this distinction correlates with a fairly clear structural contrast between a full *nominal* (or “noun phrase”) and a noun (or a noun plus its modifiers) that lacks a determiner. By itself, a lexical noun (as opposed to a proper noun or a pronoun) merely specifies a type of thing. A full nominal, on the other hand, profiles a *grounded instance* of the type in question. It incorporates a determiner that indicates how the profiled instance relates to the *ground*, i.e. the speech event and its participants. The distinction is less clear-cut in many languages, where nominals often occur without determiners, even when interpreted as referring to specific instances. I would analyze such nominals along the lines suggested in Figure 15 for unexpressed arguments. That is, particular ways of implicitly relating a noun to the speech situation, representing the discourse status of an intended referent, are conventionally established as part of the

language. These tacit structures provide a way of grounding what appears overtly as just a noun. In (19), for example, *donburi* ‘bowl’ takes the subject marker *-ga* and is thereby interpreted as designating a specific *instance* of the type.

With covert grounding the buried connection is readily found. Presenting a greater degree of indeterminacy is the use of a noun that is wholly ungrounded, so that no connection is established between its profile and the speech situation. Rather than singling out a specific nominal referent, the speaker’s characterization of the entity in question reaches only to the type level, making no attempt to direct the hearer’s attention to any single instance. Often, of course, the type level is the only one relevant. Thus in (20a) *house* merely specifies the type of painting my son engages in. As the first element of a compound, it is ungrounded and does not single out any particular instance of the *house* type. This indeterminacy of reference is fully appropriate, since the painting referred to represents a general activity involving an open-ended set of houses. On the other hand, (20b) describes a situation that presumably did involve one particular house – e.g. the speaker might have said *Last week I painted my house*. The effect of choosing an ungrounded (or “incorporated”) noun as landmark instead of a full nominal is to leave the profiled event “floating” or indeterminate with respect to how it applies to actuality.

- (20) a. *My son is a **house** painter.*
 b. *Last week I **house** painted.*

Another kind of indeterminacy involving type specifications arises in constructions where grammatical connections hold between the types themselves. Consider first the indefinite pronoun *one*, which profiles a single instance of some type identifiable in the discourse context. It is often identified as the type evoked by an antecedent nominal, as in (21a), where *one* is taken as designating a computer. The use of boldface is meant to indicate that the relevant aspect of the antecedent is only the type specification supplied by the noun, not the nominal as a whole or the specific instance it profiles. That is, the nominals *one* and *a computer* invoke the same type but profile different instances of it.

- (21) a. *She doesn’t have a [**computer**], but she needs **one**.*
 b. *That’s an [**expensive** [**Japanese** [**car**]]]. My friend bought **one** last week.*

Often, though, there is indeterminacy in regard to the antecedent type. A complex nominal, like *an expensive Japanese car* in (21b), has type specifications at multiple levels of organization. Minimally, as indicated by the bracketing, it evokes the types *car*, *Japanese car*, and *expensive Japanese car* at successively higher levels. Which of these types is the pronoun *one* interpreted as instantiating? It is most likely the highest-level type, *expensive Japanese car*, but all three are acceptable in normal speech. With the other two options, finding the intended type involves “burrowing down” to a lower level of structural organization. (This is not unlike the situation with extraposed relatives, as shown in Figure 13.)

Indeterminacy as to type also figures in the internal structure of a single nominal expression. Two examples are given in (22), involving the definite article *the* and the (non-grounding) quantifier *four*. The definite article indicates that a single instance of the specified type is uniquely identifiable in the current discourse context. But what is that type? In (22a) it can either be *Japanese* or *hard-working Japanese*. In the former case, the set

of Japanese as an undifferentiated whole offers itself as the obvious unique instance of this plural type. The adjective *hard working* does not itself contribute to characterizing the type in question. It does however contribute in the second interpretation, where only those Japanese who are hard-working are said to have achieved prosperity. Depending on whether or not the adjective contributes to characterizing the specified type, it is sometimes described as being used either “restrictively” or “non-restrictively” (by analogy to relative clauses). In the Cognitive Grammar account, this is simply a matter of which type specification potentially available within the nominal is put in correspondence with the type invoked by the article.

- (22) a. *The [hard-working [Japanese]] have achieved prosperity.*
 b. *She has four [brilliant [students]].*

Similarly, *four* evokes a plural type and indicates the size of a set constituting one instance of it. In (22b) the type in question can either be just *students* (in which case she only has four, all of whom are brilliant) or else *brilliant students* (in which case she probably has additional students of lesser caliber). This is not a structural difference in the sense of there being different constituency or constituents representing different categories. It is simply a matter of how the component elements are connected by correspondences, in this case at the type level. But despite its non-structural nature, the contrast is still in the realm of grammar. In the Cognitive Grammar perspective, grammar is nothing more than assemblies of symbolic structures linked by correspondences. Neither the indeterminacy of many connections nor the conceptual nature of the elements connected offers any basis for claiming that the phenomena at issue are semantic rather than grammatical or pragmatic rather than semantic.

7. Conclusion

Nothing I have presented in this paper is terribly new or terribly surprising. Most of the facts are commonly known, at least to cognitive linguists, few of whom will be shocked by the revelation that much in grammar is “fuzzy” rather than fully precise. What I have tried to emphasize is the pervasiveness and fundamental nature of this fuzziness, even in “core” areas of grammar, suggesting a need to revise what traditionally has been the default conception of grammatical structure. Cases where grammatical relationships involve approximation rather than exact connections, and rely on general or contextual knowledge, are neither atypical nor pathological. On the contrary, they represent the usual situation and from the cognitive linguistic perspective are quite unproblematic. It is only natural, from this perspective, that metonymy in grammar should not be seen as a problem but as part of the solution.

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PART 1

Word class meaning and word formation

Nouns are THINGS

Evidence for a grammatical metaphor?*

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1. Introduction

Parts of speech such as nouns or verbs are implicit grammatical categories without a phonological form of their own (see Talmy 2000: 23). Parts of speech are basic linguistic categories, yet they are difficult to define. Some definitions are based on their morphological properties, some on their syntactic properties (see Baker 2003: 19), and others on their communicative functions (Croft 2000: 89). Langacker (1987: Ch. 5) postulates a conceptual basis. In the case of nouns, he assumes that all nouns, not only concrete nouns designating countable objects, are conceptualized as THING – certainly one of the most daring hypotheses in this domain. The purpose of my paper is to present and discuss converging evidence mainly from the typological and psycholinguistic literature as well as my own research on semantic change in the lexicon in favor of the existence of such a metaphorical basis for nouns, at least in languages whose nominal system is dominated by count nouns.

2. Typical and atypical nouns

Undeniably, there is a strong correlation between a part of speech and the types of concepts it expresses. Concepts representing concrete objects tend to be expressed by nouns; actions and processes tend to be expressed by verbs and properties by adjectives (Croft 2000: 89). Within the category of nouns, concrete count nouns are typical nouns:

[...] the possibility of semantic characterizations limited to the category prototypes is hardly controversial; a number of scholars have suggested that physical objects are prototypical for nouns [...] (Langacker 1990: 60)

Typical, concrete nouns are conceptually stable and autonomous first-order nouns (Lyons 1995: 83). More specifically, they denote concrete objects on the basic level such as *horse*, *dog*, *cat*, *tree*, *table*, *chair* (cf. Rosch et al. 1976: 388), i.e., they are based on maximally simple gestalts with distinctive shapes. The basic level seems to play a major

role for the noun lexicon, which in turn is a central part of the lexicon (cf. Cuenca & Hilferty 1999: 49, n. 5).

There is ample evidence for the typicality of concrete nouns on the basic level. Basic-level nouns tend to be morphologically simple and relatively stable (Rosch et al. 1976, Taylor 1995: 46–49). They are learned first via ostension and with minimal linguistic input (Gentner & Boroditsky 2001: 216–218; Markman 1989: 16, 70–71) before atypical nouns such as nouns for parts or relations (Gentner 1982: 307).¹ In language acquisition the shape bias seems to be so strong that children sometimes reinterpret adjectives as nouns and mass nouns as count nouns (Bloom 2000: 92, 107).

Due to their imageability concrete nouns are more easily recognized and memorized than atypical nouns (Opwis & Lüer 1996: 402). They are good storage units of the human long-term memory, which shows a strong preference for visual information, whereas auditory information seems to be preferred in working memory (Kintsch 1982: 157–163, 206–208; Paivio 1983: 314–315).

Less typical nouns are often conceptually (and quite frequently also morphologically) derived from basic-level nouns via metaphor, metonymy, generalization, specification, etc. (Mihatsch 2006a; also see Lakoff 1987: 268). Atypical nouns are subordinates such as *kitchen chair*, which consists of the modified basic-level noun *chair* (Ungerer & Schmid 1998), superordinates such as *furniture*, which are based on a conjunction of several basic-level concepts (see Mihatsch 2006b, 2007), relational nouns, deadjectival and deverbal nouns, as well as abstract nouns. Thus a strong correlation between semantics and word class is undeniable:

Briefly, the position I will take is that the correlation between syntax and semantics, although not perfect, is strong enough, at least for concepts at the perceptual level, for the form classes of noun and verb to have psychologically powerful semantic categories associated with them. (Gentner 1981: 161, n. 1)

The question is whether *all* nouns in *all* languages have a common semantic basis. Not all languages (for instance some North American and Oceanic languages) seem to have a distinct category of nouns (see Sasse 2005: 1596–1598). Furthermore, noun systems can be typologically quite varied. In Indo-European languages count nouns prevail, whereas in other languages such as Mandarin, Japanese, Navajo, or Tzeltal all nouns are transnumeral (cf. Rijkhoff 2002: 59), a distinction which even shows in non-linguistic categorization tasks, i.e. a strong shape-bias in speakers of languages with a majority of count nouns and a substance-bias for certain types of objects in speakers of languages with transnumeral nouns (see Imai & Gentner 1997, Lucy 1992), a case of weak linguistic relativity, which in turn has consequences for processes of lexical change (Mihatsch 2005). And even in Indo-European languages a common underlying noun schema seems to be difficult to prove since nouns much more than other parts of speech can stand for very heterogeneous concepts. However, this is exactly where we should look for evidence for an abstract conceptual basis of nouns.

3. Langacker's noun schema THING

Langacker (1987: Ch. 5) postulates a conceptual noun schema **THING** that underlies all nouns and is metaphorically derived from the prototype **PHYSICAL OBJECT**. The crucial difference between prototypes and schemata is that prototypes serve as a reference point for the categorization of less typical elements, whereas a schema is an abstract entity that characterizes all the members of a category, even the peripheral ones (Langacker 1987: 371). The schema **THING** is described as a region in a domain as illustrated in Figure 1.

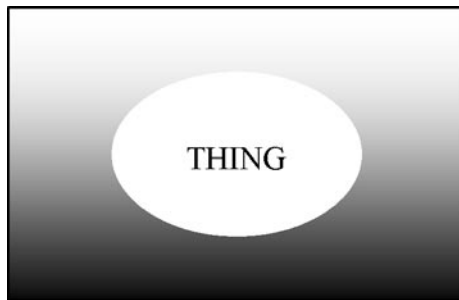


Figure 1. The noun schema according to Langacker (1987)

Count nouns represent a special but prototypical case, in which the designated region is construed as being bounded (Langacker 1987: 189–190).² So far, the existence of the noun schema is based on strong intuitions rather than concrete evidence, as Langacker (1998: 19) admits:

I have no definite proof for this conceptual characterization of nouns. If basically correct, it will nonetheless have to be refined, properly formulated, and empirically tested from the psychological standpoint by those with proper expertise. [...] I personally find it hard to imagine that fundamental and universal categories like noun and verb would not have a conceptual basis.

This intuition might be founded on mere prototype effects, as Jackendoff (1996: 102) points out. He restricts the importance of the correlation between nouns and physical objects to child language acquisition (103):

This is not to deny that the strong correlations between objects and nouns and between actions and verbs are necessary for the child to get grammatical acquisition off the ground. It's just that once the grammatical system gets going, it in part cuts loose of its semantic connections: a noun is now a kind of word that has grammatical gender and gets case-marked, a preposition is a kind of word that cannot take a subject but does permit a direct case-marked object, and so on.

Thus, it is necessary to look for further evidence for the noun schema.

4. Further evidence for the noun schema: Nouns vs. verbs

Despite the diversity of concepts expressed by nouns, there seems to be a strong correlation between semantics and word class even for adults, which is perhaps not surprising, given the strong link in general between the lexical meaning and the syntactic category of a lexeme, a unit called lemma in psycholinguistics, as Levelt (1989) and many others have shown for language production tasks.

Intuitively, nouns in general are felt to construe portions of information as stable autonomous entities; they are felt to be bounded containers for information:

The quality of the noun is that it captures a concept on the wing and holds it still for inspection. Nouns name things because children learn the solid world first, and go on to solidify mentally whatever they think or talk about. (Bolinger 1980: 27)

Do all nouns have a conceptual basis that goes beyond syntactic and morphological properties? Where can we find evidence for an abstract noun schema? If there is a noun schema, all nouns, even atypical nouns, have to show signs of a common conceptual basis. Atypical nouns should be processed as stable entities resembling physical objects:

If this is true, then one interpretation is that the basic-level representational differences between object-reference and relational meaning give rise to second-order rhetorical differences. By the partitioning of a message into object-terms and relational terms, the speaker may signal which parts of the message are to be thought of as stable concepts and which parts provide adjustable relational links. [...] Further research will show whether, even in abstract domains, relational terms are still treated as more mutable than nouns, more thoroughly processed during comprehension, and more altered according to the requirements of the context. (Gentner 1981: 176)

Thus, even atypical nouns should be better containers for information than other parts of speech.³ Indeed, the most basic, frequent nouns tend to be syntactically and conceptually more autonomous than the most common verbs (or adjectives) (cf. Engelkamp, Zimmer, & Mohr 1990: 190). Among the lexical parts of speech they are more strictly lexical than verbs or adjectives, which possess more properties that are typical of grammatical morphemes or function words. Grammatical morphemes are strongly bound to the sentence context. They are hard to memorize since they are processed by procedural memory in an automatic, unconscious manner (Friederici 1998: 263), whereas lexical units, which are stored in semantic memory, are more autonomous, more likely to be consciously selected and processed, and therefore easier to recall (Friederici 1998: 263). Koch (2004: 424) considers verbs to be the hinges between lexical and sentence semantics since all verbs contain argument slots and thus activate whole frames and propositions. Therefore sentences and verbs are closely intertwined (cf. Druks 2002: 313). The stronger relations that verbs have with syntax is also reflected worldwide in the greater number of verbal inflectional affixes than nominal inflectional affixes. If a language has nominal inflection, then it has verbal inflection, not vice versa. There are hardly any purely nominal inflection categories; the majority are also verbal (Lehmann & Moravcsik 2000: 744). This also explains why the absolute number of types in the nominal domain is three times higher than the number of

verbal types in English and other languages (Aitchison 2003: 113, Gentner & Boroditsky 2001: 232), whereas the number of tokens, i.e. the frequency of the types, is much higher in the case of verbs than that of nouns (Gentner 1981: 163–164). Thus, in the number of types and the frequency of tokens, verbs behave more like grammatical morphemes than the “more lexical” nouns.

Another argument for the greater semantic autonomy of nouns is the observation that typical verbs are learned later than typical nouns (Bloom 2000: 89–91, Gentner 1982: 305–307), since the linguistic context plays an important role in the acquisition of all verbs (Tomasello 1995). For a long time, verbs are more error-prone in language acquisition than nouns (Gentner 1981: 163), and they are harder to recognize out of context than nouns (Bloom 2000: 209). Furthermore, responses to word-association tests are more syntagmatic and varied in the case of verbs, more paradigmatic and uniform in the case of nouns (Cramer 1968: 67–69). Thus, nouns are altogether more stable and are remembered more easily than verbs (cf. Langenmayr 1997: 246) since they represent good autonomous chunks of information.

Besides the greater syntactic autonomy of nouns and the stronger syntactic links of verbs, there are striking conceptual differences between nouns and other word classes. Nouns are conceptually more flexible, thus better open-class words than verbs or adjectives. Nouns can express all kinds of concepts, even very atypical ones (Flaux & van de Velde 2000: 1); the class of nouns is therefore more open to innovation by borrowing than the class of verbs or adjectives (see Haugen 1972: 97). The greater need for nominal concepts and the greater ease of creation of nouns is also shown in the higher number of nominalization affixes compared to the number of verbalization affixes (Bauer 2002 cited in Haspelmath 2002: 68).

Diachronically, verbs are replaced at a slower rate than nouns, function words even slower (Dixon 2001: 84), due probably to the stronger syntactic and syntagmatic integration of verbs and the greater syntactic autonomy of nouns. But verbs also have more options for semantic change, e.g. regarding the number and kinds of arguments (Koch 2004: 423–427). Verbs are more easily reinterpreted metaphorically and are therefore more polysemous than nouns, whereas nouns seem to be rather closed stable containers for meaning (also see Gentner & France 1988 cited in Murphy 2002: 418). Verbs are altogether more likely to be modified by the syntactic and semantic context and therefore more polysemous than the more autonomous nouns. In the case of mismatches between the syntax and semantics of a lexical item and its sentence context, it is the verbs, not the nouns, which tend to be semantically adapted to the syntactic context, not only by pre-school children but also by adults (Gentner 1981: 161–165; Naigles, Fowler, & Helm 1992).

Another kind of evidence for the conceptual basis of nouns comes from regular types of semantic shifts associated with certain word-formation processes. Nominalization products seem to reify relational concepts (i.e. processes and qualities), which can then be manipulated metaphorically like a physical object, as in expressions such as “give a call” (Talmy 2000: 43–44; also see Hopper & Thompson 1985: 177).

Just as striking are the regular semantic shifts associated with conversion from adjectives to nouns. Conversion from adjectives to nouns automatically triggers semantic enrichment.⁴ Deadjectival nouns as in *John is a liberal* are semantically richer than adjectives

as in *John is liberal* (Markman 1989: 122–125). The noun *blonde* has more traits than the adjective since it designates a multidimensional person whose properties go beyond the color of the hair (Wierzbicka 1988: 472). This explains why not all women with blond hair are blondes.⁵

The semantic enrichment caused by nominalization tends to manifest itself on the morphological level. Nominalization morphology is usually overt, verbalization morphology not so often; compare the denominal verb *to breakfast* and the deverbal noun *eating*. Arguably, deverbal and deadjectival nouns not only change their word class but also receive additional semantic information since events or properties are then conceptualized as entities (cf. Hopper & Thompson 1985: 177).

On the level of discourse, certain untypical generic nouns, so-called “shell nouns” such as *thing*, *fact*, or *matter* serve temporary concept formation by conferring a simple label (and conceptually, a container) to propositional contents as in expressions like *the idea was that...* (Schmid 1999a: 112–116).⁶ The reificational force is intuitively stronger with shell nouns than with complement clauses (Schmid 1999a: 122–123). Constructions with shell nouns actually improve the capacity of the working memory by dividing information into clearly delimited chunks and help to stabilize propositional concepts which are thus more easily manipulated and recalled (Chafe 1994: 108–110, 119; van Dijk & Kintsch 1983: 349 cited in Schmid 1999a: 123).

Interestingly, in German all nouns are capitalized, whereas in many other languages only proper names are, which are typical labels for individuals. In English, all open-class words (as well as pronouns and subordinating conjunctions) can be capitalized in book titles (cf. Gibaldi 1998: 89–90); this certainly reflects our intuition as to the degree of autonomy, semantic stability, and salience of diverse parts of speech.

Gestures, which are argued to have a common origin with speech (see McNeill & Levy 1982, McNeill 1985: 350) might also serve as evidence for the container-like conceptualization of untypical abstract nouns such as *message* that are often accompanied by gestures signaling an entity held up in both hands in front of the speaker (Gullberg 1995: 49; see also McNeill & Levy 1982 and McNeill 1985: 355–356; 1992: 147–149).

Thus untypical nouns can be described as freely fillable, stable, and well-delimited containers for information unlike the more context-dependent verbs and adjectives, which explains why nouns tend to be semantically richer than the rather vague verbs (cf. Engelkamp 1988: 305–306). Words in general can be conceived of as containers for meaning (cf. Radden 2000: 103), but nouns seem to be better suited for concept formation and preservation than other word classes since even untypical nouns seem to create the impression of a clearly delimited rich concept (cf. Schmid 1999b: 221–222).

All this points to a continuum from nouns to verbs to function words, with nouns being the most autonomous and best storage units in long-term memory, whereas function words are rather context-dependent and procedural. Lexicon and grammar are on a continuum: every morpheme, whether grammatical or lexical, is a pairing of form and meaning, and includes both grammatical and conceptual information (Langacker 1987: 58, 81–82; 1999: 18–23). However, lexical items are semantically more autonomous, more concrete than function words, and within the lexicon, nouns are certainly prototypical since they are the most autonomous, stable units. Many of these observations seem to

hold for typologically very distant languages, but since most studies are based on Indo-European data, I will limit my analysis to a number of Indo-European languages. Further research will have to show whether this is true for nouns in all languages.

All in all, the conceptual autonomy and syntactic autonomy of nouns seem to be correlated. This would explain why linguists from very diverse backgrounds assume that nouns are the most typical open class lexical items (also see Gentner & Boroditsky 2001:216, 242–243):

[...] N is certainly the unmarked word class, while P is the least numerous and hence plausibly the most marked. (Emonds 2000: 8, n. 9)

When psychologists think about the organization of the lexical memory it is nearly always the organization of nouns that they have in mind. (Miller & Fellbaum 1992:204)

The synchronic properties of nouns as opposed to verbs or adjectives thus supply good arguments for a common conceptual basis of all nouns.

5. Evidence from lexico-semantic change

In the preceding section diverse types of evidence have been shown to reflect the container-like force of nouns. This force is even more visible in diachrony since semantic change reflects fossilized categorization processes. In analogy to the well-studied phenomenon of grammaticalization, I consider lexicalization a process of natural semantic change whereby lexical items become more autonomous and thus more prototypical lexical items through a process of increasing morphological univerbation,⁷ phonological simplification (cf. Wurzel 1994:99, Himmelmann 2004:28) as well as certain semantic changes (Mihatsch 2006a:16–23). Lexicalization as defined here has to be distinguished from lexical change due to borrowing, word-formation processes, and some types of semantic change caused by purely extralinguistic factors such as the conscious creation of scientific terms. Lexicalization means those “invisible hand” processes (see Keller 1994) by which lexical units are further integrated into the core lexicon (cf. Wischer 2000:358–360) and thereby become more typical. I will argue that, at least in several Indo-European languages, the lexicalization of nouns is at least partly caused by a process of unconscious reification triggered by the conceptual noun schema whereby units of short-term memory turn into increasingly simple but distinctive autonomous gestalts in long-term memory. Experiments have shown that visual gestalts change in the course of memorization and become both more distinctive and more leveled (Wulf 1922 cited in Murray 1995:55).

While atypical nouns seem to behave like containers for all kinds of information, typical basic-level nouns correspond to concrete concepts based on a clear shape, not a container-like concept that can contain heterogeneous information. Thus, in the course of lexicalization, cognitively complex containers turn into conceptually simpler more typical concrete nouns. This is why we find a number of regular lexicalization paths in the nominal domain. For instance, abstract concepts, processes, or qualities eventually tend to become nouns denoting concrete objects. Spanish *compra* ACT OF BUYING can then designate THINGS BOUGHT / PURCHASE. Concretization is typical of nouns, as already noted by Paul

(1995:99–100) and Bréal (1924:137–139). Interestingly, generalization or metaphorical abstraction seems to be more frequent in verbs and adjectives (Bréal 1924:120–121).

Very frequently nouns denoting concrete objects, which are defined on the basis of functional temporary properties such as *compra* THINGS BOUGHT, acquire more concrete, stable, and inherent properties and designate fixed types of referents as the development of Spanish *ropa* CLOTHING shows. Old Spanish *ropa* BOOTY, i.e. THING(S) THAT IS / ARE PART OF A BOOTY), becomes Modern Spanish *ropa* CLOTHING (DCECH), where the referent type is restricted to certain types of objects with diverse, but fixed shapes and materials (see Mihatsch 2006a:116–123).

Another case of lexicalization is the development of relational nouns to absolute nouns. In language acquisition and informal speech, relational nouns are often reinterpreted as absolute nouns based on inherent rather than relational properties, as tests with children have shown. They often interpret *uncle* MOTHER OR FATHER'S BROTHER AS FRIENDLY MAN WITH A PIPE (Keil 1989 cited in Gentner & Boroditsky 2001:222) or *grandmother* MOTHER OF ONE'S MOTHER OR FATHER AS OLD WHITE-HAIRED WOMAN (cf. Weinert & Waldmann 1988:168). As in the case of deadjectival nouns such as *blonde*, extralinguistic knowledge, i.e. social stereotypes, provides the material for increasing semantic autonomy. Thus, although lexicalization is driven by the lexicon's specific preference for autonomous, gestalt-like concepts, the raw material, so to speak, is provided by extralinguistic information.

Often, the loss of relational properties is conventionalized, as in the case of Spanish *tío* UNCLE that develops a second sense GUY.

A further process of lexicalization is the emergence of basic-level items out of superordinates or subordinates via generalization and specialization towards the basic level:

- (1) Latin *passer* SPARROW > Spanish *pájaro* SMALL BIRD (Blank 1997:204–205)
- (2) Latin *vas* RECIPIENT > Spanish *vaso* GLASS (SPECIFIC RECIPIENT) (DCECH)

These extremely frequent paths not caused exclusively by any external factors such as cultural influences (although extralinguistic information provides the semantic material) reflect how nouns optimize the entrenchment of shape as part of their lexical meaning. In this process, visual properties of the referents, especially shape, are extracted by the hearer and become part of the lexical meaning, whereas in grammaticalization communicative functions and speakers' intentions expressed by a construction are extracted from the reference situation and become part of the meaning of the construction (see Detges & Waltereit 2002:155–158 for a definition of the so-called "principle of reference").⁸ In the case of nouns for instance, grammaticalization processes can transform collective nouns into quantifiers, which lose the ability to profile the NP containing them (Langacker, this volume:60).

Lexicalization paths have to be distinguished from the mostly conscious paths of change caused by other factors, which are not cases of lexicalization. Generalization above basic level as in the case of Latin *planta* SEEDLING that serves the creation of the Scholastic Latin botanical term *planta* PLANT (DHLEF) is often caused by scientific classifications, whereas specialization is a rather natural type of change (Mihatsch 2006a:143–148, 172–174; also see Bréal 1924:118–120). Neither do metaphors seem to play a major role in lexicalization as defined here, although they are ubiquitous in the lexicon and elsewhere. Metaphors play

an important role in the conceptualization of abstract concepts such as Spanish *pensar* THINK, which can be traced back to Latin *pensare* WEIGH (DCECH). Metaphors tend to render abstract concepts more accessible (see Lakoff & Johnson 1980: 17–19), but do not turn the concrete source lexemes into more typical lexical items. These cases of semantic change, as well as word-formation processes and borrowing, can create new marked, untypical lexical items that can then be subjected to lexicalization in our sense.

Untypical nouns thus display a strong diachronic attraction towards typical core nouns, which shows that the prototype is very strong and persistent. Therefore, lexicalization offers good evidence in favor of a schema with a prototype structure, not logically requiring, however, the more abstract schema valid for all nouns.

6. Overt manifestations of the noun schema

I have shown that all nouns, at least in the Indo-European languages discussed here, possess a reifying force and therefore a great conceptual stability that distinguishes them from other parts of speech. Untypical nouns are containers for information and they all show a great attraction to basic-level nouns where the noun schema and the semantics of the noun designating a basic-level concept optimally coincide in a good gestalt. So far, strong unidirectional processes of lexical change point to a noun schema, but the evidence is rather indirect and has to be extrapolated from the frequency of certain paths of change such as processes of generalization and specialization, which produce basic-level nouns (see examples (1) and (2)). More direct evidence might come from overt realizations of the noun schema:

Possibly the schema [THING] can be equated with the semantic pole of the morpheme *thing* in its most general sense, as represented in *something*. The apparent problems with this equation may be resolvable; for instance, the existence of more specialized pro forms like *someone* and *someplace* explains why *something* is not easily used for people or locations. (Langacker 1987: 189, n. 4)

Placeholder nouns such as *thing* are overt manifestations of the noun schema in several Indo-European languages such as Spanish, French, English, and German (see Mihatsch 2006b for a more detailed study). They can replace almost any noun. The extent to which they can offer us new insights into the nature of the metaphorical noun schema is shown below.

6.1 The grammaticalization path of placeholder nouns: Evidence for the noun schema?

As shown in examples (1) and (2), there is a strong tendency for nouns to be attracted by the basic level, but some nouns such as French *rien* or Italian *roba* seem to contradict this observation:

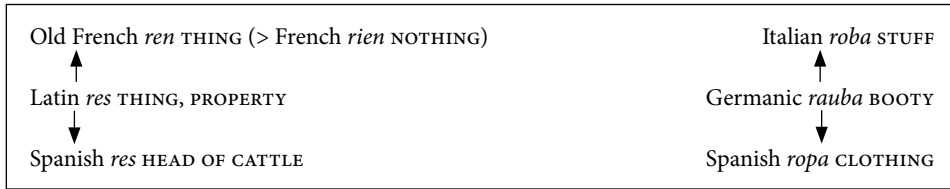


Figure 2. Superordinates between generalization and specialization

Paradoxically, some highly generic and thus atypical nominal elements such as French *chose*, *rien* NOTHING, *truc*, *machin*, Italian *roba* STUFF, Spanish *cosa*, *chisme*, *trasto*, English *thing*, German *Ding* and *Sache* (most of which can be very roughly translated as ‘thing’) are short, frequent, morphologically simple words and thus highly entrenched (cf. Vossen 1995: 377–378). Such words differ from other generic nouns such as *object* or *furniture* in that the latter are morphologically complex and/or learned and not very frequent and tend to specialize towards the basic level rather than generalize. Conceptually, they often correspond to conjunctions or disjunctions of basic-level concepts, which explains the great number of collective superordinates and an above-average number of plural forms above basic level (see Mihatsch 2006a: Ch. 3; 2007).

Nouns like *thing*, however, are more or less grammaticalized placeholder nouns (see Koch & Oesterreicher 1990: 104–109), which explains their divergence from other nouns and their tendency to generalize. Here generalization is caused by pragmaticalization and grammaticalization, i.e. the processes whereby objective-referential lexemes acquire (inter-) subjective, pragmatic, and increasingly grammatical functions (cf. Traugott 2003). The emergence of placeholder nouns and the semantic changes associated with this process is triggered by certain communicative strategies (see Detges 2001 for a well-founded study of such strategies in several grammatical domains).

In informal contexts, speakers often adopt the strategy of downgrading a referent in order to hide their word-finding problems. Speakers sometimes employ nouns designating small, insignificant, large, bulky, or complex and therefore often malfunctioning objects for referents they think are not worth being named correctly and are thus treated with contempt, as the use of *trasto* in the following example illustrates:

- (3) *Que no, es mucho mejor poner ducha. Quitar la bañera que es un trasto [emphasis mine] y poner el cuadradito de la ducha.* (CREA, 1991, ORAL)
 ‘No, it’s a lot better to put in a shower. Get rid of the bath tub, which is a piece of junk, and put the little shower cube in.’

These nouns can also be employed to hide the ignorance of the correct word by pretending that the referent is not worth being named, as in the following example where an unusual heater is referred to by the more conventionalized placeholder *chisme*. Here it is not quite clear whether the speaker just expresses his or her contempt or wants to conceal the lack of the correct word:

- (4) *A los toros no le llevaría usted el chisme ese [emphasis mine]* (Beinhauer 1978: 416)
 ‘You’re not going to bring that thing to the bullfight’

The semantic changes triggered by such uses can be seen in the following nouns that are already quite conventionalized (but still pejorative) placeholders that must have gone through the following stages (see DCECH and DHLF):

- (5) European Spanish *chisme* BUG → SMALL ANNOYING USELESS THING⁹
- (6) French *machin* INCOMPREHENSIBLE WAR OR STAGE MACHINERY → (COMPLEX) THING
- (7) Spanish *trasto* BULKY PIECE OF FURNITURE (ROWING BENCH) → (BULKY, USELESS) THING
- (8) French *truc* INCOMPREHENSIBLE STAGE MACHINERY → (COMPLEX) THING

The more grammaticalized and therefore more frequent placeholders such as English *thing*, Spanish *cosa*, French *chose* and German *Ding* or *Sache* are not among these placeholders since they do not emerge in informal contexts, but in more formal contexts. Paradoxically, the most conventionalized placeholders are not usually accepted in formal contexts (cf. Koch & Oesterreicher 1990: 107–108). However, in spoken formal speech, it is even more important to conceal one's word-finding problems. Another strategy has to be chosen: The speaker can pretend that he or she chooses a learned generic word such as *matter*, *affair*, *element*, or *object* on purpose. Such generic words are often used in learned contexts when very general but not very salient properties are emphasized (cf. Mihatsch 2002, 2004, 2006a: 161–164), but they can also be used to conceal the ignorance of a more specific noun in rather formal oral speech without the pejorative value of the placeholders created in informal contexts:

- (9) A: [...] *en Londres, fui a una exposición china, a una exposición de **objetos*** [emphasis mine]
 B: *¿Artesanales?*
 A: *Arqueológicos. Arqueológicos. Sí, pero artesanales, pero de de Sí, antiguos.*
 (CREA, 1977, ORAL, arranged by W. M.)
 'A: [...] I went to a Chinese exhibition in London, to an exhibition of objects.
 B: Craft objects?
 A: Archeological ones. Archeological ones. Yes, but craft ones, yes, antique objects.'

The most grammaticalized placeholder nouns – English *thing*, Spanish *cosa*, French *chose*, and German *Ding* or *Sache* – come from the legal domain. Historically, this domain has always maintained very close connections to everyday language (Hattenhauer 1999: 70, DSSPIL: 633). The typical path is:

LEGAL CASE > LEGAL MATTER > MATTER/AFFAIR > THING

These placeholders are all very old and it is hard to trace the exact diachronic path, but more recent, less conventionalized placeholders from the legal and the economic domain, often loans that indicate a formal context, sustain this assumption. Here, we find French *affaire* MATTER from *affaire* MATTER, PROCESS (DHLF s.v. *faire*). In Italian, the French loanword *affare* today means MATTER, LEGAL AFFAIR but also SOMETHING ONE DOES NOT WANT TO NAME OR IDENTIFY, TRIVIAL THING (ZVI). Even the English loanword *affair*, borrowed from French, can be employed as a placeholder (Hohenhaus 2000: 250). French *business*, borrowed from English, is used to designate complicated matters, but, in the

past, was also employed as a placeholder. These uses have disappeared; it now designates only BUSINESS (PR). Spanish *asunto* MATTER / LEGAL AFFAIR can now be employed in informal language as a vague euphemistic word (DEA), thus as a kind of placeholder. Informal Brazilian Portuguese *negócio* is a placeholder derived from BUSINESS (DLPC, ADLP). English *item* goes back to Latin *item* EQUALLY, which introduced repeated items in a list (OED).

Once a placeholder is conventionalized, it acquires specific deictic functions pointing to contextual knowledge. Unlike the well-known situational deictic functions, this particular type of deixis, “recognitional deixis”, refers to shared knowledge of speaker and hearer (one universal function of demonstratives, see Himmelmann 1996, but also expressed by specific recognitional expressions, cf. Enfield 2003: 111). Thus, learned generic words employed in order to conceal the ignorance of a more specific noun may be reinterpreted by hearers if they see through the speaker’s strategy and become aware of the word-finding problems of the speaker. They are cooperative and reinterpret the placeholder as an instruction to look for the correct name within the context. Sometimes the speakers explicitly ask for help, as in the following examples:

- (10) *Valdo, mon cher, joue-leur ton machin... tu sais* [emphasis mine], *ton interlude*.
(FRANTEXT; Duhamel, G. (1934): *Vue de la terre promise*)
‘Valdo, dear, play your thingy for them, you know, your interlude’
- (11) A: *oui vous savez au truc là* [emphasis mine] *qu’on tourne*.
(ELICOP; Corpus Orléans file t017.txt)
‘A: yes you know, the thing you turn around’

Some placeholders directly emerge as questions addressed to the hearer, e.g. English *what-d’you-call-it* or *whatsisname* (cf. Channell 1994: 160–161). The deictic force distinguishes grammaticalized placeholders from generic lexical nouns such as *object*. Placeholders indicate that the referent can be identified on the basis of contextual information, but cannot refer or predicate independently, i.e. without the deictic component pointing to shared knowledge:

- (12) *’C’est une chose*. (Kleiber 1987: 114)
‘That’s a thing’

Lexical generic nouns, however, refer independently of the context; here their vague semantics should be enough to identify the referent (Koch & Oesterreicher 1990: 108–109) and thus they can be used even as predicates:

- (13) *C’est un sapin*.
‘That’s a pine tree’
- (14) *C’est un objet* (Kleiber 1987: 114)
‘That’s an object’

Interestingly, the deictic force of placeholder nouns seems to be restricted to an intermediate step in the process of grammaticalization. The deictic force disappears in the course of further conventionalization as in the case of English *thing*, *stuff*, Spanish *cosa*, French *chose* and even *truc*, as well as German *Ding* or *Sache*. They can then be employed in contexts

where the deictic and expressive force is no longer needed and their use is not restricted to the ignorance of the correct word. Once they have lost their deictic force, they can become pure dummy nouns that serve as an adjective support, for instance (see Fronek 1982: 633, 640–646) as in (15), or as the equivalent of an indefinite pronoun as in (16):

- (15) *Votre pianocktail est un truc fantastique* [emphasis mine] [...] (FRANTEXT, Vian, B. (1947): *L'écume des jours*)
 'Your pianocktail is a fantastic thing'
- (16) [...] *je peux quand même faire un truc* [emphasis mine], *c'est de vous stopper une voiture* [...] (FRANTEXT, Sarrazin, A. (1965): *L'Astragale*)
 'but I can do something, that is stop a car for you'

At this stage, they can also be used for propositional concepts as in (17):

- (17) *Pedro insultó a su hermana. La cosa* [emphasis mine] *no le gustó a su madre.*
 'Pedro insulted his sister. His mother didn't like the thing'

Thus we have seen how placeholders emerge, but what can they tell us about the noun schema? The grammaticalization paths discussed so far do not reveal any diachronic metaphorical extensions from PHYSICAL OBJECT, but rather metonymic changes as in the case of Spanish *chisme* SMALL ANNOYING OR INSIGNIFICANT THING > PEJORATIVE THING and generalization as in the case of Latin *causa* LEGAL MATTER, the source of Spanish *cosa* and French *chose* MATTER / THING.¹⁰ As an anonymous reviewer pointed out, generalization is very likely to be motivated by metonymy, too, since generalization involves the high-level metonymy MEMBER FOR CATEGORY (see Radden 2002: 425). On a lower level it is plausible to assume that a lexical item such as *causa* LEGAL MATTER is increasingly applied to other, similar concepts (also see Koch 2005) that are not bound to the frame of legal proceedings. Here the loss of the frame goes hand in hand with the extension to similar concepts, which triggers the generalization of the original concept. However, similarity here does not mean that metaphor is involved, since there is no transition from one domain to another linked by similarity, but rather a loss of domain-specificity.

In the case of more strongly grammaticalized nouns such as French *chose*, Spanish *cosa*, and English *thing*, which can become indefinite pronouns, e.g. *something* (cf. Haspelmath 1997: 28), the source lexemes are not even concrete nouns, but higher order nouns meaning LEGAL MATTER.

Metonymy, generalization, and specialization have received much less attention in cognitive linguistics than metaphor, although metonymy is probably more basic to language and cognition (Barcelona 2000a: 4, Koch 2001, Panther & Radden 1999: 1, Ruiz de Mendoza Ibáñez 1999: 3–8; also see Waltereit 1998: 12–13). Metonymy also plays an important role in the emergence of primary metaphors as described by Lakoff and Johnson (1999: 48–51), such as SIMILARITY IS CLOSENESS, where the child's experience that similar things tend to go together explains the conflation of two different domains, e.g. similarity and (spatial) contiguity (also see Radden 2000: 94, 2002: 413–416). Barcelona (2000b: 51) shows that metaphors are typically motivated by metonymic mappings.

Metonymy as well as generalization clearly prevail in grammaticalization processes (also see Langacker, this volume: 46–47, 60). Metaphors would be too costly here (see

Detges & Waltereit 2002: 165; Heine, Claudi, & Hünemeyer 1991: 60–61; Radden 2000: 98; Traugott & Dasher 2002: 282). For instance the well-studied transition from movement to future as in the grammaticalization of the *going-to*-future implies an intermediate step “intended action”. All three stages are linked via metonymies since voluntary movement typically implies the intention of an action, and an intention implies some future action (Detges 2001: 147–187). This process is based on special communicative strategies – in this case, the impending action serves as an accreditation of a future action – especially in the case of promises. Another example is discussed by Langacker (this volume: 60), who points out the metonymic nature of the grammaticalization of quantifiers. Similarly, the grammaticalization path of placeholder nouns gives no direct evidence for a metaphorical noun schema.

6.2 Synchronic evidence for the metaphorical noun schema in placeholder nouns

The predominance of metonymy in grammaticalization processes does not mean metaphors are conceptually less important than metonymy. On the contrary, metaphors are very strong conceptual structures of the human mind, although they are not involved in the grammaticalization processes themselves. The emergence of metaphorical analogical relationships often accompanies metonymic change or metaphors appear to be the results of metonymic change (Traugott & Dasher 2002: 9, 29), such as the metaphorical mappings from space to time, which Heine, Claudi, and Hünemeyer (1991: 60–61) call “emerging” metaphors as opposed to creative metaphors. Metonymies thus very frequently produce extremely strong and omnipresent metaphors later on, as in the case of primary metaphors.

As a matter of fact, it is not the grammaticalization paths of placeholder nouns but their unique synchronic properties that point to the metaphorical noun schema *THING*. The syntax and semantics of strongly grammaticalized placeholders, such as Spanish *cosa*, French *chose*, English *thing*, and German *Ding*, *Sache* correspond to Langacker’s abstract noun schema, which does not distinguish between concrete and abstract, count and mass nouns (Langacker 1987: 189). Less grammaticalized placeholders often retain more specific semantic information from the source. European Spanish *chisme* is sometimes still employed for smaller objects (cf. DEA), *trasto* for rather largish objects (MOL), and they often retain pejorative values and other semantic distinctions (cf. Koch & Oesterreicher 1990: 104–105). They lose these specifications in the course of grammaticalization and they retain only the feature *INANIMATE*. Even the important distinction between abstract vs. concrete nouns disappears. The sources of placeholder nouns tend to be either concrete nouns in informal speech or abstract nouns in formal speech. As shown in 6.1 placeholders that originate in formal contexts usually derive from abstract nouns:

[The use of these words for ‘thing’] is based on a variety of specific notions, and most commonly the generalization to an act, event, or affair is earlier than that to a material object. A few of the words listed are still not used for ‘thing’ as a material object. In several cases, partly due to semantic borrowing, the development has been through ‘subject of litigation’. Other sources are ‘act, deed, work, share, thing needed, property’, etc. (DSSPIL: 633).

These specifications disappear later on. French *chose*, Spanish *cosa*, English *thing*, and German *Sache* and *Ding* can now refer to both concrete and abstract referents. Even English *affair* can refer to concrete objects:

- (18) *there's a new university there, you know, one of those plate glass and poured-concrete affairs on the edge of the town* (David Lodge, *Small World* 1984: 182, cited in Hohenhaus 2000: 250)

French *affaire* is still abstract; only the plural *affaires* designates concrete objects in the sense of PERSONAL BELONGINGS, but it is not a placeholder (PR). Italian *affare* is already used for concrete objects in informal language as in *a che serve quell'affare che hai in mano?* (ZVI) 'What is that thing you hold in your hand good for?'. Informal Brazilian Portuguese *negócio* is now a placeholder for both concrete and abstract nouns (DLPC, ADLP). English *item* is used for both concrete and abstract referents (cf. CED).

The originally concrete placeholders of informal origins such as Spanish *chisme* (from Lat. *cimex* BUG) and *trasto* (from Lat. *transtrum* CROSSBEAM / ROWING BENCH) (DCECH) are still limited to concrete referents (Clara Pérez & Alberto Zuluaga, p.c.):¹¹

- (19) *Ocurrió una cosa rara*
'A strange thing happened'
- (20) **Ocurrió un chisme raro.*¹²
'A strange gadget happened'
- (21) **Ocurrió un trasto raro.*
'A strange gadget happened'

French *engin*, *machin*, and *bidule* of informal origin are still limited to concrete referents according to the dictionaries and the secondary literature (cf. Kleiber 1987: 113). However, corpus data show that their use has already been extended to abstract referents:

- (22) – *Papa, dit David, le soir, il lit tout haut pour la famille les livres de Moïse et...*
– *Tu comprends ces machins-là?* [emphasis mine] (FRANTEXT, Sabatier, R. (1985): David et Olivier)
'– Dad, David said, reads aloud the book of Moses in front of the family in the evening and...
– Do you understand these things?'

French *truc* no longer shows this distinction:

- (23) [...] *je vais vous dire un truc* [emphasis mine] [...] (FRANTEXT, Benoziglio, J.-L. (1980): Cabinet portrait)
'I will tell you a thing'

Thus the more conventionalized placeholder nouns are, the more likely they are to be able to refer to both concrete and abstract referents.

Another very general distinction expressed by many placeholder nouns is the count/mass distinction. Less conventionalized placeholders are either count or mass nouns. Count nouns are e.g. Spanish *chisme* or *trasto*; mass nouns are e.g. Italian *roba*, German *Zeug*, English *stuff* (cf. Koch & Oesterreicher 1990: 106). Some more grammaticalized

placeholders can be used in both ways. French *machin* and *truc* are usually count, but sometimes can be used as mass nouns:

- (24) *ah parce que ça se mange avec du machin* [emphasis mine] (Koch & Oesterreicher 1990: 106)
 'because you eat that with the stuff'
- (25) *Vous avez plein de truc* [emphasis mine] *rouge sur la gueule*. (FRANTEXT, Benoziglio, J.-L. (1980): Cabinet portrait)
 'You have lots of red stuff in your mug'

Strongly grammaticalized placeholder nouns such as Spanish *cosa*, French *chose*, German *Ding*, *Sache*, English *thing*, but sometimes also French *truc* and *machin* manifest a strange behavior as to the count/mass distinction. Except for French *truc* and *machin* (see examples (24) and (25)) they cannot be used as mass nouns, as in **de la chose*. They are syntactically count, but they are semantically mass and can refer to substances as in *cosa líquida* 'liquid stuff'.¹³ Even if they refer to objects, they semantically behave like mass nouns since they refer cumulatively and divisively (Kleiber 1987: 119–121). Unlike in the case of *object* there is no objective boundary between two *things*. A part of a thing is yet another thing; two things together are a thing:

- (26) *la table est une chose de plusieurs choses* (Kleiber 1987: 121)
 'a table is a thing of several things'

Thus, they behave as conceptual containers for all kinds of concepts.

Strongly conventionalized placeholder nouns have lost more specific semantic features, except for inanimacy (Koch & Oesterreicher 1990: 105), since this distinction is extremely salient. Thus the most grammaticalized placeholders conceptually correspond to the noun schema *THING*, which doesn't distinguish between abstract and concrete, mass and count nouns (Langacker 1987: 189), but has a strong reifying force that shows in the count noun syntax despite the possibility to refer indistinctly to substances, individuals, parts, and any other types of concepts. The count noun syntax is a good piece of evidence for the assumption that noun schemas are clearly delimited containers for meaning.

Another strong argument in favor of a noun schema is the emerging polysemy of placeholder nouns that reveals the conceptual basis of the noun schema. English *thing*, Spanish *cosa*, German *Ding*, *Sache*, and French *chose* have developed a secondary polysemy, with a new, but intuitively central, meaning *THREE-DIMENSIONAL MEDIUM-SIZED CONCRETE OBJECT*. This sense is felt to be central regardless of the different sources (cf. Hohenhaus 2000: 246, Miller & Johnson-Laird 1976: 218; see also DEA, DHLF). Therefore, English *thing* and its equivalents in other languages are often found in opposition to abstract nouns:

- (27) *Las cosas y las ideas* 'things and ideas' (MOL, s.v. *cosa*)

This polysemy reflects the prototype structure of Langacker's noun schema, which is anchored in concrete, well-delimited objects. The new concrete meaning is probably triggered by the vivid metaphorical nature of the noun schema based on concrete, discrete objects. This may then lead to a secondary development of a more specific, concrete

meaning of placeholder nouns that corresponds to the conceptual basis of the abstract schema. The metaphorical basis of the noun schema may surface as soon as the placeholder is well entrenched.

7. Conclusion

There is ample evidence from different domains that points to a conceptual basis of nouns, at least in various Indo-European languages, such as the typicality of concrete nouns, the great syntactic and semantic autonomy of nouns in general, the semantic enrichment in the course of nominalization processes, the reifying force of shell nouns, lexical change, and other phenomena. Interestingly, in the case of overt manifestations through placeholder nouns, it is not the grammaticalization path itself but the unique synchronic properties that point to the metaphorical noun schema *THING*. Placeholders evolve via metonymy and generalization. For instance, nouns designating small annoying or insignificant things can be used to convey a pejorative note since they often trigger negative attitudes of the speakers, a clear case of metonymic implicature, which can subsequently undergo conventionalization. Such small metonymic steps on the micro-level are typical of grammaticalization processes, while the overarching conceptual relation between a lexical source expression and a relatively strongly grammaticalized item accessible to speakers who may be unaware of its metonymic discursive origins tends to be metaphorical on a macro-level (Heine, Claudi, & Hünnemeyer 1991:70, 103). Although these metaphors seem to be epiphenomena of grammaticalization processes, they can clearly determine our conceptualization of abstract grammatical categories such as nouns. Thus, signs of the grammatical metaphor emerge later and show in the emerging polysemy as well as the count/mass anomaly of words like *thing*. The assumption of a noun schema underlying all nouns therefore seems to be realistic in the languages analyzed in the present study.

Notes

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1. This is even true for languages where all nouns are transnumeral such as Mandarin, Japanese, Navajo, or Tzeltal (Bloom 2000:91–92). In these languages, all nouns behave like mass nouns, i.e. shape is not lexically encoded in the nouns (cf. Rijkhoff 2002:59).

2. The data analyzed in the literature stem mostly from Germanic and Romance languages where count nouns prevail. More studies are needed to confirm the universality of a noun schema and its reifying force or to discover some possible variations in typologically different languages such as those with no count/mass distinction (see Rijkhoff 2002 for a detailed cross-linguistic study of conceptual differences between noun systems). Langacker (this volume:68) discusses the implicit grounding of nominals in languages without determiners. Perhaps cross-linguistic differences in the noun schema can be explained in a similar fashion.

3. Experiments suggest that derived nouns are neurologically processed like verbs or adjectives (Kintsch 1972:63–64). Typical concrete nouns are processed in the right hemisphere of the brain that operates on

the basis of *gestalts*, i.e. holistic information, whereas verbs and adjectives as well as abstract nouns, syntax, and phonology are processed in the left hemisphere that operates on the basis of analytical processes (Hillert 1987: 86). More studies are required to show whether there are any systematic neurological differences between verbs and deverbal nouns. The neurological differences between the storage and processing of verbs and nouns are far from clear (see Shapiro & Caramazza 2003 for a discussion of neuroanatomical differences between parts of speech).

4. The derivation of adjectives from nouns causes a loss of semantic content. German *Winter* denotes the season with its typical weather, holidays, etc. The derived adjective *winterlich* only denotes some climatic aspects (see Coseriu 1968: 14).
5. As an anonymous reviewer pointed out, this is related to the tendency of nouns to designate metonymy-based social stereotypes (Lakoff 1987: 77–90), a particularly strong tendency of nouns designating humans. Thus, extralinguistic information “feeds” reification.
6. Abstract and generic nouns have to be distinguished. Abstract nouns such as *time*, *idea*, *fact*, or *grammar* do not contain perceptual information (cf. Kleiber 1981: 65; 1994: 48–64). Generic nouns (not to be confused with generic NPs) designate concepts on a very high level of generalization. They can be concrete nouns such as *object* or abstract nouns such as *fact*.
7. For instance, a morphologically complex, but lexicalized noun such as *wheelchair* is increasingly interpreted as one concept, not a compound that establishes an indirect referential access via its two components (see Ungerer & Schmid 1998).
8. An important area that requires investigation is speakers’ motivations behind lexical innovations that supply the raw material for lexicalization.
9. An anonymous reviewer pointed out that in contemporary European Spanish *chisme* usually designates just an object and possesses a negative connotation, whereas standard dictionaries still include this older, more specific meaning.
10. Taxonomic broadening via expansion to more contexts by loss of emphasis is typical of grammaticalization processes (Detges & Waltereit 2002: 165).
11. Spanish *chisme* means both THING and RUMOR / GOSSIP. According to DCECH the derivation of *chisme* RUMOR / GOSSIP could be explained as a strategy of the victim of gossip downplaying the importance of the rumor, however, MOL treats *chisme* THING and *chisme* RUMOR as homonyms.
12. This holds only for the placeholder meaning, not for *chisme* RUMOR / GOSSIP.
13. In English, it is difficult to refer to masses with *thing*. Perhaps the reference to masses is blocked by *stuff* (Sam Featherston, p.c.).

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The role of metonymy in word formation

Brazilian Portuguese agent noun constructions

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1. Introduction

1.1 Agent nouns: An overview

Agent nouns have been defined traditionally as nouns derived from verbs to denote the agent of the process represented by the verb. This conception of agent nouns was current in the pre-lexicalist Standard Theory of Generative Grammar, as agent nouns would be derived from verbal structures by nominalization transformations. Thus, for instance, the sentence in (1b) would be derived from the deep structure underlying (1a) by means of a transformational rule:

- (1) a. John speaks Portuguese.
b. John is a Portuguese speaker.

In this model, the term *agent noun* relates to a monolithic vision of the meaning of words; so, agent nouns and instrumentals are considered as unrelated, for they would come from different syntactic sources.

The analysis of agent nouns and similar derivational constructions was drastically changed under the Lexicalist Hypothesis, in which all derived nouns would be either lexically related to their bases (Jackendoff 1975) or produced by word formation rules (Aronoff 1976). However, even in proposals where a bidirectional relation would be admitted between lexical items, the primacy of the verb over the noun has never been abandoned, so that even though a strict syntactic derivation was left aside, a syntactically oriented vision for the derived agent noun remained.

A different way of analyzing these constructions is presented in Dressler (1986) under the Natural Morphology approach. In Dressler's analysis, the main functions of word formation are lexical enrichment and motivation of derived words. Thus, agent nouns are so considered only if motivated, that is, if derived by means of word formation processes. According to Dressler, agent nouns are often polysemous, the most common meanings being agent, instrument, locative, and source, but the range also includes animal and plant

names, impersonal agents and recipients. Dressler considers agent noun polysemy as “regular” lexical polysemy and suggests that its conceptual basis lies in metonymy. He adds that agent polysemy has a hierarchical structure of agent > instrument > locative/source and claims that agent nouns can be derived not only from verbs, but also from nouns and adjectives, in that order of naturalness. His conclusions are based on diachronic evidence and cross-linguistic analysis.

Panther and Thornburg (2001, 2002) present an extensive analysis of deverbal and non-deverbal *-er* nominals in English under a Cognitive Linguistic approach. The authors back the proposition that agent nouns are not adequately analyzed as derived from or correlated with underlying syntactic structures and show that the difference between verb-based and non-verb-based formations is considerably less relevant than traditionally assumed, so that “all *-er* nominals can be accounted for with the analytical tools available in cognitive linguistics” (2002: 284). Their analysis of the role of metaphor and metonymy of *-er* constructions provides a unified account of the variation in morphological bases and meanings for these constructions in English.

The analysis in the present paper focuses on agent noun formation, but as an instance of the interaction of cognitive and functional factors operating in word formation in general. In this sense, I follow Dressler’s proposition that the main function of morphology is to expand the lexicon and motivate lexical constructions. Moreover, I agree with Panther and Thornburg that “a coherent picture can be constructed within a cognitive linguistic framework” (2001: 153) for agent noun formation. My main goal is, however, to investigate the connection between the general semantic function of morphological patterns and metonymic patterns. More specifically, I am concerned with the functional principles of organization of the lexicon rather than with the analysis of one specific construction.

1.2 Agent nouns: A lexical approach

From a cognitive point of view, the lexicon can be defined as a set of symbolic forms, that is, forms that evoke meanings. These forms are used in speech and are as flexible to meaning associations as colors are changeable depending on the color structure of a painting, the focus and intensity of light in the environment, the position of the observer, and so on. In other words, lexical constructions “evoke conceptions that merely provide mental access to elements with the potential to be converted in specific ways, but the details have to be established on the basis of other considerations” (Langacker, this volume: 46). Lexical forms have different degrees of complexity, from monomorphemic words and affixes like *tree* or *-er* to expressions like *of course* and *on the other hand*, even though we still can consider the word as the prototypical lexical unit, be it in traditional morphological terms or in terms of Rosch’s concept of basic classes.

The lexicon is in constant expansion, as our conceptualizations and communication needs are constantly changing, mostly expanding, both at the individual and at the social levels. Word formation patterns optimize lexical expansion, both socially and individually, as they permit the adaptive use of already stored symbolic material in new circumstances, be it in a more creative way or following the same grammaticalized patterns.

The use of already existing elements and patterns is fundamental for the efficiency of word formation processes in that it (i) guarantees automatic communication of the meanings connected to those patterns and (ii) does not overburden memory. We can thus view word formation processes as processes that form new meaningful lexical units from already existing lexical material.

Let us first consider agent nouns as nouns in which a verbal process specifies a class of referents. Thus, in (2) below,

- (2) *skater, writer, refrigerator, tranquilizer, sufferer, beginner, participant, conformist ...*

the linguistic meaning of the deverbal nouns is 'X characterized by the verbal process'. Whether the specific X is a person characterized by some action/process/feeling/situation, etc., or an inanimate object characterized by a function depends on metonymic processes and encyclopedic information.

Agent nouns can also be derived from nouns, in which case the base noun provides a characterization of the derived noun. Thus, in (3) below,

- (3) *pianist, evolutionist, artist, prisoner, philosopher, Hamburger, lawyer, banker, high schooler, hardliner, baby-boomer, foreigner, parishioner ...*

the meaning of the derived noun is 'X characterized by the base noun'. In this case, metonymy and encyclopedic information are even more crucial, as the characterization provided by the base noun is less direct than in constructions with verbal bases.

Importantly, agent noun formation can be seen as part of a more general lexical pattern. In this sense, it is analogous to action nominalization, denominal verb formation, denominal adjective formation, and so on. In all cases, a general pattern exists, that of using a symbolic unit to form a related but distinct complex symbolic unit.

2. Agent noun formation in Brazilian Portuguese

In Portuguese, regular deverbal agent nouns can be represented structurally as $[[X]v-dor]_N$ or $[[X]v-nte]_N$ constructions, as in *governador* 'governor' and *estudante* 'student'. There are some differences between $[[X]-dor]$ and $[[X]-nte]$ constructions: whereas $[[X]-dor]$ constructions tend to denote individuals for generic, habitual, eventual, or professional/occupational activities, as in *roedor* 'rodent', *jogador* 'gambler', *vencedor* 'winner', and *educador* 'educator', $[[X]-nte]$ constructions denote individuals mostly in terms of some act they are presently engaged in, as in *viajante* 'someone who is traveling', *combatente* 'combatant', *participante* 'participant' etc.

$[[X]-dor]$ and $[[X]-nte]$ constructions also provide reference to instruments; once again, there are some differences between them. $[[X]-dor]$ nouns refer to electric, electronic, and abstract instruments, as in *refrigerador* 'refrigerator', *computador* 'computer', and *reductor* 'reducer'. $[[X]-nte]$ instruments, on the other hand, are chemical substances, such as *fertilizante* 'fertilizer', *tranquilizante* 'tranquilizer', *adoçante* 'sweetener'.

In Brazilian Portuguese, denominal agent nouns are also very common. Regular denominal agent noun constructions are structurally represented as $[[X]N-ista]_N$ and

[[X]_N-eiro]_N. Consider first [[X]-ista] denominal formations. These denote prototypical occupational agents, as in *pianista* ‘pianist’ and *artista* ‘artist’; specialists, as *linguista* ‘linguist’, *neurologista* ‘neurologist’; and they denote people for their political, theoretical, religious, etc. stance, as in *esquerdista* ‘leftist’, *evolucionista* ‘evolutionist’, and *budista* ‘Buddhist’.

[[X]-eiro] constructions are also very productive in the formation of denominal agent nouns. They are common in occupational labeling, as in *porteiro* ‘doorman’, *pipoqueiro* ‘popcorn seller’; they also name objects functioning as containers, as in *açucareiro* ‘sugar bowl’, *papeleira* ‘waste paper basket’; and they are used to name fruit producing trees, as in *bananeira* ‘banana tree’, *pereira* ‘pear tree’, *abacateiro* ‘avocado tree’.

The main difference between [[X]-ista] and [[X]-eiro] constructions seems to be that [[X]-ista] constructions form a wide continuum of agentivity, from observable physical acts to mental or spiritual dispositions, yet always denoting human beings, whereas [[X]-eiro] constructions form a continuum ranging from concrete activities of humans to functions of inanimate objects and plants. So, we could perhaps say that [[X]-ista] takes a mental path, whereas [[X]-eiro] takes a physical path.

In Brazilian Portuguese, agent nouns can also be used as adjectives. When used as adjectives, agent nouns and instruments specify as an agent or instrument the noun they modify, as illustrated below:

- (4) *O/a organizador / Comissão Organizadora solicita a atenção de todos.*
The organizer / committee organizing requests attention from everybody
‘The organizer / Organizing Committee requests everybody’s attention.’
- (5) *Chegaram os visitantes / os professores visitantes.*
Arrived.3PL the.PL visitors / the.PL professors visiting.PL
‘The visitors / visiting professors arrived.’
- (6) *O médico me deu um tranquilizante / pílula tranquilizante.*
the doctor me gave a tranquilizer / pill tranquilizing
‘The doctor gave me a tranquilizer / tranquilizing pill.’
- (7) *Os budistas / monges budistas são treinados para controlar emoções.*
the.PL Buddhists monks Buddhists are trained to control emotions
‘The Buddhists / Buddhist monks are trained in emotional control.’

The adjective use does not extend to most [[X]-eiro] constructions.

3. Word formation patterns and conceptual metonymy

Lexical patterns are such efficient tools for lexical expansion to a great extent because of the interaction of morphological patterns with metonymic processes. There are various ways in which the role of metonymy in agent noun formation can be analyzed. For instance, the focus on a prototypical sense of agent in order to derive less prototypical senses by metaphoric and metonymic links, as Panther and Thornburg (2002: 297) propose for English *-er* nominals, accounts not only for their meaning variations, but also for the facts mentioned by Dressler; this is compatible with the facts of Brazilian Portuguese as well.

In a lexically oriented approach, on the other hand, focusing on a general pattern of agent noun formation, all agent noun constructions can be analyzed as having referents broadly characterized by the meaning of the morphological base. In this view, *speaker* refers to someone characterized by *speak*, *Hamburger* is someone characterized by *Hamburg*, *sufferer* is someone characterized by *suffer*, *sweetener* is something characterized by *sweeten*, and so on, independent of whether the characterizing element is grammatically a verb or semantically an action/feeling/disposition, or whether the product of the process is a person, object, place, event, etc. The relevant point is the structure of the lexical construction in which there is a nominalizing head, the suffix *-er*, and a morphological base that provides the characterization of the person (or thing or place, etc.) to be designated by the construction.

Now I turn to the role of metonymy. First, agent noun constructions can be considered as metonymic on the whole because of their profiling function, in the sense of Langacker (this volume: 51–52, and 2000: 45): “...essentially, every expression is characterized as imposing a profile on its conceptual base”. Accordingly, agent nouns denote an individual or object while at the same time are descriptive of a role. See examples in (8) and (9):

- (8) *O famoso pianista pediu silêncio absoluto.*
 The famous pianist requested silence absolute
 ‘The famous pianist requested absolute silence.’
- (9) *A saladeira quebrou.*
 The salad-bowl broke
 ‘The salad bowl broke.’

In (8) *pianista* denotes a specific person with reference to an object involved in an activity the person is known by. We understand that in (8) the specific referent is a human agent, whereas in (9) the referent is an object (container). Both nouns require metonymic processes for their comprehension. That is, the interpretation of *pianista* involves the understanding of *piano* as an OBJECT that stands for the typical ACTIVITY performed with that object. *Saladeira* is understood by means of a metonymic inference from SUBSTANCE to CONTAINED SUBSTANCE located in an artifact made expressly for this PURPOSE.

Observe that the morphological process represented in $[[X]-ista]$ and $[[X]-eiro]$ formations merely designates someone/something as characterized by X. For instance, *pianista* could refer to a person who tunes pianos, who constructs pianos, who believes in the relevance of pianos in an orchestra, and so on; in the same way, *saladeira* could be a person specialized in making salads, a person who always serves salads at her parties, a restaurant specialized in salads, an object used as an instrument for making salads, and so on. That is, the morphological pattern itself is not metonymic; it can be analyzed as a complex symbol, where the base specifies the nominal head. However, at the very moment we understand the construction *pianista* to denote a professional player, we are metonymically referring to an individual by some relevant activity related to pianos. As Langacker (this volume: 52) points out, “the characterization of a nominal referent is multifaceted, with certain facets being more relevant than others in a given context.” In short, there is a metonymic reference to individuals or objects for some role related to the meaning of the base noun.

The appropriate relation between the meaning of a specific agent noun and the meaning of the corresponding morphological construction is dependent on encyclopedic knowledge, which provides, for each case, the substantive properties that do not pertain to the morphosemantic construction. Herein lies a second role for metonymy in agent noun constructions, illustrated with a brief analysis of Brazilian Portuguese deverbal and denominal agent nouns and instruments in Sections 3.1–3.3.

In occupational agent formations, given the occupational frame, agents are defined by what is conventionalized as the main activity of the occupation, profession, or social role. So, the morphological pattern for deverbal agent and instrumental noun formation is intrinsically connected to what Lakoff (1987) calls a metonymic model, as these derivational patterns systematically refer to human beings, objects, and substances in terms of their typical actions and functions, where “typical” or “emblematic” is socioculturally defined; it is also subsumed under what Langacker (2000: 198–200) calls reference point phenomena. In fact, agent/instrument noun formation as a process of lexical expansion depends on a systematic exploitation of metonymy for efficient categorizing and reference purposes. Agent noun formation is motivated by the need to refer to people functionally; to that end, a point of reference is needed, as Langacker points out. The classic examples of reference to a customer by using the expression *the ham sandwich* in a restaurant or to a patient by using the expression *the ulcer* in a hospital are specific instances of functional reference. In agent noun formation, systematic functional reference is provided by morphological patterns.

3.1 Occupational agent nouns in Portuguese and metonymic models

Occupational agents constitute possibly the most relevant group of *X-dor* agents in Portuguese. In these constructions, there is an underlying Idealized Cognitive Model (ICM) (Lakoff 1987: 68), that of the work market, which establishes a structure of functions and categories for workers, together with their labels. The reference to someone is not made just by what one does; it is rather the ICM of the work market structure that determines which activity will stand for the whole of activities in a given occupation, profession, or similar agent role. Workers are frequently categorized by *X-dor* and *X-nte* constructions, where X stands for the most typical or relevant function among the many functions a worker performs in a standard occupation. So, we have in the construction of the agent noun a morphological pattern connected to a metonymic model.

Consider, for instance, the case of *estudante* ‘student’. In the school ICM a student is symbolically represented by the agent noun corresponding to the activity of studying, which is ideally central to the school system. However, whether the student studies or not depends on what or how much she knew before entering school, what the family ideals are, and so on; additionally, most students study very little and for a very short time; for instance, students do not study during vacations. On the other hand, the activity of studying does not make one a student. Professors, in the same ICM, certainly study much more than their students, and people who for some reason are out of the school system are not considered or called students, even if they spend the whole day in the library. In a more

realistic vision, what probably characterizes a student is enrollment, that is, a student is someone registered for the social function of studying.

Consider further the case of *escritor* ‘writer’. Even though a writer can be regarded as someone who at least once did some writing, still what makes a writer is not writing, but some specific qualities of the abstract product of the writing activity, and, most of all, the public recognition of those qualities.

An interesting example of the relevance of the connection to an ICM for the understanding of an agent noun is the ambiguity of the word *pintor* ‘painter’. This word denotes a person characterized by the activity of painting, but in two entirely different ICMs: one of house maintenance and a different one relating to a cultural scene and an art market.

Students, writers, painters, and the like are, thus, prototypically labeled. In sum, agent nouns characterize people not so much by what they do, but by the social role encapsulated in the word formation process, which includes the choice of the base verb. In other words, the act of naming is already a sociocultural act, corresponding to a deliberate choice of words from the lexical patterns put at the speaker’s disposal for functional reference to people and things.

The same applies for instrument nouns. Once again, we have a system of reference to objects that elects a verb as a symbol for a typical function the referent fulfills. In *refrigerador* ‘refrigerator’, for instance, not only do we refer to an electrical appliance rather than a clay pot pasted with fresh mud from the nearby river; we also refer to an object that refrigerates edible and drinkable things and not the whole environment, as in *ar-condicionado* ‘air conditioning’. And, of course, we consider refrigerators as desirable goods, rather than instruments of torture. Also, *computador* is different from a pocket calculator, even though one could call “computation” what the little machine does, and so on. Refrigerators and computers participate in larger ICMs, which are related to marketing and heavy industry, as well as the domestic appliance ICM.

The same holds for the $[[X]-nte]$ chemicals. In $[[X]-nte]$ formations, the fact that the function represented by the verbal base is performed specifically by a chemical substance demonstrates again the relevance of metonymic models, as we can see in the question below, standardly used in a coffee-serving situation:

- (10) *O que você prefere, açúcar ou adoçante?*
 What you prefer, sugar or sweetener
 ‘What do you prefer, sugar or sweetener?’

where the more natural substance represented by *açúcar* is opposed to the chemical *adoçante*, whose sweetening power is less strong than that of natural sugar. More specifically, *sweetener* is a (properly) chosen name for an artificial substance used for sweetening; but, as shown in (10), different substances have different places in sociocultural ICMs. So, in spite of the fact that both *sugar* and *sweetener* could be defined, say, as a manufactured substance used for sweetening, *sweetener* is opposed to *sugar* in terms of chemical versus non-chemical functional item – a distinction that is considered relevant in our times.

Because of the fundamental labeling function of agent and instrument noun formation in larger ICMs, polysemy between agent nouns and instrument nouns is more potential than actual. An $[[X]-dor]$ formation can potentially label both an agent and an

instrument, but the normal case is that once a denotatum has been selected, the possibility of ambiguity is somewhat blocked, since such an additional sense would make the derivational pattern communicatively less efficient. For instance, if the word *tranquilizer* exists to name some specific kind of pill that alleviates feelings of anxiety for a number of hours, it is less likely that this word will be chosen to label some weapon that, say, preventively knocks out any reactions from a stranger if she is considered suspect, unless one deliberately wants to produce that association.

Blocking, however, has always been a difficult notion in word formation. In relation to agent nouns, it should be kept in mind that the same construction can relate to different ICMs, in which case there will be – and, in fact, there are – identical constructions for distinct referents, as we saw in the example of *pintor* ‘painter’. Some other examples are *jogador*, from *jogar* ‘play, gamble’, which can refer either to a gambler or to a sports player; and *camiseiro*, from *camisa* ‘shirt’, which refers either to some kind of chest of drawers for shirts or to a tailor specialized in making shirts.

3.2 *[[X]-ista]* mental agent nouns

The interpretation of *[[X]-ista]* constructions is also based on metonymic models. Of special interest here is the case of *[[X]-ista]* constructions that categorize and denote people with reference to political, theoretical, or religious bodies of ideas, as in *evolucionista* ‘evolutionist’. In such formations the base meaning, which provides mental access to a complex ICM, is conceptually and inferentially distant from the meaning of the whole construction. Moreover, in order to be available for an *[[X]-ista]* formation, the base that evokes the ideological ICM has to be a socially sanctioned term, that is, it has to have a certain degree of conventionality as well as being positively evaluated by the referent of *[[X]-ista]* constructions. For example, since feminism is a socially sanctioned body of ideas, *feminista* ‘feminist’ can be used to refer to a person that advocates equal social, political, and economic rights for women. Similarly, *unilateralista* is understood in relation to a unilateralism ICM having to do with asymmetric national power relations. The *[[X]-ista]* construction thus denotes one who favors “the pursuit of a foreign policy without allies or irrespective of their views” (OED, s.v. *unilateralism*).

Even more to the point is the case of formations like *marxista* ‘Marxist’ and *budista* ‘Buddhist’, in which people are not characterized with reference to an ideological key term such as *evolution-* or *unilateral-*, but where convictions are metonymically indexed by the use of a proper name in the base. Once again, in order to be available for an *[[X]-ista]* formation, the bearer of the proper name has to be socially sanctioned as an author, artist, saint, politician, or the like; one will not call *Humbertista* someone who believes in everything her uncle *Humberto* says or writes. These cases are thus doubly dependent on ICMs.

3.3 *[[X]-eiro]* occupational agent nouns

Agent noun formations with *-eiro* also depend on ICMs. For instance, *pipoqueiro* ‘popcorn seller’ refers to a man with a small pushcart from which he sells sweet or salty popcorn made on the spot. *Pipoqueiros* are normally found in front of schools, movie theaters, and so on. In the same way, *coveiro* ‘grave digger’ can be understood only in the ICM of cemeteries, where *coveiros*, in fact, do not dig graves, but do the work of opening tombs and lowering coffins; words like *garrafeira* ‘bottle seller’, *verdureiro* ‘green vegetable seller’ and *vassoureiro* ‘broom seller’ are less and less used, for their ICMs are fading away with the emergence of the ICMs of supermarkets and the like.

As examples of recent formations, consider the agent nouns *doleiro* and *sacoleira*, formed during the 1980s in Brazil. *Doleiro* ‘dollar dealer’ appeared when Brazil had a closed economy; it has a strong “outlaw” flavor and is best understood in the framework of 1980s’ Brazil when inflation was more than 50% a month. This was a time of constant tension between people buying dollars to preserve the value of their assets and the government trying to keep the money in the country. *Sacoleira*, from *sacola* ‘handbag’, is an informal label for people who go to Paraguay to buy second rate imported items and smuggle them in handbags across the bridge linking Paraguay to Brazil. In this example, the relatively large conceptual distance between the literal meaning of the base (*sacol-*) and the intended meaning of ‘smuggling’ and ultimately ‘(female) smuggler’ is mediated by the instrumental function of the handbag, i.e. the container used for transporting the illegal goods. In both examples, there is an occupational denotation that, though recognized as a matter of fact, is marginalized by society and is even illegal. The fact that *doleiro* is masculine and *sacoleira* is feminine is part of their respective stereotypes.

A further point to be observed in the formation of agent nouns in Brazilian Portuguese is that, while *[[X]-dor]* formations are rather neutral terms, *[[X]-ista]* formations are more positively evaluated, whereas *[[X]-eiro]* formations often have a pejorative connotation. This point is illustrated by contrasting pairs such as *jornalista* ‘journalist’ / *jornaleiro* ‘person who sells papers in the streets’ and *acordeonista* ‘accordion player’ / *sanfoneiro* ‘player of *sanfona* (a rural peasant version of accordion)’. Thus, the choice of the agentive suffix is partially determined by the evaluation of the referent within some sociocultural model.

4. Summary and conclusions

This paper has argued for a lexically oriented approach to the analysis of agent noun formation in Brazilian Portuguese. Agent nouns were analyzed as products of a general process of word formation by means of which the meaning of an already existing lexical item is used to coin another item, with a different grammatical and/or referential role. As a lexical process, agent noun formation was seen as being metonymic in two ways: (1) in the act of referring to a specific class of individuals or things by means of a functional characterization provided by the base of the agent noun, and (2) in the interaction between the morphological processes of agent noun formation and metonymic models.

I thus defend the view that the verbal or nominal base of agent nouns is fundamentally connected with a metonymic process in the sense of Langacker (this volume, 2000). According to Langacker, we can “invoke one conceived entity as a reference point in order to establish mental contact to another, i.e., to mentally access one conceived entity through another” (this volume: 52). I also agree with Radden and Kövecses (1999: 20) that “Lakoff’s (1987) framework of ‘idealized cognitive models’ may capture metonymic processes best. The ICM concept is meant to include not only people’s encyclopedic knowledge of a particular domain but also the cultural models they are part of”.

In order to clarify these points let us return to some of our examples in the last section. We must keep in mind that agent nouns are formed to functionally designate people as conceptualized in some cognitive model. Agent noun formation thus establishes access to encyclopedic meaning. Just as the noun *mother* is a reference point for the verb *mother*, which is understood (restrictively) in terms of maternal attitude and care-giving (rather than in a biological sense), a similar process occurs in agent noun formation, with the additional problem of what the respective roles of the base and the suffix are with regard to encyclopedic meaning. Let us examine the issue in the words *sacoleira* and *marxista*.

In *sacoleira*, the base *sacol-* ‘handbag’ is a point of reference for the agents of light smuggling, an activity (one could even say “occupation”) that has low social prestige. Hence, the role of agent denoted by the suffix *-eira* expresses a negative evaluation. The feminine form *-a* of the suffix reflects the view that the typical agents are women. Of course, all information concerning *sacoleiras* preexists the formation and, in fact, directs the choice of the instrument *sacola* ‘handbag’ to evoke the notion of smuggling. In *marxista*, the proper name in the base serves as a point of reference for the body of ideas known as Marxism, whereas the suffix *-ista* designates the individual who holds a positive view of Marxist ideology (and may teach/propagate/practice these views). The suffix *-ista* has a positive connotation when it denotes persons engaged in socially valued occupations (*jornalista*); however, its connotation is variable when used to denote mental agents, i.e. adherents to certain ideologies, religions, etc. (*budista*, *evolutionista*).

Langacker’s (2000:199) comments on traditional kinds of examples of metonymy could be applied to all cases of agent noun formation in Brazilian Portuguese herein presented:

Why are we not confused by these changes in reference? Why is metonymy so prevalent? Why, indeed does it occur at all? [...] We are not confused by the change in designation precisely because the reference point adopted is deemed capable of evoking that target. Metonymy is prevalent because our reference point ability is fundamental and ubiquitous, and it occurs in the first place because it serves a useful cognitive and communicative function.

Of course, there is the danger of overgeneralizing the concept so that it would be vacuous (Langacker 2000:201, Panther & Thornburg 2002:287); this means a greater precision is needed in the definition of different types of metonymic transfer, together with an accurate description of general patterns. In fact, there is a choice to be made in relation to agent nouns: Are agent nouns to be conceived as nouns referring to people for their actions (with all pertinent variations) or as nouns that categorize people according to their social

roles? My position is that we understand nouns such as *student*, *painter*, *writer*, *artist*, *Buddhist*, *sweetener*, *pipoqueiro*, *doleiro*, and the like, in the same way we understand *housewife*. As Lakoff (1987:79) points out, “social stereotypes are cases of metonymy – where a subcategory has a socially recognized status as standing for the category as a whole”. In agent noun formation, reference is made to professionals and other social roles by means of morphological constructions where verbs or nouns stand for the whole, that is, for the role. In other words, the connection between morphological patterns and metonymic models seems to be the only way to account for the functional reference role that agent noun constructions have.

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The metonymic basis of a ‘semantic partial’

Tagalog lexical constructions with *ka*-*

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1. Introduction¹

On first inspection Tagalog *ka*- appears to be a nominalizer similar in function to the English derivational suffix *-er/-or*, which is typically regarded as denoting an agent or instrument, e.g. *rescuer*, *screwdriver* (see e.g. Payne 1997: 226, 228). However, detailed study of *-er* usages has shown that morpheme to be quite complex. Panther and Thornburg (2001: 154) present more than a dozen variant meanings centered around the prototype “human Agent who performs an action or engages in an activity to the degree that doing so defines a primary occupation,” with many of the variants best explained as motivated by metonymy. For example, the term *sleeper* “may also be used to denote (a child’s) clothing designed for sleeping, the specially designated car on a train for sleeping, and a drug/event that causes sleep” (191–192). In this paper we show that the category structure of Tagalog *ka*- has much in common with English *-er* as described by Panther and Thornburg, even though the overlap in the semantic domains of the two affixes is minimal.

1.1 *ka*- and *ka*-___-*an*

Even though Tagalog lexical constructions that have *ka*- as their only affix are relatively infrequent,² *ka*- is important to Tagalog grammar because it appears very frequently in compound prefix constructions that range over diverse semantic entities such as verbal mode and aspect, superlatives, and derived generic nouns. In the excellent Panganiban (1972: 875) Tagalog dictionary-thesaurus under entries for the unglossed word root *sama*, the following glosses of the derived term *kasama* are given: ‘companion,’ ‘part of a mixture or whole,’ ‘husband or wife,’ and ‘included.’ The construction *kasamahán* is glossed ‘fellows or companions in a group.’ Since *sama* itself might be glossed as ‘together’ or ‘included,’ we hypothesize that some of the variance is contributed by alternative construals evoked by the prefix *ka*- and the circumfix *ka*-___-*an*. Our analysis, then, takes the view that Tagalog lexical constructions are less arbitrary than they are made to appear in the existing linguistics literature, i.e., approaches that assume a more arbitrary relation of form and

meaning or that would simply classify *ka-* as a nominalizer fail to discover semantic motivations governing constructions with *ka-*.

1.2 Theoretical background and overview of the *ka-* conceptual network

In this paper we collate glosses and usages of constructions containing *ka-* in order to determine its conventional meanings and outline its category structure. Our assumption is that the prefix is a complex category with one or more central schemas, each of which may serve as the origin of a radial structure based on relations of similarity and contiguity, in which we include, respectively, metaphor and metonymy (Lakoff 1987; Langacker 1987, 1991; Palmer 1996, 2003a). We argue that the polysemy of *ka-* originates in conceptual metonymy, which we believe is actually a more pervasive cognitive process than conceptual metaphor. To understand the analysis by metonymy, it is useful to review Langacker's (1987: 183–189; 2000: 6–7) distinction between *profile* and *base*, one of several distinctions in his theory that involve the relative prominence of conceptual entities. The profile of a lexeme or construction is the concept that it designates. The base (or *scope* of predication) is the full conceptualization needed to interpret the profile. It is the ground against which the profile is the figure. One can think of the conceptual base as a scene, scenario, or cognitive model evoked by a term in a particular discourse context. In other words, the meaning of a term includes some conception of the context of usage. For example, a kinship term, such as *aunt*, makes sense only against a conceptualization of a kinship network that includes at a minimum a reference individual, his/her parent, and a parent's female sibling.

Now imagine an affix that combines with various linguistic roots to evoke profiles that are always just a part of or selection from the full conceptualization evoked by the linguistic root. The part that is profiled for each such construction is determined by convention; it may be a part of the usual profile of the uncombined root or a part of the root's wider conceptual base. This is what we mean by a *semantic partial*. We claim that a partial is an abstracted element that is accessed via metonymy. It is a kind of conceptual metonymy that is triggered by the affix according to convention. In such a process, one can expect that roots belonging to various semantic categories will be the sources of particular types of constructional profiles. Additionally, it seems likely that derivational categories will correspond to semantic categories and subcategories of roots. In this paper we illustrate why *ka-* has led us to define this new category of grammar – the *semantic partial*, which shows promise of having wider application.

For *ka-* we propose that a single schema of PARTIAL subsumes two important subschemas: INDIVIDUATION, which is typically nominal, and ABSTRACT QUALITY, which is typically adjectival. These in turn have important subcategories as shown in Figure 2, which uses conventions of heuristic diagramming developed for cognitive linguistics by Langacker (1987). These conventions are illustrated in Figure 1.

In Figure 1, boxes represent entrenched concepts. Relations of schematicity (the inverse of instantiation) are depicted with solid lines. The hierarchy of schematicity implies that categories and terms are fully sanctioned by the immediately superior category. Relations of similarity (the inverse of variation) are depicted with arrows having dotted lines

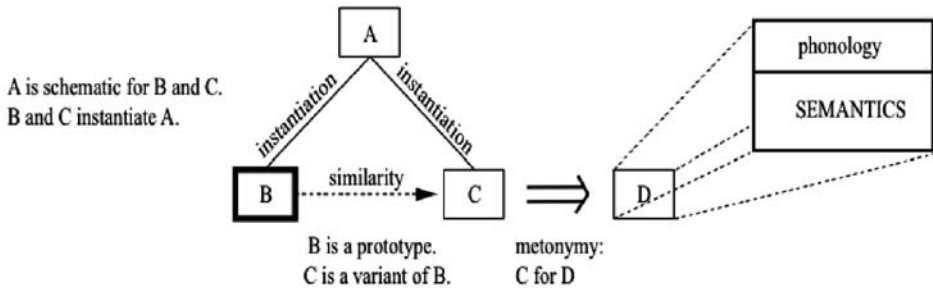


Figure 1. Schematic for diagrams of conceptual networks

pointing from reference concepts to their variants. These have been omitted in subsequent figures (4–5) to avoid clutter. Variants (extensions) are only partially sanctioned by the reference concept. In fact, all subcategories of a schema are related by similarity, and all variants on a reference concept share a schema with it. Arrows with double lines represent the relation of metonymy.³ The dotted lines to the blowup of the D box in Figure 1 have no theoretical significance.

The schema and subschemas of *ka-* laid out in Figure 2 are attributed not to the prefix alone, but to constructions with various classes of linguistic roots and stems. Another important sense of *ka-*, the RECENT COMPLETIVE, is verbal, thus completing for this prefix the triad of noun, adjective, and verb that De Guzman (1996) argued is found in Tagalog. We treat the RECENT COMPLETIVE *ka-* forms as lying outside the PARTIAL schema.

The various categories of *ka-* constructions are actually subsumed by two schemas, termed PARTIAL and EXPERIENTIAL, located in the topmost part of Figure 2. The domains subsumed by these schemas are complexly interconnected. Within the PARTIAL schema, the INDIVIDUATION subschema is ambiguous between ONE OF A COLLECTION and PART OF MASS. The degree to which a collection of persons may be conventionally construed as merged into a single conceptual mass is presently, and perhaps inescapably, indeterminate (cf. Peña & Ruiz, this volume).⁴ Such semantic and grammatical indeterminacy can hardly be avoided in any representative sample of linguistic data (cf. Langacker, this volume: 45–48).

Like the partial domain, the experiential domain is hypothetical. The notion of ABSTRACT QUALITY emerges from the universal cognitive process of schematization. ABSTRACT QUALITY is a meta-schema; it is what is common to a set of abstractions. Since abstraction is a cognitive process, it seems reasonable to place it in the experiential domain, which includes cognitive as well as emotional experience (Palmer 2003b). The subcategories COMPARISON OF EQUALITY and INTENSE EXPERIENCE both involve the registration of some element of psychological experience, as does the notion of SHARED EXPERIENCE. The RECENT COMPLETIVE, not included in the PARTIAL schema, is an aspect of experience located on the realis margin of the incipient or inchoative moment. This is the margin that is proximate to the temporal reference point, often the time of speaking. These are the considerations that led us to posit the experiential schema.

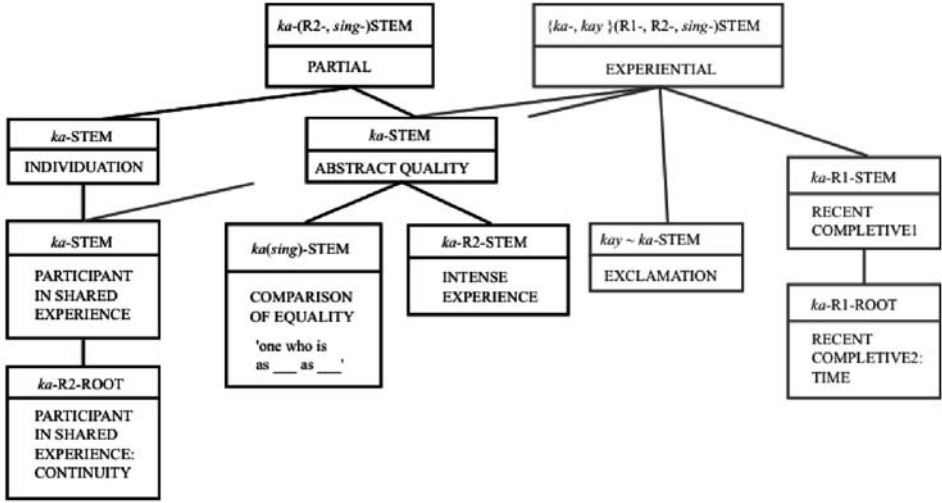


Figure 2. Semantic network of prefix *ka-*

Ka- affixes to roots with quite diverse semantics to derive new lexemes and stems. For example, *kaputol* ‘one piece’ (< *putol* ‘cut, cutting’) derives a nominal from a root with verbal semantics. The form *kababayan* ‘fellow townsman’ (< *bayan* ‘town’) derives a nominal from a nominal root. The form *karunong* ‘equally learned’ (< *dunong* ‘knowledge, wisdom’) appears to derive an attributive from a nominal root. Panganiban (1972) and Cena (1979) derive only nominals, perhaps because this is the most common derivation with *ka-*.⁵ Similarly, *kapára* ‘(be) like’ (< *pára* ‘likeness’) appears to derive a stative verbal from a root with nominalized relational semantics. The form *kakikita* ‘(x) has/have just seen (y)’ (< *kita* ‘visible’) derives a verbal (recent completive) from a verb of perception, while *katákot-tákot* ‘frightful’ (< *takot* ‘fear’) apparently derives an attributive from an emotion verb. Though certain classes of roots are more likely to undergo particular derivations, it is clear that *ka-* is derivationally flexible. Here we are only asserting that *ka-* derives new forms from roots with diverse semantics. We are not arguing that the derived products are diverse in their grammatical categories, though that may also prove to be the case.

For some of the semantic classes of *ka-* constructions, it can be said that they are categorized by the classes of their lexical roots. For example, only psych-predicates make up the set of roots in the semantic class of INTENSE EXPERIENCE. Roots in this class undergo complete reduplication (R2) of the root or stem, or the first three segments of these. Roots for eating and drinking have historically provided semantic bases for terms denoting companions, as with the obsolete *kaatáy* ‘companion in eating liver’ and *kanúbig* ‘companion in drinking water’ and the contemporary *kainuman* ‘drinking buddy’.

For other semantic classes of *ka-* constructions, the roots may variously evoke things, processes, or states. For example, the roots of the PARTICIPANT IN SHARED EXPERIENCE category include those with glosses ‘cut’ (process), ‘race of human beings’ (thing), ‘companionship’ (thing), and ‘intimate’ (state). These are not only very different categories, but also

different levels of abstraction. These observations, and further complications to be discussed later, suggest that each of the semantic classes of *ka-* has its own construction or constellation of constructions; each is a *kaputol*, one piece cut from a semantic matrix, and the collected meanings of *ka-* constitute a semantic archipelago, a *ka-pulu-áng ka-hulug-án* (< *pulô* 'island', *hulog* 'meaning'). Apparently, in this construction with *ka-* the locative *-án* suffix (*-áng* < *-án* + *na*) pluralizes and re-derives a place or thing as a reaggregation of previously individuated items. It is thus a beautiful example of linguistic iconicity, in which there is first a cutting off with *ka-* in initial position, followed by a reassembly with *-án* in final position.⁶

We have described the outlines of a category network and something of the relationship of *ka-* to the semantics of the stems and roots with which it combines. We assume that *ka-* constructions make sense to native speakers, even though they may lack conscious awareness of the constructional semantics or the meaning of the prefix in any particular usage. But how can this prefix, even when restricted to a single sense, attach with equal facility to roots that have process, thing, or stative semantics to yield constructions that have sensible profiles when these profiles are not necessarily reducible to the compositional product of the constituents? We propose that *ka-* works with different kinds of roots and stems because it acts by abstracting and profiling some aspect of the base conceptualization of the root. This abstracted entity could be a material part, a person in a group, a participant in a social relationship, a person from a certain place, an endpoint in a process, a result of provocation, a person with a similar facial configuration, or a generic feature of a series of experiences evoked by the root semantics. The cognitive process is probably the same as that involved in the search for a target in the dominion of a reference point as described by Langacker (this volume: 53). The kinds of elements that can be abstracted from different sorts of linguistic roots and stems are part of the conventional knowledge that is essential to speaking fluent Tagalog.⁷

We propose that the derivational flexibility displayed by *ka-* is to be expected if one can put aside the notion that its primary function is derivation to a particular category of grammar. If, instead, its function is to evoke and profile a subpart of the conceptual base of the stem or root, then a variety of grammatical derivations with various syntactic distributions are to be expected. Derived forms may also act as stems to host the affixes of voice and mode according to whatever grammatical status they have acquired in the derivation process. The complex is much like that of English *-er* described by Panther and Thornburg (2002: 279); they were able to account for "the range of semantic role possibilities (Agent, Experiencer, Instrument, Location, etc.) and referent types (people, objects, events, etc.)" by means of metaphoric and metonymic extensions. However, where they began with a central sense of *-er* embedded in a general action schema, it appears that *ka-* has more to do with the abstraction, individuation, and comparison of entities embedded in a variety of schemas, including those of entities, social groups, and actions. In the remainder of this chapter we examine what other scholars have said about *ka-* and present data and arguments in support of the theory presented above. But first a brief review of Tagalog grammar in Section 2 may assist readers who are unfamiliar with the language.

2. Background: Tagalog/Filipino⁸

Tagalog is a Western Austronesian language of the Philippines with more than 30 million speakers. It is spoken as a first language by some 17 million persons throughout the Philippine archipelago with the greatest concentration living in Manila and southern Luzon (Crystal 1987:318; Schachter 1990, Himmelmann 2005). First established as the national language in 1937, it was given the official title of ‘Filipino’ by the Philippine Constitution of 1987, but linguists continue to use the older term. Some of the data presented in this paper can be characterized as ‘Taglish’, a register that mixes English with Tagalog in correlation to social status. Taglish is pervasive in vernacular discourse and the popular media (Bautista 1979).

Tagalog is a predicate-initial language, with verbal or non-verbal predicates.⁹ The predicate marker, *ay*, provides a frequently used means of fronting the topic. The distinction between complete (perfective) and non-complete (imperfective) verbs is accomplished by means of stressed reduplication (R1) of the first consonant and vowel of the stem. A system of voice correspondences relates a series of verbal affixes to noun phrases prefaced by one of three particles: *ang* (specific), *ng* ([nang], genitive), or *sa* (directional or oblique). The participant that is in the *ang*-phrase or signified by the specific pronoun, as in example (1), is the ‘focus.’¹⁰ Its role as actor, undergoer, or experiencer varies with the verbal prefix. The noun phrases constructed with the particles *ang*, *ng*, and *sa* can be replaced by corresponding pronouns (e.g. singular first person *akó*, *ko*, *akin*) or noun-phrases with personal name markers (e.g. singular *si*, *ni*, *kay*). For example, the prefix *mu-* (usually realized as *-um-*) always takes a specific actor and an object (if there is one) marked with the genitive pre-positional particle, as in (1).

- (1) *K-um-ain akó ng manggá.*
 RLS.AF-eat 1P.SPC GN mango
 ‘I ate some mango’

The semantic roles of nominal participants correspond to the selection of verbal affixes as shown in Table 1, which lists only the basic ones. In glosses, an unspecified focal participant may be signified with ‘(x)’, as in *nahíhirápan* ‘(x) experiences hardship’. Roots generally have undergoer focus by default.

Tagalog verbal affixes form complex compounds and circumfixes. One that occurs frequently is *ka-___-an*, recognized by Panganiban (1972:208) as a nominalizer denoting ‘possession, qualification, or abstractness’. In fact *ka-___-an* appears in our texts with much greater frequency than *ka-* alone.

Table 1. Semantics of the voice affixes

Focus	Morphology	Semantics
undergoer (UG)	<i>ni</i> ^{a, b}	realis
”	<i>-in</i> ^b	irrealis
”	<i>-i-</i>	reason for doing, conveyance of patient, benefactive, instrument
agent (AF)	<i>mu</i> ^c	agent performs or initiates action
”	<i>mag-</i> , <i>nag-</i>	agent performs or initiates action; (irrealis, realis)
”	<i>maN-</i> , <i>naN-</i>	agent performs or initiates characteristic action, often with negative evaluation; (irrealis, realis)
non-control (NC) ^d	<i>ma-</i> , <i>na-</i>	experiencer, patient, non-control agent; (irrealis, realis)
no focus	<i>pa</i> ^e , <i>pag-</i> , <i>paN-</i>	gerund forms of <i>ma-</i> , <i>mag-</i> , <i>maN-</i>
locative (LOC)	<i>-an</i>	goal, source, or location

^a *ni-* is realized as *in-* or *-in-* (Halle 2001).

^b Undergoer focus in constructions with *ni-* and *-in* may be attributed to the default semantics of most roots rather than coercion by the prefix.

^c *mu-* is realized as *um-* or *-um-* (Halle 2001).

^d The prefix *ma-* is often labeled *stative*.

^e The prefix *pa-* is often labeled *causative*.

3. Sources and methods

The data used in this paper were obtained from a variety of published sources, but especially the grammars of Leonard Bloomfield (1917), Frank R. Blake (1925), Cecilio Lopez (1941), and Paul Schachter and Fe Otanes (1972). Some terms were found in the more specialized topical articles of R. M. Cena (1979), J. R. Martin (1988), Videa De Guzman (1978, 1995, 1996), and Der-Hau Rau (1993). Additional terms were gleaned from romance novels, transcripts of several interviews on the topic of emotion language, notes based on 70 hours of elicitation with two Tagalog consultants on the topic of experiential language, 10 hours of formal elicitation with two other Tagalog consultants on the topic of generics in Tagalog, and incidental conversations with other Tagalog speakers living in Las Vegas. Several terms were provided by Videa P. De Guzman in personal communication. All terms were checked against the dictionaries of Leo J. English (1977, 1988) and José Villa Panganiban (1972), which also provided additional terms. The resulting list of terms collected from these sources is intended to be representative rather than exhaustive. Finally, the list of terms and expressions was checked by co-author Clarito, whose pronunciations differ in some cases from the representations in documentary sources, which are often incomplete, as they were written for different purposes. In most cases, the markings were corrected to Clarito's pronunciation. Diacritical marks that imply clearly different pronunciations are left unchanged, but differences are noted in footnotes.

The terms found in these various sources were then collated and sorted into categories and subcategories by common meanings based on English glosses and by construction type. The method is based on the assumption that a morpheme is a symbol made up of a phonological unit linked to one or more semantic (conceptual) units and that a lexeme with affixes is a symbolic construction.¹¹ While two distinctive constructions may theoretically share a single semantic unit as precise synonyms, it is more often the case that there is a corresponding, if sometimes subtle, semantic distinction, particularly if there are multiple tokens of the construction type. Thus, we distinguish [*ka-R2-ROOT* / INTENSE EXPERIENCE] from [*ka-ROOT* / ABSTRACT QUALITY].

Our method raises two questions regarding the status of categories identified entirely on the basis of difference in meaning. First, if differences fall on a continuum, where does one draw the lines between categories? Perhaps the continuum should be made explicit and category boundaries should not be drawn. We can only answer that the categories we have proposed seemed in our judgment to be distinctive. For example, in (1) we positioned PARTICIPANT IN SHARED EXPERIENCE as a subcategory of INDIVIDUATION. While we recognize overlap in membership and conventional metaphors, as with the terms *kaputol* 'one piece, brother' (< *putol* 'cut, cutting') and *kasama* 'companion, part of a mixture or whole' (< *sama* 'companionship'), it seems reasonable to distinguish active human participants from inanimate pieces of a mass even where no difference in grammatical pattern of usage is known. Cena (1979) treated them both under the heading of *comitative*. So what do we gain by recognizing the subcategory? We gain a clearer understanding of category semantics and the possibility of discovering hitherto unnoticed grammatical patterns based on semantic differences. We can see that *kaputol* involves first a metonymy (CUTTING PROCESS for CUT OFF PIECE) to create the schema and then a metaphor (A SIBLING IS A CUT OFF PIECE) to create the subcategory.

The second question is whether the categories that we propose have psychological reality for native speakers. Since native speakers may lack conscious awareness of such distinctions, the only way to prove the validity of latent categories in the absence of distinctive grammatical patterns would be to conduct psycholinguistic experiments such as those undertaken by Sandra and Rice (1995) to test the psychological reality of fine-grained polysemy in English prepositions. They conducted three experiments: a sentence sorting task, sentence similarity judgments, and an on-line acceptability decision task. All three supported the proposition that speakers make fine-grained distinctions among the different senses of a lexeme.

4. Analysis of *ka-*

We have attempted to provide labels only for usages that native speakers would regard as distinctive. We cannot be sure on this point, but we include most senses that native speakers Lopez, Panganiban, and Cena regarded as distinctive and a few other senses that we believe would qualify. In this we are following Langacker's (1991:55) premise that an adequate account of the grammar does not end with discovery of the most schematic sense of a form, but must also include all the distinctive conventional sub-senses. This is be-

cause specifying only the most general sense may predict usages that never occur. Sandra and Rice (1995:92) have provided experimental evidence that lower-level distinctions are needed in polysemy networks.

4.1 The comitative construction: Individuation and participant in shared experience

Bloomfield regarded the semantics of *ka-* as primarily relational. For example, of the form *kabaláe* 'fellow-parent-in-law', he said "the form *ka-baláe* merely makes explicit the element of relation present in the simple word [*baláe* 'parent-in-law']" (1917:266). An indication of the polysemy and variety of grammatical functions that such terms may possess may be illustrated with the term *kasunód* (*sunód* 'following'), which Bloomfield glossed as 'one of two persons, one of whom is following the other'. English (1988:1283) additionally listed the glosses 'the continuation', 'the successor', 'result', 'after', 'later', 'next', 'nearest', and 'subsequent'. As a modifier meaning 'subsequent', *kasunód* appears in the focus phrase *ang kasunód na pangyayari* 'subsequent events'.

Where Bloomfield emphasized the relational value of *ka-*, Blake (1925:88) noticed the sense of individuation:

The function of this prefix *ka-* seems to be in general to indicate an individual one of a number of persons or things; it is used as follows.

- (a) It forms nouns of simple individuality, e.g.

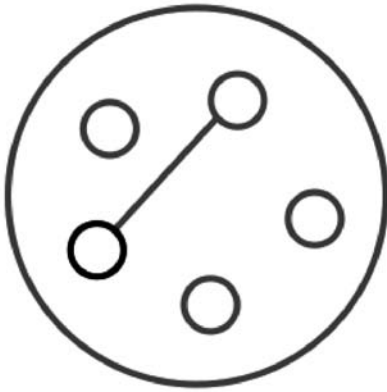
katáwo 'one man'

kapótol 'one piece'

To accentuate the idea of unity reduplicated forms like *kakapótol* and *kakatakatówo* are sometimes made.¹²

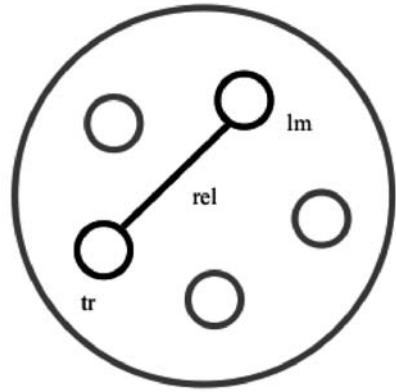
But Blake (1925:88) also said that the individual can be "one of a number who are *associated in some way*, e.g. *kasáma* 'companion' from *sáma* 'accompany', *kasangbáhay* 'of the same house' [from] *sangbáhay* 'one house'" [italics added to English only]. We have labeled this idea of association or relationship as PARTICIPANT IN SHARED EXPERIENCE, which we analyze as a subcategory of INDIVIDUATION. The distinction is diagrammed in Figures 3A and 3B.

In these diagrams, the conceptual base is a THING (bounded entity), represented by the outer circle and all the contents. The smaller circles represent entities that are part of the base. The solid lines represent the relation of shared experience. Profiled (designated) elements are depicted with bold lines. The specific relations of shared experience and comparisons of equality that come to be conventionally profiled are latent elements of the linguistic root or stem. Figure 3B schematically represents a term such as *kababayan* 'fellow townsman', in which the conceptual base is a group of people. In a relation, the entity with relatively greater prominence is referred to as the trajector (TR), while that with lesser prominence is the landmark (LM). In this case, the trajector represents the highlighted participant, the *kababayan*; the landmark is the individual or subgroup that serves as the



A. INDIVIDUATION

The thing that is individuated is profiled, which is indicated with boldface. Certain roots may raise the profile of additional elements, such as a relation to a landmark. The landmark may in fact be the mass or collectivity bounded by the outer circle.



B. PARTICIPANT IN SHARED EXPERIENCE

This group of terms profiles a trajector (tr), a relation (rel), and therefore, also a landmark (lm). The trajector is taken to be the Tagalog participant that is marked for focus. Certain roots (e.g. lahi 'race') that designate the collectivity raise its profile and establish it as the primary landmark.

Figure 3. Schematic conceptual structure of INDIVIDUATION and PARTICIPANT IN SHARED EXPERIENCE

point of reference. See also examples (2) and (3) in which the trajector is the participant with grammatical focus marked by pre-positional *ang*.

A term recorded by Bloomfield (1917) that seems to extend the category is *kamatá* 'take to [be attracted to] (someone)¹³ (< *matá* 'eye'). It is evidently a chain metonymy (EYE FOR LOOK.AT → LOOK.AT FOR TAKE.TO → EYE FOR TAKE.TO). Whether it is nominal, processual, attributive, or more than one of these, is unclear.

Cena (1979: 122–123) described two lexical constructions with *ka-*. The first he called *comitative predicates*, which are “made up of a nominalizing prefix *ka-* and a verb base”. His examples of the comitative all belong to our subcategory PARTICIPANT IN SHARED EXPERIENCE. Clauses (2) and (3), from Cena (1979: 122), illustrate the use of the comitative predicate. Note that Cena used COM (comitative) and SU (subject) where we use GN (genitive) and SPC (specific). The second gloss of each example is our attempt at a structure-preserving interpretation.

- (2) *Kasama ng doktor ang anak.*¹⁴
ka+'with' COM-doctor SU-child
 'The child is with the doctor'
 ?'Companion of the doctor, the child'
- (3) *Katulong ng doktor ang anak.*
ka+'help' COM-doctor SU-child
 'The child is helping the doctor'
 ? 'Helper of the doctor, the child'

If in these instances *kasama* is actually a noun, and we do not doubt Cena, then it is hard to understand why Cena translated it with the verb phrase (*is with*), unless he was simply trying to present the most idiomatic translation. He did concede that "English passive glosses of Tagalog sentences whose 'subject' is nonagent, used throughout this squib, are only rough approximations of the syntax and semantics of the Tagalog sentences" (1979: 124). Cena (1979: 122) also pointed out that the participant in the *ang*-phrase and the *ng*-phrase can be relativized, as in examples (4) and (5). Again, Cena's glosses make one wonder if the *ka*- constructions *kasama* and *katulong* have undergone zero denominalization to statives.

- (4) *Madismaya ang doktor na kasama ang anak.*
 disappoint SU-doctor LK *ka+*'with' SU-child
 'The doctor who is with his/the child was disappointed'
 ?'Disappointed (was) the doctor who(se) companion (is/was) the child'
- (5) *Madismaya ang doktor na katulong ang anak.*
 disappoint SU-doctor LK *ka+*'help-with' SU-child
 'The doctor whom the child is helping was disappointed'
 ?'Disappointed (was) the doctor who(se) helper (is/was) the child'

Martin (1988: 253–256) interpreted *ka*- as one of several forms that express "togetherness": doing things together or having things in common." He cited *kalarô* 'playmate', *magkalarô* 'two playmates' and *magkakalarô* 'more than two playmates', and the realis form in *kinalarô ko siyá* 'He was my playmate'.¹⁵ But, it should be pointed out that the *mag*- prefix has a reciprocal sense and prefix-reduplication pluralizes. Therefore, those constructions add nothing in particular to our understanding of *ka*- other than the information that a *ka*- construction may undergo appropriate forms of pluralization. The *kinalarô //ni-kalarô//* construction suggests that *kalarô* is construable as a progressive and temporally unbounded state that can be particularized and bounded in time by adding the realis marker *ni*-, which is realized as *-in*-.

The first two categories of Table 2 (see Appendix) – INDIVIDUATION and PARTICIPANT IN SHARED EXPERIENCE – would probably both qualify as instances of the comitative, as is supported by the entries that seem to fit both categories, e.g. *kapatíd* 'brother or sister', *kalahi* 'of same race or nationality', and *katao* 'one man [from the mass of humanity]'. Terms in the category of individuation can be interpreted as generic partitives. In fact, the term *katao* 'one man' is normally used only in counting persons, as in (6), from a newspaper report.¹⁶ The more familiar specific partitive is shown in (7), from Lander (2001). Potet (p.c., July 2, 2003) pointed out that *4 katao* is read *ápat katáo*, not *ápat na katáo*, and that *katáo* is the only form that takes this construction. In the sixteenth century, the *ka*- forms

all lacked the linker, as in *ápat kaputól*. A consultant, age about 20, did not recognize the construction *ápat katáo* as valid.

- (6) *generic partitive*
Nag-overtake na tricycle 4 katao, patay; 3 malubha
 RLS.AF-overtake LG tricycle 4 persons, dead; 3 grave
 ‘Tricycle overtaken 4 persons dead; 3 grave [serious]’
- (7) *specific partitive*
isa sa mga kaumbayan
 one DR PL town-dweller
 ‘one of the town dwellers’ (Lander 2001)

4.2 Abstract quality

The sentence in (8) provides an example of this category in the non-exclamatory use of *karámi* ‘amount’ (< *dami* ‘quantity, great number’) with the vernacular spelling *kadami*. All four of our examples in Table 2 (see Appendix) have roots that are qualities. The exclamatory usage can be heard in colloquial constructions in predicate position with the counter-expective *naman* as in (9). The pair is evidence that *kay/ka-* of EXCLAMATION may be merging with the PARTIAL *ka-*. The expression in (10) is a more formal or ‘proper’ expression (Pam Otado, p.c., about June 2003).

- (8) *sukatin ang ka-dami ng p-in-akuluang tubig*
 measure SPC PAR-amount GN RLS-NC-boil water
 ‘measure the amount of boiled water’¹⁷
- (9) *Ka-dami naman niyan.*
 PAR-amount CE GN.MED
 ‘That is too much’
- (10) *Sobrang dami naman niyan.*
 excessive-LG amount CE GN.MED
 ‘That is too much’

4.3 Comparison of equality

The label COMPARISON OF EQUALITY is from Cena (1979), who listed the senses ‘has the same X as’ or ‘is as X as’ (example (11)). It does not have the sense of the English comparative *-er* ‘more than’. Like the category ABSTRACT QUALITY, many of the roots in this category predicate qualities, but there are also roots that profile concrete things (e.g. face, head) and processes (e.g. follow, walk). Cena made no attempt to characterize the lexical construction with the comparative *ka-* as nominal, verbal, or adjectival. The choice of one or the other is not obvious. If we accept Himmelmann’s (2005) theory that Tagalog clause structure is equational, then this construction should be regarded as a nominal.

- (11) *Ka-mukha ng doktor ang anak.*
 PART-face GN doctor SPC child
 'The child has the same face as the doctor' (Cena 1979:122)
 ?'Likeness of the doctor, the child'

Unlike the comitative *ka-*, the comparative may occur with the morpheme *-sing-*, which is optional for some roots and obligatory for others. An example is *kasíng-taás* 'as tall as'. But the comitative predicates, unlike the comparatives, inflect for aspect, "e.g. *kinatulong*, *kakatulungin*, *kinakatulong*" (1979:123). These can be glossed, respectively, 'assistance (past event)', 'to assist or help', and 'assisting or helping'. The root is *tulong* 'help'; the markers *-in-* and *-in* are realis and irrealis, respectively; and the second two examples have non-completive reduplication of *ka-*.

Thus, with Cena's data, one could make an argument that there are two homonymic *ka-*'s, much like the nominalizing and comparative *-er*'s in English. Cena (1979:123) characterized the similarity of the comparative of equality to the comitative as "superficial". A different view was advanced by Martin (1988), who noticed that the comparative *ka(sing)-*form shares a meaning with the comitative 'mateship' *ka-*, in that the comparative participants share a feature of appearance while those of the comitative share an activity. His conclusion that "sharing, both in terms of activities and appearances, can thus be seen to be more pervasively grammaticalized in Tagalog than in English" (1988:256) reveals that he regarded the comitative and comparative of equality as instances of a more general notion of sharing and not simply as semantically unrelated homologous forms. We take this as a plausible hypothesis, but we do not attempt to test it in this paper.

4.4 Intense experience

Bloomfield (1917:267) noticed forms with reduplicated roots, such as *katakut-takot*¹⁸ 'frightful', which express "that which causes ... an involuntary action, specifically, ... an emotion", but he failed to remark that the roots themselves were all emotion predicates: *takot* 'fear', *hiyà* 'shame', *taká* 'amazement', and *áwa* 'pity'. Blake (1925) observed that in a construction with reduplicated emotion verbs, *ka-* forms emotion adjectives, as with *ka-ibig-ibig* 'lovable' (< *ibig* 'want, like'). In Schachter and Otnes (1972:226), *ka-* is found as part of the fourth item under "Other derived adjective formations" in the construction *ka*+dup₂+B [base], with the meaning 'causing or serving to produce, in an extreme degree, what the base designates'. This describes such forms as *kawili-wili* 'delightful'.

The category of INTENSE EXPERIENCE has the construction [*ka*-R2-ROOT]. Since it combines a distinctive phonology with a distinctive semantics, its status as a category is grammatical as well as semantic (Langacker 1987:58). By contrast, within the grammatical category of INDIVIDUATION (Cena's *comitative*), the subcategory of PARTICIPANT IN SHARED EXPERIENCE is strictly semantic – so far as is presently known. The category of EXCLAMATION (Section 4.5) may be seen as a semantic and (optional) phonological variant of INTENSE EXPERIENCE. It is not a subcategory of the partial *ka-*. De Guzman (p.c., October 1, 2003) observed that the common contemporary usage for terms like

katakot-takot and *katuwâ-tuwâ* is *nakakatakot* and *nakakatuwâ* and that these might form yet another category.

4.5 Exclamation

Most of the roots in this category predicate qualities. An exception occurs in *kagálit* ‘anger’, which has as its root the emotion *gálit* ‘anger’, but this term from Blake (1925) is suspect, because reduplication is unusual for the category. Bloomfield (1917) recorded the exclamatory usage with *katayog* ‘how tall!’. He noticed that in such usages *ka-* often takes the form *kay* or *ke-*, which Panganiban (1972:278) treated as a separate form, noting that “the *kay* prefix expresses admiration, surprise, deprecation, or derogatory consideration, according to the nature of the rw [root word] and to the occasion of the expression.” De Guzman (p.c., October 1, 2003) has observed that such forms do not belong with INTENSE EXPERIENCE, and that they usually occur in predicate position when used in clausal constructions. For these reasons, we have not included EXCLAMATION as a type of PARTIAL in Figure 2. Yet it does seem possible that the *kay* construction is undergoing grammaticalization and assimilation to the *ka-* PARTIAL. Bloomfield (1917:268) noticed that with reduplication of initial segments of the root, “the form refers to the quality in an explicit plurality of objects,” as in (12).

- (12) *Ka-la-lamíg ng paá ng mga batà.*
ka-R1-cold GN foot GN PL child
 ‘How cold the children’s feet are’

In Schachter and Otones (1972), *ka-* appears listed as one of several forms, including *ang*, *kay*, and *ano*, that can replace *ma-* in an exclamatory construction, such as *Kaganda ng dalaga!* ‘How beautiful the girl is!’ (*kaganda* ‘how beautiful!’ for *maganda* ‘beautiful’).¹⁹ Schachter and Otones (1972:280) added that some speakers do not use exclamations with *ka-* and that there is variation in the use of a long or short /a/.

4.6 Recent completive aspect

The roots in this category are all clearly process roots, though when realized as simple unaffixed words, they generally have nominal profiles (zero derivation to nouns). We have not found a sufficient justification for including the recent completive *ka-* within the semantics of partials, in spite of our inclination to do so. Here it may be useful to consider some parallels to English *-er*, which has two obvious senses: first, the agent or instrument nominal; and second, superiority in a comparison. We can set these in correspondence to Tagalog comitative and comparison of equality. But in English there are over 180 verbs whose present tense forms end in [ɹ]. Admittedly, the group has diverse origins and no meaning common to all, except for PROCESS, but there are interesting subgroups. Terms such as *flicker*, *glitter*, *glimmer*, *twitter*, *shiver*, and *stutter*, suggest ‘frequent and irregular repetition of low-intensity events’. The sub-group *simper*, *snigger*, and *whimper* suggests ‘low intensity vocalization with negative evaluation’. Whorf (1956:70) referred to such

groups as *cryptotypes*. The point is simply that *ka-* resembles *-er* in deriving nouns, comparatives, and verbs. Among the world's languages, it is not uncommon for affixes, or even paradigm sets, to have multiple grammatical functions and to predicate in multiple domains that are disambiguated by context.

Bloomfield regarded as "divergent in meaning" the terms *kagabi* 'last night' (< *gabi* 'night'), and *kahapon* 'yesterday' (< *hapon* 'afternoon'). These temporal terms can be seen as variations on the sense of RECENT COMPLETIVE, but they differ from the ordinary recent completive in having roots with nominal semantics.

5. Forms with *ka-___-an*

Constructions with *ka-___-an* are very common. A concordance search of words beginning with initial *ka-* and final *-an* produced hits on 68 out of 607 lines of text. This count does not include lines having terms with additional prefixes before the *ka-* or terms in which the *ka-* has undergone metathesis with another prefix (*k-in-a-*). Also, some of these lines had more than one *ka-___-an* term. Both Lopez (1941) and Panganiban (1972) treated the circumfix construction *ka-___-an* as a variant of *ka-*, which suggests that the semantic values of *ka-* are at least partially preserved. When *-an* stands alone as a suffix, its meaning pertains to a focal participant that is a location, goal, or source. Such constructions often have a nominal sense. The circumfix may fit our notion of a metonymic operator even better than *ka-* standing alone. De Guzman (1996:310) noticed that noun roots marked with *ka-___-an* have derived noun forms referring to "some abstract notion pertaining to N", as in *kabuhayan* 'livelihood' (< *buhay* 'life'). Examples of abstract derivations appear in Table 3 in the Appendix.

Schachter and Otnes (1972:286) discussed *ka-___-an* in their section "Survey of Major Affixes", as the second example in the construction *ka-...-an*. The authors assert that "as a major affix, *ka-...-an* (/ka , , , an/) is always the DF [directional-focus] counterpart of AF [actor-focus] *ma-*".²⁰ An example is *kawilihan* 'enjoy', the DF counterpart of AF *mawili*. This kind of structural distribution is important to know, but it gives us little sense of why *ka-* appears in the circumfix *ka-___-an*, a problem that is aggravated by the lack of context for the examples. Finally, we find *ka-* listed in their section "Affix-correspondence classes: directional verbs" with item 2, *ma-/ka-...-an* (301). The first example is *hirati* (*mahirati/kahiratihan* 'get used to'). There is no further comment on the semantics of the construction.

5.1 *Ka-___-an*: Place

The roots in this category have nominal or process semantics. Blake (1925:90) recorded a variety of senses of *ka-*, but particularly interesting is his description of the derivation of nouns of place:

It forms nouns of place (a) from various nouns, denoting a place where there is much of what the noun indicates; (b) from verbal roots, denoting the place, person, or thing upon which everyone exercises the action in question.

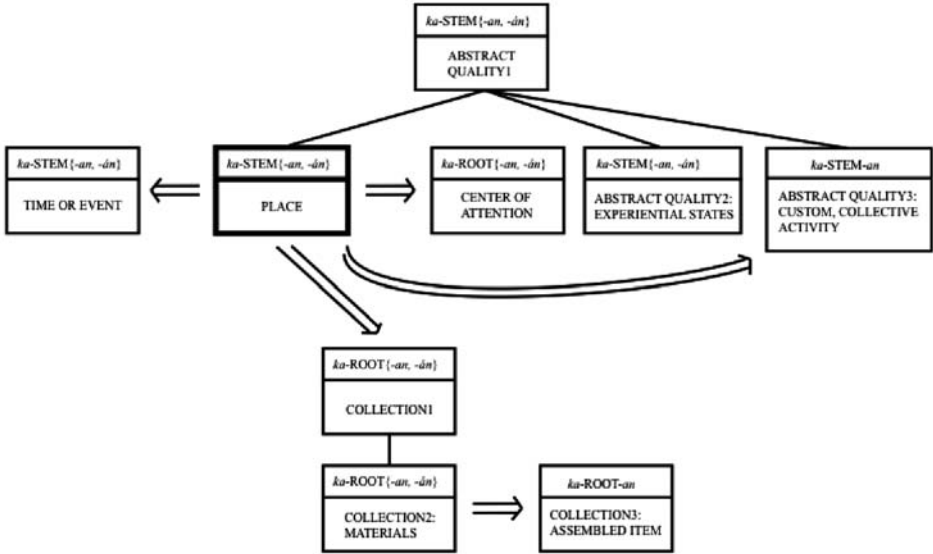


Figure 4. Schematic network of circumfix *ka-___-an*

The subcategory of PLACE is a clearly defined and a well-motivated derivation from the locative sense of *-an* (Table 3 in Appendix). As it is relatively concrete, this subcategory could be regarded as the category prototype and we have diagrammed it so in Figure 4. The subcategory of PLACE as CENTER OF ATTENTION seems closely related, as events typically draw viewers’ attention to a particular location, giving rise to the metonymy PLACE FOR CENTER OF ATTENTION. There is no consistent phonological difference between the two categories. The category of TIME OR EVENT seems a likely extension of the sense of PLACE, as it is in many languages.

5.2 *Ka-___-an*: Abstract quality₁

All the roots in this large category predicate qualities. The category yields meanings such as ‘arrogance’, ‘goodness’, ‘truth’, and ‘inner being’ (Table 3 in Appendix). Such senses can be described as instances of the existential metaphor AN ABSTRACT QUALITY IS A PLACE, or perhaps more generally, A STATE IS A CONTAINER (Lakoff & Johnson 1980: 30). This applies also to the superlatives that are constructed on reduplicated roots with *ká-r2-STEM-an* construction, such as *ká-tamís-tamís-an* ‘sweetest’ (< *tamís* ‘sweetness’). But with equal motivation, one could also regard these as metonymies of the type PLACE FOR ABSTRACT QUALITY, which is arrived at by positing the metonymy ABSTRACT QUALITY FOR FOCUS OF ATTENTION. FOCUS OF ATTENTION can be regarded as a subjectification of CENTER (LOCATION) OF ATTENTION. It is the experience of directing attention to the location of an object, an event, or a series of events. Thus, the polysemy in these examples can be produced by a well-motivated chain of metonymies. Probably belonging in this

category is the code-mix *ka-cheap-an* in (13), which appeared in the Showbiz page of *Kabayan Online*.

- (13) *JC-Melissa-Camille love triangle, ka-cheap-an lang*
 ... PAR-cheap-LOC just
 'The JC-Melissa-Camille love triangle is just a cheap affair ...'
ISANG ka-cheap-an ang isyung love story nina Juan
 One PAR-cheap-LOC SPC issue.LG love story GN.PN Juan
 'It is one cheap affair, the issue of the love story between Juan ...'
Carlos Castro at Melissa Mendez ...
 Carlos Castro and Melissa Mendez
 'Carlos Castro and Melissa Mendez ...'

5.3 *Ka-___-an*: Abstract quality₂: Experiential states

The roots in this category predicate mental states (e.g. pity, anger, envy), judgments (e.g. other), and one social relation (intimate). Since the suffix *-an* has a goal sense, it is not surprising that EXPERIENTIAL STATES is an important subcategory of the circumfix. The relation of *ka-* to *ka-___-an* constructions can be one of cause and effect, as with *katakut-takot* 'terrible, terrifying' and *katakutan* 'state of being afraid, to fear (x)'. *Katakutan* has tacit undergoer focus inherited from the root, as illustrated in (14). Tagalog is like English in the possibility of making the source of fear the grammatical object.

- (14) *Kinatátakútan [ni-ka-tá-takot-an] ko sila.*
 RLS-PAR-R1-fear-LOC 1S.GN 3PL.SPC
 'They are frightening me/I am afraid of them' ['They are the object of my fear']

5.4 *Ka-___-an*, abstract quality₃: Custom, collective activity

Our three examples – *katagalugan* 'custom of the Tagalogs', *kaamerikanuhan* 'ways or customs of the Americans', and *kasáyahan*²¹ 'feasting, celebration of a feast' – suggest that this category predicates qualities of collective actions as well as customary ones. The two terms that predicate CUSTOM have roots that are ethnic names (Tagalog, American). The apparent metonymy is PLACE FOR (CUSTOMARY) ACTIVITY (CONDUCTED AT A PLACE).

5.5 *Ka-___-an*: Collections: Material, tools, assembled item

The roots in this category all predicate concrete things (i.e. child, island, house, tool, cloth). Where the *ka-* constructions individuate by abstracting elements away from the collective, the circumfix *ka-___-an* conceptually reassembles individuated items into a collective. Thus, we find *kapuluán* 'group of islands' (< *pulò* 'island') and *kabatáan* 'group of children, the young ones' (< *bátà* 'child, young'). The process of metonymy and the telic sense of *-an* are evident in the related notions of MATERIAL and COLLECTION OF TOOLS. In the

conceptual scenes that they evoke, the collection of elements (materials) is assembled into an integrated product or the collection of tools is used to assemble a product. So we find that *ka-___-an* may predicate a collection as a thing in itself or the collection of elements required to create an end product, or even the end product itself, as in the case of *kadami-tán* ‘the whole wearing apparel’ (< *damit* ‘cloth, fabric’). This last sense of ASSEMBLED ITEM seems related to RESULT, which has additional reduplication morphology.

5.6 Summary of *ka-___-an*

Conceptual metonymy is key to the polysemy of the *ka-___-an* circumfix. First, there is the subjective experience of imagining the occurrence of events at a place, which gives rise to the metonymy PLACE FOR CENTER OF ATTENTION. Then, by separate chains of metonymies, we can arrive at PLACE FOR ABSTRACT QUALITY and possibly at PLACE FOR EXPERIENTIAL STATES. Metonymy is also involved in the category of COLLECTION, because a collection of things typically occupies a place. Metonymy also explains the opposition between *ka-* as INDIVIDUATION and *ka-___-an* as COLLECTION OR ASSEMBLED ITEM. The process is very labile, as shown by the term *kasangkapan* (< *sangkáp* ‘part, concomitant’), which, according to Lopez (1941) can predicate either a collection of tools, or a single tool (perhaps one of a recently assembled or otherwise salient collection). Where *ka-STEM* predicates the source or cause of an intensive experience, *ka-STEM{-an, -án}* predicates the resultant experience. The cause of the experience may be tacit or realized as a focal undergoer.

6. The non-control ‘accidental’ stressed form *ká-*

Most of the roots in this category predicate actions (e.g. study, read, follow, stumble), but a few predicate emotions (e.g. joy), states (e.g. full, old), or qualities (e.g. beauty, expensive). Bloomfield (1917) recorded the accidental sense with stressed *ká-*, as in *kásiyá* ‘accidentally fit into’ (< *siyá* ‘containable’). Lopez (1941) and Panganiban (1972) provided additional examples (Table 4 in Appendix). In our view, most of the forms have a sense of non-control or a sense of accidental or unexpected occurrence, or could readily be so construed. An apparent exception to this generalization is found in the aspectual category REPETITION. However, terms with connotations of more or less are good candidates for interpretations in any of the senses mentioned (non-control, accidental, unexpected), as are superlatives, uncertain results finally achieved, and the one non-desiderative in Table 4 (see Appendix), *káwawà* ‘pitiful’ (< *awà* ‘pity’). Such construals are likely to be accompanied by evaluative connotations as well, such as we see in the ‘cut off too much’ sense of *káputulan*. As Tuggy (2003: 124) has observed:

The idea of intensity is naturally tied in to the contrary ideas of approbation and disapprobation. Of whatever quality a process, attribute, or thing is, we tend to regard it as good or bad to some degree. It is natural, then, that if that quality is intensified or exaggerated, we tend to regard it as better, or worse, than normal.

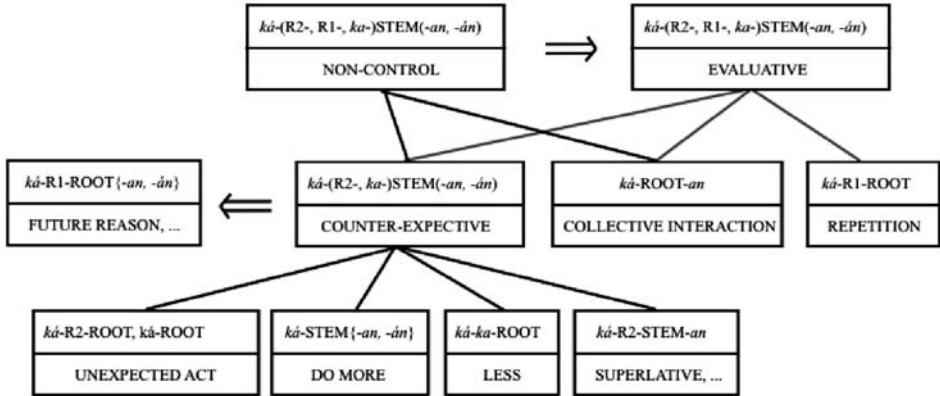


Figure 5. Semantic network of prefix *ká-*

Thus, it seems that expectations and norms are involved in the interpretation of *ká-*, and that the prefix is a site of subjectification (Langacker 1990). The proposed connections among the various senses of *ká-* are diagrammed in Figure 5.

6.1 *Ká-*: Collective interaction

This subcategory resembles the unstressed *ka-___-an* forms of subcategory PLACE in that the metonymy of PLACE FOR COLLECTIVE ACTION is found in both. Terms such as *kágalitan*²² 'quarrels, disagreements all around' (< *galit* 'anger') and *kásunduan* 'agreement, treaty' (< *sundô* 'agreement') suggest an additional metonymy: NON-CONTROL FOR PROBLEMATIC COLLECTIVE ACTION. This is an obvious connection in the case of *kágalitan*, but less obvious for *kásunduan*. The argument is simply that treaties and agreements, however much deliberation may go into them, are problematic to begin with and/or somewhat unexpected, as may also be the case with *káuntian* 'small party celebrated together' and *kátuwâan* 'gladness together'. Not surprisingly, the three glosses in this category suggest an evaluative dimension that may be shared with the counter-expective and repetition.

6.2 *Ká-*: Future

The subcategory FUTURE has senses of FUTURE REASON, FUTURE PLACE OF ACTIVITY, and RESULT. Since the future is often problematic, it is not surprising to find it marked with *ká-*.

6.3 *Ká-*: Do more, less

Comparison shows up in the *ká-* terms, as it does in the *ka-* and *ka-____-an* terms. One can see a semantic relation between the COMPARISON OF EQUALITY (*ka-*), the SUPERLATIVE (*ká-R2-____-an*), and DO MORE (*ká-____-an*) in that all involve comparisons on a scale, though the forms with *-an* are more obviously scalar and may reflect the metonymy PLACE FOR POSITION ON SCALE. The fact that several of the DO MORE examples are glossed as verbs adds weight to the analysis of *ká-* as non-control or accidental.

6.4 *Ká-*: Superlative, endpoint, result

Superlatives with *ka-* are usually constructed with reduplicated roots (R2), but there is a superior comparative using the non-control stressed *ká-* without reduplication of the root. Panganiban (1972:209) lists *Ká-gandahán pa natin* ‘Let’s make it even prettier.’²³ A similar form, lacking stress on the *-an* suffix, is used with *hindí* ‘not’, as in *Hindí namán siyá kágandahan* ‘She is not so beautiful’. Most of the roots in this category predicate qualities (e.g. sweetness, smallness, old, expensive). The category could be labeled the *endpoint transformation*, as results and superlatives are endpoints of processes and scalar states, respectively. The implied metonymy of PLACE FOR RESULT is obvious and seems implicit in several of the previously discussed categories of Table 3 (see Appendix) as well. Collections, centers of attention, finished products, and psychological states are all experienced as results of processes.

In the dimension of time we encounter the term *kátapús-tapúsan* ‘finally’, which predicates the end point of a protracted period. It contrasts with the recent complete *ka-*, which seems neutral as to duration. Example (15), from Rau (1993:23) illustrates the nominal status of the term. The suffix *-an* places a goal or result in focus. In the example, the focus element is the noun phrase *ang ginawâ* ‘what (she) did’. Thus, the sentence has the equational structure [*kátapústapúsan* / ‘the final thing’] = [*ang ginawâ* / ‘what she did’] (cf. Himmelmann 2005).

- (15) *Ka-tapus-tapus-an ang g-in-awa’y iyong bundok,*
 PAR-R2-finish-LOC SPC RLS-do.PM REM.LG mountain
 ‘Finally, what she did was that mountain.’

iyong sabon ay in-i-laglag.

REM.LG soap PM RLS-UG-drop

‘She dropped the soap (which turned into a mountain of soap and flushed away the pursuers)’

Under the heading “Superlative constructions”, Schachter and Otnes (1972) described a usage of *ka-* /*ka:*/ that occurs on a reduplicated adjectival base with the suffix *-an*, as in *káliit-liít-an* ‘smallest’ (< *liít* ‘small’). The long vowel, which occurs with stress, would align these forms to the accidental or non-control *ká-*. Neither stress nor length was recorded on *ka-* superlatives by Blake (1925), Lopez (1941), or Rau (1993), but they were added by De Guzman (p.c., October 1, 2003). These *ká-* superlatives often connote negative evaluation, as in (16), from *lumà* ‘old’ (Schachter & Otnes 1972:244–245).

- (16) *Ang káluma-lumaang libro niyá ang ibinigáy niyá sa akin.*
 SPC PAR-R2-old-LOC-LG book 3P.GN SPC UG-RLS-give 3P.GNDRC 1P.DRC
 'What he gave me was his oldest book' (1972: 245) [stresses added to Tagalog]

The authors seem not to consider that the superlative usage might be related to the intensive, or that these two usages of *ka-* might be related to that of the usual superlative prefix construction *pinaka-*, which could be analyzed as *ni-* (realis) + *pa-* (non-control gerund) + *ka-*.²⁴ This is not to deny that such constructions are so well entrenched and grammaticized that they acquire idiomatic senses or that they are felt by native speakers to be semantically and structurally unanalyzable.

7. Complex lexical constructions with *ka-*

Given that many of the subcategories listed in Tables 2–4 (see Appendix) are satisfactorily motivated by metonymy, and that a network of polysemy and semantic relations has been established, there is now a basis for the semantic analysis of prefix constructions with *ka-* other than those previously discussed. Space permits discussing only a few.

In (17), *ka-* occurs in the compound prefix *pagka-*, which here functions as a quality nominalizer with a meaning something like that of the English suffixes *-ness* and *-ance*. In this passage from a romance novel, the speaker experiences annoyance (*pagkayamót*) caused by a late night phone call. In this context, *pagka-* appears adequately motivated as a combination of *pag-* as an abstract gerund and *ka-* as an abstract quality. Thus, *pagkayamót* predicates the temporally unbounded existence of the abstract quality of *yamót* 'annoyance'.

- (17) *Areia! Is something wrong? Gabing-gabi ay na-pa-tawag ka?*
 ... late PM RL.NC-NC.GER-call 2P.SPC
 'Why are you calling so late?'
Na-palit-an ng pag-a-alala ang pagka-yamot nito.
 RL.NC-change-LOC GN GER-R1-think SPC GER-PART-annoy GN.PROX
 'Annoyance changes to worry' (Arielle, n.d.: 28)

A similar and somewhat unusual example is *pagkakákílanlán* 'landmark', which we analyze (tentatively) as *pagka-[ká-kilala-an]-án* (GER-PAR-[PAR-recognize-LOC]-LOC) lit. 'generic place of recognition' with the *ká-___-an* circumfix in an interior construction. This example suggests that *pagka-* as an abstract gerund plus abstract quality can acquire an extended sense of **GENERIC QUALITY**.

Another example appears in a headline from the Showbiz page of *Kabayan Online* (18). The sentence was first translated for us with the past tense as indicated, but another knowledgeable consultant translated it in the present. Here it appears that the constituent *kaguluhán* has the sense of a person attracting attention and creating confusion. This *pag-* is much like that in (17), predicating an unbounded process, but here it prefixes non-control *ká-* and it is marked as realis by the prefix *ni-* [-in-]. So a more literal translation would be 'It eventuated that Alessandra was the source of chaos at the international film festival' or even 'Alessandra got bombarded'

- (18) *Alessandra, p-in-ag-ká-ka-gulu-(h)-án sa international film fests.*
 Alessandra RLS-GER-PAR-PAR-chaos-LOC DR ...
 'Alessandra was bombarded (by fans) in the international film festival'

Potet (1988:71) cited the form *ikápagbíbigáy*²⁵ in (19). Example (20) presents our own morphological analysis, which is essentially the same as Potet's with the addition of the gloss NC for *ká-*. Thus, where Potet (1988:74) glosses *iká-* as CAUSE, we prefer an analysis with *i-ká-*, because a NON-CONTROL interpretation of *ká-* is natural in the context of being motivated to give. The *i-* is coded as an undergoer (UG), though it may have the sense of goal, instrument, beneficiary, or – in the context of causation – reason for action.

- (19) *Sanhíng ikápagbíbigáy ng X ng Y sa Z*
 F cause L will give (cause)
 'reason why X will give Y to Z'
- (20) *Sanhí-ng i-ká-pag-bí-bigáy ng X ng Y sa Z*
 Cause-LG UG-NC-GER-R1-give GN X GN Y DR Z
 'reason why X will give Y to Z'

To take another example, Panganiban (1972:204) has *pakábutihin* 'to exert utmost efforts to make (x) the best possible' < *buti* 'good'. Here again, the construction *paká-*, often treated as a unit with an aptitive or abilitative sense, is quite understandable as the combination of the non-control gerund *pa-* and non-control *ká-*. One could construe it as 'get/manage to have (Vb) happen'. The *-in* suffix is irrealis. A reviewer questioned "How can this be treated as non-control *pa-* and NON-CONTROL *ká-* when the meaning indicates a conscious exertion of effort to do something the best way possible." Perhaps we are stretching the traditional definition of the category of NON-CONTROL, but it seems to us that the need for a conscious effort to do something *in the best way possible* is evidence that the outcome is problematic; if it is not precisely 'out of control', it at least requires special efforts at control.²⁶

Roberto Tangco (p.c., March 14, 2002) has offered the contrasting sentences (21) and (22), which can be given the same gloss. Example (22) conveys a 'sense of urgency, or more generally calls attention to time'. Thus, it appears that this is the recent completive *ka-*, or a close variant. Together with the gerund *pag-*, which predicates an unbounded process or time of occurrence, it would mean something like 'when (actor) has just arrived, ergo a sense of urgency.

- (21) *Pag-dati-ng ng tiyo mo tawag-an mo 'ko.*
 GR-PAR-arrive-LG GN uncle 2S.GN call-LOC 2S.GN 1S.SPC
 'Call me when your uncle arrives'
- (22) *Pag-ka-dating ng tiyo mo tawag-an mo 'ko.*
 GER-PAR-arrive-LG GN uncle 2S.GN call-LOC 2S.GN 1S.SPC
 'Call me when your uncle arrives'

De Guzman (1995:46–47) also cited the form *na-ka-kita* in (23) as an instance of the construction that she labeled the antipassive: "the ... antipassive ... consists of the stative marker *ma-* plus a *ka-*+stem." Here it is realized as *n-* + *ma-* + *ka-* + stem. This form is

quite understandable as a completive *ka-*. De Guzman regarded the abilitative *maka-* as a different construction.

- (23) *Na-ka-kita ang bata nang parada sa daan.*
 RLS.NC-PAR-see SPC child GN parade DR street
 'The child saw a parade on the street'

8. Subjectification

Initially, we suspected that subjectification would exert an important influence on the semantics of *ka-* because it seems to be such a ubiquitous process in language change (Langacker 1990; Palmer 1996). Specifically, we expected that some of the meanings abstracted from the base conceptualization of lexical roots and profiled in the construction would be subjective experiences. It is not hard to see why this should be the case. We have argued that the semantic function of *ka-* is to abstract a partial – an individual, an end point, a result, a quality – from a base conceptualization. Any time a speaker is called upon to abstract (select, isolate) something from a scene, the speaker may be induced to make a subjective judgment. As a language evolves, subjective usages may become grammaticalized. Subjectivity is obvious in those usages that imply evaluation or urgency because they require speaker judgments. We also proposed subjectification as motivation for the metonymy CENTER (LOCATION) OF ATTENTION FOR FOCUS OF ATTENTION and for counter-expective interpretations of *ká-*. We now submit that subjectification is crucially involved in the majority of terms in the following categories from Tables 2–4 (given in full in the Appendix):

from Table 2:

ABSTRACT QUALITY
 COMPARISON OF EQUALITY
 INTENSE EXPERIENCE
 EXCLAMATION

from Table 3:

PLACE₂: CENTER OF ATTENTION
 ABSTRACT QUALITY₁
 ABSTRACT QUALITY₂: EXPERIENTIAL STATES

from Table 4:

UNEXPECTED ACT
 DO MORE
 LESS
 SUPERLATIVE
 NON-DESIDERATIVE

Thus, it appears that subjectification is important to the meaning of several of the categories of *ka-*, *ka-___-an*, and *ká-*. We take this as evidence that humans are intentional beings, always evaluating their experiences, so that any semantic domain is likely to intersect with the domain of subjective experience. Thus, it is not surprising that this list of categories showing subjectification includes most of the categories depicted in the experiential

group on the right side of Figure 2. Conventional constructions such as those involving *ka-* enable subjective judgments to be intersubjectively shared. Any function morpheme in current use is likely to be undergoing subjectification, which manifests synchronically as polysemy.

9. Conclusions

Our investigation of the semantics of *ka-* has drawn on a variety of linguistic approaches. Each of these has contributed elements toward a full description of *ka-* as a unit of grammar. Descriptive approaches provide some of both syntax and semantics, but avoid theorizing. The systemic functional approach emphasizes the salience of social dimensions in grammatical categories. Formal structural approaches are strongest in describing the syntactic patterns of the phonological units and their paradigms and nested hierarchies. In addition to the explicitly mentioned occurrences of *ka-* discussed above, we note that *ka-* also appears in such forms as *ikapag-*, *ikapagpa-*, *ikapang-*, *ikapapang-*, *maka-*, *makapag-*, *mai-ka-*, *maikapag-*, *maikapagpa-*, *maikapang-*, *maikapapang-*, *mangaka-*, *mangakapag-*, *mangakapagpa-*, and *mangakapagpaka-*. All of these are analyzable as constructions containing *ka-*, though with varying and largely unknown degrees of grammaticization and opacity. The forms are listed in Schachter and Otanes (1972:280) with little or no comment on the semantic roles played by each of the morphemes. Despite its comprehensive scope, the structural analysis presented in the Schachter and Otanes grammar leaves the semantics of *ka-* and other forms unexplored. We argue that a cognitive linguistic grammar can provide sensible semantic motivations for a large portion of the structural grammar and that semantic analysis (preferably diachronic) is necessary to explain structural distributions. But a cognitive linguistic grammar is usage-based; it must be assembled morpheme by morpheme and construction by construction. Since each morpheme very likely manifests considerable polysemy, the participation of a morpheme in a construction is sanctioned by virtue of a particular construal of its meaning. A conventional polymorphic affix therefore profiles a semantic construction selected from a matrix of possible combinations and construals by a process that is only partly deterministic (Langacker, this volume: 45–48).

Our hypothesis is that most of the senses of *ka-* in our tables are related in a semantic network that could be diagrammed by integrating Figures 2, 4, and 5. The hypothesis has important implications for the writing of Tagalog grammar. It is not sufficient to record distributions of morphemes in constructions, nor is it sufficient to provide one or two schematic glosses. A valid grammar requires a description of all conventional usages and an analysis of their semantic links via schematization, variation, and metonymy. The approach gives us a description of *ka-* as both a partitive and a participle, as capable of deriving nominal, adjectival, and aspectual terms, as both individuating and experiential. We conclude that *ka-* functions to evoke and mark a *semantic partial*, which we define as *the conventionalized profiling of an element that is selected or abstracted from the conceptual base evoked by a linguistic root or stem*. A semantic partial in the domain of *ka-* may have the sense of a piece or individual, a quality, an excess, materials and instruments used in construction, and perhaps an intense experience or a superlative. An individual predi-

cated by a *ka-* term may be a participant in a shared experience or a person compared as an equal or likeness. Thus, the essential function of *ka-* is to evoke a partial based on a conventional metonymy appropriate to the context of the text and the discourse.

Our findings add support to Panther and Thornburg's (2001, 2002) conclusion that metonymy motivates many of the semantic variants of the English nominalizer *-er*, which exhibits a roughly similar range of meanings. The correspondence is remarkable because English and Tagalog belong to different language families and our own conclusions were formed before we encountered their article. Our analysis reveals motivations for complex lexical constructions previously treated as semantically unanalyzable. Like Panther and Thornburg (2002), we find support for the generalization that lexicon and grammar form a continuum of symbolic units. On the basis of this study and other work previously cited, we suggest that the approach taken here will prove useful in the study of function morphemes in general. Cognitive linguistics takes a middle ground between purely descriptive approaches and those that attempt to reduce the rules of language to a few parameters combined deterministically. It should result in descriptions that are complex, but more predictive and more natural than formal structural accounts, and more predictive of future usages than descriptive accounts, or even systemic functional accounts that depend on social salience as the primary motivator of grammar. Cross-linguistic studies of grammar could proceed on a foundation of lexical constructions described as complex symbols situated in semantic and phonological networks.

Notes

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1. ABBREVIATIONS IN GLOSSES. Adj: adjective; AF: agent focus; CE: counter-expective; DIST: distal deictic; DR: directional; GN: genitive; GER: gerund; IMP: imperative; IRR: irrealis mood; LG: ligature; LOC: locative undergoer, trigger, or focus; MED: medial deictic, near addressee; N: noun, NEG: negative; PAR: partial; PL: plural; PM: predicate marker (inverse); PRX: proximate deictic; PF: patient focus; RLS: realis mood; R1: imperfective reduplication (CV-CVC...); R2: moderative or intensifying reduplication (ROOT-ROOT); R3: characterizing reduplication (CV-CVC...); S: singular; SOC: social; SPC: specific, corresponding to *ang* trigger or focus; ST: stative; UF: undergoer focus; Vb: verb; 1,2,3: first, second, third person; '<': derivation; '∅': conflation of meanings in one form; '-': morpheme boundary; {-*an*, -*án*): -*an* or -*án* is obligatory. The acute accent (á, é, í, ó, ú) indicates stress, which may be realized as a higher tone or vowel length (Himmelman 2005). Stress is marked only where it occurs somewhere other than the penultimate syllable, but the notation is not consistent among all the authors cited in this paper, so information on stress

is not always available in documentary sources. All the forms have been checked by Art Clarito, except for a few that were unfamiliar to him. In Tagalog transcriptions, the grave may occur on the final syllable where it signifies a glottal stop (example à = [a']). The circumflex signifies final stress followed by a glottal stop (example â = [á']).

2. Only a half-dozen distinct terms appear in over six hundred lines of text from transcripts of three interviews conducted for a previous study. There is a need for a larger corpus of translated Tagalog texts.
3. For demonstrations of the radial structure of spatial prefixes, see Occhi, Palmer, and Ogawa (1993), and Ogawa and Palmer (1999). Prior to these studies, Casad and Langacker (1985) and Langacker (1991) showed that variant schemas govern the polysemy of Cora spatial suffixes. This work is closely related to work on the polysemy of prepositions, such as the studies of Brugman (1988), Sandra and Rice (1995), and Rice (2003).
4. For Jean-Paul Potet (p.c., June 2003), there is no question: "...the Philippines or Japan ... is mass that is divided into individuals."
5. As suggested by de Guzman (p.c., October 1, 2003).
6. Jean-Paul Potet (p.c., June 2003) also noted the form *sangkapuluán* 'the whole archipelago'. The notion of an aggregate can be seen also in one of the terms cited in the first paragraph of Section 1.1: *kasamahán* 'fellows or companions in a group'.
7. A similar argument for the actor focus prefixes *mag-* and *nag-*, and the gerund *pag-* appears in Palmer (2003a).
8. This section is a revision of paragraphs taken from Palmer (2003b) by permission of the editors of *Cognitive Linguistics*.
9. For comprehensive descriptive and theoretical studies of Tagalog grammar, see Bloomfield (1917), Lopez (1941), Schachter and Otones (1972), de Guzman (1978), Schachter (1990), and Himmelmann (2005).
10. Schachter (1990) preferred the term 'trigger' for the nominal participant. He also objected to the characterization of the trigger system as a voice system.
11. We are indebted to Jean-Paul Potet for reminding us of the alignment of cognitive linguistics with Saussure's formulation of the bipolar conceptual structure of the symbol.
12. These forms would today be written *katao* [katáò], *kaputol*, *kakaputol*, and *kakatakatao*. Clarito is unfamiliar with *kakatakatao*.
13. Clarito has not heard this term used.
14. Underlining that is irrelevant to this discussion has been omitted.
15. Clarito would say *kalarô ko siyá*.
16. Ding Bermudez, Kabayanonline, June 11, 2003.
17. http://www.dhs.vic.gov.au/emergency/resources/translations/tagalog/5_tagalog.pdf (No longer posted online.)
18. Terms that reduplicate a root with penultimate stress may retain the stress pattern on the duplicate, but the final penultimate is significantly stronger.
19. Clarito has a strong preference for *káganda* in this context.
20. Items in square brackets added by the authors.
21. The stress is written as given in Panganiban (1972:209). Clarito prefers *kasayáhan*.
22. Clarito is more familiar with *kagalitan*, with the same gloss as a noun, but also glossable as 'to reprimand', as in Kinagalitan *silá ng kanilang mga magulang* 'They were given a tongue-lashing by their parents'.
23. Clarito prefers *Pagandahán pa natin*, which is consistent with the proposition that both *ká-* and *pa-* have an element of non-control.

24. We are following Halle (2001) in taking *-in-* as a form of *ni-*.
25. Clarito prefers *ikapagbibigay*.
26. The related construction *maka-* is commonly used with an abilitative sense while *maká-* has an adverbial sense of 'frequentative impression' (a form of counter-expective), and a sense of 'having the chance or opportunity to do', also a counter-expective (Panganiban 1972:675). Furthermore, it does not seem farfetched to see a metonymic relation between the attributive *ma-* and the stative (non-control) *ma-*, which takes a patient or experiencer as the focal participant.

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Appendix

Table 2. Semantic categories of *ka-*

Categories, Subcategories, and Tokens	Sources ^a
INDIVIDUATION [<i>ka</i> -ROOT]	
<i>kasaniḅ</i> 'one of two things that overlap' < <i>sanib</i> 'joined together'	Blm.
<i>kasangkáp</i> 'accompaniments, trimmings, affixes' < <i>sangkáp</i> 'component part'	Blm.
<i>kaputol</i> 'one piece, brother (Blm.)' < <i>putol</i> 'cut, cutting'	Blk., Lo., Pa.
<i>kabilâ</i> 'side' < <i>bilâ</i> 'split bamboo used to reinforce a fence'	Blk.
<i>kahati</i> 'one half in relation to the other' < <i>hati</i> 'half'	En.
<i>kauntí</i> 'bit, small amount' < <i>untí</i> 'littleness, smallness'	En.
PARTICIPANT IN SHARED EXPERIENCE ₁ [<i>ka</i> -STEM]	
<i>kabalâe</i> 'fellow-parent-in-law' < <i>balâe</i> 'parent-in-law'	Blm.
<i>kalaban</i> 'opponent' < <i>laban</i> 'affray, fight'	Blm., Ce.
<i>kasunód</i> 'one of two persons, one of whom is following the other' < <i>sunód</i> 'follow'	Blm., En.
<i>katungó</i> 'person one is dealing with, the other party' < <i>tungó</i> 'with head bowed'	Blm.
<i>kamatá</i> 'take to (someone)' < <i>matá</i> 'eye'	Blm.
<i>katao</i> 'one man' < <i>tao</i> 'man, human being'	Blm., Blk.
<i>ka(i)sangbâhay</i> 'of the same house' < <i>isang-bâhay</i> 'one house'	Blk., Pa.
<i>katulong</i> 'helpmate' < <i>tulong</i> 'help'	Blk., Lo.
<i>kaáway</i> 'one of those that quarrel' < <i>áway</i> 'quarrel'	Blk.
<i>kalahi</i> 'of same race or nationality' < <i>lahi</i> 'race of human beings'	Lo.
<i>kasama</i> 'companion' < <i>sama</i> 'companionship'	Lo., Ce.
<i> kapatíd</i> 'brother or sister' < <i>patíd</i> 'cut, cut off' ^b	Lo.
—— 'one who holds portion of a common whole'	Ta.
<i>kaagáw-súso</i> 'said of infants fed from the same breast' < <i>agaw-suso</i> 'snatch breast'	Lo.
<i>kadaúp-pálad</i> 'intimate' < <i>daúp-pálad</i> 'put palms of hand together'	Lo.
<i>kababatâ</i> 'fellow with whom one spent childhood' < <i>batâ</i> 'child'	Pa.
<i>kababayan</i> 'fellow townsman, ... same country' < <i>bayan</i> 'town, municipality'	Pa.
<i>kabarkada</i> 'gangmate' < <i>barkada</i> 'shipload of passengers'	Ce.
<i>kataló</i> 'opponent' < <i>talo</i> 'surpassed, defeated'	Ce.
<i>kakampón</i> 'ally' < <i>kampón</i> 'vassel, subject'	Ce.
<i>kasabuwát</i> 'accomplice' < <i>sabuwát</i> '?assistance'	Ce.
<i>kasapakát</i> 'accomplice' < <i>sapakát</i> 'intrigue'	Ce.
<i>kaututangdila</i> '(fig.) confidant'; etymology not available	Ce.
<i>kamapangarapin</i> 'fellow dreamer' < <i>mapangarapin</i> 'dreamy'	Pa., Gpc
<i>kainuman</i> 'drinking buddy' < <i>inuman</i> 'drinking vessel' < <i>inóm</i> 'drink'	Gpc
<i>kabiák</i> 'partner' < <i>biák</i> 'split into halves'	P-R
<i>kahati</i> 'one who shares half' < <i>hati</i> 'division into two equal parts'	P-R
<i>kamag-ának</i> 'family member' < <i>mag-</i> RECIPROCAL, <i>ának</i> 'relative'	P-R, En.
<i>kausap</i> 'person with whom one is in conversation (Pa.)' < <i>usap</i> 'conversation'	Pa., P-R
PARTICIPANT IN SHARED EXPERIENCE ₂ : CONTINUITY [<i>ka</i> -R2-ROOT]	
<i>kasáma-sáma</i> 'long time companion' < <i>sama</i> 'companionship'	Pa.
<i>kaáral-áral</i> 'long time companion in studying' < <i>aral</i> 'study'	Pa.

Table 2. (continued)

<i>kaúsap-úsap</i> ‘long time companion in conversation’ < <i>usap</i> ‘conversation’	Pa.
ABSTRACT QUALITY [<i>ka</i> -ROOT]	
<i>kaisá</i> ‘one with, united with, of one mind with’ < <i>isá</i> ‘one’	Pa.
<i>kakaibá</i> ‘singular, strange’ < <i>ibá</i> ‘other, different’	Pa., En.
<i>karami</i> ‘amount’ < <i>dami</i> ‘quantity, great number’	Pa.
<i>kaimportante</i> ‘important’ < <i>importante</i> ‘important (Spanish)’	P-R
COMPARISON OF EQUALITY [<i>ka</i> -STEM]	
<i>kamukhá</i> ‘similar to or resemble in appearance; like that of’ < <i>mukhá</i> ‘face’	Blm., Blk.
<i>kaugali</i> ‘one having same habits’ < <i>ugali</i> ‘habit, custom’	Blm.
<i>kalapad</i> ‘equally wide’ < <i>lapad</i> ‘breadth’	Blk.
<i>kapagsunód</i> ‘equally obedient’ < <i>pag-</i> GER + <i>sunód</i> ‘follow’	Blk.
<i>kapára</i> ‘like’ < <i>pára</i> ‘likeness’	Blk.
<i>kaulohán</i> ‘having an equally large head’ < <i>ulohán</i> ‘big headed’ (obsolete)	Blk.
<i>kakulay</i> ‘same color’ < <i>kulay</i> ‘color’	Blm.
<i>kahulilip</i> ‘comparable’ < <i>hulilip</i> ‘comparability’ (obsolete)	En.
<i>kapantáy</i> ‘equal’ < <i>pantáy</i> ‘of the same height or level, equal’	Ce.
<i>ka(sing)buhók</i> ‘has the same hair as’ < <i>buhók</i> ‘hair’	Ce.
<i>ka(sing)lakad</i> ‘has the same gait as’ < <i>lakad</i> ‘walk, manner of walking’	Ce.
<i>ka(sing)taás</i> ‘is as tall as’ < <i>taás</i> ‘height’	Ce.
<i>ka(sing)gilas</i> ‘is as good-looking as’ < <i>gilas</i> ‘elegance’	Ce.
<i>ka(sing)bait</i> ‘is as kind as’ < <i>bait</i> ‘kindness’	Ce.
<i>(ka)sin(g)lakí ng ulo</i> ‘one has as big a head as the other’ < <i>lakí</i> ‘bigness’, <i>ulo</i> ‘head’	Gpc
<i>(ka)sin(g)dunong</i> ‘as intelligent as’ < <i>dunong</i> ‘knowledge, wisdom’	Gpc
<i>ka(sing)timbang</i> ‘of the same weight’ < <i>timbang</i> ‘weight’	Gpc, Cl.
<i>kaparis</i> ‘one of a pair, equal, identical, similar’ < <i>paris</i> ‘pair’	Gpc
INTENSE EXPERIENCE [<i>ka</i> -R2-ROOT]	
<i>katákut-tákot</i> ‘terrifying’ < <i>tákot</i> ‘fear’	Blm., Blk., Pa.
<i>kahiyáhiyá</i> ‘disgraceful’ < <i>hiyá</i> ‘shame’	Blm., En.
<i>katakataká</i> ‘astonishing, amazing’ < <i>taká</i> ‘amazement, surprise’	Blm., En.
<i>kaáwaáwá</i> ‘pitiful’ < <i>áwa</i> ‘pity’	Blm., Pa.
<i>kaibig-ibig</i> ‘lovable’ < <i>ibig</i> ‘want, like’	Blk.
<i>katuwá-tuwá</i> ‘causing joy’ < <i>tuwá</i> ‘joy’	Blk.
[<i>dí</i>] <i>kapaní-paniwála</i> ‘very interesting!’ < <i>tiwalá</i> ‘belief’	P-R
<i>kagálang-gálang</i> ‘honorable, respectable’ < <i>galang</i> ‘respect’	P-R
<i>kahánga-hángá</i> ‘admirable, amazing’ < <i>hangá</i> ‘admiration’	Pa., P-R
EXCLAMATION [<i>kay</i> - <i>ka</i> -stem]	
<i>kátáyog</i> ‘How tall!’ < <i>táyog</i> ‘height’	Blm.
<i>kagagálit</i> ‘anger’ ^d < <i>gálit</i> ‘be angry’	Blk.
<i>kayrami</i> ‘Such a great number!’ < <i>dami</i> ‘quantity, great number’	Pa.
<i>kabait</i> ‘How kind!’ < <i>bait</i> ‘kindness’	Pa.
<i>kadalí, kaydalí</i> ‘How quick! How easy!’	Pa.
RECENT COMPLETIVE ASPECT ₁ [<i>ka</i> -R1-STEM]	
<i>kakákáin</i> ‘(x) has just finished eating’ < <i>kain</i> ‘consumption of food’	Pa.
<i>kabíbili</i> ‘(x) has just finished buying’ < <i>bili</i> ‘buying’	Pa., Gu.

Table 2. (continued)

<i>karárating</i> '(x) has just arrived' < <i>dating</i> 'arrival'	Pa.
<i>katatapos</i> '(x) just finished' < <i>tapos</i> 'finished'	Guz.
<i>kakikita</i> '(x) have just seen (y)' < <i>kita</i> 'visible'	Guz.
<i>kasusulat</i> '(GN) has just written' < <i>sulat</i> 'writing'	Rau
<i>kasusúlat-súlat</i> '(GN) has just very recently written' < <i>sulat</i> 'writing'	Rau
RECENT COMPLETIVE ASPECT ₂ : TIME [<i>ka</i> -TIME]	
<i>kagabi</i> 'last night' < <i>gabi</i> 'night'	Blm.
<i>kahapon</i> 'yesterday' < <i>hapon</i> 'afternoon'	Blm., En.

^a Blk.: Blake (1925), Blm.: Bloomfield (1917), Ce.: Cena (1979), Cl.: Clarito, En.: English (1988), Gu.: De Guzman (1978, 1995), Gpc: Videa De Guzman (personal communication, October 2003), Lo.: Lopez (1941), Pa.: Panganiban (1972), P-R: notes of authors Palmer and Rader, Rau: Rau (1993); Ta.: Roberto D. Tangco, personal communication, 2003. Blake also listed the obsolete forms *kaatáy* 'companion in eating liver' < *atáy* 'liver' and *katúbig* 'companion in drinking water' < *túbig* 'water'.

^b *kapatíd* is a metonymic reference to the cutting of the umbilical cord.

^c The category placement is uncertain between ABSTRACT QUALITY and COMPARISON OF EQUALITY. The context was *Hindi ka basta ganoon kaimportante* 'You feel that you are not that important'.

^d Blake (1925) treated *kagagálit* as an exclamation, though that sense is not clear from his gloss.

^e Clarito prefers *kábait*.

^f Clarito prefers *kádali* and *káy dali*.

Table 3. Semantic categories of *ka*-___-*an*

Categories, Subcategories, and Tokens	Sources ^a
PLACE ₁ [<i>ka</i> -STEM{- <i>an</i> , - <i>án</i> }]	
<i>kapalayán</i> 'place of many rice fields' < <i>paláy</i> 'rice'	Blk.
<i>kahúhulúgan</i> 'place where people usually fall' < <i>hulog</i> 'fall'	Blk.
<i>kabukiran</i> 'place where there are many fields, valley' < <i>bukid</i> 'field'	Lo.
<i>kapawiran</i> 'a district ... where many houses are made of nipa' < <i>pawid</i> 'nipa'	Lo.
<i>kasilanganan</i> 'direction of, around the orient' < <i>silang</i> 'going up, e.g. sun or moon'	Lo.
<i>kabahayán</i> 'the primary/central part of the house' < <i>bahay</i> 'house'	Gpc
PLACE ₂ : CENTER OF ATTENTION [<i>ka</i> -ROOT{- <i>an</i> , - <i>án</i> }]	
<i>kasabihán</i> 'place or person attracting attention' < <i>sabi</i> 'say, tell'	Lo.
<i>kabalitaan</i> 'place or person of fame, newspaper correspondent' < <i>balitá</i> 'news'	Lo.
TIME OR EVENT < PLACE [<i>ka</i> -STEM{- <i>an</i> , - <i>án</i> }]	
<i>kaánákan</i> ^b 'month of delivery of a child' < <i>anak</i> 'child'	En.
<i>kapangánákan</i> 'birthday, nativity' < <i>manganák</i> 'give birth'	En.
ABSTRACT QUALITY ₁ [<i>ka</i> -STEM{- <i>an</i> , - <i>án</i> }]	
<i>kabalanán</i> 'virtue' < <i>banál</i> 'virtuous'	Blk.
<i>katungkulan</i> 'duty' ^c < <i>tungkól</i> 'pertaining to'	Blk.
<i>kamanahan</i> 'share in inheritance' < <i>mana</i> 'inheritance, heritage'	Blk., Lo., Cl.
<i>kapalaluan</i> 'arrogance' < <i>palalò</i> 'arrogant'	Lo.
<i>kabutihan</i> 'goodness' < <i>buti</i> 'goodness'	Lo.
<i>kasamaán</i> < <i>samá</i> 'badness'	Lo.

Table 3. (continued)

<i>katotohanan</i> 'truth' < <i>totoò</i> 'true'	Lo.
<i>kabiglaanan</i> 'suddenness, abruptness' ^d < <i>biglá</i> 'sudden, abrupt'	Lo., Pa.
<i>kaabaán</i> ^e 'abjectness, lowliness' < <i>abâ</i> 'humble, lowly'	Pa.
<i>kaaksayahán</i> 'wastefulness' < <i>aksayá</i> 'waste, wasted'	Pa.
<i>kadakilaan</i> 'greatness' < <i>dakilâ</i> 'great'	Pa.
<i>kahirapan</i> 'difficulty, hardship, poverty' < <i>hirap</i> 'difficult'	Pa.
<i>kaibahán</i> 'difference, distinction' < <i>ibâ</i> 'another, different'	Pa.
<i>kaibaibahan</i> 'oddity, peculiarity' < <i>ibâ</i> 'another, different'	En.
<i>kasarinlán</i> 'independence' < <i>sarili</i> 'self'	En.
<i>kabuhayan</i> 'livelihood' < <i>buhay</i> 'life'	Gu.
<i>kagalingan</i> 'goodness; skillfulness' < <i>galing</i> 'skill, excellence'	Gu.
<i>kagandahan</i> 'beauty; state of being beautiful' < <i>gandá</i> 'beauty'	Gu.
<i>katamaran</i> 'laziness' < <i>tamad</i> 'lazy'	Gu.
<i>kalágáyan</i> 'situation' < <i>lagáy</i> 'position, situation'	P-R
<i>kaloóban</i> 'inner being' < <i>loób</i> 'inside'	P-R
ABSTRACT QUALITY ₂ : EXPERIENTIAL STATES [<i>ka</i> -STEM{- <i>an</i> , - <i>án</i> }]	
<i>kapalagayang-loób</i> 'intimate' < <i>palagáy-loób</i> 'carefree'	Lo.
<i>kaawaan</i> 'have pity on' < <i>awâ</i> 'pity'	Pa.
<i>kagalitan</i> 'be angry with (x)' < <i>galit</i> 'anger'	Pa.
<i>kaingitán</i> 'feel envious of (x)' < <i>inggit</i> 'envy'	Pa.
<i>kaligayahan</i> 'happiness (in the abstract sense)' < <i>ligaya</i> 'happiness'	Pa.
<i>kalimutan</i> 'forget (x)' < <i>limut</i> 'oblivion'	Pa.
<i>katuwaán</i> 'have appreciation for (x)' < <i>tuwâ</i> 'joy'	Pa.
<i>kakaibahán</i> 'oddity, peculiarity' < <i>ibâ</i> 'other'	En.
<i>katakutan</i> 'state of being afraid, to fear (x)' < <i>takot</i> 'fear, dread'	Pa.
<i>kaalaman</i> 'inner thought' < <i>alám</i> 'know'	P-R
<i>kalungkutan</i> 'melancholy' < <i>lungkót</i> 'sad'	P-R
ABSTRACT QUALITY ₃ : CUSTOM, COLLECTIVE ACTIVITY [<i>ka</i> -STEM- <i>an</i>]	
<i>katagalugan</i> 'custom of the Tagalogs' < <i>Tagalog</i>	Blk.
<i>kasáyahan</i> ^f 'feasting, celebration of a feast' < <i>sayá</i> 'merriment, cheer'	Pa.
<i>kaamerikanuhan</i> 'ways or customs of the Americans' ^g < <i>Amerikano</i> 'American'	Gpc
COLLECTION ₁ [<i>ka</i> -ROOT{- <i>an</i> , - <i>án</i> }]	
<i>kabatáan</i> 'group of children; the young ones' < <i>bátà</i> 'child, young'	Blk., Gpc
<i>kapuluán</i> 'group of islands' < <i>pulò</i> 'island'	P-R
COLLECTION ₂ : MATERIALS, COLLECTION OF TOOLS [<i>ka</i> -ROOT{- <i>an</i> , - <i>án</i> }]	
<i>kabaroán</i> ^h 'material for a shirt' < <i>bárò</i> 'shirt'	Blk.
<i>kabahayán</i> ⁱ 'materials sufficient for building a house' < <i>bahay</i> 'house'	Lo.
<i>kasangkapan</i> 'collection of tools (or a single tool)' < <i>sangkáp</i> 'part, concomitant'	Lo.
COLLECTION ₃ : ASSEMBLED ITEM [<i>ka</i> -ROOT- <i>án</i>]	
<i>kadamítan</i> 'the whole wearing apparel' < <i>damít</i> 'cloth, fabric'	Lo.

^a Sources are abbreviated as in Table 2.^b Clarito prefers *kaánakán*.^c Blake (1925) included the definition 'share in obligation'. This was rejected by De Guzman (p.c., 2003).^d Also *kabiglaán* with the same meaning.

^e Clarito prefers *kaabáan*.

^f Clarito prefers *kasayáhan*.

^g *Kaamerikanuhan* was glossed by Lopez (1941) as 'the American people and nation'.

^h Blake (1925) also listed *kakabaroan* 'material for a single shirt', but it is regarded by De Guzman (p.c.) as ungrammatical.

ⁱ Clarito prefers *kabaháyan*.

Table 4. Semantic categories of stressed *ká-*

Categories, Subcategories, and Tokens	Sources ^a
REPETITION [<i>ká</i> -R1-ROOT]	
<i>káaaraal</i> ^b 'repeated studying' < <i>araal</i> 'study'	Pa.
<i>káaalís</i> 'repeated departure' < <i>alís</i> 'departure'	Pa.
<i>kákukuha</i> 'repeated act of taking or obtaining' < <i>kuha</i> 'act of ...'	Pa.
<i>kásisigáw</i> 'repeated shouting' < <i>sigáw</i> 'shout, loud call, outcry'	Pa.
UNEXPECTED ACT [<i>ká</i> -R2-ROOT, <i>ká</i> -ROOT]	
<i>kábasa-basa</i> 'something unexpectedly read' < <i>basa</i> 'read'	Pa.
<i>kádalá-dalá</i> 'something unexpectedly brought' < <i>dalá</i> 'carried, taken away'	Pa.
<i>kásiyá</i> 'accidentally fit into' < <i>siyá</i> 'containable'	Blm.
COLLECTIVE ₃ INTERACTION [<i>ká</i> -ROOT- <i>an</i>]	
<i>kágálitán</i> ^c 'quarrels, disagreements all around' < <i>galít</i> 'anger'	Pa.
<i>kásunduan</i> 'agreement, treaty' < <i>sundó</i> 'agreement'	Pa.
<i>kátuwaan</i> 'gladness together' < <i>tuwá</i> 'joy'	Pa.
<i>káuntian</i> ^d 'small party celebrated together' < <i>untí</i> 'littleness, smallness'	Pa.
FUTURE REASON, FUTURE PLACE, OR RESULT [<i>ká</i> -R1-ROOT{- <i>an</i> , - <i>án</i> }]	
<i>kátítirahán</i> 'place of residence in the future' < <i>tirá</i> 'dwell, reside'	Lo.
<i>kátítisuran</i> 'object or place of stumbling or tripping upon, i.e. obstacle, in the future' < <i>tisod</i> 'trip, stumble'	Lo.
<i>káúuwíán</i> 'result, outcome' < <i>uwi</i> 'go back, return'	Lo.
DO MORE [<i>ká</i> -STEM{- <i>an</i> , - <i>án</i> }]	
<i>kápupunán</i> 'something in addition, additional' < <i>punó</i> 'full'	Lo.
<i>kátaasán</i> 'make (x) higher' < <i>taás</i> 'height'	Pa.
<i>káputulan</i> ^e 'cut off more, cut off too much' < <i>putol</i> 'cut'	Pa.
<i>kágandahán</i> 'make even prettier' < <i>gandá</i> 'beauty'	Pa.
<i>kátawagan</i> ^f 'call again and again' < <i>tawag</i> 'call'	Pa.
LESS [<i>ká</i> - <i>ka</i> -ROOT]	
<i>kákaputol</i> 'little piece' < <i>putol</i> 'cut, cutting'	Blm.
<i>kákarampót</i> 'of so little quantity, a tiny pinch' < <i>dampót</i> 'picking up with hands'	Pa.
<i>kákátítíng</i> 'of almost infinitesimal quantity' (root not known)	Pa.
<i>kákapurát</i> 'of very negligible quantity' (root not known)	Pa.
<i>kákaunti</i> 'of little amount, very few, few only' < <i>untí</i> 'littleness, smallness'	Pa., En.
SUPERLATIVE, END POINT, RESULT [<i>ká</i> -R2-STEM- <i>an</i>]	
<i>ká-tamis-tamis-an</i> 'sweetest' < <i>tamis</i> 'sweetness'	Blk.
<i>kágagáwan</i> ^g 'something provoked or incited by somebody' < <i>gawá</i> 'work'	Lo.

Table 4. (*continued*)

<i>ka:-liit-liít-an</i> ^h 'smallest' < <i>liít</i> 'smallness'	S&O
<i>ka:-lumá-lumá-an</i> ^h 'oldest' < <i>lumà</i> 'old'	S&O
<i>kámahál-mahálan</i> 'most expensive' < <i>mahál</i> 'expensive'	Rau
<i>kátapús-tapúsan</i> 'finally' < <i>tapos</i> 'completed, finished, concluded'	Rau
NON-DESIDERATIVE	
<i>káwawà</i> 'pitiful' < <i>awà</i> 'pity'	Pa.

^a Sources are abbreviated as in Table 2.

^a Clarito has *káaáral*.

^b Vowel length correlates with stress. Except for the marking of vowel length in Schachter and Otones (1972), none of the terms in this subcategory were marked for stress in the original sources. A native-speaker reviewer observed that every term in the subcategory should have stress.

^c Clarito has *kágalítan*.

^d Clarito has *káuntían*.

^e Clarito prefers *káputulán*.

^f Clarito prefers *tawagan ng tawagan*. Also, compare *katawagán* 'how you name a thing, nomenclature'.

^g Clarito prefers *kágagawán*.

^h Schachter and Otones (1972) mark stress as vowel length.

PART 2

Case and aspect

A new model of metaphorization

Case semantics in East Caucasian*

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1. Introduction

A hypothesis widely accepted in Cognitive Linguistics claims that linguistic knowledge is entrenched in individual cognition based on linguistic practice (Barlow & Kemmer 2000). Accordingly, linguistic structures (as well as their categorization) are usage-based with respect to both ontology and mental processing. The main hypothesis resulting from this claim is that the cognitive reality of linguistic categorization may strongly differ from the categorial output that is achieved by applying metalinguistic analytic tools. For instance, it is highly questionable, whether the linguistic labels used to gloss and analyze the Udi (East Caucasian) phrase in (1) represent true ‘cognitive’ values.¹

- (1) *xibumži etaž-i aʻyn-in-axun beʻ-zu-ğ-sa beʻyn mašin-en*
third floor-GEN window-SA-ABL see-1SG:A- $\$$ -PRES whether car-ERG
beši yaqʻ-a beʻ-ya-ğ-sa yax aš-l-a taštʻ-eyna
our way-DAT see-3SG:Q- $\$$ -PRES we:DAT2 work-SA-DAT bring:INF-BEN
‘I look from a window in the third floor [to see] whether the car is waiting for us to take us to work.’ [Udi, Nizh, OL 20]

The literal translation of this phrase (‘From a window of the third floor, I look whether: Does the car look towards our way in order to bring us to work?’) illustrates that there is a considerable mismatch between the grammatical labels used to gloss the text and the actual meaning of the phrase.

Another hypothesis current in cognitive linguistics argues that in principle, all types of linguistic ‘domains’ such as phonology, morphology, syntax, or the lexicon are cognitively represented and processed in basically the ‘same’ (or: analogous) way (Dirven & Verspoor 1998; Taylor 1998). It is beyond question that the structural coupling of different subdomains may give rise to more domain-specific techniques of representation and processing. However, these techniques are never exclusively present in only one of these domains. Here, it is of no matter whether we describe the basic principles of linguistic representation in terms of a symbolic approach, as is typical for, e.g. the Langacker tradition (see Langacker 1999), or whether we assume subsymbolic routines and prelinguistic

mechanisms in terms of Experientialism and Constructivism (Schulze 1998). The main point is that, according to the above-mentioned hypothesis, grammar is processed in basically the same way as the lexicon. Accordingly, linguistic categories as described for grammatical systems are thought to possess many of the properties that are typical of lexical entries and vice versa.

Perhaps the most prominent approaches to lexical knowledge today are those that describe lexical knowledge in terms of prototypicality, metaphor, and metonymy. These usage-based approaches are (in parts) extended to other linguistic domains such as morphology and (less pronounced) phonology. As for morphology and morphosyntax, we can easily refer to grammaticalization theory as one of the cornerstones of a usage-based model of the dynamics of linguistic knowledge. Metaphor theory, on the other hand, is less frequently referred to in order to describe the cognitive reality of linguistic categories.²

It is commonly assumed that linguistic categories are non-discrete clusters of formal and behavioral properties, marked by fuzzy boundaries and interacting domains. Adopting a central term in cognitive linguistics, such clusters can adequately be termed the *categorial space* of a linguistic unit. Such *spaces* are closely related to universal properties of linguistic practice (based on experiential procedures), for instance (references are illustrative only): Action <> Perception (Swenson & Turvey 1991; Gallese et al. 1996), Attention Information Flow (Schulze 2004), Personhood and Role Commitment (Mead 1934), Memory Activation > Timing (Schulze 2002), Orienteering (Lynch 1960; Gibson 1979; Mandler 1988), Figure-Ground > Cause-Effect processing (Schulze 1998:445–491), Gestalt-based classification (Wertheimer 1924 [1938]). Note that none of these ‘spaces’ exist independently. Rather, they are clustered according to the tradition of linguistic practice, to the tradition of language acquisition, and to the degree of entrenchment related to a linguistic habitus. Nevertheless, it may be hypothesized that language cannot function without minimally activating the parameters mentioned above, which represent the major part of a *language space* embodied in individual cognition.

In the present paper, I address one of the universals mentioned above, namely that of *orienteering*: I use the term *orienteering* as a cover term to denote the totality of cognitive activities related to the processing of spatial relations and activated during the interaction of cognition with an outer entity. Orienteering is hence related to the realm of experiential procedures (based on the Action Perception Cycle, see Schulze 2002). Its conceptualization (or: categorization) results in the notion of ‘space’, which again is linguistically expressed in terms of localizing strategies (case, verbal locatives, etc.).

Here, I will look at only those linguistic units that are marked for the presence of a formal expression, or, in other words, that are morphologically marked. Nevertheless, it should be borne in mind that the functional properties of the morphological segments discussed below must not be isolated except for heuristic purposes. In order to cover the full gestalt of these morphemes, we would have to judge to which extent both structural and positional values are activated. In other words, the results presented in this paper cannot be but provisional. This is true also because orienteering strategies cannot be fully understood without referring to the cluster of categorial spaces mentioned above. For instance, orienteering is strongly coupled with figure-ground experience and its metapho-

rization potential (see Schulze 1998), with the interplay of personhood, subjectivity, and shifts within the allocation of the orienteering ‘center’ (Schulze 2001), and with aspects of information flow. Crucially, all these categorial spaces focus on what is perhaps the most basic (and phylogenetically speaking, oldest) layer of cognition, namely the Perception Action Cycle, as described for instance by Swenson and Turvey (1991).

The main goal is to show that the functional dynamics of locative morphemes to encode orienteering strategies in two East Caucasian languages, Aghul and Udi, are heavily dominated by metaphorization processes. Hence, they are illustrative of the degree to which metaphorical and metonymic strategies are relevant in the description and typology of grammar. Unfortunately, the paucity of data does not allow for a comprehensive picture of developmental aspects with respect to the metaphorization of orienteering morphology in either of the two languages. Nevertheless, it is expected that the more general hypotheses concerning the acquisition of metaphorical strategies (e.g. Winner 1988; Elbers 1988) are likewise relevant for a fuller account of the cognitive grounding of Aghul and Udi orienteering morphology.

In Section 2 I describe the functional scope of orienteering (spatial) morphemes in Aghul. Section 3 discusses the question of which type of metaphor theory best accounts for the Aghul findings. I address this issue, applying what is called the *Mirror System Hypothesis* (or simply *Mirror Hypothesis*) to the data. Section 4 returns to East Caucasian, relating the Mirror Hypothesis to diachronic metaphorization strategies at work in Udi orienteering morphemes.

2. Orienteering strategies in Aghul

2.1 The Aghul system of local cases

The case system of most autochthonous East Caucasian languages is marked for a complex system of local case forms that are opposed to a rather restricted set of relational or derivational cases. The examples in (2) illustrate the basic paradigmatic make-up of such a system in Aghul, an Eastern Samur language of the Lezgian branch (spoken by roughly 8,000 people along the upper regions of the Chirakh Chay in Southern Dagestan). Aghul speakers make use of the following relational (‘grammatical’) case forms:

- (2) ABS *hur* ‘village’ [Magometov 1970; field notes]
 ERG *hur-i*
 GEN *hur-i-n*
 DAT *hur-i-s*

In addition, we find a set of local morphemes, which are suffixed to nouns ([cnt] = [contact]) (see Table 1).

The following examples illustrate uses of the local case forms essive, allative, and ablative:

Table 1. System of local case forms of Aghul

	AD	ANTE	POST	SUB	SUPER [+cnt]	SUPER [-cnt]	IN	INTER
ABS	-w	-h	-q	-k:	-k	-l	-'	-ğ ^s
ESS	-∅	-f	-h	-q	-k:	-k	-l	-ğ ^s
ALL	-di	-f-di	-h-di	-q-di	-k:-di	-k-di	-l-di	-ğ ^s -di
ABL	-as	-f-as	-h-as	-q-as	-k:-as	-k-as	-l-as	-ğ ^s -as

- (3) a. Essive
hur-i-h-∅
 village-SA-ANTE-ESS
 'in front of the village'
- b. Allative
hur-i-q-di
 village-SA-POST-ALL
 'towards behind the village'
- c. Ablative
hur-i-'-as
 village-SA-IN-ABL
 'from inside the village'

The system of local cases consists of so-called series markers, which specify the 'region' of a referent in landmark function (see Schulze 2001). The three case markers essive, allative, and ablative relate a trajector to the region defined by the landmark. The relational subparadigm of these cases is marked for a tripartite opposition: ESS describes immobile situations, while the two lative cases ALL and ABL describe mobile situations (Figure 1).

Situations of immobility are morphologically unmarked for case, whereas situations of mobility are morphologically marked by case suffixes. Figure 2 represents those prototypical trajector-landmark relations that are documented for Aghul.

The spatial morphemes profile the regions of the landmark in an asymmetrical way: the frontal, lateral, and upper parts of a region show a fourfold distinction (Ante, Ad, Super[+cnt], Super[-cnt]), as opposed to the twofold distinction of the back and lower parts (Post, Sub). Those regional domains that are immediately accessible to vision thus show a greater degree of subcategorization than the domains that are strongly associated

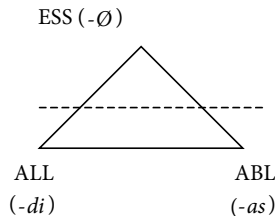


Figure 1. Motion and location in Aghul

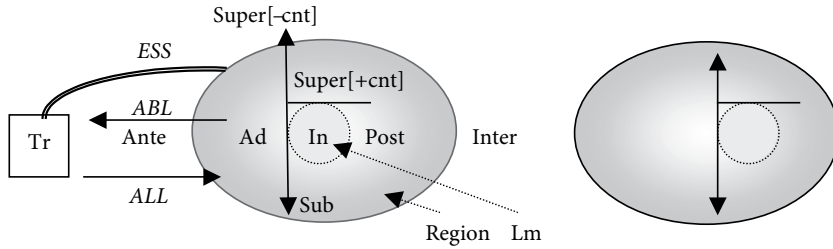


Figure 2. Trajector-landmark relations in Aghul

with non-visibility. As a result, the regions defined as Post and Sub are strongly coupled with inferential and knowledge-based procedures as long as the trajector is conceptually ‘smaller’ than the landmark. This pattern corresponds to general properties of figure-ground organization:

- (4) Trajector – Landmark
 Figure – Ground
 Part – Whole
 Smaller – Larger
 Salient – Inferred

The processing of prototypical orienteering patterns has the trajector smaller than the landmark: in these situations, the landmark is visible but the trajector may be hidden inside, behind, or below the landmark; hence it is invisible and must be inferred. In marked spatial relations, the trajector is bigger than the landmark: in these situations, the trajector is normally visible but the landmark may be hidden behind the trajector and must be inferred. Table 2 lists the possible combinations between relative size of trajector relative to landmark on the one hand and orienteering relations on the other, which result in a trajector’s or landmark’s visibility or inferential status.

The POST- and SUB-schemata prototypically allow for the construction of a trajector only if an appropriate inferential context is given. The same usually holds for the

Table 2. Trajector-Landmark coupling with orienteering structures

	tr < LM		TR > lm	
	TR	LM	TR	LM
AD	visible	visible	visible	visible
ANTE	visible	visible	visible	<i>inferential</i>
IN	<i>inferential</i>	visible	---	---
SUPER(+)	visible	visible	visible	visible
SUPER(-)	visible	visible	visible	visible
POST	<i>inferential</i>	visible	visible	visible
SUB	<i>inferential</i>	visible	visible	visible
INTER	visible	visible	visible	visible

IN-schema. The following sentences illustrate the relevance of the features ‘(non-)visibility’ and ‘inference’:

- (5) *za’ ’-aya šar-ar*
 I: IN:ESS IN:ESS-be:PRES tapeworm-PL
 ‘I have a tapeworm [I know, I’m told].’ [Aghul, field notes]
 Lit.: [in me_{LM}] in=are [tapeworms_{TR}] / Inferred trajector: *tapeworms*
- (6) *k’ur-ani-f sa q’in f-aya*
 wood-SA-AD:ESS one nail AD:ESS-be:PRES
 ‘There is a nail in (lit.: at) the (piece of) wood.’ [Aghul, field notes]
 Lit.: [at wood_{LM}] at=is [a nail_{TR}] / Visible trajector: *nail*
- (7) *k’ur-ani-’ sa q’in ’-aya*
 wood-SA-IN:ESS one nail IN:ESS-be:PRES
 ‘There is a nail in the (piece of) wood [I know].’ [Aghul, field notes]
 Lit.: [In wood_{LM}] in=is [a nail_{TR}] / Inferred trajector: *nail*

Sentence (5) illustrates the prototypical situation of containment in which the trajector is fully contained in a landmark: the trajector is inferred and hence coded by using the Inessive. Example (6) illustrates a situation in which the trajector is partially contained in a landmark and, at least in part, visible to the speaker; hence the speaker tends to switch from the inferential Inessive to the corresponding Adessive, which is prototypically marked for visibility. Sentence (7) codes the situation of partial containment by means of the Inessive because it is no longer a matter of visibility but of knowledge.

Naturally, inferentially derived entities are especially crucial with essive locatives. The two lative variants (allative and ablative) call prototypically for a visible trajector, regardless of the landmark’s region specified by the orienteering morpheme. For example, sentence (8) describes an allative situation, which is expressed by means of the spatial morphemes IN-ALL irrespective of visibility.

- (8) *zun q’in k’ur-ani-’-di yerha-d-a*
 I:ABS nail:ABS wood-SA-IN-ALL beat-GER:PRES-AUX:PRES
 Lit.: I [nail_{TR}] drive into=wood_{LM}] / Visible trajector: *nail*
 ‘I drive a/the nail into the (piece of) wood.’ [Aghul, field notes]

The interaction of spatial orientation and aspects of visibility (or knowledge) is determined by the underlying figure-ground schema. On the one hand, Figure/Ground accounts for the ability of cognition to experience and interpret spatial relations. On the other hand, the properties of the referents involved in a given figure-ground schema appeal to the processing of parameters of visibility. In addition, we have to deal with a blend of two cognitive parameters, namely that of orienteering and that of object permanence (in the Piagetian sense). *Orienteering* lays the ground for treating ‘objects’ as trajector and *object permanence* establishes the ground for inference: among others, object permanence allows to construe the existence of ‘objects’ even if they are not visible in a given moment (see Schulze 2001).

2.2 Metaphorization of orienteering strategies in Aghul

Although the Aghul spatial morphemes are used basically to encode orienteering strategies, they form a neat system describing functions distinct from the linguistic or cognitive category ‘space’. In fact, the prototypical or basic level functions of the locative case/series paradigm can undergo a certain degree of metaphorization. For instance, the Super Allative is frequently used to derive an instrumental, as is also the case in the cognate language Tabasaran. Sentences (9) and (10) are examples:

- (9) *nažbar-i yak'-u-l-di rug-aq'-ay-a k'ur-ar*
 farmer-ERG axe-SA-SUPER-ALL chop-do-GER:PRES-PRES wood-PL:ABS
 ‘The farmer chops wood with an/the axe.’ [Richa, field notes]
- (10) *ze fikir-da-l-di wun duz-da-wa*
 I:POSS thought-SA-SUPER-ALL you:SG:ABS right-NEG-AUX:PRES
 ‘As for me, you are not right!’ [*with my thought...*] [Kurag, field notes]

The Post Ablative marks a Benefactive of Replacement (‘for’):

- (11) *ibrahim-di-q-as ma-ğa uč-i ras-e*
 Ibrahim-SA-POST-ABL PROH-speak:IMP REFL-ERG speak:INF-AUX:PRES
uč-i-q-as
 REFL-SA-POST-ABL
 ‘Don’t speak for Ibrahim! He will speak for himself.’ [Richa, Magometov 1970: 85]
- (12) *ga-q-as ge k'-in-e*
 DIST-POST-ABL DIST:ABS die-GER:PAST-PRES
 ‘He died for him.’ [*in place of him*] [Richa, Magometov 1970: 85]

A Delocutive is derived from the Super Ablative:

- (13) *xeš ağ-ay-a il-di-k-es*
 we:INCL:ERG speak-GER:PRES-PRES DIST↓-SA-SUPER[CNT]-ABL
 ‘We talk about him/her/it.’ [Richa, field notes]

The non-contact Super Ablative is used to encode both a Comparative and a temporal Translative:

- (14) *xe haywan ha-f e we haywan-i-l-as*
 we:POSS horse:ABS big-REF:ABS be:PRES you:SG:POSS horse-SA-SUPER[-CNT]-ABL
 ‘Our horse is bigger than your horse.’ [Richa, field notes]
- (15) *zun sa sa'at-i-l-as ad-is-e*
 I:ABS one hour-SA-SUPER[-CNT]-ABL come-INF-PRES
 ‘I will come within an hour.’ [Kurag, field notes]

The major local-based metaphors are summarized in Table 3.

It should be noted that some of these metaphors have retained invariant components (Lakoff 1990; Brugman 1990; Turner 1990) of the corresponding source domain to a greater extent than others. For instance, the instrumental can be sensitive to the location of the “instrument”, as in the following examples:

Table 3. Metaphorization strategies with Aghul local case forms

After time period	<i>is</i>	s.th. <i>from on</i> [-contact]	SUPER[-CNT]-ABL
Benefactive	<i>is</i>	s.th. <i>onto</i> [-contact]	SUPER[-CNT]-ALL
Cause	<i>is</i>	s.th. <i>from behind</i>	POST-ABL
Comitative	<i>is</i>	s.th. <i>behind</i>	POST-ESS
Comitative	<i>is</i>	s.th. <i>between</i>	INTER-ESS
General Possession	<i>is</i>	s.th. <i>behind</i>	POST-ESS
Instrument	<i>is</i>	s.th. <i>onto</i> [-contact]	SUPER[-CNT]-ALL
Object of speaking	<i>is</i>	s.th. <i>from on</i> [+contact]	SUPER[+CNT]-ABL
Replacement	<i>is</i>	s.th. <i>from behind</i>	POST-ABL
Temporal Possession	<i>is</i>	s.th. <i>at, on, in...</i>	AD-ESS, SUPER[+CNT]-ESS, IN-ESS ...

- (16) *gi midal k-ed üx-ün-i*
 DIST:ABS medal:ABS SUPER:ESS-be:GER:PRES come-GER:PAST-PAST
 ‘He came with a medal (on his breast).’ [Fite, Magometov 1970: 86]
- (17) *gi midal f-ad üx-ün-i*
 DIST:ABS medal:ABS AD:ESS-be:GER:PRES come-GER:PAST-PAST
 ‘He came with a medal (in his pocket or so).’ [Fite, Magometov 1970: 86]
- (18) *gi ad-in-e ħa k:ul f-ay*
 DIST:ABS come-GER:PAST-PAST big fur:ABS AD:ESS-be:GER:PRES
 ‘He came with a long fur (in his arms).’ [Richa, Magometov 1970: 86]
- (19) *gi ad-in-e ħa k:ul q-ay*
 DIST:ABS come-GER:PAST-PAST big fur:ABS POST:ESS-be:GER:PRES
 ‘He came with (> wearing) a long fur.’ [Richa, Magometov 1970: 86]
- (20) *ze ħu’ni ad-in-e gür-i ġ^s-äy*
 my cow:ABS come-GER:PAST-PAST DIST:PL-OBL INTER-be:GER:PRES
 ‘My cow came with (among) them [the other cows].’ [Richa, Magometov 1970: 86]
- (21) *tp:iğ dehan zun xil-a-w-di ad-in-e*
 Tpig towards I:ABS foot-SA-AD-ALL come-GER:PAST-PAST
 ‘I came to Tpig on foot.’ [Richa, Magometov 1970: 155]

Accordingly, the concept of instrumentality can result from “stretching” the superessive, adessive, postessive, interessive, and allative case functions. This is especially true with verbs of motion, which relate the local semantics of the MOVE complex to the location of the instrumental. In case this relation is no longer transparent, the standard instrumental based on the Super Allative is used:

- (22) *baba marq:al-a-l-di geda-di-s yirh-u’n-i*
 mother:ABS stick-SA-SUPER-ALL boy-SA-DAT hit-GER:PAST-PAST
 ‘Mother hit the boy with a/the stick.’ [Fite, Magometov 1970: 83]

The same aspect of invariance is also present with possessive constructions:

- (23) *ruš zis e*
 daughter:ABS I:DAT AUX:PRES
 ‘The daughter is mine.’ [Burkixan, Dirr 1907: 80]

- (24) *ze č̣i ʔar-awa*
 I:POSS sister NEG-be:PRES
 'I don't have a sister.' [Tsirkhe, Magometov 1970: 214]
- (25) *zaq q-aya kitab*
 I:POST:ESS POST:ESS-be:PRES book:ABS
 'I have a book.' ('I possess a book.')
- (26) *zaf f-aya kitab*
 I:AD:ESS AD:ESS-be:PRES book:ABS
 'I have a book (with me).'

From this we can conclude that the maintenance of invariant components of the source domain within the metaphorical expression is strongly coupled with the general constructional layout into which the noun phrase is embedded. In other words, in the given case, invariance is not a mere semantic property but is conditioned by constructional features. The presence of orienteering MOVE verbs factually reduces the metaphorical potential of the given case form. In case non-orienteering verbal concepts are present, the invariant component is further reduced, as becomes evident for instance from the standard instrumental. Here, the Super Allative has nearly completely lost its invariant component. Crucially, this happens especially with transitive constructions, e.g.:

- (27) *češ č̣al-di-l-di p:ara bulağ-ar fac-un-e*
 we:ERG net-SA-SUPER-ALL(>INSTR) many fish-PL:ABS catch-GER:PAST-PRES
 'We caught many fish with the net.'

We have to assume that transitive structures illustrated in (27) represent a conflicting localization strategy. It is a standard assumption that the core structure of transitive constructions is derived from the metaphorization of the figure-ground schema (see Schulze 1998; F = Figure, G = Ground, C = Cause, E = Effect, > = metaphorization, → = oriented towards, force dynamics etc.):

- (28) $F \rightarrow G \quad > \quad C \rightarrow E$
- (29) *češ bulağar facune*
 $F > C \quad \rightarrow \quad G > E$

Hence, *bulağar* satisfies the primary localization strategy. In Aghul, the metaphorization of the ground-domain is usually not expressed morphologically, contrary to, for instance, Udi, a marginal Lezgian language (see Section 4). In Udi, the *Effect* domain is marked by an old allative if the corresponding referent is marked for the feature [definite]:

- (30) *yan č̣äli-n-a biq'-e-yan*
 we:ABS fish-SA-DAT catch-PERF-1PL:A
 'We caught the fish (we were talking about).'

The presence of a second locative concept usually establishes a secondary (qualifying) relation between one of the primary actants and the concept expressed by the locative, e.g.:

- (31) *žinar-ar-i ha-te q'aley-i' dustağ-aq'-un-a*
 dzhin:PL-PL-ERG EMPH-MED:ABS castle-SA-IN:ESS prisoner-take-GER:PAST-PRES
 'The dzhins have imprisoned her in the castle.' [Burkixan, field notes]
- (32) *žin-urğ-on mo-t'-o q'ala^s-a yesir-t'un ef-e*
 dzhin-PL-ERG PROX-SA:OBL-DAT castle-DAT imprisoned-3PL:A keep-PERF
 'The dzhins have imprisoned her in the castle.' [Udi, Nizh, field notes]

In the case of Aghul (31), the locative functions as a landmark or ground for the trajector or figure *hate* 'she':

- (33) $F > C \rightarrow G_{(F \rightarrow G)} > E$

The standard instrumental of Aghul has obviously marginalized the relational properties of the underlying locative. This process is conditioned by the loss of gestalt features related to the Ground domain. Most likely, we have to start with constructions like (29) that still involve a notion of MOVE; see (34):

- (34) *We_{F>C} LOC:caught [many fish_F onto the net_G]_{G>E}.

Here, *net* still functions as Ground for the Figure *fish*. Historically, Aghul was a strong Manner Conflating language with overt location markers. These markers were added to the verb in terms of preverbs and conditioned the initial stability of spatial invariance. After the preverbs had become more or less opaque elements fusing with the lexical meaning of the verb, the general typological make-up changed from Manner Conflation to Space Conflation, opening a free 'manner' slot in the constructional pattern of transitive clauses:

- (35) [LOC] LOC-{Verb:Manner} > [Manner] {LOC:Verb[:Manner]}

This shift enabled the NP overtly marked as a locative to assimilate features of manner semantics. An intermediate state is preserved, for instance, in the following structure:

- (36) *zun sil-bar-i-l-di xiw ärg^s-u^sn-i*
 I:ABS tooth-PL-SA-SUPER-ALL nut crush-GER:PAST-PAST
 'I crushed the nut with ~ onto the teeth.' [Fite, Magometov 1970:83]

The examples discussed in this section illustrate that in Aghul, the two series Super and Post represent the preferred source domain for metaphorization strategies. Obviously, certain local domains such as Sub and In do not qualify for metaphorization to the same extent as the domains just mentioned. If we include data from other Lezgian languages, however, it becomes clear that such constraints result from aspects of conventionalization rather than from underlying cognitive parameters. Hence, any generalization related to the metaphorical potential of local case forms in East Caucasian should take into account the fact that practically all combinations of case and series markers can serve as the source domain of case metaphors. The main question is to which extent the resulting metaphorical function still reflects invariant components of the source domain and how we can account for this from a cognitive point of view. In addition, we have to ask whether a corresponding model of invariance and metaphorization can be referred to in describing the functional scope of so-called functional or derivational case categories in East Caucasian

(basically ergative, genitive, dative). In the following section I will show that a model of metaphorization in terms of the so-called Mirror Hypothesis helps to interpret not only the Aghul data, but also metaphorization chains as such.

3. The Mirror Hypothesis

3.1 Introduction

For nearly twenty years, it has been standard to relate the Lakoffian type of metaphor theory to Cognitive Linguistics. Here, I cannot dwell upon the question of “whether Cognitive Linguistics is cognitive linguistics,” as Bert Peeters has put it (1998:226; Peeters 1996). Nevertheless, it should be noted that most work in standard Cognitive Linguistics applies an analytical or interpretative approach towards the relation of language and cognition. Typically, linguistic data are explained by referring to a model of cognitive activities, be it in a modular or holistic framework. The physiological ‘make-up’ of cognition, that is, the actual mental ‘operations’ that underlie the dynamics of linguistic knowledge and linguistic practice are traditionally explored from a different point of view, namely Neurocognitive Linguistics (see Arbib 1998 for a detailed overview). Models of language relevant neural activities are less frequently consulted in order to evaluate the empirical plausibility of assumptions about the cognitive motivation of linguistic units. For instance, it is popular among proponents of Analytical Cognitive Linguistics to interpret the cognitive representation of a linguistic unit (be it substantial or constructional) in terms of ‘symbolic units’ (cf. Langacker on ‘symbolic structures/assemblies’, this volume: 47, 63, 69). Although they occasionally adopt notions derived from neurocognitivism (such as ‘network’, ‘constructions’), they normally refrain from accommodating more fully the ‘subsymbolic’ and ‘analogical’ types of representation (e.g. Smolensky 1988; Johnson-Laird 1983; Miiikkulainen 1993). Crucially, a symbolic approach allows accessing and modifying units of a network, whereas a subsymbolic representation in terms of a back propagation network cannot be modified in its ‘parts’ without affecting the functionality of the whole network (see e.g. van Gelder 1990; Schulze 1998: 271–393). A subsymbolic interpretation of cognitive activities is strongly related to Neurocognitivism, which takes its empirics (among others) from modeling the cortical architecture and hence arrives at a model of how language is cognitively processed that differs in important ways from models referred to in standard Analytical Cognitive Linguistics. In fact, the bridge between these two “domains” is still “under construction”.

So far, the domain of language acquisition has been one of the most promising potential bridges. Important contributions can also be expected from the Neural Theory of Language project at Berkeley (see for instance Feldman & Narayanan 2003). Nevertheless, the core issues of Cognitive Linguistics such as standard Cognitive Semantics or Cognitive Grammar(s), have not hitherto paid much attention to contributing to this bridging problem.

In order to explain the case semantics described for Aghul above, I adopt certain findings of Neurocognitive Linguistics, as expressed e.g. by Feldman and Narayanan (2003: 13):

“The synthesis of embodied meaning and its subsequent enactment is essentially the same task faced in visual or other perception of a complex ongoing situation”. In addition, I will refer to the well-known Mirror System Hypothesis (see Stamenov & Gallese 2003 for a recent account). Finally, I will ground my arguments in the framework of Cognitive Typology, which makes constant reference to the neurophysiology of perception and schematization (see Schulze 2002). Nevertheless, the approach to metaphORIZATION in the present paper remains situated in the Analytical Cognitive Linguistics camp. The admittedly superficial look at the other camp cannot be but provisional and in parts oversimplifies the attempt to bridge the two models referred to above. To do so, I adopt observations about the functional layer of neural activities, not assumptions about the neural substrate itself. The main goal is to model metaphorically motivated grammaticalization processes by referring to this functional layer (in terms of mirroring).

3.2 A model of metaphORIZATION

It is a common feature in many or even all languages that grammatical elements and constructional patterns are marked for polysemic properties. These properties reflect the asymmetrical relation between linguistic structure and communicated experience. Accordingly, a rather small and usually restricted set of grammatical elements and constructional patterns is used to communicatively process the ever changing world of experience. Whatever the exact relation between the linguistic and the cognitive domain might be, the asymmetry just described ensures that a one-to-many mapping is an empirically well-founded procedure for constructing “linguistic worlds”, i.e. is experience-based knowledge systems anchored in language (see Langacker, this volume: 46: “linguistic semantics (...) reflects our capacity to construe the same situation in alternate ways”). From a cognitive point of view, however, linguistic structures always result from reduction strategies that are anchored both in aspects of communication and linguistic knowledge. The process of reduction (many-to-one) can be best summarized by using the label *dieresis* (Greek *διαίρειν* ‘to separate, distinguish, interpret’). The modeling of dieresis is related to Information Pickup theories and Ecological Psychology (see Gibson 1979) and is characterized, among other things, by the following parameters:

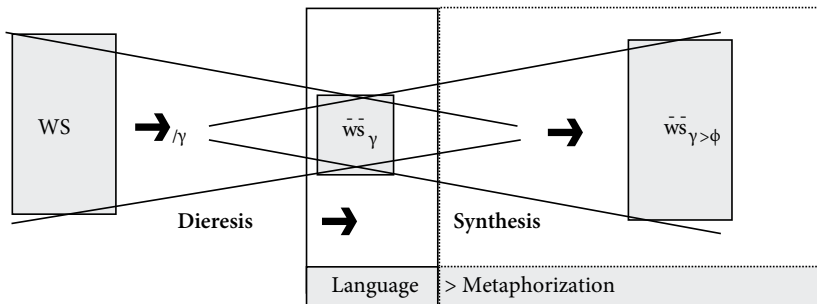
1. The fact that an individual becomes embedded in a communicative tradition during language acquisition results in the development of a *collective hypothesis* about language. Accordingly, the individual assumes that her/his linguistic knowledge represents knowledge shared with others in the same speech community (see Schulze 1998: 395–412 for details).
2. Shared knowledge usually marginalizes idiosyncratic types of communicative experience. The individual tends to accommodate her/his knowledge system to that of the social partners during language acquisition. This process is embedded in the general patterns of overt (factual) socialization and is recursive in nature (*social reduction*).
3. (Language-based) communicative experience is based on the Action Perception Cycle (Swenson & Turvey 1991) and on the Imitation/Pantomime model as described e.g. by Arbib (2001). In addition, communicative experience and practice is seen

as the constant actualization process of memorized linguistic and non-linguistic experience (an extension of the model of Action recognition; see Gallese et al. 1996; Rizzolatti & Arbib 1998; Schulze 2002). Accordingly, the processing of a (linguistic or non-linguistic) world stimulus takes place in terms of cognitive internal communication, which by itself is grounded in the general communicative routines of cognition. New experience is always processed in terms of patterns emerging from old knowledge (*Menon paradoxon*): The construing reaction upon a given world stimulus takes place by structural coupling with the activation of stored analogies of this world stimulus (*experiential reduction*).

4. The linguistic reaction upon a world stimulus is based on a memory segment and an arbitrary (actual, situational) segment (*Markov Chain*).
5. World stimuli that are experienced as being similar are usually processed according to a relatively similar and entrenched cognitive representation (*phenomenological reduction*).
6. Similarity means that the processing of different world stimuli activates different tokens of a common (entrenched) representational type (*type-based reduction*).

The parameters listed above are coupled with a second segment in the construing event that reflects one-to-many projections. Accordingly, the conceptual reaction to a world stimulus allows the individual to choose between different variants with respect to the linguistic representation of the dieretic output. Figure 3 below depicts these two procedural aspects.

Figure 3 can be read as follows: The properties of an Outer World Stimulus (WS) are reduced during perception (dieresis) to a mental ‘image’ of WS ($\bar{w}\bar{s}$), but at the same time enriched by a language-based expressive (or communicative) hypothesis (‘I perceive something in the way I want to speak about it’). The mental image can then be expressed (or metaphorized in the broadest sense) in various ways, depending on the language system acquired by the speaker. On the one hand, the linguistic representation of the communicative reaction upon a world stimulus thus depends on the cognitive typology of dieresis procedures as expressed in cognitive schemata, idealized models, and experience related to the communicability of this world stimulus. On the other hand, such a schema



[WS = World Stimulus, $\bar{w}\bar{s}$ = cognitive event induced by World Stimulus,
 γ = Language/communication based conceptualization, ϕ = Metaphorization]

Figure 3. The dieresis-synthesis continuum

or model will hardly ever be directly reflected in a linguistic representation. Rather, we have to assume that the linguistic expression of diereitic procedures is basically metaphorical in nature. This hypothesis goes against the assumption that metaphorical expression has to be taken literally (e.g. Levin 1988; also see MacCormac 1985) or that there are non-metaphorical layers in language. Rather, it starts with hypotheses proposed by Immanuel Kant (*Kritik der Urteilskraft* § 59: *Von der Schönheit als Symbol der Sittlichkeit*) and Friedrich Nietzsche (*Über Wahrheit und Lüge im außermoralischen Sinne* (1872/3), 1(v)) and extended in the well-known metaphor theory of Ivor A. Richards (e.g. Richards 1950 [1932]:94).

Accordingly, metaphorization is the only way to process a diereitic output. In order to account for this assumption, we must start with a rather broad definition of *metaphor*. Contrary to standard assumptions, I assume that metaphorization does not figure as a cognitive strategy distinct from metonymy (and, in parts, from synecdoche). Rather, I suggest that 'metaphorization' denotes the totality of cognitive mapping strategies that again are scaled according to the 'similarity parameter'. A simple example is given in Figure 4.

The chain in Figure 4 comes close to what is known as family resemblance. In the given case, the mapping of a gestalt onto an adjacent or 'near' gestalt has metonymic properties. The more distant the mapping relation is, the more metaphoric it becomes. For instance: The mapping of, e.g., B onto C (or D) entails metonymic strategies, whereas the mapping of say A or B onto say H is metaphorical in the strict sense of the term. The metaphorization scale symbolized in Figure 4 can easily be related to developmental aspects of 'metaphor acquisition' (both in comprehension and production). Accordingly, 'long-distance metaphorization' (or metaphorization as such) is based on the stretching of 'short-distance metaphorization' (or metonymy), see for instance Winner (1988) and Elbers (1988) (but see below for 'wild metaphors'). Note that according to the framework underlying the present analysis, concreteness and abstractness do not figure as prevalent parameters on the metaphorization scale. Whether or not a concept is 'rather abstract' depends heavily on the cultural habitus of a speech community, but not on the 'thing as such', which possesses (more or less) concrete properties only to the extent that these properties are experienced and hence construed as 'concrete' by human beings.

It may be argued that the use of the term *metaphorization* for both the general process and for a specific subtype (leading to metaphors in the strict sense) is ambiguous. Still, I adhere to the term because its underlying etymological meaning covers most of what is actually going on in the process of semantic expansion.

In sum, I claim that 'metaphorization' describes the process of 'growing de-similarization' of a reactionary (constructional) pattern with respect to its source domain. In other words, a metaphorical mapping has the following basic property: Two conceptual do-

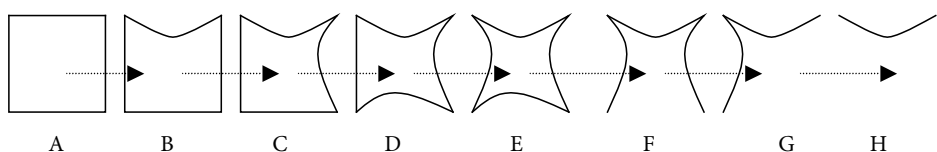


Figure 4. A gestalt-based metaphorization chain

mains, schemata, structures, or constructions that are related metaphorically must be both the same and different. In this sense, a metaphorical output “mirrors” some of the properties of a compatible source domain. A simple example is provided by the German deictic adverb *da* ‘there’ (the English equivalent of the source domain): This pronominal adverb has at least three interpretations:

- (37)

Da	ist die Haltestelle
Da	lachte sie
Da	sie krank war..

(Local)
(Temporal)
(Causal)
- [There is the stop.]
 [There she laughed...]
 [Because she was ill...]



In fact, we are dealing with the well-known metaphorization chain *local* > *temporal* > *causal*.³ The growing de-similarization can be formalized as shown in Figure 5.

The triangle symbolizes the underlying invariant component that is based on the locative interpretation of *da*. The inflation process (see below) allows accessing the conceptual domain ‘time’ without changing the basic gestalt properties of the conceptual domain. The same holds for the metaphorization of *causal* as *temporal*. The schema in Figure 5 comes close to what has often been described for fractal structures. In fact, we are dealing with so-called self-similarity in its broader sense (or with self-affinity), viz., coarse structure or metaphorical output represents a slightly contorted copy of the fine structure. In this sense, the whole structure (source domain → target domain) entails segments that are ‘similar’ or ‘affine’ to each other. The contortion results in an increasing ‘self-gestalt’ of the fine structure. The “stretching” process that underlies contortion is conventionally called ‘inflation’, a term that can be easily adopted in modeling metaphorization routines. It refers to aspects of metaphor production and metaphor usage as opposed to perception/understanding routines that are related to ‘deflation’ strategies (see below). The model given in Figure 5 suggests that metaphorization can be viewed as a step-up process: Accordingly, we usually have to deal with several levels within the inflation process, which by themselves can serve as a metaphorical output, as in the schematic graphic in Figure 6.

An important consequence of the approach to metaphor presented in this paper is that it denies the existence of linguistically represented ‘basic level concepts’. This does not exclude the possibility that more basic concepts are present outside the linguistic domain. However, I claim that *any* linguistic reaction to a conceptual stimulus is marked for metaphorization. This is also corroborated by etymology. We can often observe that basic level concepts are represented by metaphorized structures (be they lexical or grammatical). It may well be that certain cultural traditions have generalized the metaphorization strategy

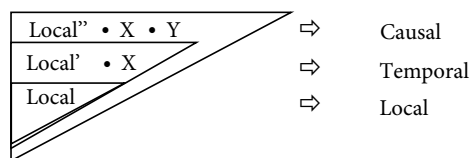


Figure 5. The metaphorization of German *da*

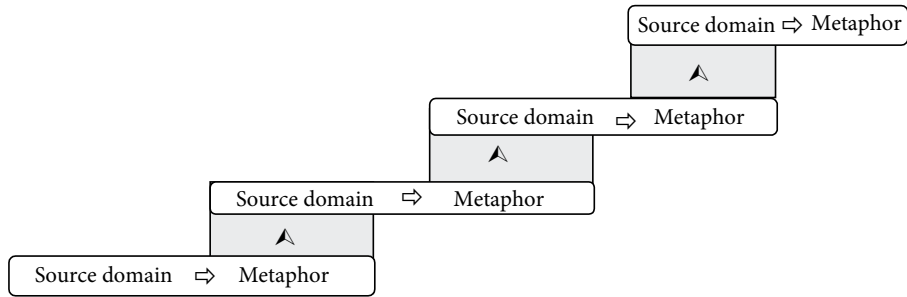


Figure 6. The metaphorization continuum

to conceptualize newly experienced world stimuli. Others may have focused on different strategies to serve this purpose (such as radial categorization, family resemblance, or generification). In addition and as has been said above, metaphorization chains do not necessarily reflect the proposed concrete-to-abstract scale. Whether or not a (linguistically represented) concept is concrete, does not depend on the ‘object’ itself (construed by cognition), but on convention.

Adopting the basic observation of the Mirror System Hypothesis, I claim that the processing of metaphorization chains takes place in analogy with cognition-environment communication. Accordingly, a metaphor is processed in terms of cognition-internal communication, activating a similar memory segment in the presence of a given (actual) stimulus. In other words, the actual stimulus imitates experience stored in memory, which again is *mirrored* in the reaction to the actual stimulus (see Schulze 2002). Here, I assume that the Mirror System Hypothesis can serve as a bridge to explain this actualization/imitation process from a neurocognitive point of view. According to Arbib, Bonaiuto, and Rost (2006: 4), the Mirror System Hypothesis claims that

[m]irror regions in a human can be activated when the subject imitates an action, or even just imagines it (...). [H]umans alone among the primates have the capacity for “complex imitation”, being able to recognize another’s performance as a combination of more-or-less familiar actions and to use this recognition to approximate the action, with increasing practice yielding increasing skill.

Basically, the Mirror Hypothesis is supposed to account for the imitation process with respect to observed or imagined actions. Nevertheless, it can be argued that the mirroring capacity is not restricted to motoric aspects, but present in cognition-internal processes, too. In this sense it does not matter (from a functional point of view) whether a stimulus stems from the Outer World or is present in terms of a given state of cognition. Another starting point for the adoption of the Mirror Hypothesis is the assumption that “only humans have ‘complex imitation’, the ability to imitate sequences of behaviors and approximate novel actions as variants of known actions after one or just a few viewings of this novel behavior” (Arbib, Bonaiuto, & Rost 2006: 7). ‘Complex imitation’ relates a perceptual state to (more or less coherent) knowledge about stored analogies, i.e. to experience. In this sense, the actual perceptual state of cognition is an ‘imitative state’ that invokes mirroring processes with respect to experience.

Imitation (executed by mirroring effects) always entails properties that are different from the imitated event (be it an Outer World Stimulus or a cognition-internal stimulus): To put it simply an event is imitated in terms of an *as if* relation. The difference between the imitation input and the imitation output is conditioned by the actual state of the imitator. In this sense, it should be noted that the properties of the segments X and Y illustrated in Figure 5 play a crucial role in the structure of the final output. Applying the Mirror Hypothesis to the complex gestalt in Figure 5, we arrive at the following claim:

- (38) Those segments that do not *immediately* mirror the fine structure or source domain result from the type of mirroring, that is, from the general processes that have triggered the mirroring.

Here, the term ‘general processes’ refers to those dynamic aspects that are activated in cognition when a stimulus is experienced. In this sense, a cognition enters the mind state of an imitator and changes its properties accordingly (e.g., it becomes attentive). This specific state (e.g. the type of attention) conditions the contortion that takes place when the stimulus is mirrored.

The variant of the Mirror Hypothesis as presented in this paper describes the emergence of metaphorical processes focusing on both aspects of invariance and conceptual variation. Hence, we have to refer to a basically bottom-up strategy of deriving conceptual variation and linguistic categorization. However, the processing of metaphorical structures and expressions may also resort to the opposite strategy, i.e., a metaphor may be processed by means of a top-down strategy. Again adopting a term from fractal geometry, I call this type of top-down processing *deflation*. It denotes assumptions about the presence of invariant components in a metaphor that relate it to its source domain, even if the source domain itself is no longer coded by the same expression as the metaphor. From a linguistic point of view, such a process of deflation is frequently encountered in the creation of folk etymologies. Figure 7 summarizes the two types of metaphorical processing (SD = Source Domain).

The top-down process of deflation thus describes the fact that any metaphor is processed in accordance with hypotheses about its invariant components. Consider, for instance, the following examples from Chuvash, an Oghur Turkic language:

- (39) *xěvel śut-i ayala kăntăr varri-něce*
 sun ray-3POSS even noon middle-3POSS:LOC
te xěs-ěn-se kăk-a sărxăn-at’
 TOP press-REFL-CV:& root-DAT flow-PRES:3SG
 ‘Even at midday, the ray(s) of sunshine fought (lit.: pressed themselves) to reach the root(s) of the trees.’ [Chuvash, passage from ‘Brown Bread’ (Nikolai Ilbekov 1950)]
- (40) *ača-sen-e tămran yapala-sem tu-ni-n-e kătart.*
 child-PL-DAT ceramics thing-PL make-INF-3POSS-DAT show:IMP:2SG
 ‘Show the children how to produce ceramics!’
 [Chuvash, Rimus pičče valli parne, p. 2, n.d.]
- (41) *xěvel-e te śi-me ěntě văpăr*
 sun-DAT TOP eat-NEG:FUT:3SG now vampire
 ‘The vampire will no longer eat the sun.’ [Chuvash, P. P. Xuzangay, n.d.]

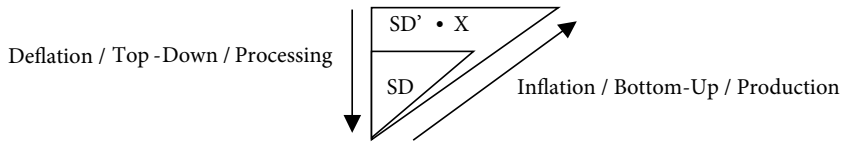


Figure 7. Inflation and deflation

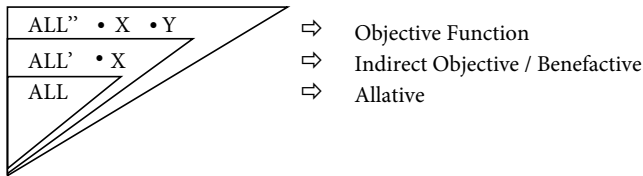


Figure 8. The metaphorization of the Chuvash allative

All three examples show a dative case (-e/-a), which covers the following functions: *kāka* (Locative-allative), *ačasene* (Indirect Objective / Benefactive), *xëvele* (Objective [definite]). Contrary to other Turkic languages, Chuvash uses the dative to encode the Fluid O-Split,⁴ as in (41). The function is related to both the Benefactive / Indirect Objective in (40) and to the Allative in (39). The bottom-up metaphorization can be described as in Figure 8.

This typologically well-known pattern is based on a growing de-similarization with respect to the local function. Nevertheless, we cannot claim that in the metaphorized version of the allative this function is no longer present. Rather, we have to assume that at least parts of this function have survived as invariant segments within the final metaphor. From this we can conclude that a speaker of Chuvash will process the clause in (41) in a way that still involves the locative function. In other words, the dative used to encode the Objective initiates a processing type that is marked for deflation. A version of (41) that is in part deflated would then read (* / indicates a deflated reading):

(42) * / The vampire will no longer eat towards the sun.

This admittedly trivial example illustrates that the output of a metaphor chain can serve as the starting point to describing the functional ‘scope’ of metaphorized grammatical elements and hence their categorial status. It should be noted that, here, the analysis concerns both synchronic and diachronic aspects of grammatical conceptualization. Hence, both grammaticalization theory and usage-based models should be referred to in order to describe the emergence of form/function pairing in grammar. Cognitive Linguistics – in my view – still lacks finely articulated tools to describe degrees of metaphorical variation with respect to the semantics of grammatical elements and grammatical structures. In other words, it is not always clear whether a postulated source domain or invariant components of this source domain are in fact processed synchronically. It may likewise be the case that grammatical elements emerging from a metaphorization process have developed into homonymic pairs (see the German example *da* above). This is, for instance, the case with the standard instrumental of Aghul, mentioned above:

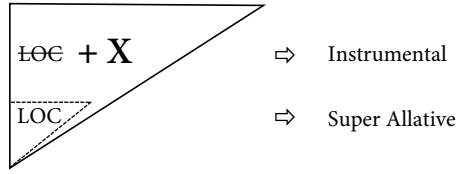


Figure 9. The metaphorization of the Aghul super allative

- (43) *malla-nasrat:in* *al-ğuc²-un-e* (...) *ğ^wad-di-l-di*
 Mollah-Nasreddin:ABS SUPER-lie-GER:PAST-PRES (...) roof-SA-SUPER-ALL
 ‘Mollah-Nasreddin lay down (...) on the roof.’ [Kurag, Magometov 1970: 208]
- (44) *idem-i* *q^sac^u-l-di* *yät^t-un-e* *şik:ar*
 person-ERG tong-SA-{SUPER-ALL} break-GER:PAST-PRES sugar:ABS
 ‘The person broke the sugar with a pair of tongs.’ [Fite, Magometov 1970: 83]

Above, I have shown that the metaphorization path itself is quite transparent from a diachronic point of view. Synchronically, however, it is rather doubtful whether (44) retains the following deflated reading:

- (45) ?*/ The person broke the sugar onto a pair of tongs.

Obviously, the invariant component of a metaphorical chain can become obscured in the process of inflation. This is especially true if the “contorting” segment attains a quality that finally “suppresses” the semantics of the invariant component, as in Figure 9 (where the strike-out symbolizes the suppression of the invariant component).

Such structures are known as “wild metaphors” in literary studies. They account for what Levin (1988) describes as a poetic metaphor, that is the alleged literality of metaphors. From a cognitive point of view, we may claim that synchronically, wild metaphors have developed into homonymic expressions that, however, are processed in terms of a “remembrance factor”. This factor may relate homonyms to a hypothesis of polysemy that comes close to the diachronic development of the metaphor, at least in terms of folk etymology.

4. A look at diachrony: The Udi system of relational cases

Udi is a marginal Lezgian language spoken by some 4,000 people especially in the village of Nizh in Northwestern Azerbaijan (see Schulze (in preparation) for details). In addition, there are two minor Udi settlements (Vartashen, now Oguz and close to Nizh, and Oktomberi in Eastern Georgia). Contrary to the paradigmatic etalon of East Caucasian case marking as illustrated in the first section of this paper, Udi has reduced its system of locatives to a one-dimensional system: Here, case and series functions have fused completely. Table 4 lists the Udi case forms (variants concern both dialects and allomorphy).

Table 4. The case morphemes of Udi

	Singular	Plural	Caucasian Albanian © W. Schulze 2003 [~ 500 AD]
ABS	-Ø	-Ø	-Ø
ERG/INSTR	-en ~ -n	-on	-en
BEN	-enk'(ena) ~ -aynak'	-onk'(ena) ~ -oynak'	-ankë
GEN	-a(y) ~ -e(y) ~ -i ~ -un	-o(y)	-un ~ -i
DAT	-a ~ -u ~ -e ~ -i	-o	-a -s
DAT2	-DAT-x	-ox	-ax
ABL	-DAT-xun ~ -xo	-oxun ~ -oxo	-axoc
COM	-DAT-xun ~ -xol	-oxun ~ -oxol	-axoš ~ -aloš -ak'a
SUPER	-DAT-l	-ol	-al ~ axal
ALL	-DAT-č'	-oč'	-ač' (?)
ADESS	-DAT-st'a	-ost'a	-ast'a

The table also includes data from Old Udi as documented by the recently discovered Caucasian Albanian palimpsest from Mt. Sinai (see Schulze 2005a for a preliminary overview; see Gippert, Schulze, Aleksidze, & Mahé (Forthcoming) for the edition of the palimpsest). Due to copyright reasons, I cannot give a detailed account of the language of the palimpsest here. But note that the language represents the oldest East Caucasian language ever documented. The text underlying the palimpsest stems from the beginning of the 6th century AD and contains a Christian lectionary. The language is immediately related to the Nizh dialect of Udi. Hence, we can refer to its grammar in order to account for the history of the Udi data.

I cannot comment upon all aspects of the Udi case paradigm given in Table 4 (see Schulze 2005b; Schulze (In preparation) for details). Instead, I will concentrate on the three domains Ergative, Genitive, and Dative. Examples (46)–(47) illustrate the superficially prototypical functions of these case categories:

- (46) *amdar-x-on kala sa händ-un oçal-t'un ez-b-sa-y*
 person-PL-ERG big one field-GEN earth:ABS-3PL:A plough-LV-PRES-PAST
 'The people were ploughing [the earth of] a large field.' [Nizh; OR 133]
- (47) *Bulum-a sa usen äš tad-al-t'un*
 Bulum-DAT one year:ABS work:ABS give-FUT:FAC-3PL:A
 'They will sentence (lit. give) Bulum (to) one year (of) labor.' [Nizh; OR 48]

The ergative case morpheme also covers the function of an instrumental, but never that of a comitative:

- (48) *tängi-n-en har-t'in sa čäräq'-yan uk-o*
 money-SA-ERG>INSTR each-REF:OBL-ERG one shashlik:ABS-1PL:A eat:PAST-FUT:MOD
 'With the money, each of us will [buy and] eat a shashlik.' [Nizh; OR 49]

Contrary to Aghul, the Udi instrumental is not related to local case forms. Rather, the function results from a blend of the lexical base and the prototypical function of the case marker *-en*; see the scale given in Figure 10.

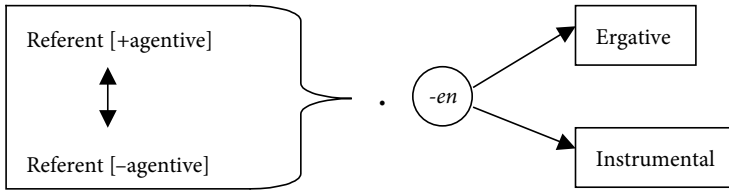


Figure 10. The case marker *-en* in Udi

Accordingly, we cannot describe one of the two functional domains as being metaphorically derived from the other function. Instead, we have to assume that the morpheme *-en* encodes a function that adds a notion of mediated or immediate agentivity to the referent. In other words, we are dealing with a superficially “abstract” concept underlying the morpheme at issue. This conceptual layer is still processed synchronically. The following examples illustrate this point:

- (49) *me a^syel-en gölö-ne axsum-exa*
 PROX child-ERG much-3SG:S laughing-LV:PRES
 ‘The child (deliberately) laughs very much.’ [Vartashen, field notes]
- (50) *kala sa läpi-n-en bi^sbi^s-n-ux kâc²-ne-p-e*
 big one wave-SA-ERG bridge-SA-DAT2 break-3SG:A-LV-PERF
 ‘A big wave broke the bridge.’ [Vartashen, field notes]

In (49), the ergative case is used to encode a strongly controlling agent, in (50) it conditions the agentivization of the referent *läpä* ‘wave’. Both constructions are based on an *as-if*-relation rather than on an *is*-relation:

- (51) Subjective *as if* (~ *is*) Agentive
 Instrumental *as if* (~ *is*) Agentive

Nevertheless, the cognitive space represented by the Udi ergative-instrumental can easily be described in terms of the above-mentioned Mirror Hypothesis. Most likely, we are dealing with a Proto-Lezgian focus marker (**-di*) that at that time was used to highlight a weak agentive segment within the attention information flow. In other words, **-di* had support functions compensating the lack of “natural” agentivity with the help of a focal strategy. Already in Proto-Lezgian, the function of **-di* (> Early Udi **(e)ni* > Udi *-en*) was inflated towards agentivity due to the frequent co-occurrence of the structure NP[weak agentive]: A+FOC (see Figure 11).

Obviously, the split of the Subjective (S-Split) as documented in (49) still reflects the invariant component within the inflated structure. In addition, we are dealing with a functional shift that can best be accounted for in terms of a *disguising* process. In (49), the intransitive relation is disguised as a Cause-Effect event, whereas the disguising process in (50) is conditioned by the usurpation of the agentive function by the semantic instrumental.

Table 4 above illustrates that Udi possesses at least three types of Genitives. The prototypical distribution of the three basic allomorphic types can be described as follows:

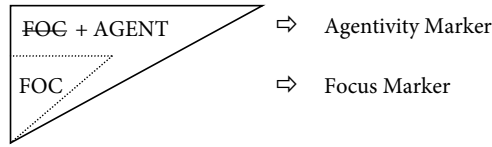


Figure 11. The metaphorization of the Early Udi focus marker

- (52) *-un* Relational ~ Derivational ~ Possessive
-ay ~ -ey Possessive [Possessor: Human[-socially salient]]
-i Possessive [Possessor: Human [+socially salient]]

Although a number of phonotactic processes has obscured this distribution, we can safely claim that the relational genitive differs from the vocalic variants with respect to the feature [referential]. The relational genitive usually reduces the degree of referentiality (ending up in a derivational case form), whereas the vocalic allomorphs at least historically stressed the referential properties of the unit.

Space does not allow for entering into a discussion of all genitive variants in Udi. Here, I wish to concentrate on the variant *-ay ~ -ey*. It can clearly be related to the Mirror Hypothesis. From a diachronic point of view, the two allomorphs reflect an old ablative, which again was derived from a local case, as it was described for Aghul in Section 3:

- (53) GEN *-ay ~ -ey* < **-a-y-* ~ *-e-y*
 IN-ABL IN-ABL

Accordingly, the case form of the old ablative consisted of a series marker (inessive: **-a ~ *-e*) and a case marker (ablative: **-y*). The underlying inessive function has survived in the Udi dative:

- (54) *kòž-a xib dev-urux kar-t'un-x-e*
 house-DAT three dev-PL:ABS live-3PL:S-LV-PERF
 'In the house, there lived three devs.' [Nizh, field notes]

The Udi dative (basic form *-a*) itself is derived from the Proto-Lezgian inessive (**-'(a)*). Accordingly, we have to assume that Udi once possessed a system of case-series markers as was described for Aghul in Section 1. This assumption is now confirmed by the palimpsest data. The list (55) gives the reconstructed forms of the subparadigm at issue (note that I have cumulated the data from the two dialects):

- (55)
- | | | |
|-----|------------------------------|--|
| | IN | Functional Scope |
| | * <i>-'(a)</i> | |
| ESS | * <i>-∅</i> * <i>-'(a)-∅</i> | Inessive; Indirect Objective; [Objective [definite]]
Non-controlling Agentive; Non-controlling Subjective |
| ABL | * <i>-y</i> * <i>-a-y</i> | Possessor (referential) |
| ALL | * <i>-x</i> * <i>-a-x</i> | Allative (~ Inessive); Objective [definite], Possessor |

The data from the palimpsest show that the metaphorization process started with the inessive, then affected the illative, and finally reached the ablative. Both the inessive (> dative)

and the illative (dative2) show a strong invariant component; see (56)–(60) for the inessive, and (61)–(63) for the illative:

- (56) *zu šähär-ä-zu kar-x-esa*
 I:ABS city-DAT-1SG:S live-LV-PRES
 ‘I live in the city.’ [Vartashen, field notes]
- (57) *zu ġar-a sa šum-zu tad-e*
 I:ABS son-DAT one bread:ABS-1SG:A give-PERF
 ‘I gave the son a (loaf of) bread.’ [Vartashen, field notes]
- (58) *zu ġar-a bisi šum-a tad-e-z*
 I:ABS son-DAT old bread-DAT give-PERF-1SG:A
 ‘I gave the son the old bread.’ [Nizh, field notes]
- (59) *ġar-a sa e’k-t’u ak’-i*
 boy-DAT one horse:ABS-3SG:IO see-PAST
 ‘The boy saw (perceived) a horse.’ [Vartashen, field notes]
- (60) *ġar-a mi-t’u-b-sa*
 boy-DAT cold-3SG:IO-LV-PRES
 ‘The boy is cold.’ [Vartashen, field notes]
- (61) *zu šähär-äx ta-s-c-i*
 I:ABS city-DAT2 go-1SG:S-S:PAST-PAST
 ‘I went to the city.’ [Vartashen, field notes]
- (62) *zu bisi šum-ax kä-i-z*
 I:ABS old bread-DAT2 eat:PAST-PAST-1SG:A
 ‘I ate the old bread.’ [Vartashen, field notes]
- (63) *sa e’k zax p’u*
 one horse:ABS I-DAT2 AUX:PRES
 ‘I have a horse.’ [Nizh, field notes]

The case category that has undergone the highest degree of inflation in Udi is the old inessive. In fact, we are confronted with at least six layers:

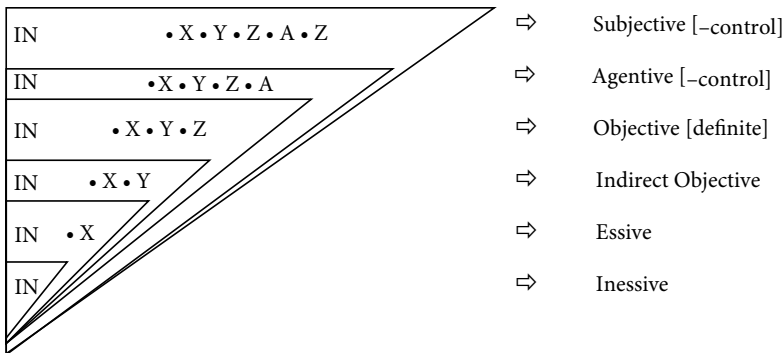


Figure 12. The metaphorization of the Udi inessive

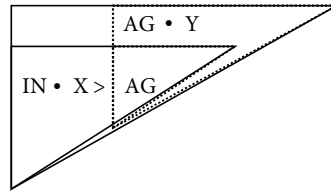


Figure 13. Long distance metaphorization with respect to the Udi inessive

The mirroring of the domain IN, i.e. its inflation, can easily be related to the metaphorization continuum given in Figure 6. Accordingly, neighboring levels in Figure 12 have metonymic properties and are marked for a relatively strong invariant component. Thus we arrive at typical metonymic pairs such as Inessive/Essive, Essive/Indirect Objective, Indirect Objective/Objective[definite], Objective/Agentive[–control], Agentive[–control]/Subjective (see Schulze 2000 for a discussion of relational primitives in East Caucasian). The more distant the levels are, the more metaphoric (in the strict sense of the term) the relation becomes. For instance, the Subjective-*is*-Essive relation comes close to what has above been termed a wild metaphor. Such a long-distance metaphorization (see Section 3.2) hence obscures the original invariant component, replacing it by a component of a level at a short distance. As a result, we arrive at a more complex structure that again has fractal properties (see Figure 13).

Therefore, it is rather improbable that the Subjective function of the dative, as in (64), is cognitively deflated to something like (65):

- (64) *za mi-za-p-sa*
 I:DAT cold-1SG:IO-LV-PRES
 ‘I’m cold’ [Vartashen, field notes]

- (65) ?*/ In me is cold.

In Section 3.2, it was claimed that metaphorization can be regarded as the functional or conceptual side of intra-cognitive mirroring techniques that again are part of the ontology of cognition itself. Accordingly, the Mirror Hypothesis does not subscribe to the assumption that metaphorization presupposes the introduction of “new” concepts that then are referred to with the help of more less motivated metaphors. The approach presented in this paper (together with its strong commitment to the Menon paradoxon (see Schulze 2002)) suggests that linguistically expressed metaphorization also takes place, if there is nothing “new” to process.⁵ This assumption can be illustrated with the help of the metaphorization chain just described for Udi. The inflation of the old Inessive towards a Dative does not presuppose the non-existence of a Dative in an earlier variant of Udi. In fact, the data from the palimpsest clearly show that at that time, the Udi reflex of the Proto-Lezgian Dative (*-s) was still in use:

- (66) *maekal-ux buqana anakè b~e-s*
 sacrifice-PL loving as G[o]d-DAT3
 ‘...because (such) sacrifices please God.’ [Old Udi; Heb 13,16]

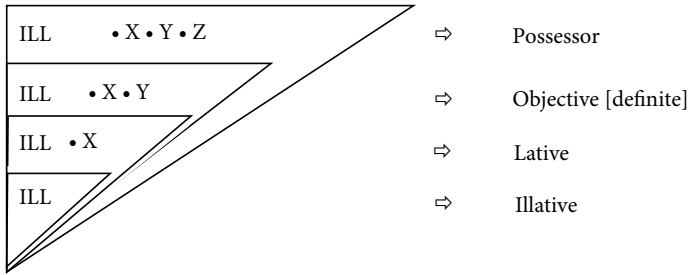


Figure 14. The metaphorization of the Udi illative

Here, I cannot elaborate the full functional scope of the Old Udi *s*-Dative. Nevertheless, it should be noted that the texts clearly show that the metaphorization as described in Figure 12 had already started when the old *s*-Dative was still in use.

Another important assumption that results from the Mirror Hypothesis is related to the feature of markedness. In more general terms, it may be claimed that a linguistic unit that takes the marked role in a semantically motivated paradigm tends towards a lower degree of metaphorization than an unmarked member of the same paradigm. This assumption is related to the observation that unmarked members in a paradigm tend to have a greater number of allo-variants than the marked members (see Dik 1989: 38–43). Accordingly, a marked member, i.e. a member that conveys more (specific) information than its unmarked partner, tends to retain its invariant components to a greater extent. Within the paradigm of the Early Udi IN-series, the two motion cases (allative and ablative) constitute the marked members, whereas the (historically) stative inessive is the unmarked member. Accordingly, we can expect that inflation is less pronounced with the two motion cases, or more specific. In fact, the old illative shows only four layers of inflation (see Figure 14).

Note that the fourth layer (possession) is reached in Nizh only. In addition, the use of the illative to mark the Objective function is typical for Vartashen, but rare in Nizh. Both dialects share the metonymic relation ILLATIVE/LATIVE.

The actual genitive (*-ay* ~ *-ey*) represents a wild metaphor. It lacks any invariant component related to the old ablative function. This can be seen from two facts: First, the genitive cannot be used in standard ablative function:

- (67) ***šo-no* *ek'-n-ay* *ci-ne-ğ-o*
 DIST-REF:ABS horse-SA-GEN2 down-3SG:S-go:FUT-FUT:MOD
 'He shall dismount from the horse.'

Second, the old ablative has been replaced by a new morpheme that again has developed from the illative (see Schulze 2005b):

- (68) Ablative -DAT-*xo* (Vartashen), -DAT-*xun* (Nizh), -DAT-*xoc* (Palimpsest)

Accordingly, we can describe the following inflation for the Udi *-ay*-Genitive (see Figure 15).

If we summarize the functional make-up of the Udi case forms discussed in this section, we arrive at the following picture: The system of Udi relational/orienteering cases

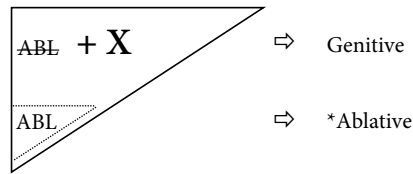


Figure 15. The metaphORIZATION of the Udi ablative

has undergone massive processes of metaphORIZATION. From a formal point of view, these processes are marked for both syncretism and substitution. Basically, we are confronted with the following types:

- | | | | |
|------|------------|-----------|----------------------------------|
| (69) | Agenthood | <i>is</i> | Focus (on controlling force) |
| | Instrument | <i>is</i> | Focus (on non-controlling force) |
| | Objecthood | <i>is</i> | Motion towards Goal |
| | Affection | <i>is</i> | Motion towards Goal |
| | Possession | <i>is</i> | Motion from Source |

Accordingly, we can describe a metaphorical domain related to locational (orienting) strategies and a relational domain that goes back to focal functions present already in Proto-Lezgian. This distribution is quite different from the etalon described with the help of Aghul in Section 2. Nevertheless, we can safely claim that the Udi system in the final instance goes back to a distribution that also underlies the Aghul type.

5. Conclusions

In this paper I have tried to show how a theory of metaphORIZATION that itself is embedded in a broader theory of Cognitive Typology can account for a special problem, namely the description of case categories in two East Caucasian languages, Aghul and Udi. The main goal was to illustrate that the Mirror Hypothesis may serve as a starting point for more accurately describing metaphORIZATION processes and for relating these processes to a more general framework that views language as a basically metaphorical system derived from the need to link experience and the world. According to the hypotheses put forward in this paper, metaphORIZATION chains in fact do not have a starting point (or source domain) as such. Source domains turn out to be just another instantiation of a metaphorical process that may go beyond the linguistic system as such. If we adopt a gestalt-oriented holistic view of human cognition, we cannot describe a clear dividing line between linguistic knowledge and linguistic practice on the one hand and cognitive experientialism on the other. Hence, linguistic categories, structures, functions, and semantics are conditioned by both language internal and language-transcending conditions. A cognitive model of linguistic knowledge and linguistic practice should be strong enough to cover both, i.e. the explanation of the macro-system 'language' and of micro-systems, as presented in this paper. Hence, the interpretation of individual linguistic categories has to be embedded in a framework that is oriented towards the explanation of language as such. Such an

explanatory perspective must refer to models that stem from the domain of Neurocognitive Linguistics. However, it seems that even now Analytic Cognitive Linguistics faces the problem that the neurocognitive modeling of language is unable to detect concrete linguistic processes and (even less so) linguistic substance at the neural level. Hence, any reference to Neurocognitivism cannot be but a provisional “borrowing”, which is itself more metaphorical than substantial in nature. Of course, this assessment holds for the present paper as well.

Notes

* I would like to thank Claudia Gerstner-Link (Munich), who provided valuable comments on an earlier version of this paper and Kerstin Kazzazi (Eichstätt), who undertook the painful task of correcting my English. I also thank anonymous reviewers who made valuable suggestions to render the text more readable.

1. The following abbreviations are used in the interlinear glosses:

\$	Second part of discontinuous lexical stem	GER	Gerund
>	Metaphorization	IMP	Imperative
1PL	1st Person Plural	IN	‘in’ (case)
1SG	1st Person Singular	INCL	Inclusive
3PL	3rd Person Plural	INF	Infinitive
3SG	3rd Person Singular	INTER	‘between’ (case)
3SG:Q	3rd Person Singular (interrogative)	IO	Indirect Objective
A	Agentive	LOC	Locative
ABL	Ablative	LV	Light Verb
ABS	Absolutive	MED	Medial (deixis)
AD	‘at’ (case)	MOD	Modal
ALL	‘towards’ (case)	NEG	Negation
ANTE	‘in front of’ (case)	O	Objective
AUX	Auxiliary	OBL	Oblique
BEN	Benefactive	PAST	Past
CNT	Contact	PERF	Perfect(ive)
CV:&	Converb (simultaneous action)	POSS	Possessive
DAT	Dative	POST	‘behind’ (case)
DAT2	Second Dative (Udi)	PRES	Present
DIST	Distal	PROH	Prohibitive
DIST↓	Distal (vertical below)	REFL	Reflexive
EMPH	Emphasis	S	Subjective
ERG	Ergative	SA	Stem Augment (thematic)
ESS	Essive	SUB	‘under’ (case)
FAC	Factitive	SUPER	‘above/on’ (case)
FUT	Future	SUPER(+)	‘on’ (case)
GEN	Genitive		

2. Implicitly, metaphor theory is frequently present in grammaticalization research. For instance, the formal properties listed for grammaticalization chains (Heine 1992: 348–349) come close to family resemblance structures as described in Section 5. Nevertheless, the analysis of such chains rarely makes reference to metaphorization processes as such.

3. Note that, here, I refer to the semantic scope of German *da* from a synchronic point of view. Diachronically speaking, German *da* has resulted from the syncretism of two different forms, namely from OHG, MHG *dā(r)* (locative adverb) and from *dō* (probably the accusative feminine singular of the definite article, once followed by a temporal noun, e.g. *zīt* ‘time’). It is interesting to see that the synchronic

metaphorization path (*local* > *temporal* > *causal*) goes against the diachronic facts. Accordingly, MHG *dār* tended to be metaphorized as 'causal' (hence *local* > *causal*), whereas the intermediate stage *temporal* was not present with *dār*. This conceptual layer was later introduced at the time the two forms *dār* and *dō* phonetically merged (thanks go to Kerstin Kazzazi for drawing my attention to this point).

4. Conventionally, the term 'Fluid-O' is used to denote the formal differentiation of at least two domains within the function 'Objective' (or 'Object') with the help of morphological and/or syntactic devices. 'Fluid-O' differs from 'Split-O' to the extent that with 'Fluid-O', the speaker has the pragmatic choice to use one of the options (e.g. definite vs. indefinite), whereas 'Split-O' is controlled by the semantic properties of the lexeme at issue (e.g. human vs. non-human); see Schulze (2000) for details.

5. This hypothesis goes together with the general assumption that the function of metaphorization is not restricted to lexical and/or functional gap filling; see for instance Goatly (1997: 135–167).

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Aspect and metonymy in the French *passé simple**

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The beginning is half of the whole.

(Ancient proverb)

1. Introduction

In this chapter we argue that the combination of a verb meaning with a grammatical aspect meaning leads to a holistic sense that is non-compositional, i.e. not predictable from the meanings of the constituent parts of the verb form. Non-predictability, however, does not necessarily mean arbitrariness. We contend that the result of the concatenation of verbal and aspectual meaning may be *motivated* by metonymy and metaphor.¹ Our paper presents a case for such motivated meaning found in some French verbs that denote *states*, in particular, mental states, states of being, and states of possession. Such verbs, when combined with a form of the so-called *passé simple* ('simple past'), tend to shift to a dynamic sense that in other languages, including English, is often more adequately rendered by a non-stative verb form.

The data that we are concerned with have been long known by foreign language teachers. One of the authors of this chapter (K.-U. P.) remembers from his own school days that the translation of expressions such as *je sus* (literally 'I knew') provided in pedagogical grammars of French for German learners is *ich erfuhr*, equivalent to the English 'I learned, I came to know'. What is new in our contribution is that we try to provide an *explanation* for the shift of stative verbs to dynamic senses in terms of conceptual metonymy and, to a lesser extent, metaphor. In so doing, we hope to demonstrate that these conceptual tropes are reflected not only in the lexical semantics and pragmatics of language but in grammatical structure as well, i.e., grammatical structure itself is a site for figuration.

The phenomenon we explore in this chapter is not restricted to the French *passé simple*. In his well-known textbook, Comrie (1991: 16–40) distinguishes between two basic grammatical aspects: the perfective aspect, which marks a situation as a bounded whole irrespective of its internal structure; and the imperfective, which marks a situation as having no inherent boundaries and focuses on the internal structure of the event. Instantiations of this distinction in French are the *passé simple* (perfective) and the *imparfait* (imperfective), both of which are, in addition, tenses that refer to past events.² Comrie

remarks that in various languages the combination of a stative verb with a perfective aspect may result in an ingressive meaning. The following data from Comrie (1991: 19–20) illustrate this observation:

Ancient Greek (*basileúō* ‘I reign’)

- (1) Ebasileusa déka étē.
‘I reigned for ten years’ (perfective (aorist): bounded event)
- (2) Ebasileusa.
‘I became king’ (perfective → ingressive)
- (3) Ebasileuon.
‘I was king’ (imperfective)

Spanish (*conocer* ‘know, be acquainted with’)

- (4) Conocí a Pedro hace muchos años.
‘I got to know Pedro many years ago’ (perfective → ingressive)

Russian (*ponimat* ‘understand’; perfective *ponjat* ‘come to understand, grasp’)

- (5) Nakonec on ponjal, v čem delo.
‘At last, he grasped what was up’ (perfective → ingressive)

Mandarin Chinese

- (6) Tā gāo.
‘He is tall’
- (7) Tā gāo-le.
‘He became tall/has become tall’ (perfective → ingressive)

The phenomenon is thus fairly widespread, but what, to our mind, has not been explained satisfactorily is how the semantic shift from a perfective reading to the so-called ingressive reading with stative verbs is motivated conceptually. In this chapter we propose a solution to this use of the French *passé simple* that relies heavily on the notion of *conceptual metonymy* as understood in cognitive linguistics. We will however argue that the aspectual shift is not quite adequately captured by labels such as ‘ingressive’ or ‘inchoative’.

Methodologically, we proceed as follows. We compare the use of stative verbs in the *passé simple* (abbreviated as *ps*) in French narrative texts to their translations in English. Where the English translator deems it appropriate to translate a stative verb into a dynamic verb, instead of using an equivalent stative verb in English, we have good evidence that in the French source text a metonymically motivated sense shift has taken place. The conceptual shifts involved are analyzed in some detail. We do not claim that this metonymic shift takes place by necessity, but this fact follows naturally from our conception of metonymy (see Section 4 below). Our study is more qualitative than quantitative in nature, i.e., we wish to make the point that the phenomenon of metonymic shift from *STATIVE* to *DYNAMIC* in French *ps* forms exists and that it is sufficiently frequent to deserve the linguist’s attention.

The chapter is structured as follows. In Section 2 we discuss the meaning and function of the French *ps*. Section 3 provides information about our data sources. Section 4 introduces the concept of metonymy used in the analysis of the data. Section 5 discusses three stative verbs and provides a conceptual analysis of the shifts that a verb’s meaning

may undergo under the pressure of the *ps* and other contextual factors, and the semantic contribution of the stative verb to the total meaning of *Verb*_{STATE} + *ps*. Section 6 concludes the chapter with a summary of the findings.

2. The *passé simple* (*ps*) in French

The *ps* in French, in contrast to the descendants of the Latin perfect in other Romance languages, is usually restricted to the written language. Typically, it is found in literature, e.g. narrative fiction, and our data sources actually consist of nineteenth and twentieth century French novels (see Section 3 below). The grammatical meaning of the French *ps* has been long discussed, both in traditional grammar and linguistics. Some linguists, e.g. Guenther, Hoepelman, and Rohrer (1978), who follow Guillaume (1929) in this respect, have argued that the *ps* has an inherently inchoative or ingressive meaning. According to this approach, the *ps* profiles the beginning of a past event.³ In contrast, other grammarians, such as Grevisse (1993:1252), in his voluminous reference grammar *Le bon usage*, maintain that the basic meaning of the *ps* is perfective: according to him, it denotes a bounded event (“un fait bien délimité”) in the past having neither contact with nor consequences for the present.

More recently, de Swart (1998) has claimed in an influential article that the *ps* is a tense that *selects* perfective verbs, i.e. either accomplishments or achievements in Vendler’s (1967) terminology.⁴ Thus she assumes that the *ps* itself does not have an inherent aspectual meaning but that it is *sensitive* to lexical aspect. In those cases where the event type of the verb violates the selection restriction imposed by the *ps*, the verb undergoes a process of *semantic shift* (in the sense of Talmy 2000:324) or *coercion* (Pustejovsky & Bouillon 1996), resulting in a perfective reading. Labelle (2002) argues against this position, claiming that there are no specific selection restrictions on the type of situation co-occurring with the *ps*. In her view, the *ps* is simply a past tense with “existential closure” (11). A consequence of Labelle’s theory is that the boundedness of the *ps* and its often-observed property of propelling the narrative action forward are not intrinsic but pragmatic or rhetorical effects of its use in discourse.

In what follows we adopt the conservative position of Grevisse that the French *ps*, in addition to its past temporal reference, *has* an aspectual meaning. As a first approximation, one might assume that it profiles a perfective, i.e. left- and right-bounded event schema instantiated by specific perfective verbs. Relying on Taylor’s (2002:395) proposal that tense inflections syntactically head and semantically “ground” finite clauses, one might further be tempted to claim that, in the case of the French *ps*, its conceptual properties are *inherited* by the finite clause that it heads. Appealing and elegant as such an approach seems at first sight, it is not without problems, as we show in Section 5.

To summarize, we assume that the *ps* in French has a perfective meaning, i.e., it expresses an event schema with a left and a right boundary, but that, under the influence of stative verbs, the combined meaning *Verb*_{STATE} + *ps* will not necessarily have a right boundary. In other words, we will show that aspects of the unbounded stative meaning are preserved in the overall meaning and that not all properties of *ps* survive in the combined meaning.

Table 1. Corpora

Author, work	Number of words (French original)	Number of words (English translation)	Total
Céline, Louis Ferdinand, <i>Voyage au bout de la nuit</i>	82,664	89,143	171,807
Gide, André, <i>L'immoraliste</i>	24,946	29,326	54,272
Sartre, Jean-Paul, <i>La nausée</i>	75,348	77,128	152,476
Zola, Emile, <i>Germinal</i>	165,931	177,229	343,160
Total	348,889	372,826	721,715

Table 2. Text sources and translation information

INTERSECT Project, Language Centre, University of Brighton, Falmer, Brighton BN1 9PH, England: Céline, Louis Ferdinand. 1932. <i>Voyage au bout de la nuit</i> . [<i>Journey to the End of the Night</i> . Translator and date of translation unknown.]
Gide, André. 1902. <i>L'immoraliste</i> . [<i>The Immoralist</i> . Translated by Dorothy Bussy. Middlesex: Penguin Books, 1973.]
Sartre, Jean-Paul. 1938. <i>La nausée</i> . (<i>Nausea</i> . Translator and date of translation unknown.)
Zola, Emile. 1885. <i>Germinal</i> . [<i>Germinal</i> . Translated by Havelock Ellis. Everyman's Library, 1894.] http://ibiblio.org/gutenberg/etext04/7germ10.txt [original] http://www.eldritchpress.org:8080/ez/germinal.html [translation]

3. Data sources

We have investigated French stative verbs in a collection of data taken from the narrative sources summarized in Tables 1 and 2.

4. Conceptual metonymy

For the analysis of aspectual shift proposed in this paper the notion of *conceptual metonymy* is crucial. We therefore briefly characterize some of the basic attributes of metonymy as used in this paper.⁵ To begin with, what we call the *basic metonymic relation* is diagrammed in Figure 1 (see e.g. Panther 2005).

We regard metonymy as a tool of meaning elaboration, some of whose relevant properties are listed below:⁶

- i. Metonymy is based on associative thinking, which itself may be grounded in human experience and culture.
- ii. A linguistic metonymy consists of a *vehicle* that conveys a *source* meaning that provides mental access to an associatively connected *target* meaning. More specifically, the target meaning is an elaboration of the source meaning, i.e., the source meaning is “contained” in the target meaning, but becomes backgrounded as a result of the metonymic operation.⁷

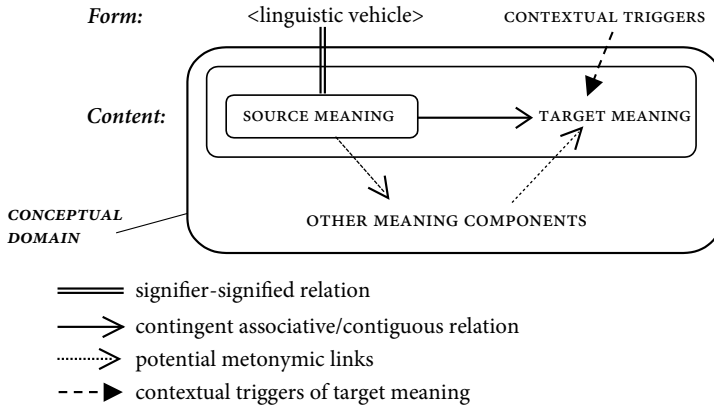


Figure 1. The basic metonymic relation

- iii. Access to the target meaning may be facilitated or even enforced by other meaning components in the conceptual domain of the metonymic operation and/or contextual triggers (including the linguistic and extralinguistic environment).⁸
- iv. The metonymic shift is *construed* as occurring in a single conceptual domain – in contrast to metaphor, which involve cross-domain mappings.
- v. The relation between source and target meaning is *contingent*, i.e., the metonymic relation as such is conceptually non-necessary. This entails that the metonymic relation is, in principle, defeasible.
- vi. In a prototypical metonymy, the target becomes conceptually *prominent*; the source is contained in the target but backgrounded.
- vii. In prototypical metonymies the relation between source and target is conceptually *tight*.
- viii. Metonymic relations provide natural inference schemas that allow fast, economical, and effortless access to target concepts.

A few comments on some of these points are in order. In (v) it is claimed that the metonymic relation is conceptually non-necessary, i.e. contingent. At first sight, this statement seems to be inconsistent with (iii), where it is assumed that, under certain circumstances, a metonymic shift may be enforced. The apparent incompatibility of (iii) and (v) vanishes however on closer inspection: We claim only that the source-target relation as such – irrespective of other meaning components and context – is defeasible; we do not deny that contextual pressure and other meaning components may virtually or factually make the cancellation of the target meaning impossible. A number of examples where the metonymic shift is enforced are discussed in Section 5.

5. Metonymically induced aspectual shift in the French *passé simple*

5.1 From 'knowing' to 'learning': The case of *savoir*

Given the conceptual apparatus presented in Sections 2 and 4, we are now in a position to present our data analysis. We begin with a sentence from André Gide's novel *The Immoralist*:

- (8) a. je ne **sus** que plus tard l'avantage qu'ils y trouvaient.
 I not knew but more late the.advantage that.they there found
 (André Gide, *L'immoraliste*)
- b. I only **learned** later how much they benefited by this.

In (8a) the word in bold is a ps form of the French verb *savoir* 'know', which denotes an unbounded mental state, i.e. is imperfective. Crucially, however, it occurs in the Simple Past, whose basic meaning we assume is PAST and PERFECTIVE. The sentence in (8a), then, apparently instantiates a semantic conflict: the verb meaning is unbounded/imperfective, the meaning of the Simple Past is bounded/perfective. How can this conceptual conflict be resolved? Interestingly, the English translation (8b) contains the non-stative verb *learn* in the past tense.

A standard approach to the resolution of a conceptual conflict between two linguistic units is to assume that one of them is "stronger" than the other and *coerces* or *shifts* the meaning of the "weaker" unit to a sense that is compatible with that of the stronger unit (see Talmy 2000: 324ff.; Pustejovsky & Bouillon 1996). Furthermore, it seems to be generally assumed that grammatical meanings are stronger than lexical meanings (see e.g. Goldberg 1995; Michaelis 2004).⁹ This assumption also seems to underlie Taylor's (2002) account of tensed clauses (see Section 2). Taylor postulates a schematic meaning for tense/aspect inflections, which is specified by the meaning of the verb (or verb phrase) combining with the tense/aspect inflection. We argue below however that the phenomena we are investigating in this paper do not exhibit cases of specification but metonymic elaboration. If the attribute PERFECTIVE of the *passé simple* were the *only* determining factor in the coercion process, one would expect its outcome to be a left- and right-bounded situation. However, the result of the combination V_{STATE} + ps in (8a) is a left boundary (onset) followed by an open-ended state. This observation suggests that the aktionsart of the verb, viz. STATE, plays a role in the meaning that *sus* assumes in the clause. It is just as important as the grammatical aspect meaning PERFECTIVE EVENT denoted by ps. In other words, there seems to be an effect of *mutual influence* in such cases: the grammatical meaning influences the lexical meaning to a certain extent but the lexical meaning also exerts its pressure on the grammatical meaning.¹⁰ The *passé simple* is shifted metonymically from a left-and-right-bounded event to a left-bounded event and contributes *one* boundary (the onset) to the overall sense; the verb contributes its stative meaning. As a result, the mental state of knowing is now marked as having a beginning, i.e. a left boundary.¹¹ There is however no right boundary. The mental state of knowing has its onset in the past; how much, if at all, this state extends into the present remains an open question.

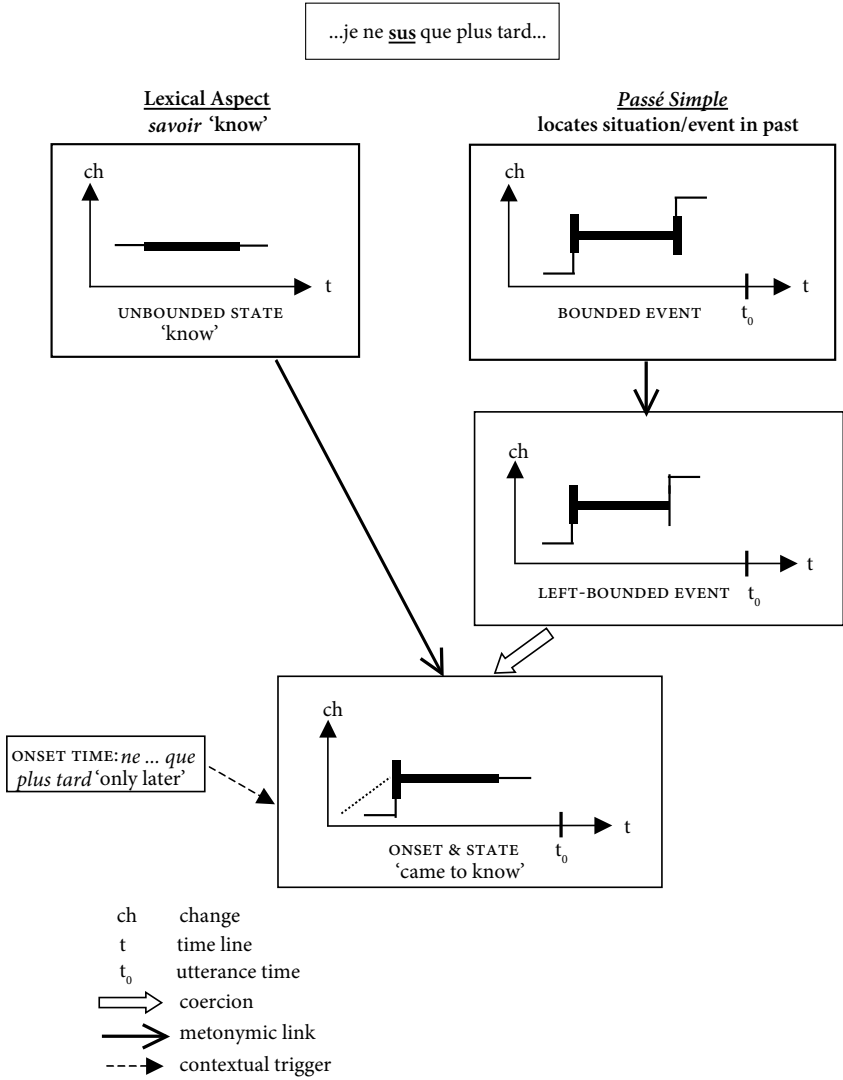


Figure 2. Metonymic coercion in *je ne sus que plus tard*

gradual increase in the amount of knowledge that ultimately reaches its completion point (i.e. the left boundary). In both cases, the entailed resultant state is KNOW. One might be tempted to call the two metonymies involved STATE FOR ACHIEVEMENT OF STATE and STATE FOR ACCOMPLISHMENT OF STATE, respectively. It should however be kept in mind that the focus in either case is on the left boundary *plus* the resultant state. What precedes the onset is backgrounded or even irrelevant. We therefore prefer to call the metonymy by the more general formula STATE FOR ONSET & STATE, i.e. the focus is just as much on the left boundary as on the resultant state. The metonymic relations are represented by open arrowheads. The coercive relation that contributes to the metonymic shift is represented

by a block arrow; finally, the influence of the time adverbial *ne [...] que plus tard* 'only later', which reinforces the ONSET & STATE reading, is represented by a discontinuous line with a solid arrowhead.

An example that is very similar in aspectual structure to (8a) is (10a), which is found in Céline's novel *Voyage au bout de la nuit*, where the translator chooses *got to know* for the PS form *surent* '(they) knew'. Again, as for (8a), the English translation codes the target meaning in a more explicit fashion than the French original, which relies on the STATE FOR ONSET & STATE metonymy, with the left boundary conjunction *dès que* 'as soon as' serving as a contextual trigger.

- (10) a. Les fourmis rouges, dès qu'elles le **surent**, qu'on en avait de nouvelles conserves, montèrent la garde autour de ses cassoulets. (Céline, *Voyage au bout de la nuit*)
 b. As soon as the red ants **got to know** that a stock of new food had arrived, they mounted guard around the cassoulet stew.

But note that in (10b) a literal translation of *surent*, viz. *knew* (instead of *got to know*), would also be appropriate in this context. Stative verbs in the English Simple Past can thus have a metonymically coerced interpretation from STATE to ONSET & STATE, but this interpretation seems to need more contextual support (triggering) than the corresponding *passé simple* form in French.

To see this point, consider the French sentence in (11a) from the well-known novel *Germinal* by Emile Zola, where the PS *sut* '(she) knew' is translated with the achievement/accomplishment-of-state verb *learnt* in (11b).

- (11) a. Lorsque, le soir, la Maheude **sut** que son homme en était, elle fut désolée, elle lui demanda s'il voulait qu'on les jetât à la rue. (Zola, *Germinal*)
 b. When, in the evening, Maheude **learnt** that her man was one of them, she was in despair, and asked him if he wanted them to be thrown on the street.

A literal translation for (11b) with *knew* seems much less appropriate in this context than in (10b) above. Why would *knew* fit less well in (11b) than in (10b)? In both (10) and (11) the verbs in bold are situated in adverbial subordinate clauses. Yet each contains a different sort of temporal reference. In (10) the phrase *dès que* 'as soon as' provides a punctual time reference, but in (11) the time reference *lorsque, le soir* 'when, in the evening' refers to a time interval that can actually be fairly large and is, therefore, more indeterminate than in (10). We contend that the punctual time reference in (10b) in combination with the simple past tense form *knew* would trigger the metonymic inference to the meaning 'came to know'. On the other hand, in (11a), despite the vague time reference, French *sut* is capable on its own to metonymically evoke the 'came to know' sense; however, in the English translation the vague time reference requires the explicit coding of the target sense 'come to know': *knew* on its own seems insufficient to trigger the change-of-state meaning that *learnt* provides.

What this suggests is that in English the past tense of the stative verb *know* – by itself – cannot be used metonymically for the sense 'came to know'. In other words, the metonymy STATE FOR ONSET & STATE seems to be more restricted in the Simple Past in English than in the *passé simple* in French.

5.2 From 'being' to 'becoming': The case of French *être*

In this section we consider the metonymic shift of the verb form *être* + ps from a STATE reading to the sense ACHIEVEMENT/ACCOMPLISHMENT OF STATE, i.e. what we call the STATE FOR ONSET & STATE metonymy. As with *savoir* this shift is by no means obligatory. Therefore one would expect that explicit coding of the onset of a state is avoided when the translator judges this meaning component not to be conceptually relevant, as in (12), where the translator adheres to a literal translation of *fut* 'was':

- (12) a. Quand ce fut la nuit, Michel dit: [...] (Gide, *L'immoraliste*)
 b. When it was night Michel said: [...]

Of interest at this point are those examples with the verb form *être* + ps for which English translators explicitly code the target sense ONSET & STATE. As pointed out in Section 1, such data provide good evidence that in French a metonymically motivated aspectual shift takes place. Consider (13):

- (13) a. Quand elle fut à ma proximité, je me mis à lui faire des petits signes d'intelligence, si je puis dire, à la serveuse, comme si je la reconnaissais. (Céline, *Voyage au bout de la nuit*)
 b. When she came near me, I started to make little knowing signs to her, as though I recognized her.

In (13a), *fut à ma proximité* 'was in my proximity, was near me' codes a location, but the translator interprets this location as the endpoint of motion (*come near me*), which is at the same time the onset of being *at* the location. The translator thus interprets the French original as instantiating the metonymy BEING AT A LOCATION FOR MOVEMENT TO THE LOCATION.

Example (13) refers to goal-oriented motion (*come*), the spatial analog of the telic process of *becoming*, which is relevant for the interpretation of *fut* 'was' (14a) as *became* (14b):

- (14) a. sur les conseils de T... j'essayai donc de les ouvrir la nuit; un peu, d'abord; bientôt je les poussai toutes grandes; bientôt ce fut une habitude, un besoin tel que, dès que la fenêtre était refermée, j'étouffais. (Gide, *L'immoraliste*)
 b. in accordance with T ...'s advice, I now tried keeping [the windows] open at night; a little at first; soon I flung them wide; soon it became a habit, a need so great that directly the window was shut, I felt stifled.

In (14b) the translator explicitly codes the target meaning of the shift from STATE to ONSET & STATE, reinforced by the contextual trigger *bientôt* 'soon', which introduces a left boundary into the discourse. Figure 3, representing this interpretation, is structurally isomorphic to Figure 2.

Sentence (15a) from Céline contains a ps form of the expression *être au courant (de)*, usually translated into English as *know (about)*. However, the translation given in (15b) is the dynamic past tense form *learned*.

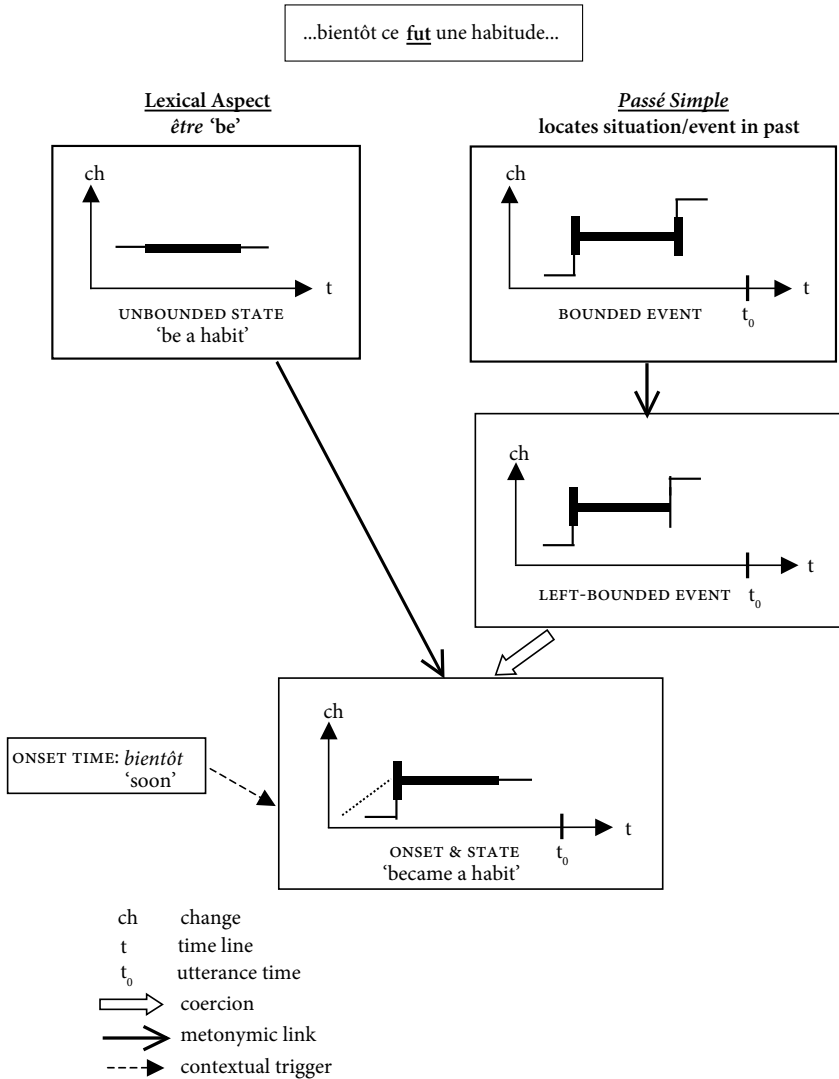


Figure 3. Metonymic coercion in *bientôt ce fut une habitude*

- (15) a. Quand Pomone fut au courant de mon état et de mon passé médical, il ne se tint plus de me confier son tourment. (Céline, *Voyage au bout de la nuit*)
 b. When Pomone learned about me and heard that I had been a doctor, he immediately unbosomed himself to me about the torment of his life.

Sentence (15a) contains the contextual trigger *quand* 'when', which supports the metonymic shift from BE to BECOME, and which, in conjunction with the phrase *au courant* 'informed', leads to the target meaning 'become informed' or 'come to know'.

As a final example in this section that involves metonymic interpretations in both the French original and the English translation consider (16):

- (16) a. Il ne fut pas plutôt devant Marceline que je compris qu'il ne lui plaisait pas.
 (Gide, *L'immoraliste*)
 b. He was no sooner **standing** before Marceline than I knew she had taken a dislike to him.

In (16a) a metonymic interpretation of *fut* (literally: 'was (located)') is supported by the punctual time adverbial *ne ... plutôt que* 'no sooner than'. The metonymic meaning of *fut devant Marceline* 'was before Marceline' is clearly 'came to be located before Marceline', i.e., the location is a result of prior movement to the location. Some interesting conceptual intricacies that we have not considered so far arise in the translation (16b). The translator chooses a stative verb (*stand*) in the progressive aspect, which itself is usually assumed to be a *stativizer* (see Langacker 2000: 226–229; Michaelis 2004: 35). However, the effect of this "vacuous" stativizing operation is an intuitively more dynamic sense. Possibly, this sense comes about because the application of the progressive aspect to stative verbs often has an effect of temporariness: *She was living in London in the 1990s* suggests a relatively short period (or periods) in contrast to *She lived in London in the 1990s*. The former, but not the latter, is more natural with an additional time specification such as *off and on*. A temporary state has a more dynamic quality to it than a permanent state.¹⁴ Temporariness implicates change and temporal boundaries. In (16b) the comparative adverbial *no sooner [...] than* denotes a point in time when the woman Marceline stood "before him" and the narrator became aware that Marceline "took a dislike" to the third character "him". This situation implicates that, before this point in time, "he" was moving towards Marceline and the narrator did not yet know about Marceline's disliking "him". Thus there are two metonymically induced senses in (16b): (i) 'came to be standing' predicated of "him" and a (ii) 'came to know' predicated of the narrator (a type of metonymic shift discussed in Section 5.1). Leaving (ii) aside, we represent the metonymic target meaning (i) 'came to be standing' in (17a) and (17b), respectively:

- (17) a. French original:
 UNBOUNDED STATE (être) → LEFT-BOUNDED STATE (être) / ONSET & STATE (être)
 b. English translation:
 UNBOUNDED STATE (stand) → TEMPORARY STATE (stand) → LEFT-BOUNDED STATE (stand) / ONSET & STATE (stand)

5.3 From 'having' to 'doing': The case of *avoir*

To start with a case very much in line with the data discussed in Sections 5.1 and 5.2, consider the typical French translation of Rudyard Kipling's tale *How the camel got his hump*:

- (18) Comment le chameau eut sa bosse.

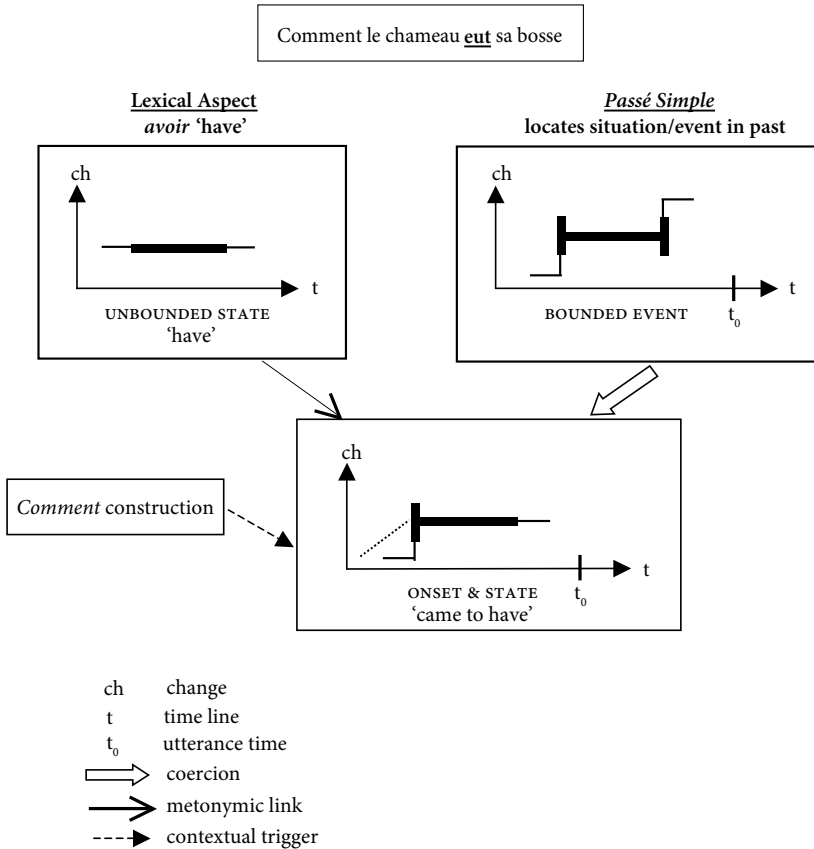


Figure 4. Metonymic coercion in *Comment le chameau eut sa bosse*

The literal, but unidiomatic translation of (18) is 'How the camel *had* his hump'. Sentence (18) is a perfect example of a metonymic shift from the stative meaning 'had, possessed' to the left-boundary plus state meaning 'came to have'. A reinforcing contextual trigger is in this case the adverbial of manner or means *comment* 'how', which contains a variable to be filled by the ensuing narrative. *Comment* (like *how*) requires a telic process interpretation (probably an accomplishment) whose culmination point is reached when the camel *has* a hump. Figure 4 diagrams the conceptual structure of (18).

A more complex picture emerges with so-called *light verb* constructions with *avoir* 'have', especially ones in which the object noun following the verb expresses a bounded event. Again, as in the preceding sections, we are not aiming at a systematic comparative analysis of French and English. Rather, our methodology is to look at some French *avoir NP* constructions where the English translations are not "literal". As pointed out in Section 1 above, the viewpoint of the translator can help to unravel some of the conceptual complexities of the French ps that might otherwise go unnoticed.

Consider first examples (19)–(21) in which the ps form *eut* 'had' is translated as *gave*, *made*, and *uttered*, respectively:

- (19) a. Le petit brun ne répondit pas, mais il **eut** un imperceptible sourire, plein de morgue et de suffisance. (Sartre, *La Nausée*)
 b. The little brown-haired boy did not answer, but he **gave** an imperceptible smile, full of arrogance and self-sufficiency.
- (20) a. Le vieux **eut** un ricanement d'aise, et montrant le Voreux: – Oui, oui ... (Zola, *Germinal*)
 b. The old man **made** a grimace of satisfaction and pointed to the Voreux: “Yes, yes ...
- (21) a. Mais, comme Catherine lisait à voix haute les noms, sur les plaques de zinc, au-dessus des mangeoires, elle **eut** un léger cri, en voyant un corps se dresser brusquement devant elle. (Zola, *Germinal*)
 b. But as Catherine was reading aloud their names, written on zinc plates over the mangers, she **uttered** a slight cry, seeing something suddenly rise before her.

What (19)–(21) have in common is that they all express brief, if not punctual events. *Gave a smile*, *made a grimace*, and *uttered a cry* are short events – possibly actions. The English translations can be seen as evidence that in the French original the *ps* expressions *eut NP* convey a dynamic, i.e. non-stative meaning. However, the meaning of *eut* in (19)–(21) is more complex than in our introductory example (18), and also quite different from the data that we have discussed so far in Sections 5.1 and 5.2. Two important meaning properties of examples (19)–(21) are:

- i. These expressions do not profile the onset of a state but have a perfective meaning, i.e., they profile a complete event of short duration with left and right boundaries.
- ii. The events denoted by the noun phrase instantiate the metaphor *EVENTS ARE OBJECTS*.

Figure 5 – in which, for ease of readability, we have omitted the change and time axes – represents the conceptual structure shared by (19)–(21).

The basic idea of our analysis is, as throughout the chapter, that there is a conceptual conflict between the meaning of *ps* as a left- and right-bounded event and the meaning ‘have an object’, which is an unbounded state. Our theory is that there have to be meaning adjustments in both the verb phrase and the *passé simple*. We suggest here that the bounded-event reading of *ps* itself might undergo a metonymic shift whereby the right boundary is backgrounded so that only the left boundary and the ensuing event phase are conceptually prominent. At the same time, the meaning of ‘have object’ is, via metonymy, adjusted to ‘came to have object’. Both the *ps* and the verb phrase have to undergo some conceptual shifts to become semantically compatible with each other.

So far everything is in line with the data we have previously discussed. What is new in (19)–(21) is a metaphorical operation from the source domain *POSSESSION OF OBJECTS* to *CAPABILITY TO DO ACTIONS*, which is a blend of the metaphors *CAPABILITIES ARE POSSESSIONS* and *EVENTS ARE OBJECTS*, with the specific case *ACTIONS ARE OBJECTS*. (For reasons of simplicity the latter two metaphors are not represented in Figure 5.) Having an object is a prerequisite for manipulating it, for using it in actions. Analogously, having the capability to perform an action is a prerequisite for performing the action. The possession of a concrete object serves as the source domain from which *POSSESSION* is mapped onto *CAPABILITY* and *OBJECT* is mapped onto *ACTION* (indicated with a dou-

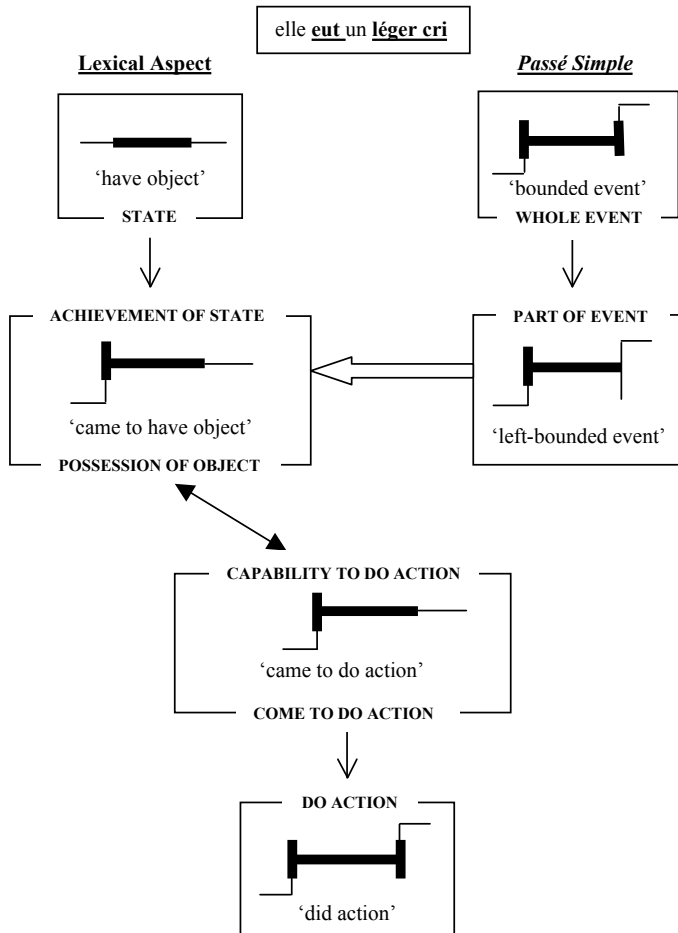


Figure 5. Metonymic and metaphoric elaboration of *elle eut un léger cri*

bled-headed arrow). This complex metaphor, together with the metonymic 'left-bounded event' sense, leads to the meaning 'come to have the capability to do action', which, after application of a pervasive metonymy that we have called *POTENTIALITY FOR ACTUALITY* elsewhere (Panther & Thornburg 1999b), results in the meaning 'come to do action'. This reading profiles the onset of the action. And since parts of events can trigger a whole event interpretation, it is possible to end up with an event reading 'do action': a profiled change-of-state (conferred already by the basic meaning of the *ps*) is finally shifted to the perfective sense 'do action' – in this particular case what the translator of *La nausée* renders as 'gave an imperceptible smile'.

In (22) the French light verb construction is not translated into a corresponding light verb construction in English: the phrasal expression *eut [...] un sourire* is rendered as [...] *smiled*. But in this example again the translation captures the perfective nature of the event of smiling.

- (22) a. M. Hennebeau ne se fâcha point. Il **eut** même un sourire. (Zola, *Germinal*)
 b. M. Hennebeau was not at all angry. He even **smiled**.

To conclude this section, we present two additional examples conforming to the metonymic and metaphoric shifts diagrammed in Figure 5:

- (23) a. Il **eut** un haussement d'épaules désespéré, il mordit de nouveau dans sa tartine. (Zola, *Germinal*)
 b. He **shrugged** his shoulders with despair, and again bit at his bread and butter.
 (24) a. D'ailleurs, il n'**eut** d'abord qu'un regard distrait, il s'était dirigé vers une table, couverte de papiers, et il y cherchait la note introuvable. (Zola, *Germinal*)
 b. But at first he only **glanced round** with an abstracted look as he went towards a table covered with papers to look for the missing report.

In (23a) there is chain of metonymic and metaphorical shifts of the same sort as in (18)–(22) from a STATE to a perfective meaning that could also be paraphrased as 'give a shrug'. In (24a) the glance is something that is "produced" and, ultimately, it is *eut* that expresses this meaning component after having undergone various metonymic and metaphoric elaborations.

6. Summary and conclusion

In this chapter we have provided evidence for the claim that the meaning of French verbal forms in the *passé simple* relies on a complex interaction between the aktionsart of the verb (or verb phrase) and the meaning of the *ps* itself, which we assume to be perfective. We have argued against the Michaelis' (2004: 25) override principle, which postulates that "[i]f a lexical item is semantically incompatible with its morphosyntactic context, the meaning of the lexical item conforms to the meaning of the structure in which it is embedded". On the basis of narrative French texts and their translations into English, we have shown that the grammatical meaning of the French *ps* and the lexical meanings it combines with exert mutual pressure on each other and that the outcome of this process is a semantic compromise: the respective meanings of the verb stem and the *ps* are mutually adjusted.¹⁵

One might object to our analysis, questioning why it is necessary to postulate long metonymical and metaphorical chains (as in Figure 5) to arrive at the desired target meanings. Such chains are necessary if our initial assumption is correct that the *passé simple* is a past tense with a perfective sense. It should however be borne in mind that we do not claim that native speakers go through a process of metonymic and metaphoric chaining whenever they produce or comprehend verb forms in the *ps*. We certainly cannot make any psychological claims at this point about what happens in the brain when such data are processed. But the analysis we have proposed has some plausibility on conceptual and theory-internal grounds, given that the metonymies and metaphors we have seen at work in our data have a high degree of generality and are found elsewhere in the conceptual system.

Notes

* We are very grateful to Antonio Barcelona for his careful reading of our paper and his many insightful comments and suggestions. We also thank two anonymous reviewers for their comments.

1. See Panther and Thornburg (2003c) for research results regarding the role of metonymy in EVENT-phase coding in French and English across different discourse genres. Additional papers on the cross-linguistic relevance of conceptual metonymy can be found in Panther and Thornburg (2003b).

2. We can ignore the *passé composé* for our purposes.

3. The term ‘profile’ is of course inspired by Ronald Langacker’s foundational work in Cognitive Grammar. We use ‘event’ in the broadest sense here, as ‘eventuality’ or ‘situation’.

4. De Swart calls such telic situations ‘events’.

5. As noted in our introductory chapter (this volume: 11–12), we apply a narrower conception of metonymy to our data than Langacker (this volume: 46), who considers metonymy to be a general feature of grammars.

6. Our notion of metonymy is discussed in more detail in e.g. Panther and Thornburg (2003a), Panther (2005), and Panther and Thornburg (2007).

7. In our view the phenomenon we are investigating here constitutes metonymy even under the constrained view of Paradis (2004), who distinguishes metonymization from facetization and zone activation.

8. Barcelona (2005) makes a similar point, observing that metonymies are facilitated by contextual factors and often form the input for further metonymies (metonymic chaining).

9. Strictly speaking, lexical items are viewed as constructions in their own right in construction grammar, but this does not invalidate the point that lexical constructions are considered to be “weaker” than more abstract grammatical constructions.

10. Our account runs counter to, for example, the underlying assumption in construction grammar that the meaning of a lexical item is coerced by the meaning of the construction in which it occurs (see e.g. Goldberg 1995).

11. This is why Comrie (1991: 19–20) uses the term ‘ingressive’.

12. See e.g. Panther and Thornburg (2003a, 2007) and Panther (2005) for more detailed discussion of this point.

13. Given the target meaning ‘learn Y (from X)’ our approach to metonymy predicts that the valency of *savoir* can be increased to include a third argument, the source of information, and indeed one finds examples of this kind: *Je sus plus tard, de très bonne source, que ces bruits étaient fondés* (‘I only learned later from a reliable source that these rumors were founded’) [from Léon Daudet, *Souvenirs littéraires*]. Antonio Barcelona (p.c.) informs us that in Spanish the three-argument construction with ‘know’ is also possible, e.g., *Sólo más tarde supe por / de labios de Pedro que p* (‘It was only later I learned from Peter’s lips that p’).

14. Michaelis (2004: 35–36) notes that a conceptual conflict arises in sentences with state predicates in the progressive, e.g., *I’m liking your explanation*. In such cases the stative meaning undergoes implicit type-shifting to an activity sense as a consequence of her *override principle*. She regards such “progressive-form state predications” not as “temporary states” but as “homogeneous activities”.

15. An analogous point is made with regard to sentences such as *Enjoy your summer vacation!* in Panther and Thornburg (2004: 101) and Panther (2005: 364). This utterance cannot be interpreted as a directive speech act like prototypical imperatives, but, due to the lexical meaning of *enjoy*, expresses a wish. The non-actional verb *enjoy* thus works against the constructional meaning of the imperative meaning ‘Speaker asks hearer to perform an action’.

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PART 3

Proper names and noun phrases

Generic reference in English

A metonymic and conceptual blending analysis*

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1. Introduction: Outlining problems of genericity

1.1 Types of generic reference

The notions of genericity and generic reference apply to types, or kinds, or classes, which are part of the structured, or idealized, model of the world (Langacker 1991:264, 1995; Taylor 2002:359). Genericity is, however, not a uniform phenomenon. Scholars of genericity (see e.g. Krifka et al. 1995, Nickel 2005) generally distinguish between two basic classes of genericity: characterizing generalizations, as in (1a), and direct reference to a kind, as in (1b).

- (1) a. *A lion* has a bushy tail.
- b. *The lion* is a predatory cat.

Sentence (1a) expresses a characterization of a type, the species 'lion'. The predication *has a bushy tail* describes a characteristic attribute, which, however, need not apply to all members of the type: there are, in all likelihood, lions in the world that do not have a bushy tail. A characterizing generalization thus allows for exceptions. Sentence (1b), by contrast, does not allow for exceptions: it is a statement about the species 'lion' as a whole. The generic noun phrase *the lion* "directly" refers to a type and the predicate *is a predatory cat* categorizes the type.

The dichotomous distinction between these two types of genericity is certainly justified from a truth-conditional point of view. However, the borderlines between characterizing generalizations and direct reference to a kind are far from clear-cut. Genericity is – as suggested by Chesterman (1991: 38) and Anderson (2004: 446–450) – much rather to be seen as forming a cline from full to marginal genericity. Such a cline would take into account conceptual as well as linguistic aspects, such as the type of construction, the predicate, tense, aspect, information structure, adjuncts, and type of generic reference.¹ This study is concerned with types of generic reference in English and their conceptual basis.

English distinguishes four types of generic reference by means of two dimensions: definiteness/indefiniteness of the article and singular/plural number of the noun. I assume that each form of generic reference conveys its own generic meaning.² Striking differences between the generic NPs can, for example, be observed in their behavior with respect to non-human and human referents in subject position. As shown in Table 1, three of the four types of generic reference display different degrees of acceptability depending on whether they denote a non-human or a human generic referent. Such seeming irregularities are, of course, in need of explanation and are also dealt with in the ensuing discussion.

Table 1. Generic reference with non-human and human subjects in English

generic form	non-human generic subject	human generic subject
(a) indefinite singular	<i>A lion has a bushy tail.</i>	[?] <i>An Italian loves pasta.</i>
(b) indefinite plural	<i>Lions have bushy tails.</i>	<i>Italians love pasta.</i>
(c) definite singular	<i>The lion has a bushy tail.</i>	[?] <i>The Italian loves pasta.</i>
(d) definite plural	[?] <i>The lions have bushy tails.</i>	<i>The Italians love pasta.</i>

It has often been noted that the forms used for generic reference in English are identical to those of non-generic, or individuating, reference. In fact, no language seems to have forms that are exclusively reserved to mark generic referents.³ It is therefore to be expected that individuating and generic reference are not just related with respect to their forms but also with respect to their meanings. An important commonality between individuating and generic reference has been observed by Hawkins (1978). In both types of reference, the indefinite article refers exclusively while the definite article refers inclusively. Thus, both the indefinite individuating referent in *A lion jumped at me* and the indefinite generic referent in *A lion has a bushy tail* are exclusive in that at least one more lion is presupposed to exist that is excluded from a given reference mass. Likewise, both the definite individuating referent in *The lion has escaped* and the definite generic referent in *The lion is a predatory cat* are inclusive in that only one particular lion and only one type 'lion' are included in a given reference mass.

1.2 Interdependence of instance and type

Hawkins' insights into the parallelism between individuating and generic reference may be seen more generally as reflecting the tight conceptual connection that exists between tokens and their types, or between instances and types. The interdependence of instance and type pervades our everyday behavior and reasoning. Perception involves recognizing individual phenomena as instances of a type, and knowledge of a type allows us to project its characteristics onto its instances. For example, when, on a hike, we hit upon a snake slithering across the grass (instance) and realize that it is a rattlesnake (type), we instantly project our knowledge of poisonous rattlesnakes (type) onto the particular snake in front of us (instance) and react accordingly, i.e. back away. When we cannot identify the type an instance belongs to, we feel irritated or even alarmed. Thus, a sudden shooting pain in the

chest (instance) will fill us with anxiety until the disease (type) has been diagnosed so that it (instance) can be properly treated.

In language, the tight connection between instance and type is most visibly manifest in acts of individuating reference. When we refer to a particular instance as in *the book*, we do so by naming the type it belongs to, i.e. the type 'book.' The determiner and the number of a noun provide further specifications of the instance. The TYPE may thus metonymically stand for an INSTANCE of the type. Conversely, an INSTANCE may evoke, or stand for, the TYPE it belongs to. As pointed out by Norrick (1981:35), "any specific instantiation of a class calls forth the whole class." He gives the examples of a single violin that calls forth the class of violins, or of a musical note that calls forth the musical key system. In a similar vein, Langacker (1991:62) argues that "a type conception is immanent in the conception of an instance".

In view of the interdependence of instance and type, it is not surprising that referring expressions may, under certain conditions, be ambiguous between an instance and type reading. Carlson (1980:53) has noted a systematic ambiguity of count nouns with certain quantifiers and demonstratives. For example, *every animal* may be interpreted in the sense of 'every particular animal' or 'every kind of animal'. Similarly, *this car* in *I really like this car* may refer to the particular car I am pointing at or the make of this car, i.e. the type of car. The linguistic and/or situational context normally resolves potential ambiguities between instance and type readings. Thus, we tend to understand the salesman's comment that *This jacket is our best-selling item*, "not in the sense that the particular jacket has been sold many times, but that jackets made to that design have sold well" (Taylor 1995:123). Here, the predicate nominal *our best-selling item* imposes a generic interpretation of *this jacket* and hence disambiguates the sentence. Nevertheless, the notion of an individuating instance is still present. In talking about the type of jacket the salesman may lift up a particular jacket or point at one – he cannot possibly lift up or point to a type as such. Understanding a particular instance in a generic sense is based on metonymic reasoning: we need to know that a particular INSTANCE may be used to stand for its TYPE – young children will probably not be able to perform this kind of metonymic generalization. It is probably safe to assume that individual instances are experientially more basic and salient than abstract types and that we derive general information from specific information. This paper argues that we comprehend and process generalizations about a type by way of its instances, i.e. by means of the metonymy INSTANCE FOR TYPE.⁴

Generic reference involves a further conceptual process that is also metonymic in nature. The example of the characterizing sentence (1a), *A lion has a bushy tail*, has shown that generic reference may allow for exceptions. In this case, the generalization does not apply to the type 'lion' as a whole but to male lions only. In his discussion of metonymic models, Lakoff (1987:77–90) convincingly demonstrates that categories are typically comprehended via subcategories or individual members. Thus, the category 'mother' is comprehended via the prototypical subcategory 'housewife mother', i.e. by means of the metonymy SUBCATEGORY FOR CATEGORY. Lakoff's metonymic models apply to categories at the conceptual level. When a category is named, the metonymic process is reversed: the category evokes, or stands for, one of its subcategories. Thus, when there is talk about a mother and her three children, the linguistic category *mother* tends to evoke, or stand

for, the subcategory 'housewife mother'. The metonymy involved might be described as (LINGUISTIC) CATEGORY FOR SUBCATEGORY. The same kind of metonymy also applies to generic types. In the case of *A lion has a bushy tail*, the type 'lion' is understood as applying to the subtype of prototypical lions only, i.e. a TYPE is used to stand for a SUBTYPE.

This paper argues that generic referents are accessed by way of the metonymies INSTANCE FOR TYPE and TYPE FOR SUBTYPE. The notion 'metonymy' is understood as an inferential process that links a source concept to a target concept within the same idealized cognitive model, giving rise to blended and emergent meaning. The ensuing discussion of generic reference in English shows that the metonymic sources, far from being erased, conceptually blend with the metonymic targets and contribute to the specific emergent meaning that characterizes each particular type of generic reference.

This paper thus makes the following assumptions about the conceptual basis of generic reference:

- i. Generic reference applies to types, where the type is invoked by way of an instance. Generic reference thus involves the metonymy INSTANCE FOR TYPE.
- ii. The characterizing type of generic reference allows for exceptions, i.e., it applies to a subtype of the type. Generic reference may thus also involve the metonymy TYPE FOR SUBTYPE.
- iii. Generic reference involves the conceptual blending of instance and type.

As shown in Table 1, generic reference may be construed in different ways. The specific forms of generic reference and the meanings associated with each of them are the subject of the following sections. This discussion of generics is restricted to referring expressions with count nouns in subject position. Mass nouns lack distinctions in number and use of articles and hence do not allow the same range of generic construals that count nouns do. Thus, we can normally only generalize about substances by using one form: an articleless singular NP, as in *Oil floats*, and not **The oil floats*, **An oil floats*, or **Oils float*.

The following sections are organized in the order of the four types of generic reference listed in Table 1. Sections 2 and 3 discuss indefinite generic construals and Sections 4 and 5 definite generic construals.⁵ The results of this study are summarized in Section 6.

2. Indefinite singular: Representative generic

2.1 Individuative and generic indefinite singulars

Indefinite reference is exclusive. In individuative reference, exclusiveness of a single instance is illustrated in a request such as *Can you open a window?* Here, the speaker refers to a single non-specific instance and at the same time presupposes that there is at least one more element within a pragmatically defined set that is excluded, i.e., there is assumed to be at least one more window in the room that can be opened. We would not say *Can you open a window?* when there was only one window in the room. Likewise, in generic reference, a single indefinite instance is profiled but at least one more element is presupposed to exist within the reference mass of the type that is excluded. Thus, in the generic

statement *A lion has a bushy tail*, only one non-specific instance of a lion is profiled at the exclusion of all the other lions that form the reference mass of the type 'lion'.

In both types of reference, the speaker has no specific entity in mind, and an arbitrary element within a reference mass qualifies to be selected. In individuating reference, this instance becomes the non-specific referent; in generic reference, this instance is understood to represent the generic type. This kind of reference is therefore described as **representative generic**.

2.2 Representative-instance quantifiers and representative generics

Generic *a(n)* has often been viewed as equivalent to the universal quantifier *any* (e.g. Jespersen 1949:424, Perlmutter 1970, Quirk et al. 1985). Both *a(n)* and *any* profile an arbitrary individual element as representative for a whole. Thus, the subject NPs in both *An alligator has a strong bite* and *Any alligator has a strong bite* are singular in form, take singular agreement and denote a single indefinite instance but represent a whole: a type in the generic sentence and a full set in the quantifying sentence. Langacker (1995) described the set quantifiers *any* and *every* as *representative-instance quantifiers* and the generic article *a(n)* as *representative-instance generic*.

The representative-instance quantifiers *any* and *every* and the representative generic *a(n)* are different grammatical categories but, as shown by Langacker (1995), belong to the same paradigm.⁶ Both of them occur only in non-progressive sentences, as in (2a), and preclude the use of the progressive aspect, as in (2b):

- (2) a. {Every/ any/ a} cat *dies* before the age of 15 these days.
 b. {[?]*Every/ *any/ *a} cat *is dying* before the age of 15 these days.

In using the non-progressive aspect in (2a), I adopt a maximal viewing frame of an event, which allows me to see both the single event (of one cat dying) and the higher-order general event it represents (of cats as a set or type dying). In using the progressive aspect, I take a restricted viewing frame of an event and see it internally and as implicitly bounded (Radden & Dirven 2007: 178). A single implicitly bounded event cannot simultaneously represent a higher-order set or type of events. Thus, sentences with a representative generic are not compatible with the progressive. This analysis confirms Declerck's (1986) observation that the progressive necessarily applies to a single situation, which therefore can have no generic reading.

For a similar reason, representative-instance quantifiers and representative generics cannot be coordinated (3a), while definite singulars (3b) and bare plurals (3c) permit their coordination.⁷

- (3) a. **A beaver and an otter* build dams.
 b. *The beaver and the otter* build dams.
 c. *Beavers and otters* build dams.

In the conjoined representative instances in (3a), each of the coordinated phrases profiles its own individual event representing its own type: 'a beaver builds its kind of dams' and

‘an otter builds its kind of dams.’ Since each individual event involves its specific kind of dam-building, they cannot jointly represent a generic event. Definite singular generics as in (3b), on the other hand, can be coordinated because they denote types (see Section 4), and bare plurals as in (3c) can be coordinated because they refer to proportions (see Section 3).

The grammatical constraints of the representative generic with respect to the progressive and coordination show that the single instance is highly prominent. Further evidence for the prominence of the single instance can be seen in its incompatibility with ‘kind predicates’. Kind predicates include verbs such as *die out*, *abound*, *collect*, or *scatter*, predicative adjectives such as *be extinct*, *be endangered*, *be numerous*, *be rare*, *be widespread*, or *be common*, and semantically similar expressions (Krifka et al. 1995:8–14). Only a species as a whole, not an individual member of a species, can die out, become extinct, abound, etc. In fact, not even full sets can be said to be dying out or facing extinction: **any orangutan is dying out*, **all gorillas are facing extinction*. As has often been noted, kind predicates are not compatible with indefinite singulars, i.e. representative generics, as in (4a), but are compatible with bare plurals, as in (4b), and definite singulars, as in (4c):

- (4) a. **An orangutan will die out.*
 b. *Gorillas are on the brink of extinction.*
 c. *The chimpanzee is critically endangered.*

As with the progressive, the ungrammaticality of kind predicates with representative generics as in (4a) is apparently due to the singularity of the representative instance and the concomitant exclusion of all other elements of the type.⁸ How is it possible that a single instance can exclude all other elements of the reference mass of a type and at the same time be interpreted as denoting this very type? This puzzling question cannot be solved solely in terms of metonymy.

2.3 Blending of instance and type in representative generics

Like all types of generic reference, the representative generic is based on the metonymic relation between instance and type. The metonymic source, the singular instance, and the metonymic target, the type, jointly determine the generic meaning.⁹ However, the representative generic is, as suggested by Christophersen (1939), nearer to individual use and more of a representative use. He gives a fitting psychological account of the fusion of the individual and generic concepts: “there is an image in the mind, more or less vague, of a single individual, accompanied by a certain knowledge that what is said about this individual would have been equally true if we had chosen another member of the same class instead” (33), and “[t]he generic *a*-form is at times only a masked individual use. The speaker has often one definite case in mind if he veils his speech in the garb of a generic statement” (130). This description calls for a blending analysis, in the sense of Fauconnier and Turner (2002).

Let us illustrate the blending of instance and type in the sentence *A lion has a bushy tail*. Input 1 contains the profiled indefinite instance ‘a lion’ and input 2 the type ‘lion’. The type is evoked by the generic context and the INSTANCE FOR TYPE metonymy. The blended

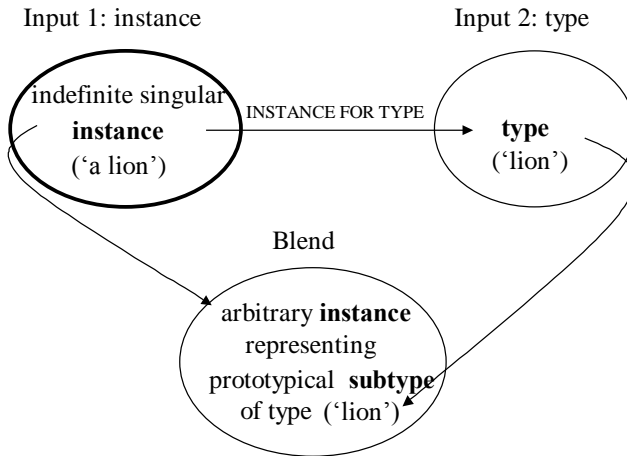


Figure 1. *Representative generic*: A lion (has a bushy tail)

space inherits the notions ‘instance’ and ‘type’ from the two input spaces and fuses them conceptually. Moreover, the blend contains emergent meanings: the meaning of arbitrariness derives from the indefinite, non-specific nature of the instance, and the meaning of representativeness derives from its relation to the type. The representative generic also allows for exceptions, i.e., it applies to a prototypical SUBTYPE of the TYPE. This aspect of meaning derives from our metonymic comprehension of categories in terms of salient subcategories (see Section 1.2).

2.4 Uses of the representative generic

The conceptual integration of ‘instance’ and ‘type’ has consequences for the use of the representative generic. If one arbitrary instance can represent a generic type, all individual members of the type must be equivalent. This also means that only those attributes can be predicated of the representative instance that are shared by all its members. These are typically essential or characteristic attributes of the category; accidental attributes may apply only to a subset of its members but not to the category as a whole. Thus, typical birds have a beak and feathers and lay eggs. We may therefore pick a typical bird and generalize about the species ‘bird’ by saying *A bird has a beak and feathers and lays eggs*. Attributes such as ‘singing’ or ‘beauty’ do not characterize the “essence” of the species ‘bird’, since there are birds that croak and birds that are not seen as beautiful because beauty is in the eye of the beholder and not in the thing itself. Hence generalizations such as [?]*A bird sings* and [?]*A bird is beautiful* sound odd. A convincing set of examples of essential as opposed to accidental attributes has been provided by Lawler (1997):

- (5) a. A madrigal is *polyphonic*.
 b. [?]A madrigal is *popular*.
 c. *The madrigal* is popular.
 d. *Madrigals* are popular.

Sentence (5a) is acceptable because *polyphonic* predicates an essential, or necessary, attribute of madrigals: madrigals are polyphonic unaccompanied songs on a secular theme. Sentence (5b), by contrast, is unacceptable because *popular* ascribes an accidental attribute of madrigals. What counts as an essential attribute depends on the kind of thing the attribute is ascribed to. While popularity is not an essential attribute of madrigals, it is an essential aspect of a football hero so that the statement *A football hero is popular* is acceptable (Krifka et al. 1995: 13). A comparison of the representative generic in (5b) to other generic construals shows that it is more restrictive than either the definite singular in (5c) or the bare plural in (5d).

Essential attributes are particularly relevant in definitions: they define what we assume to be the “essence” of a thing. It is thus no coincidence that the indefinite singular is the preferred form of a *definiendum*. This applies to definitions of scholarly terms as in (5a) as well as to definitions of everyday terms, as illustrated in the following definitions found in the *Sesame Street Dictionary* (Hayward 1980):

- (6) a. A *car* is something that you ride in.
 b. A *card* is a flat stiff piece of paper.
 c. A *carpenter* is someone who builds things with wood.

This children’s dictionary defines its terms by using “complete” sentences and expressing the *definiendum* in a full indefinite noun phrase. For reasons of space, most dictionaries do not repeat the entry in their definitions. A natural context for full definitions are questions of the form *What is a N?*, which evoke answers in complete sentences, as in the following examples found on the Internet:

- (7) a. What is a package? – A *package* is a namespace that organizes a set of related classes and interfaces.
 b. What is a galaxy? – A *galaxy* is made of billions of stars, dust, and gas all held together by gravity.

The definition given in (7a) conforms to the classical pattern of *genus proprium* and *differentia specifica*, i.e., it provides a superordinate type and specifies it by naming one or more essential and distinctive attributes. Sentence (7b) shows that events also may qualify as essential attributes defining a type.

We are now in a position to explain the restriction on the use of the representative generic with humans, as in the barely acceptable sentence [?]*An Italian loves pasta* listed in Table 1. Let us consider the following examples of generic types of humans:

- (8) a. ^{??}*An Italian* is a football fan.
 b. *An Englishman* drinks tea, even underwater.
 c. The average life expectancy for *an Italian* is 79.54 years.
 d. *A linguist* is one who engages in the study of language.

'Loving pasta' or 'being a football fan,' for all intents and purposes, are not essential attributes defining nationalities. When such "accidental" attributes are used in conjunction with the representative generic, they are understood as conveying a national stereotype and hence as being politically incorrect.¹⁰ The writer of sentence (8b) in fact nicely exploits this aspect of meaning of the representative generic in parodying a popular English stereotype. Nations seem to lack an inherent essence and hence can usually not be represented by a single member of this nationality. Like any other object of study, however, nationalities can also be studied scientifically under the restricted "essence" of the given goal. Thus, in (8c), the statistical average of life expectancy applies to a nation as a whole since it is based on the sum of its individual members.¹¹ There are apparently only very few essential attributes that can be predicated of an individual person as representative of a type of human without sounding stereotypical. One such essential attribute would be the role people play in society, especially with respect to their profession. Thus, as stated in definition (6c), the essence of a carpenter resides in building things with wood, and an arbitrary instance of a carpenter can represent this category. Similarly, according to the definition given in (8d), the essence of a linguist resides in engaging in the study of language.¹²

In sum, the representative generic has the following characteristics. A single indefinite instance is profiled to the exclusion of other elements of its type. The *INSTANCE* metonymically stands for its *TYPE*. The notions of instance and type are blended, giving rise to the emergent meanings of 'arbitrariness' and 'representativeness' of the instance. Due to these aspects of meaning the representative generic is compatible only with essential attributes shared by all members of the generic type. However, the representative generic allows for exceptions: it typically applies to a prototypical subtype, i.e., it involves as a further metonymy *TYPE FOR SUBTYPE*.

3. Bare plural: Proportional generic

3.1 Individuative and generic indefinite plurals

Like the indefinite singular, the indefinite plural is exclusive. It denotes a proportion of at least two elements and excludes at least one element from a set. In individuative reference, the referent *some teeth* in *I lost some teeth yesterday* fulfills these requirements: I lost at least two teeth of my set of teeth. In the sentence ²*Bill lost some legs in the war*, by contrast, *some legs* presupposes the existence of more than two legs, which, of course, conflicts with our knowledge of the world (Hawkins 1978: 180).

In generic reference, the indefinite plural only occurs in its bare form. The bare plural is normally also exclusive, i.e., we expect generalizations expressed by the bare plural to allow for exceptions. Thus, we understand the sentence *Lawyers are crooks* as a generalization about a substantial proportion of lawyers, but by no means about all lawyers. This kind of reference is therefore described as **proportional generic**.

How large does a proportion have to be in order to allow generalizations about a type? The size of the proportion may vary considerably. It may in fact range from 'all' to 'a few', as illustrated in the following examples:

- (9) a. *Horses* are mammals. [= all]
 b. *Dodos* eat peanuts. [= most]
 c. *Finns* always do well in ski-jumping competitions. [= a few]

The generic referent in (9a) applies to a type without exception, i.e., it is inclusive, the generic referent in (9b) applies to most dodos, and the generic referent in (9c) applies only to the small set of “Finnish ski-jumpers, and only to the cream of these, perhaps to only two or three individuals” (Chesterman 1991: 38).

Because of its wide range of application, Chesterman (1991: 76) regards the bare plural as “the generic article *par excellence*”, while Burton-Roberts (1976: 441–4) regards the bare plural as not generic at all because there does not seem to be any clear-cut distinction between its generic and individuating usages.¹³ Carlson (1980) and Lyons (1999) adopt a similar position and argue that the bare plural does not have a constant semantic interpretation. This can be seen from the possibility of coordinating generic and individuating instances, as in:

- (10) Hedgehogs are shy creatures but often visit my garden. (Lyons 1999: 191)

This kind of coordination is not possible with singular generics: **The/*A hedgehog is a shy creature but often visits my garden*. The unique behavior of the bare plural in construction (10) shall therefore be analyzed in more detail. The first clause characterizes the species ‘hedgehog’, while the second clause characterizes the behavior of individuating hedgehogs: they often visit my garden. However, the antecedent for the individuating hedgehogs is the generic referent *hedgehogs* in the first clause. The conjunction *but* conveys counter-expectation: the behavior of the hedgehogs visiting my garden conflicts with my expectation about the normal behavior of hedgehogs. Hedgehogs are normally shy, but those that visit my garden are apparently bold and hence excluded from the generic class of shy hedgehogs. In terms of quantity, the proportion of shy hedgehogs probably outnumbers that of bold hedgehogs. In the complex sentence (10), the indefinite plural subject *hedgehogs* thus combines three notions of reference and quantity: it profiles an indefinite larger proportion (shy hedgehogs), metonymically invokes a type (‘hedgehog’), and serves as the antecedent for the smaller, excluded proportion in the *but*-clause.

Generic and individuating referents are, of course, normally not coordinated, as in sentence (10). However, the fact that their coordination is possible at all shows that the generic bare plural is closer to individuating reference than the two singular generic constructions. This is also borne out by the possibility of switching from individuating to generic reference. Thus, sentence (10) can also be reversed as *Hedgehogs often visit my garden but are (really) shy creatures*, where the antecedent of the implicit generic referent in the *but*-clause is the specific referent *hedgehogs* in the first clause.¹⁴

In its propinquity to individuating reference, its wide proportional range, and its exclusive and inclusive uses, the bare plural generic poses particular problems for postulating a unified meaning. Can the different usages be subsumed under a core meaning and are their different senses motivated? First to be discussed is the most typical use of the bare plural as a proportional generic (Section 3.2), then its blended generic meaning (Section 3.3), and finally the set referred to by the bare plural (Section 3.4).

3.2 The bare plural as a proportional generic

According to Langacker (1995), plural generics belong to the same paradigm as the quantifiers *all*, *most*, and *some*, which describe a proportion. Both these “proportional quantifiers” and the plural generic profile a set of entities as some proportion of a reference mass. With full sets as described by *all*, the subset coincides with the reference mass. Unlike representative-instance quantifiers and representative generics as in (2), proportional quantifiers and bare plurals are compatible with the progressive, as in sentence (11b):

- (11) a. {All/ most/ some/ Ø} cats *die* before the age of 15 these days.
 b. {All/ most/ some/ Ø} cats *are dying* before the age of 15 these days.¹⁵

Both proportional quantifiers and bare plural generics take plural nouns and plural concord and hence profile a set of entities. The process in which the quantified or generic referent participates may be construed as indefinitely lasting (11a) or as temporary (11b). Sentence (11b) in the progressive would thus be understood to mean something like ‘nowadays all/most/some/Ø cats are dying at the age of 15 but, at some other time, they may have died at an earlier or later age’. Unlike the singular representative instance in (2b), the plural proportional instance in (11b) is part of the higher-order, collective process. It is, therefore, compatible with both indefinitely lasting generic processes and temporary generic processes.

The bare plural generic differs from proportional quantifier phrases in that it is also compatible with kind predicates: *Dinosaurs are extinct* is grammatical (see also sentence (4b) above), while **All/most/some dinosaurs are extinct* is not. The bare plural noun *dinosaurs* thus profiles a proportion which, at the same time, represents a type. Its dual nature distinguishes the bare plural generic from singular generics. Farkas and Swart (2007: 1664) appropriately describe the plural generic in *Dinosaurs are extinct* as a ‘constructed’, or ‘derived kind’, as opposed to the ‘atomic kind’ expressed by the singular generic in *The dinosaur is extinct* (see Section 4). An atomic kind refers to the type-level entity directly, while the constructed kind creates a type-level entity by summing up all its realizations, i.e. by a kind of summary scanning. In the context of processes, constructed kinds are therefore compatible with adverbs specifying modes or phases of their summing up, as in (12a), which sounds odd with atomic kinds, as in (12b):

- (12) a. Dinosaurs slowly/ gradually/ eventually became extinct.
 b. **The dinosaur slowly/ gradually/ eventually became extinct.*

We assume that, due to its collective composition, the bare plural generic always involves mental summing up, irrespective of the kind of predication it occurs in. In inclusive uses as in (9a), *Horses are mammals*, and (12a), the summed-up proportion is identical to the whole reference mass of the type, and in exclusive proportions, as in (9b), *Dodos eat peanuts*, the summed-up proportion is smaller than the type’s reference mass.

3.3 Blending of instance and type in proportional generics

Like representative generics, proportional generics involve the conceptual integration of instance and type, as shown in Figure 2. The bare plural *hedgehogs* in the sentence *Hedgehogs are shy creatures* serves as an illustration. The indefinite plural evokes a mental space comprising an indeterminate number of entities ('hedgehogs') which, following Langacker, is described as forming one (plural) instance.¹⁶ The second input, as in all generic construals, is evoked by the INSTANCE FOR TYPE metonymy: it represents the type 'hedgehog'. Instance and type are conceptually blended, giving rise to emergent meanings. The indeterminate number of entities denoted by the indefinite plural is understood as forming a proportion of the overall reference mass of the type, i.e. of all hedgehogs that can potentially be referred to by the type 'hedgehog'. This proportion establishes a prototypical subtype of the type, such as 'shy hedgehogs'. As a rule, the subtype in proportional generics forms the larger subset of the reference mass and thus corresponds to 'most'. However, as is shown below, the generic proportion may also be smaller but salient in other than quantitative respects. The generic proportion is therefore characterized as 'salient'.

In the characterizing generalization *Hedgehogs are shy creatures*, the generic referent *hedgehogs* is understood exclusively, since there are, as seen in example (10), also hedgehogs that are not shy. In direct reference to a kind as in *Hedgehogs are spiny mammals*, on the other hand, *hedgehogs* are understood inclusively, i.e., all hedgehogs are spiny mammals. Yet, the conceptual representation of both types of generic reference is basically the same: an indefinite plural instance is profiled, its type is metonymically evoked, the instance is understood as a salient proportion of the type's reference mass, and the proportion is equivalent to the prototypical subtype of the type. With proportional generics,

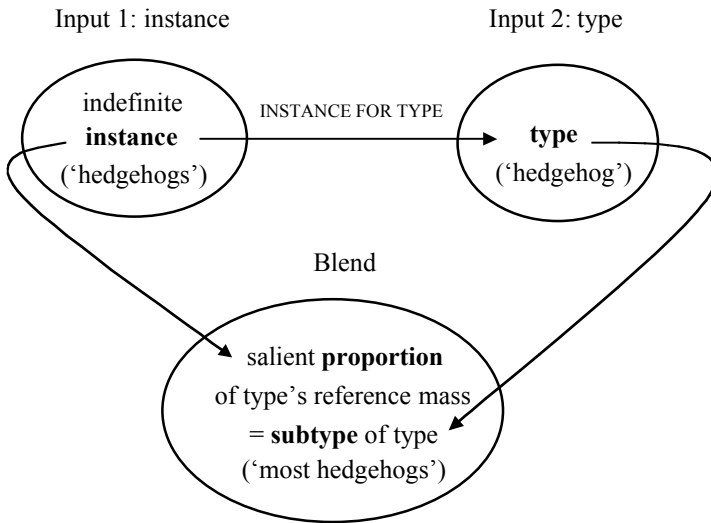


Figure 2. Proportional generic: Hedgehogs (are shy creatures)

the only difference between direct reference to a kind and a characterizing generalization is that, in the former, the proportional subset is, as a limiting case, of the same size as the full set of the reference mass. The following section examines the issue of the proportional subsets, or subtypes, more closely.

3.4 The proportional subset referred to by proportional generics

The extensional notions of proportion, (sub)set, and reference mass make the bare plural the preferred construal for generalizations based on quantitative and statistical information. The following excerpt from a paper written by a graduate student of political science illustrates the reasoning process leading from statistical data to a proportional generalization.

- (13) Bear in mind, Americans are patriotic. A full 97% of respondents to the 1994 GSS [General Social Survey] identified themselves as either “extremely proud”, “very proud”, or “somewhat proud” to be an American, compared to less than 2% who were “not very proud”.¹⁷

The student’s generalization that “Americans are patriotic” was based on the number of respondents who identified themselves as “extremely”, “very”, or “somewhat” proud to be an American. Their responses amount to 97% of the overall sample and thus represent the larger proportion of the reference mass. The 2% of the respondents who were “not very proud” to be an American form the smaller subset and are excluded. These quantitative results are then reinterpreted in a qualitative, or generic, sense: ‘Americans in general are patriotic’. Most people would probably agree that the generalization made by the student is valid. It is also immaterial for this generalization that responses along the middle range (“somewhat proud”) were included in the generic class and that “being proud” was identified with “patriotic”.

The magnitude of the generic subset expressed by the bare plural tends to approximate the whole set of the type, as confirmed by the sentences below. The continuation clauses in (14a) illustrate that the generic subset does not include all entities of a set, the clauses in (14b) demonstrate that it does not apply to small magnitudes, and the clauses in (14c) show that ‘most’ of a set represents the best magnitude of a generic subset.

- (14) a. Americans are patriotic, #in fact all of them are.
Americans are patriotic, but of course not all of them are.
b. Americans are patriotic, ?at least some of them are.
Americans are patriotic, #in fact a few of them are.
Americans are patriotic, but of course some of them aren’t.
c. Americans are patriotic, in fact most of them are.
Americans are patriotic, #but most of them aren’t.

The bare plural is the preferred generic form to use for probabilistic judgments (Dahl 1995) and very vague and impressional statistics (Lawler 1997). It applies to “the norm of a species over its individuals” (Lawler 1997), but may also leave ample room for exceptions. Let us consider uses of the proportional generic in which a small, but salient, proportion of individual members is sufficient to generalize about a type as a whole. Sentence (15a)

was already cited as (9c), and sentences similar to (15b) are discussed in Nickel (2005: 9), Carlson (1980: 40) and Krifka et al. (1995: 44).

- (15) a. Finns always do well in ski-jumping competitions.
 b. Mosquitoes carry plasmodia.

In sentence (15a), the bare plural *Finns* does not refer to the set of all Finns but is understood as referring to the subset of Finnish ski-jumpers that participate in international competitions, i.e., *Finns* metonymically stand for Finnish ski-jumpers. In international competitions, Finnish ski-jumpers tend to outperform other nationalities, i.e., the proportion of Finns that do well in ski-jumping competitions is larger than that of other nationalities within the overall reference mass of ski-jumpers world-wide. Finnish ski-jumpers thus represent the larger proportion within the reference mass of international ski-jumpers, i.e., their larger proportion is in conformity with the other cases of the proportional generic. The same analysis applies to another of Chesterman's examples, *Italians make fine furniture*. The subject *Italians* metonymically stands for Italian cabinet-makers and, among the cabinet-makers of different nationalities, Italians are known as the ones who make particularly fine furniture, i.e., they represent the larger proportion within the reference mass of cabinet-makers world-wide.

Sentence (15b), *Mosquitoes carry plasmodia*, exhibits a more intricate conceptualization and needs to be analyzed in some more detail. Plasmodia are blood parasites that cause malaria – people normally speak of “mosquitoes carrying malaria” and I do so here as well. Most mosquitoes do not carry malaria; therefore, the bare plural *mosquitoes* does not refer to a larger proportion of mosquitoes. However, the sentence *Mosquitoes carry malaria* is not understood to mean that the smaller proportion of mosquitoes is malaria-carrying. It might much rather be understood to mean that mosquitoes *can* carry malaria,¹⁸ i.e. in the sense of an intrinsic possibility, which can be paraphrased as ‘it is possible for mosquitoes to carry malaria.’¹⁹ This meaning would be derived by way of the metonymy ACTUAL FOR POTENTIAL OF GENERIC FOR POTENTIAL. In the metonymic reading the generic referent *mosquitoes* can apply to the larger proportion and hence be compatible with *most*: *Mosquitoes carry malaria, in fact most of them do*. However, we still feel that this paraphrase does not fully capture the meaning conveyed by the generic sentence. We are much more concerned with the risk of being infected with malaria by a mosquito than with the actual proportion of mosquitoes that can carry malaria. In fact, their proportion is grossly magnified when we think of mosquitoes as transmitters of malaria. A smaller subset thus becomes highly salient and, in overriding quantitative aspects of a proportion, licenses the use of the proportional generic. As transmitters of malaria, mosquitoes are more dangerous to our health than any other insect.²⁰ This interpretation is, of course, based on world knowledge. If the same pattern were applied to other kinds of species, as in *Cats carry fleas*, we might prefer a purely quantitative interpretation of the proportion, i.e., ‘most cats carry fleas’.

The proportional generic has the widest range of application among the four types of generic reference. It is used to generalize about a larger or otherwise salient proportion or a type, it may be coreferential with individuating referents (as in *Hedgehogs are shy creatures but often visit my garden*), it applies to non-human and human referents, and, when

applied to humans as in *Americans are patriotic*, it is felt to be much less stereotypical or prejudicial than the representative generic. These properties of the proportional generic result from its conceptual basis. The profiled instance is an indefinite plural and hence denotes an indeterminate magnitude of elements ranging from at least two elements up to a full set. The INSTANCE metonymically evokes its TYPE, and the magnitude is understood to represent a salient proportion of the type's reference mass. The proportion is equivalent to a prototypical subtype, i.e., extensional units (set and subset) and intensional units (type and subtype) interact. The proportional generic may give the false impression that it is a form of individuating reference. It is a type of generic reference, but the generalization it conveys is based on individual entities and hence allows exceptions much more readily than any of the other types of generic reference.

4. Definite singular: Kind generic

4.1 Individuating and generic definite singulars

Definite reference is inclusive. In Hawkins' (1978: 160) words, "the reference must be to the totality of objects or mass, whatever the number or size of this totality." With individuating singular referents, the inclusive totality of objects amounts to a single instance. In asking the question *Can you see the lion?*, the speaker has one particular lion in mind and assumes that the hearer can also establish mental contact to this referent.

In generic reference, the definite singular directly refers to a type, or kind. Its inclusive totality also amounts to a single instance: the type as such. Thus, the speaker who informs us that *The lion is a predatory cat*, refers to the species 'lion' as a single instance and assumes that the hearer is able to establish mental contact to the type – hence its definiteness. This type of generic reference is described as **kind generic**.

4.2 Reference to a kind

The kind generic is often considered the only true expression of generic reference. As shown in (4c), definite singulars are readily compatible with 'kind predicates'. The kind generic is also unique among the generic types of reference in that it preserves its generic force irrespective of its position in the sentence. Thus, the definite singular NP refers to a generic type in both subject position (16a) and object position (16b).

- (16) a. *The chimpanzee* is critically endangered.
 b. The loss of habitat endangers *the chimpanzee*.

The following set of examples from Quirk et al. (1985: 5.5.2) illustrates the referential behavior of different types of noun phrases in object position:

- (17) a. Nora has been studying *the medieval mystery play*.
 b. Nora has been studying *a medieval mystery play*.
 c. Nora has been studying *medieval mystery plays*.

Only the definite singular NP in sentence (17a) can generically refer to mystery plays as a genre; the indefinite NPs in (17b) and (17c) refer to one or several individual mystery plays, respectively.

The type interpretation of *the chimpanzee* in (16a) and (16b) is coerced by the kind predicates, whereas the type interpretation of *the medieval mystery play* in (17a) is due to the semantics of the noun: a mystery play, and even more so a medieval mystery play, is what Krifka et al. (1995) call a ‘well-established kind’. The noun phrases *the map* or *the paper* in *Nora has been studying the map/the paper*, by contrast, would not be interpreted as referring to a type but to a definite individual instance. A map and a paper are thus not seen as well-established kinds. Krifka et al. (1995: 11) illustrate the difference between a well-established and not-established kind with the following examples:

- (18) a. *The Coke bottle* has a narrow neck.
 b. *??The green bottle* has a narrow neck.

A Coke bottle, but not a green bottle, is well established as a kind of bottle in the Western world. Sentence (18a), therefore, describes an acceptable generic statement while sentence (18b) does not. The use of kind generics in English is thus governed by the language user’s assessment of the extent to which a category is well established in the culture. Why should this fleeting distinction between well-established and little or not established kinds be relevant for generics? Before exploring the constraints delimiting well-established kinds in Sections 4.3 and 4.4, I look first at the conceptual basis of kind-referring NPs.

4.3 Blending of instance and type in kind generics

Reference to a type abstracts away from the individual instances that establish a type. However, this does not mean that individual instances are irrelevant in our conception of a generic type. As pointed out in Section 1.2, we typically comprehend categories in terms of one of the metonymic models proposed by Lakoff (1987). This, of course, applies to generic types as well. Psychological accounts of the definite singular generic are already found in the work of earlier grammarians: Jespersen (1949: 492) speaks of “a more or less vague image of one member of the species in question” and assumes that “this is somehow taken as representing the whole species.” Christophersen (1939: 76–77) holds a similar view in his analysis of the generic sentence *The lion is the king of beasts*: “we imagine for a moment that there is only one lion, which is in itself the whole species”, and “the species is thought of as a unit appearing in a shape of one of its members.”²¹ The individual and generic uses are united in one form and “the distinction between the two is no longer possible” (31).

In present-day terminology, Jespersen, and even more so Christophersen, could be said to propose a blending analysis of the definite singular generic. A blending approach to generic statements such as *The lion is a carnivore* has already been suggested by Coulson and Oakley (2003: 61); however, they do not spell out the details of such an analysis. A conceptual account of this sentence in terms of blending theory might take the following form:

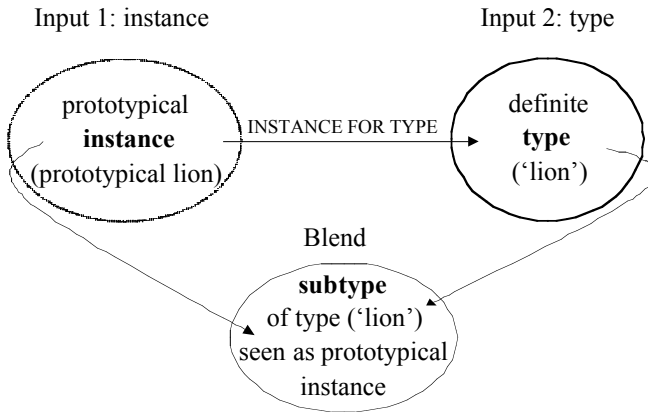


Figure 3. *Kind generic*: The lion (is a carnivore)

The definite type is the profiled referent and therefore printed and encircled in bold. The type evokes a prototypical instance of a lion. The prototypical instance is purely conceptual in nature and, by way of the metonymy *SUBCATEGORY FOR CATEGORY*, or *INSTANCE FOR TYPE*, discussed in Section 1.2, enables us to comprehend the type. The blend inherits the contents of both input spaces so that the notions of the type and its prototypical instance are co-present and fused in the blend. The profiled type predominates conceptually and linguistically: we are thinking and talking about the species 'lion', not about a prototypical lion, and express the idea in a structure (present tense, predicate nominal) that typically conveys genericness. The kind generic and the representative generic look alike in that both are singular in form. However, their conceptualizations are fundamentally different. In kind generics (Figure 3), the generic type is profiled and prominent while the instance is metonymically evoked and only vaguely present. In representative generics (Figure 1), by contrast, the individual instance is profiled while the generic type is metonymically evoked.

The kind generic is used in different types of sentences and may evoke its prototypical instance to different degrees. The categorization of sentences such as *The lion is a carnivore* probably imposes the image of an individual instance to a lesser extent than eventive sentences like those under (19). Here, it is nearly impossible to imagine a type without visualizing an individual instance of the type.

- (19) a. *The tiger* roams the jungle.
 b. *The panda* eats bamboo leaves.
 c. *The albatross* lays one egg: it is white, with a few spots, and is about four inches long.

These sentences describe the characteristic and habitual behavior of a species. Only real, live tigers, pandas, and albatrosses, not an abstract species, can roam the jungle, eat bamboo leaves, and lay eggs. Here, the behavior of individual instances is part of our conceptualization of the type of animal. The sentences in (19) take a midway position between characterizing sentences such as (1a), *A lion has a bushy tail*, and kind-referring NPs as in

(1b), *The lion is a predatory cat*. They characterize a species but, like kind-referring NPs, do not allow for exceptions, i.e., sentences such as **The tiger roams the jungle, but some tigers do not* are ruled out. The generalization about egg-laying albatrosses in sentence (19c), however, applies only to female birds and, strictly speaking, half of the population would be excluded. In our ordinary conception of an animal species, however, a distinction between male and female members is not relevant – the prototypical albatross is sex-neutral. In using the kind generic, the speaker is concerned with types as part of the structure of the world. As phrased by Lawler (1997), the use of the definite singular generic signals to the hearer “that the speaker is theorizing.”

The use of the kind generic in English is highly constrained. The following two sections attempt to specify and explain the relevant constraints on a conceptual basis. Two constraining factors are especially important: the position of the kind within a taxonomic hierarchy and its position within the cultural hierarchy of things.

4.3 Position of the kind within a taxonomic hierarchy

The kind generic is normally not used with superordinate terms such as ‘bird’, ‘mammal’, or ‘instrument’ and only rarely used with basic-level terms such as ‘tree’, ‘house’, or ‘table’. Thus, the generic statements (20a) and (20b) sound odd with a definite singular subject – they could, of course, be expressed by other forms of generic reference: *Birds build nests*; *A tree has a trunk and branches*, etc. By contrast, generic statements with subordinate terms as in (20c) and (20d) are fully acceptable.

- (20) a. ??*The bird* builds a nest.
 b. ??*The tree* has a trunk and branches.
 c. *The long-tailed tailor bird* builds its nest out of leaves.
 d. *The cherry tree* has a brown trunk, green leaves, and red cherries.

The notion of a well-established kind not only involves cultural entrenchment of the type but obviously also well-defined categoryhood so that the image of a prototypical member can be evoked. Superordinate categories such as ‘bird’ are internally heterogeneous and poorly defined. Most crucially, however, superordinate terms already constitute the highest taxonomic types and hence cannot be defined relative to a higher type. Basic-level terms such as ‘tree’ are the most informative categories and evoke rich images; still, they are normally not used as kind generics possibly because we are well familiar with them and hence not much more can be said about them as types. The “best” types to be referred to by the kind generic are subordinate categories. Subordinate terms are defined relative to well-known basic-level terms. They are thus accessible to us and can be expressed as definite entities. Most importantly, however, subordinate terms are well-delimited categories and speakers can impart a wealth of information about them. The following description of a kind of albatross nicely illustrates shifts of generic reference according to the position of the type in the taxonomy:

- (21) Of the thirteen kinds of albatrosses, *the black-browed albatross* is one of the smallest. Despite being called “gooneys” or “mollymalks” by sailors because of their clutzy landings,

albatrosses are amazing and beautiful in the sky. *The black-browed albatross* lives a roaming life over the sea, flying thousands of kilometers before setting foot on land, so being an excellent and efficient flyer is a must.

The subordinate category ‘black-browed albatross’ in the first sentence is referred to by the kind generic, the basic-level category ‘albatross’ in the second sentence is described by the proportional generic, and the subordinate category ‘black-browed albatross’ in the third sentence is again referred to by the kind generic.

The taxonomic level of a type is an important factor motivating the choice of generic reference but is, of course, not the only one. Thus, after several uses of *the black-browed albatross* in the above excerpt, the author switches to the bare plural in the sentence *Black-browed albatrosses will keep their nests a regular distance apart – 1.55m – that’s exactly how close they can get before making each other angry*. Here, the image of individual albatrosses keeping their nests at a distance from each other predominates and determines the choice of the bare plural. Another factor motivating the choice of the generic construal is the position of the kind within the Great Chain of Being.

4.4 Position of the kind within the Great Chain of Being

Lakoff and Turner (1989: 166) define the Great Chain of Being as “a cultural model that concerns kinds of beings and their properties and places them on a vertical scale.” The highest kinds of being on this ontological scale are humans, followed by animals, plants, complex objects, and natural physical things. Generic kinds in the definite singular display very different behavior on each of these levels of the hierarchy, as illustrated in the following examples:

- (22) Humans
 - a. [?]*The girl* plays with dolls.
 - b. *The customer* is always right.
- (23) Animals
 - a. *The dog* is an extremely social animal.
 - b. *The tiger* hunts by night.
- (24) Plants
 - a. [?]*The rose* has thorns.
 - b. *The tea rose* is native to China.
- (25) Complex objects
 - a. [?]*The table* has a flat top and legs.
 - b. *The computer* has changed our lives.
- (26) Natural physical things
 - a. ^{*}*The mountain* is high.
 - b. *The sea* is a complex ecosystem.

4.4.1 Humans

Humans have, in addition to lower-order properties, higher-order properties such as intelligence, emotions, morality, etc. As a result, humans tend to be individualistic and vary

from person to person and hence can hardly be generalized about. The use of the kind generic in sentences such as *?The girl plays with dolls* or *?The Italian loves pasta* therefore sounds inappropriate: it makes us see girls or Italians as a species-like kind. In Section 2.4 I observed similar constraints on the representative generic when used with human subjects. The constraints on human generics are related, but viewed from a different perspective. In Section 2.4 we saw that the representative generic is typically construed with attributes that are seen as essential, and when it is used with humans it tends to give rise to stereotypical associations, as in (8a), *?An Italian is a football fan*. Both the kind generic and the representative generic can however be freely applied to people with respect to the roles they hold in society, especially their professions. Thus, sentence (22b), *The customer is always right*, is a well-formed generalization because people in their role as customers form a well-defined group. Likewise, the use of the representative generic in *A customer is always right* is acceptable because 'being always right' is an essential attribute the Western business world associates with customers.

4.4.2 *Animals*

The highest properties of animals are instinctual properties, which are assumed to be shared by all members of an animal species and hence are fairly predictable. An animal species thus establishes a well-defined category and can be generalized about by means of the kind generic, as in (1b), *The lion is a predatory cat*, (23a), *The dog is an extremely social animal*, and (23b), *The tiger hunts by night*. More than any other kind in the Great Chain of Beings, animals are commonly generalized about by using the kind generic, at both the basic and subordinate levels. This may be due to the importance we attach to animals as our closest relatives. We have a vested interest in categorizing the animal kingdom and, in characterizing a species, often make use of human attributes. For example, in its entry for *dog*, the *Encyclopedia Britannica* lists the following attributes of the generic dog: *The dog, in many of its breeds, is basically a wolf-like hunter* [categorizing], *The dog is an extremely social animal* [human attribute], *The dog figures prominently in many tales of courage* [human relevance], etc.

4.4.3 *Plants*

Plants are characterized by botanical properties. These are stable attributes and should be useful for classificatory purposes. Yet, the definite singular is rarely used in generalizing about plants at the basic level. Sentences such as (20b), *?The tree has a trunk and branches*, and (24a), *?The rose has thorns*, sound odd. In our folk taxonomies of plants, basic-level kinds of plants are apparently felt to be less distinct, less relevant, and less interesting to us than basic-level species of animals. At the subordinate level, however, kinds of plants are well defined by distinctive botanical properties and are readily expressed by the kind generic, as in (20d), *The cherry tree has a brown trunk, green leaves, and red cherries*, and (24b), *The tea rose is native to China*.

4.4.4 *Complex objects*

Complex objects are typically man-made artifacts and characterized by structural and functional attributes. Purely structural attributes are not considered relevant in distin-

guishing kinds of complex objects. Thus, the kind generic is normally neither used to describe kinds at the basic level, as in (25a), *?The table has a flat top and legs*, nor kinds at the subordinate level, as in *?The picnic table is easy to make*. Functional attributes, on the other hand, are distinctive and define the kind of complex object, as in *The dynamo recharges the battery*. A unique property of artifacts is their invention or introduction and the impact it has on humans. Thus, the kind generic is commonly used in “theorizing” statements such as *The sonnet originated in the 13th century* and (25b), *The computer has changed our lives*.

4.4.5 Natural physical things

Natural physical things are characterized by natural physical attributes. They normally do not come to us as a kind that we want to generalize about. Thus, sentences like (26a), **The mountain is high*, or **The rock is hard* are normally not used as generic statements. However, a theorizing context also licenses the use of the kind generic, as in *The sea is a complex ecosystem which includes thousands of seabirds, countless species of crustaceans and fish, water plants, etc.*

4.5 Summary

The kind generic profiles a type directly and hence can be regarded as a true expression of genericness. Our conception of a type, however, is based on that of a prototypical individual instance of the type. Conceptually, the kind generic thus also involves the INSTANCE FOR TYPE metonymy. The use of the type generic is highly constrained: it applies to culturally well-established kinds. In taxonomic hierarchies, well-established kinds are typically found at the subordinate level, and in the hierarchy of the Great Chain of Being, they are typically found at the level of animals. Due to their individuality and variability, humans are, as a rule, not seen as forming a kind and hence are not, apart from their function in roles, generalized about by use of the kind generic.

5. Definite plural: Delimited generic

5.1 Individuative and generic definite plurals

Hawkins (1978: 159–162) illustrates the inclusiveness of the individuative definite plural in the utterance *Bring the wickets in after the game of cricket*. Here, the speaker would not be satisfied if the hearer brought him only four or five of the six wickets. The definite article refers to all objects in a pragmatically delimited set, excluding none of them.

The generic definite plural *the Italians* in *The Italians love pasta* also invokes a pragmatically delimited set within a domain: it is understood as referring to “those individuals of Italian parentage who currently inhabit Italy” (Hawkins 1978: 217). Within this delimited set in the domain of parentage and residence, the generic reference is inclusive, i.e., it is understood as not excluding any individual of Italian parentage who currently inhabits

Italy. The bare plural as in *Italians love pasta*, by contrast, does not involve a similarly delimited set: it refers to Italians in general, i.e. ‘anyone who either is, has been, or will be an Italian.’ As pointed out by an anonymous reviewer, the set described by *the Italians* may also refer to sets of Italians other than those who currently inhabit Italy, as in *During World War II, the Italians were the largest immigrant group in the U.S.* Here, the spatial (*the U.S.*) and temporal adjuncts (*World War II*) provide clues about the delimited set. In both situations, the function of the definite plural in generic reference is to imply a delimited set within a given pragmatic context. The definite plural generic can, therefore, be described as **delimited generic**.

In *The Italians love pasta*, the entities included in the delimited set are individuals. The entities included in a delimited set can also represent a subtype of a type. In this usage, the delimited generic applies to the level of types in the same way that kind generics do. Chesterman (1999: 36) gives the following example of this use:

- (27) Among *the lizards*, iguanas are the most popular as a local food.

The NP *the lizards* in (27) refers to the ‘family of lizard-types’, one of which is the subtype ‘iguana’. The superordinate type ‘lizard’ remains unmentioned but is, of course, easily inferred. The type ‘lizard’ represents the delimited set and, due to the inclusiveness of the definite plural, includes all subtypes of lizards in the set. We may, therefore, also describe the full set by using the collective quantifier *all*: *Of all lizards, iguanas are the most popular food*. With respect to its extension, the delimited generic (*the lizards*) is thus equivalent to the kind generic (*the lizard*). However, the delimited generic profiles a subtype and invokes the type, whereas the kind generic profiles the type directly.

The use of the delimited generic at the level of types as in (27) is, in principle, not restricted to any particular domain, but is nevertheless used fairly infrequently probably because it competes with two more direct construals, i.e. those with the quantifier *all* and the kind generic. At the level of individual instances, the use of the delimited generic is more common, but it is in English almost exclusively restricted to human referents, as in *The Italians love pasta*.

Both types of the delimited generic, i.e. the generic involving individuals and the generic involving subtypes, require a set within a given domain that delimits the generic reference mass. The set is an aspect of meaning that emerges in conceptual blending.

5.2 Blending of instance and type in delimited generics

The example *The Italians love pasta* is used to illustrate the process of blending with delimited generics. Input space 1 contains a definite plural instance, ‘the Italians’, and input space 2 the type evoked by the instance, ‘Italian’. In individuating reference, the definite plural instance is inclusive; in generic reference, it is made inclusive in the blended space by delimiting its set of entities. The delimited set represents a subtype of the type: Italians of Italian parentage who currently inhabit Italy. These Italians are probably considered prototypical members of the category ‘Italians’.

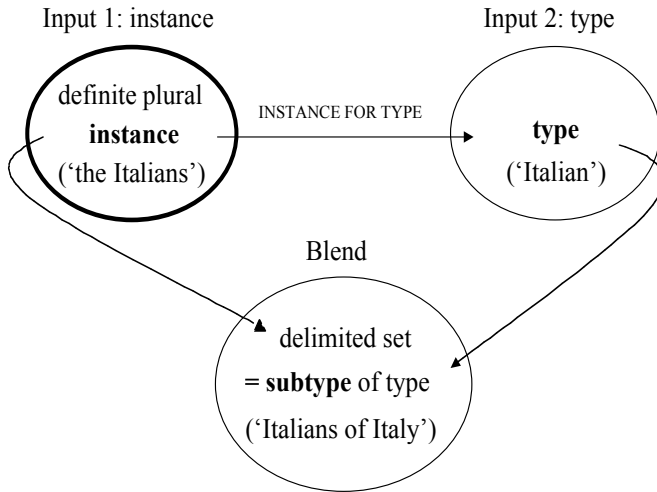


Figure 4. *Delimited generic: The Italians (love pasta)*

The information conveyed by the generic blend is to be read as follows: The definite plural generic refers to a delimited set of individuals within a domain (individuals of Italian parentage who currently inhabit Italy) that represents a subtype of prototypical members of a type ('Italian'). The delimited set is construed as inclusive, i.e. as encompassing the totality of its individual members. It would therefore be contradictory to say, *The Italians love pasta* #*but many/some/a few of them don't*. Chesterman (1991: 193) argues that "inclusiveness of *the* must often be read as pragmatic rather than strictly logical". According to this view, pragmatics accounts for the fact that *The Americans have reached the moon* does not mean that all Americans have reached the moon. However, the pragmatic interpretation is guided by metonymy: *the Americans* stands for the set of astronauts of spaceship Apollo or for the set of NASA personnel that succeeded in launching the spaceship; the achievement verb *reach* is also understood metonymically in the sense of an accomplishment: NASA personnel spent years in preparation before launching the spaceship.

5.3 Uses of the delimited generic

In English, the use of the delimited generic is restricted to humans. Non-human subjects in the definite plural are not understood in a generic sense. Thus, in *The dogs are social animals* and *The paintings are fun to look at*, the referents *the dogs* and *the paintings* describe individuating instances. More specifically, the delimited generic is restricted to sets of well-established human groupings within certain domains such as nationalities, politics, religion, etc. Thus we speak of *the Americans*, *the Democrats*, and *the Catholics*. Humans that do not form a well-established group are only understood in an individuating sense, as in *The women are the stronger sex* and *The boys don't cry*. These interpretations are coerced by the definite plural construction, since the predicates themselves strongly suggest

generic readings, as can be seen from their uses with bare plurals in *Women are the stronger sex* and *Boys don't cry*.

In English, reference to well-established human sets is also achieved by uninflected nominalized adjectives taking plural agreement, as in:

- (28) a. *The young* are taking over now.
 b. *The hungry* suffer most.

The nominalized adjectives describe properties that define human groups having this property, i.e., they involve the metonymy PROPERTY FOR A THING THAT HAS THE PROPERTY. The use of adjectives is particularly well-suited to express delimited generics because the properties they describe are associated with a specific domain: 'young' relates to the domain of 'age', 'hungry' to the domain of '(crave for) food', 'blind' to '(lack of) vision', etc. The properties defining a human group relative to a certain domain are permanent and salient. Youth, blindness, poverty, unemployment, obesity, etc. are more or less permanent properties. Hunger is experienced by most people as a temporary feeling but unfortunately is a permanent state for almost a billion people. It is these people that are referred to as *the hungry*. Thirst, happiness, or eagerness, by contrast, are only experienced as temporary states and hence are not used to characterize human groupings. Their generic uses are, therefore, ruled out, as in **The thirsty suffer*, **The happy live long*, **The eager come first*, etc.

The generic groups described by nominalized adjectives are characterized mostly by negative properties such as *the unemployed*, *the needy*, *the illiterate*, *the uneducated*, etc. These properties are more salient than their positive counterparts since the disadvantaged groups characterized by such properties are in need of humanitarian aid, assistance, or other urgent social action. Positive properties are, of course, also used in defining generic groups, but they tend to occur in contrast to their salient negative antonyms, as in *the rich and the poor*, *the employed and the unemployed*, etc.

5.4 Motivation of the delimited generic

To conclude the discussion of the delimited generic, I consider some issues regarding its motivation. Why is the use of the delimited generic so heavily constrained? Due to its constraints the delimited generic is not even included in some treatments of English generics. Nonetheless, the delimited generic does fulfill important ecological functions within the English system of reference.

First, the definite plural is available as a fourth structural option to express a type of generic reference. It is, therefore, to be expected that language users make use of this possibility and associate the definite plural generic with a specific meaning of its own.

Second, as Table 1 reveals, three of the generic construals are freely compatible with non-human referents, but only two with human referents: the proportional generic and the delimited generic. Recall that the representative generic as in *?An Italian loves pasta* is ruled out because an arbitrary human does not normally represent the essence of a whole type, and the kind generic as in *?The Italian loves pasta* is ruled out because humans are too individualistic to form well-established kinds. Without the delimited generic the English

system of generics would be unbalanced: it would only provide one generic construal, the proportional generic, to generalize about humans.

Third, the generic concept expressed by the delimited generic is needed in opposition to the generic concept conveyed by the proportional generic. While the proportional generic generalizes on the basis of a salient proportion of entities, the delimited generic generalizes on the basis of a restricted set within a domain, and while the former applies to vaguely defined classes, the latter applies to well-established groupings. The following examples illustrate these differences:

- (29) a. Americans are tolerant.
b. The Americans are tolerant.

The proportional generic in (29a) refers to the majority of Americans wherever they happen to live. This generalization sounds more appropriate than the one expressed by the delimited generic in (29b), which only refers to those Americans that live in the United States. Conversely, the use of the delimited generic in (30a) sounds more felicitous than that of the proportional generic in (30b).

- (30) a. The Americans are our best friends, whether we like it or not.
b. Americans are our best friends, whether we like it or not.

The generalization expressed by the delimited generic in (30a) is understood as applying to the inhabitants of the United States. The sentence was, in fact, uttered in the Canadian House of Commons by Robert Thompson, the leader of the Social Credit Party, in the 1960s, and this utterance “captured the essence of Canada’s difficult relationship with its nearest neighbor.”²² Without the delimited generic, this subtle nuance of generic meaning would not have been conveyed.

6. Summary and conclusion

The types of generic reference and their particular generic meanings are to a large extent motivated by the following four factors:

- i. the notions of exclusiveness and inclusiveness
- ii. the metonymy INSTANCE FOR TYPE
- iii. the metonymy TYPE FOR SUBTYPE
- iv. the conceptual blending of instance and type

The notions of exclusiveness and inclusiveness apply equally to individuating and generic reference and hence allow us to distinguish indefinite and definite types of generic reference and motivate their meanings. The metonymy INSTANCE FOR TYPE evokes the generic type. The metonymy TYPE FOR SUBTYPE serves to restrict the generic referent to prototypical members of the type and thus accounts for the fact that generic reference normally allows for exceptions. The conceptual blending of instance and type fuses their input meanings and gives rise to emergent meanings.

Table 2. Types of generic reference

	generic type	generic form	ex-/inclusiveness	generic meaning
(a)	representative generic	indefinite singular	exclusive	arbitrary instance representing its type
(b)	proportional generic	indefinite plural	exclusive/ inclusive	salient proportion of the type's reference mass
(c)	kind generic	definite singular	inclusive	prototypical subtype of a well-established type
(d)	delimited generic	definite plural	inclusive	delimited human set within a domain

The four types of English generic reference are summarized in Table 2 with their forms, their exclusiveness or inclusiveness, and their meanings.

(a) The representative generic profiles a single indefinite instance, as in *A lion has a bushy tail*. The instance is exclusive in presupposing more than one entity. It evokes a type ('lion') by way of the INSTANCE FOR TYPE metonymy. In the blend, an arbitrary instance of the type represents the type. The type is characterized by essential and defining attributes. The representative generic applies to the subtype of prototypical members and hence allows for exceptions.

(b) The proportional generic profiles a proportional indefinite instance. The proportion is typically exclusive, as in *Hedgehogs are shy creatures*, and more rarely inclusive in referring to all entities of a 'constructed' kind, as in *Horses are mammals*. The instance evokes its type by way of the INSTANCE FOR TYPE metonymy. In the blend, the profiled proportion represents the subset of entities relative to the reference mass of the type and, at the same time, is understood as a subtype of prototypical members. The proportion referred to by the proportional generic is typically the larger set or is salient in some other respect.

(c) The kind generic profiles a single definite type, as in *The tiger hunts by night*. The type is inclusive and represents a well-established kind – hence its definiteness. The kind is, however, constrained with respect to the level within its taxonomy and the Great Chain of Being. The type is comprehended in terms of a prototypical instance via the INSTANCE FOR TYPE metonymy. The kind generic allows for exceptions, as in *The albatross lays one egg*, and may thus also involve the TYPE FOR SUBTYPE metonymy.

(d) The delimited generic profiles a plural definite instance, as in *The Italians love pasta*, or a family of subtypes of a type. The definite generic is inclusive in that it applies to a delimited set within a certain domain. Thus, the set of pasta-loving Italians is delimited by the domains of parentage and residence. The delimited generic mainly applies to well-established human groups. In English, such human groups are also expressed by nominalized adjectives, as in *the poor*. Here, a defining property is metonymically used to stand for the group that has this property.

To conclude this chapter, I have tried to show that new insights into the grammar of generic reference in English can be gained by the use of analytical tools developed in Cognitive Linguistic theory, in particular, conceptual metonymy and conceptual blending.

Notes

* I would like to thank Klaus-Uwe Panther and Susannah Ewing-Bölke for their insightful comments on this paper.

1. Generic readings tend to be associated with the copulative construction with an indefinite predicate nominal as in *The lion is a predatory cat*; characterizing predicates as in *Frogs are clever* – as opposed to eventive predicates as in *Frogs are awake* (Carlson, cited in Thu, 2005); topical as opposed to non-topical elements; the timeless simple present – although other tense forms and the progressive aspect are not incompatible with a generic reading, as in *Dinosaurs ate kelp* (Lyons 1999: 189) and *Tigers are becoming extinct*; mass nouns; and certain adjuncts, as in Lyons' (1999: 190) examples *Cats mess in the open air*, which is understood generically, as opposed to *Cats mess in my garden*, which is most naturally understood non-generically.

2. See also Chesterman (1991: 33), who presumes that “each so-called generic article seems to impart to the generic reading of the NP a particular nuance of its own.” Other scholars of genericity, e.g. Vogel and McGillion (2002), assume that the conceptual distinctions of generics are independent of their forms.

3. See Dahl (1995: 425) and the online *Linguist List* of 6 April 1994. Genericity is, however, often minimally marked with respect to tense and aspect but, when a language has a form marking generics, this form is also used in non-generic contexts.

4. The metonymy INSTANCE FOR TYPE (OR SPECIFIC FOR GENERIC) is motivated by one of the cognitive preference principles governing the choice of a metonymic vehicle: SPECIFIC OVER GENERIC. Specific instances form better gestalts than general entities and tend to be concrete, immediate, and occurrent (Radden & Kövecses 1999).

5. Here I follow Langacker's (1991: 81) proposal that “every nominal profiles a single instance of some type”. The distinction between one and several discrete entities, as described by singular and plural count nouns, is a matter of different categories, or types, not a matter of different instances. To distinguish the two types of instances, I call an instance of a discrete singular type a *single instance*, and an instance of a discrete plural type a *plural instance*.

6. The representative-instance quantifier *any* and the representative generic *a(n)* differ in at least two respects. The speaker using the quantifier *any* selects one random element of a set, while the speaker using the generic article *a(n)* conjures up an arbitrary indefinite instance of a type. Thus, *Any alligator has a strong bite* could be paraphrased as ‘whichever alligator you choose among the set of alligators, it has a strong bite’; by contrast, *An alligator has a strong bite* might be paraphrased as ‘a prototypical alligator has a strong bite’. Secondly, *any* and *a(n)* make different assumptions about the entity they invoke: the quantifier *any* invokes a full set, defined by the extension of its individual members, while generic *a(n)* evokes a type and, as pointed out above, metonymically a subtype of prototypical members. Thus, in the example *An alligator has a strong bite*, toothless alligator babies would be excluded. See also Burton-Roberts' (1976) extensive discussion of generic *a* and the quantifier *any*, in which he provides many examples showing that the quantifier *any* cannot replace the generic article *a(n)*: for example, *A beaver is an amphibious rodent* cannot be substituted by **Any beaver is an amphibious rodent*.

7. These examples are discussed in Perlmutter (1970) and Burton-Roberts (1976: 437), who also noticed that the use of *any* in coordinated NPs is ungrammatical: **Any beaver and any otter builds dams*. However, Burton-Roberts' transformational account of their unacceptability is rather far-fetched. For the indefinite generic in *A beaver builds dams* he postulates an underlying structure like ‘to be a beaver is to build dams’ and claims that the NPs in **A beaver and an otter build dams* cannot be coordinated because their underlying structures cannot be conjoined, as in **To be a beaver and to be an otter are to build dams*.

8. The English indefinite article *a(n)* derives from the numeral ‘one’ and is still incompatible with plural nouns – unlike the definite article *the*, which can be used with singular and plural nouns.

9. Metonymy is not, as traditionally assumed, a shift in which a literal source expression is substituted by the target. The metonymic source is not erased but still conceptually present; however, the metonymic target is dominant (Panther & Thornburg 2004). For example, in the utterance *The kettle is boiling*, the metonymic source ‘the kettle’ is still present and might be anaphorically referred to in the reply *Please take it off the burner*. Yet, there can be no doubt that the metonymic target, i.e. ‘the water’, is conceptually dominant as its intended referent – even if it cannot easily be referred to anaphorically: thus, *#The kettle is boiling; you can pour it into the teapot now* sounds strange.

10. Klaus Panther (p.c.) has noted that the use of *real* makes the use of the representative generic with human subjects acceptable, as in *A real Italian loves pasta* or *A real Italian is a football fan*. In his analysis of the hedge *real* Taylor (1995:97) observes that *real* “highlights attributes conventionally associated with a frame, while at the same time releasing the category from otherwise necessary conditions for membership. *A real man* exhibits to a high degree stereotyped attributes of masculinity.” Since the hedge *real* releases the boundaries of a category and imparts stereotypical meaning to the human referent, generic subjects such as *a real Italian* are fully compatible with stereotypical attributes predicated of them.

11. Nationalities can, of course, be defined by their residence or provenance. For example, the *Oxford English Dictionary* defines an Italian as “someone of or pertaining to Italy or its people; native to or produced in Italy.”

12. This is Paul Saka’s definition of a linguist in the discussion on “What is a linguist?” on *Linguist List* 10 Oct 1991. Saka also points out that we would hesitate to call Donald Davidson a linguist because the coordinate fact that he is a philosopher is more salient. He also cites the interesting observation made by a discussant that in Chinese and Japanese the closest translation of *linguist* suggests some sort of prestige or fame. Needless to say that people’s concept of fairly unknown professions such as linguists varies from person to person.

13. The arguments presented by Burton-Roberts (1976) against the generic status of indefinite plurals include their different behavior in actives and passives and the “cline” between generic and non-specific interpretations, which solely pertain to this type of generic. Thus, the indefinite plural NP *beavers* in the passive sentence *In Canada, beavers are hunted by professionals* would be considered generic but is non-specific in the active sentence *In Canada, professionals hunt beavers*. A cline from generic to increasingly non-generic interpretations can be observed in the sentences *Hyenas haunt African plains*, *Hyenas haunt the Cairo suburbs*, *Hyenas haunt the Nile Street*, and *Hyenas haunt my backyard*.

14. Carlson (1980:25) provides similar examples of anaphoric coreferences between generic and individuating referents. In sentence (a) below, a generic referent anaphorically refers back to an individuating referent, and, conversely, in sentence (b), an individuating referent refers back to a generic referent.

- a. Bill trapped *eagles* last night even though he knows full well that *they* are on the verge of extinction.
- b. Even though Bill knows that *eagles* are on the verge of extinction, that didn’t stop him from trapping *them* last night.

15. The examples are taken from Langacker (1995:297). The non-progressive sentence (11a) sounds better than the progressive sentence (11b). This is probably due to the fact that we rarely conceive of generic situations holding for a limited duration. The acceptability of sentence (11b) improves if the time adjunct is fronted, as in *These days, cats are dying before the age of 15*, and even more so if the generic sentence contains a “progressive of increase”, as in *With modern medication, cats are living longer and longer*. What matters here, however, is that bare plurals are compatible with the progressive while singular generics are not: **These days the/a cat is dying before the age of 15* or **With modern medication, the/a cat is living longer and longer*.

16. This description follows Langacker’s view (1991:74–81) that, due to their many commonalities, plural nouns are seen as a subclass of mass nouns. They profile a mass consisting of an indeterminate number of discrete entities and are treated therefore as representing one instance.

17. The excerpt is taken from “The cult of institutions” published in the online journal *CUNY Graduate Center Advocate* (<http://web.gc.cuny.edu/advocate/MAY05ISSUE/html/May05CultInstitutions.htm>).
18. In a Google search, the modal predicate *can carry disease* has a lower frequency than the non-modal predicate *carry diseases* (20,400 hits vs. 51,700), but their uses appear to be more or less identical.
19. The modal quality of genericness probably has a much wider application in accounting for exceptions than can be explored here. Thus, according to Krifka et al. (1995:61), “the sentence *A lion has a mane* does not make a claim about the closed class of all existing lions, but rather about every (“realistically”) possible lion.”
20. The contrastive aspect of meaning in *Mosquitoes carry malaria* has been brought to my attention by an anonymous reviewer, who suggested that the sentence might be interpreted in terms of ellipted identifying clauses: ‘Mosquitoes are the insects that carry malaria’ or ‘The insects that carry malaria are mosquitoes’. In naming the higher-order category *insects*, these paraphrases stress the notion of uniqueness of mosquitoes as opposed to other types of insects.
21. The conceptualization invoked by a type may be more complex and involve more than one of its members. Christophersen (1939:131) gives the example of *the theatre*, which “may, according to circumstances, mean ‘the theatrical world’, ‘dramatic art’, or simply ‘the hours regularly taken up by theatrical performances every night’”
22. <http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0001220>.

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The (non-)metonymic use of place names in English, German, Hungarian, and Croatian*

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1. Introduction

It has often been noted that, unlike metaphor, metonymy has hardly any impact on grammar. This claim has been made almost invariably on the basis of a discussion of referential or nominal metonymies (cf. Nunberg 1979, 1995; Copestake & Briscoe 1995). There are two problems with such claims. First, it is not immediately clear what is meant by “impact on grammar”, or “grammatical corollaries” (as Copestake and Briscoe put it, p. 16). Are we perhaps to understand this in the sense of triggering certain grammatical rules? Copestake and Briscoe themselves make certain concessions on this issue, as they acknowledge that metonymic shifts must be involved in some cases of core morphosyntactic phenomena such as agreement, co-reference, and reflexivization. Secondly, there is a rapidly growing body of literature showing convincingly that metonymic processes are crucially involved in shaping central areas of grammar (cf. Panther & Thornburg 1999, 2000, 2007; Ruiz de Mendoza 1999, Ruiz de Mendoza & Peña Cervel 2002, Ruiz de Mendoza & Pérez Hernández 2001; Barcelona 2002, 2004; Dirven & Radden 2007). Even though metonymy may not bring about spectacular changes or shifts in grammar, it may still play an important role in motivating the distribution and function of elements in entire grammatical subsystems. For example Langacker (this volume: 58–59) shows that a number of nominal expressions are ambivalent regarding whether their referents are to be construed as uniplex/unitary or multiplex entities. The purpose of the present paper is to provide further evidence of the involvement of metonymy in a network of grammatical subsystems – where, according to Langacker (2002: 39), “everything has to fit, and everything has to fit together” – and in the motivation of cross-linguistic differences in the internal structure of these subsystems.

Constraints on referential metonymy seem at first sight to be less heavily grammatical in nature than those observed with predicational metonymy. However, this does not mean that referential metonymies are totally uninteresting from a grammatical point of view. In this paper we focus on a stock example of referential metonymies, those of the type PLACE FOR INSTITUTION, and show how some cross-linguistic differences in their

availability correlate with some other grammatical and conceptual phenomena, and thus make linguistic subsystems quite coherent.

2. Referential metonymies: Cross-linguistic differences in exploitation

Much of recent research on cross-linguistic availability of various types of metonymies seems to indicate that referential metonymies, in marked contrast to predicational ones, are relatively unconstrained, so that most subtypes of the former are attested almost universally. Although referential metonymy is very productive and some of the most conspicuous constraints on its productivity, which are discursively and pragmatically motivated, seem to be more or less universal despite some apparent cross-linguistic contrasts, a closer look reveals that there are some significant differences among languages concerning its availability. We will demonstrate such differences by focusing on the CAPITAL FOR GOVERNMENT metonymy, a subtype of the PLACE FOR INSTITUTION metonymy (or of the PLACE FOR PEOPLE metonymy as the hierarchically superordinate metonymy; see Markert & Nissim 2006: 160).

2.1 The CAPITAL FOR GOVERNMENT metonymy in the language of media: Corpus data

A series of small-scale corpus-based case studies on the availability of metonymically used proper names denoting capitals in the language of media, such as the following (*italics added*):

- (1) a. However, *Washington* has insisted it will not be drawn into a bilateral pact, having seen North Korea violate earlier non-proliferation agreements by continuing its nuclear program in secret.
- b. Russian President Vladimir Putin's top foreign policy adviser yesterday expressed optimism that *Moscow* and *Washington* could resolve their differences over a post-war settlement in Iraq by early next month.
- c. *Berlin* has long argued that it is unfair to eliminate safeguards such as poison pills if countries can retain multiple voting rights.
- d. They were less keen to talk about the US-inspired caveat that any increased threats by *Pyongyang* would "require consideration of further steps" - code for military action or, more likely, sanctions, both of which *Seoul* opposes.

have shown that this particular type of metonymy is ubiquitous in English and German, but less so in Hungarian and Croatian.

Brdar-Szabó (2002) investigated the metonymic use of country and capital names in news articles on foreign/international affairs in five German and five Hungarian newspapers with national circulation that appeared on the same day (which ensures that there is a high degree of overlap concerning the events reported).¹ It turns out that German papers use 1.5 times more tokens of the CAPITAL FOR GOVERNMENT metonymy than Hungarian papers in the body of the text; the discrepancy is even more conspicuous when types are

considered (3.5 more types in German than in Hungarian). In headlines, we found 2.5 times more tokens and 4 times more types of this metonymy type in German headlines.

Table 1. Type and token frequency of the CAPITAL FOR GOVERNMENT metonymy in German and Hungarian newspapers

		German		Hungarian	
		Total	Average per paper	Total	Average per paper
Types	Integral text	14	2.8	4	0.8
Tokens		47	9.4	30	6
Types	Headlines	8	1.6	2	0.4
Tokens		10	2	4	0.8

On the other hand, the frequency of use of the COUNTRY FOR GOVERNMENT metonymy in the same textual material showed less sharp differences.

Another pilot study (Tomka 2003) investigated the same two metonymies in two German, Slovenian, and Croatian weeklies. The results of the comparison for the CAPITAL FOR GOVERNMENT metonymy are given in Table 2. The numbers are higher due to a larger number of longer texts, but the tendency is clear: German exhibits significantly more types and tokens than Slovenian and Croatian, while the differences between the latter two are clearly not of the same magnitude:

Table 2. Type and token frequency of the CAPITAL FOR GOVERNMENT metonymy in German, Slovenian, and Croatian weeklies

	German		Slovenian		Croatian	
	Total	Average	Total	Average	Total	Average
Tokens	49	24.5	8	4	12	6
Types	25	12.5	5	2.5	9	4.5

Again, the patterning of the COUNTRY FOR GOVERNMENT metonymy showed less sharp contrasts for these three languages. It seems, then, that the COUNTRY FOR GOVERNMENT metonymy is equally productive in Hungarian, German, Slovenian, and Croatian.

Finally, in order to make these data comparable with English, we performed another count involving international/world news in two daily newspapers with national or international circulation for the four languages English, German, Croatian, and Hungarian. We sampled the articles in question on six randomly chosen weekdays in the period between September 18, 2001, and July 22, 2003. It turned out that the density of the CAPITAL FOR GOVERNMENT metonymy in this particular text type is highest in English, while the data for German, Croatian, and Hungarian match previous pilot studies, and thus confirm our expectations. The difference between English and German is not conspicuous, but is nevertheless not unimportant. On the other hand, both Croatian and Hungarian, while close to each other in terms of the frequency of metonymies in question and the number

of tokens in subcorpora of almost equal size, are well below what could be considered the average value.

We present both the absolute data in terms of types and tokens, as well as in a normalized form, giving the frequency of tokens normalized to the standard basis per 1,000 words. This procedure makes it possible to offset any relative differences in the number of articles and their relative length across papers and languages.

Table 3. Type and token frequency of the CAPITAL FOR GOVERNMENT metonymy in international news articles in English, German, Croatian, and Hungarian daily newspapers

Language	Papers	Subcorpus size (number of words)	CAPITAL FOR GOVERNMENT metonymy		
			Tokens		Types
			In absolute numbers	Number of tokens per 1,000 words	
English	<i>Financial Times</i> , <i>Guardian</i>	52,658	150	2.84	22
German	<i>Frankfurter Allgemeine Zeitung</i> , <i>Süddeutsche Zeitung</i>	58,221	150	2.57	22
Croatian	<i>Vjesnik</i> , <i>Večernji list</i>	36,091	65	1.80	15
Hungarian	<i>Népszabadság</i> , <i>Magyar Nemzet</i>	39,644	69	1.74	16
	Total	186,614	434	2.32	

These counts clearly establish the existence of this metonymy in a wide range of languages, but it is intriguing that it is conspicuously less used in some languages. Among many possible factors at play here (e.g. sociolinguistic or cultural ones, as discussed in Brdar (2006) and Brdar-Szabó & Brdar (2007)), we restrict our investigation to some cases of interaction between conceptual and typological-grammatical structure (cf. Brdar-Szabó & Brdar 2002).

2.2 The interaction of the conceptual metaphor RELATIONSHIP IS PROXIMITY and the CAPITAL FOR GOVERNMENT metonymy, or: How a culturally mediated metaphor can block metonymy

We begin by focusing on a culturally mediated conceptual metaphor, i.e. the RELATIONSHIP IS PROXIMITY metaphor. We hypothesize that the propensity for the CAPITAL FOR GOVERNMENT metonymy to occur may be constrained by this conceptual metaphor. Specifically, there are conspicuously few instances of the metonymic use of *Zagreb*, the name of the Croatian capital, in the Croatian subcorpus, and of the metonymic use of *Budapest* in the Hungarian subcorpus. *Washington*, *London*, and *Berlin* are more frequent in the

English and German subcorpora, respectively. *Washington*, in particular, is used routinely in American daily papers and magazines alike.

We presume pragmatic factors play an important role here, such as perspective and the degree of empathy or its absence (i.e. detachment) that the journalist (and, of course, the readership, if they adopt the perspective suggested by the article) may feel concerning the authority in question. The mechanism that underlies this way of marking the perspective and expression of empathy is in our view an instantiation of the conceptual metaphor RELATIONSHIP IS PROXIMITY.

Let us explain what we mean by the conceptual metaphor RELATIONSHIP IS PROXIMITY. There is normally some physical distance between journalists and their readership, on the one hand, and the locality whose name is used as the vehicle for the CAPITAL FOR GOVERNMENT metonymy, on the other. This corresponds to their status on what Langacker (1991:307) calls the empathy hierarchy. Journalists, as the authors of the text, are in the deictic center and highest on the hierarchy, followed by their readership. The topical locality functioning as metonymy (referring to an abstract entity) is lower on the hierarchy. Consequently, the journalists and readers assume an outside perspective on that locality (thus adding the dimension of mental distance), which enables them to be “objective”, emotionally neutral, or detached when discussing the activities of the government of another country. We thus have an explanation for the fact that the majority of the instances of this metonymy makes mention of other countries’ capitals. When referring to one’s own government, there is simply not enough distance to warrant the use of the metonymy. However, this does not entail that a Croatian newspaper article will never use *Zagreb* to refer to the Croatian government. In fact, a probe of the newspaper subcorpus of the Croatian National Corpus (roughly six million words sampled in 1998) reveals that Croatian journalists occasionally use *Zagreb* as a metonym for the Croatian government. Some examples are:

- (2) a. MMF u svom izvješću potvrđuje, pak, da je kreditni rejting
IMF in its report confirms however that AUX credit rating
Hrvatske doista pao za dva stupnja te da se
Croatia.GEN indeed fell for two points and that REFL
Zagreb našao u neslavnom društvu s Rusijom
Zagreb found in inglorious company.LOC with Russia
i Zimbabveom. [N155_02 12743]
and Zimbabwe
‘The IMF, however, confirms in its report that the credit rating of Croatia has fallen two points and that *Zagreb* has found itself in the inglorious company of Russia and Zimbabwe’
- b. Prvo, mogla bi pojačati pritisak na *Zagreb*... [N130_K05 11586]
First could COND intensify pressure on Zagreb
‘First, it could put more pressure on *Zagreb*...’

There were 27 instances of the CAPITAL FOR GOVERNMENT metonymy among the first 500 tokens of *Zagreb*. It is telling, however, that 21 examples come from an opposition paper, which happens to be a weekly, five from a pro-government daily, and one from a weekly sponsored by the Catholic Church. In other words, if a paper, or an article, assumes a more

critical stance towards the government, emotional distance increases, and the metonymic uses of the capital's name become more frequent.² It has also been noted that regional newspapers may use this type of metonymy to indicate their opposition to the central authority (Brdar-Szabó & Brdar 2003: 49–51). Note that the opposition paper in question is a weekly, which means that the distance in time from reported events is also greater. It is of course unfortunate that this subcorpus does not include samples from any opposition daily, but our main point – that the closer a medium stands to a government in conceptual, emotional, and temporal terms, the less likely the use of the metonymy – seems to be borne out.

There are, however, certain grammatical constructions that can be used to remove this distance. Coordination of two capitals by *and* and its various counterparts in other languages clearly puts both on an equal footing, i.e. at equal distance from the journalist/reader as the deictic center, and thus increases the likelihood that the name of the capital of a given community will be used metonymically, while no apparent increase in critical stance is observed. Compare some Croatian (3) and Hungarian (4) examples:

- (3) Svjedok je opisao i to kako mu je Milošević,
 witness AUX described too that how him AUX.2SG Milošević
 kad su razgovarali o budućnosti Jugoslavije, kazao kako
 when AUX.3PL talked about future Yugoslavia told how
 isključuje mogućnost konfederativnog odnosa Zagreba i Beograda.
 rules-out possibility confederal relation Zagreb-GEN and Belgrade-GEN
 'The witness also reported that, when they talked about the future of Yugoslavia, Milošević told him that he ruled out the possibility of a confederal relationship between Zagreb and Belgrade'

- (4) *Budapest és Varsó* elfogadhatatlannak tartja, hogy...
 Budapest and Warsaw unacceptable-DAT hold-1SG that
 'Budapest and Warsaw consider it unacceptable that...'

It is interesting to note in Croatian a degree of iconicity in the ordering of the two capitals: *Zagreb* is almost invariably the first conjunct in such constructions, due possibly to the NEAREST IS FIRST metaphor (Lakoff & Johnson 1980: 133).

Another construction, found only in Croatian, has a premodifier *službeni* 'official' in front of the name of the capital. It seems to increase distance, while at the same time serving as a clue for the metonymic reading:

- (5) ... što *službeni Zagreb* dovodi do snažnije pozicije...
 which official Zagreb leads to powerful.COMP position
 '...which puts official Zagreb in a more powerful position'

This premodifier is also found with names of other capitals, not only with *Zagreb*.

The metaphor RELATIONSHIP IS PROXIMITY explains some of the contrasts in frequency of use of the CAPITAL FOR GOVERNMENT metonymy, e.g. the avoidance of *Budapest* in Hungarian papers, or the avoidance of *Zagreb* in Croatian papers in contrast to the metonymic use of names of capitals of other countries in these same papers. Nevertheless,

even these are relatively rare in our corpus, as seen in the lower number of types in Croatian and Hungarian than in English and German.

Upon closer inspection, the metaphor *RELATIONSHIP IS PROXIMITY* seems to involve additional factors that account for the metonymic use of names of capitals of distant countries, particularly those countries that are seen as global power brokers, or, on the other hand, are held in very low esteem, perhaps because they are presented as global villains, or perceived as antagonists. If the *CAPITAL FOR GOVERNMENT* metonymy is in principle available, we might expect, at least in theory, that any capital should be a viable metonymic source. This is of course just theory, as governments, capitals, and countries in question must be sufficiently salient for the speakers of a given linguistic community. It is plain enough why Belmopan hardly stands a chance of being used metonymically in a news article for the government of Belize, or Bridgetown for the Barbados government.

Global power brokers, however, should be handled with care and from a distance. If a capital name stands for a perceived antagonistic government, it is not necessarily spatially distant (see the examples in (2)), but is certainly salient and emotionally negatively charged, and is therefore treated as if it were physically distant. Such cases are found in data from the Croatian National Corpus and are presented in Table 4, which shows the number of tokens of certain capital names in the newspaper subcorpus, as well as the number of metonymic uses. The third column indicates the density of metonymic usage in terms of percentage of the total number of tokens:

Table 4. Frequency and metonymic uses of capital names in the newspaper subcorpus of the Croatian National Corpus

Capital	Total number of tokens	Metonymic uses	
		tokens	% of the total number of tokens
Berlin	257	5	1.94
Paris	764	20	2.61
Sarajevo	1,247	36	2.88
London	515	24	4.66
Beograd	982	90	9.16
Moskva	338	57	16.8
Washington	561	146	26.02
Baghdad	85	32	37.64

The interaction of degree (and kind) of emotional involvement in the *RELATIONSHIP IS PROXIMITY* metaphor and its effect on constraining the *CAPITAL FOR GOVERNMENT* metonymy is apparent in Table 4: a relatively greater density of metonymic use occurs with highly emotionally charged capital names (“power brokers” and “global villains”) than that of emotionally neutral capital names. This interaction accounts for the skewed distribution of the metonymic use of distant capital names in Croatian; it leaves unexplained the overall lower frequency of metonymic reference observed in Section 2.1.

2.3 A contrastive intermezzo: A comparison of syntactic functions of CAPITAL FOR GOVERNMENT metonymies

Even after peeling away layers of potential constraints as outlined above, the differences between the two groups of languages are still larger than expected, which indicates that other constraining factors must be at work, some of which may turn out to be grammatical in nature. In order to check the grammatical behavior of these metonymies, we looked at their syntactic function. Metonymically used capital names can assume practically any core syntactic function in a sentence in any of the four languages under investigation; they can function as subjects, direct objects, indirect objects, and prepositional objects, as shown by the following set of English (6), and German (7) examples:

- (6) a. *Washington* also accused Iran of stockpiling blister, blood and choking agents and some nerve agents, the US diplomat Stephen Rademaker said in a statement obtained by the Guardian.
- b. Mr. Sharon may also be losing confidence in Israel's efforts to persuade *Washington* of its common cause with the US, and that it faces in Mr. Arafat the local equivalent of the Saudi fugitive Osama bin Laden.
- c. NATO foreign ministers yesterday unexpectedly back-pedaled on quickly establishing a new relationship with Russia after Washington strongly objected to giving *Moscow* a greater role in alliance decision-making.
- d. Specter of further borrowing looms for *Berlin* as Eichel faces poisonous mix of economic difficulties...
- (7) a. Außerdem will *London* eine Liste von Staaten aufstellen,
in.addition wants London a list of states set up
deren Rechtsordnung als "fair" gilt...
whose legal system as fair considered.is
'London also wants to make a list of countries whose legal system counts as "fair"'
- b. Im christlichen Abendland... löste dieser Brauch heftige
in Christian West brought.about this custom fierce
Kontroversen aus, die schließlich *Brüssel* zum Eingreifen
controversies PART which eventually Brussels.ACC to intervention
zwangen.
forced
'This custom caused fierce controversies in the Christian West that eventually forced Brussels to intervene'
- c. Der Löwenanteil dieses politischen Ärgers aber gilt *Paris*.
the lion's share of.this political annoyance however is.aimed.at Paris.DAT
'The lion's share of this political ire is however aimed at Paris'
- d. Diese Formulierung dürfte im Seouler Parlament auch
this formulation may in Seoul-ADJ parliament too
der Opposition genügen, die von Roh's Regierung
DEF.DAT opposition satisfy which from Roh's government
mehr Entschiedenheit gegen *Pjöngjang* fordert,...
more determination against Pyongyang.ACC demands
'This formulation may have satisfied even the opposition in the Seoul parliament which demands from Roh's government more determination against Pyongyang'

It appears, however, that subject function is by far the most important one. An analysis of metonymic uses of assorted capital names (*Moscow, London, Sarajevo, Paris, Ankara, Athens, Vienna, Belgrade, and Berlin*) in the newspaper subcorpus of the Croatian National Corpus, shows that there are 172 instances of metonymies functioning as subjects and 167 instances of metonymies functioning as non-subjects, i.e. direct, indirect, and prepositional objects, taken together. A similar distribution is evident in Hungarian. These distributional facts indicate that the metonymies are highly topical elements. The direct object function, on the other hand, is far less well represented than one would expect, being even less numerous than those functioning as indirect or prepositional objects.

At the same time we note that even the crudest contrastive analysis of English and German examples on the one hand, and Hungarian and Croatian examples on the other, reveals that English and German subject NPs often find their counterparts in the latter languages in non-subject PPs, viz. adpositional phrases, apparently functioning as locative adverbials. Somewhat less frequently, they are replaced by denominal possessive adjectives premodifying a noun. Compare the following Hungarian and Croatian examples:

- (8) a. *Moszkvában* most úgy látják, ...
 Moscow-in now thus consider-3PL
 'Moscow now thinks...'
- b. *Varsói* kísérletek a múlt elhalványítására
 Warsaw-ADJ attempts DEF past bleaching.on
 'Warsaw's attempts at revising the past'
- (9) a. *Iz Londona* je službeno zanijekano da je krajnje
 from London-GEN AUX officially denied that AUX ultimate
 odredište tankera bio Gibraltar, što je prije objavljeno.
 destination tanker been Gibraltar which AUX earlier published
 'It was officially denied in London that the ship's ultimate destination was Gibraltar,
 contrary to what had been claimed earlier'
- b. *Djelatnost četničkog ravnogorskog pokreta,* smatraju
 activity tchetnik Ravna Gora movement-GEN consider-3PL
u Sarajevu, dobar je primjer tih dvostrukih standarda.
 in Sarajevo good is example these double standards
 'The activity of the Ravna Gora tchetnik movement is considered in Sarajevo to be a
 good example of such double standards'

The first type of counterpart – a non-subject PP, illustrated in Hungarian (8a) and Croatian (9a) – is very similar to Langacker's topic constructions (this volume: 55–56), which are claimed to be "[a]nother grammatical manifestation of reference point relationships" (55). The most important difference is the absence of resumptive pronouns in Hungarian and Croatian, but their referents are implicit in verbal inflection. Such structures were not counted in the above quantitative analyses as instances of metonymies.

That this pattern is not an isolated and incidental contrastive finding is shown by their relative frequency in the newspaper subcorpus of the Croatian National Corpus. Consider the counts for assorted capital names presented in Table 5. The first column specifies the number of instances of straightforward metonymic uses, while the second specifies the number of PP counterparts (most of the time with the preposition *u* 'in'). The third

column shows the ratio of the two uses. The last column gives the percentage of these in the total of columns 1 and 2, i.e. if the PP structures are also considered metonymies, as we claim in Section 3.

Table 5. Ratio of metonymic uses of capital names and locative PPs in impersonal structures in the newspaper subcorpus of the Croatian National Corpus

	1	2	3	4
Capital	Metonymically used tokens	Locative PPs	Ratio 1:2	Percentage of 2 in 1+2
Moskva	57	5	11.4	8.77
London	24	4	6.0	14.28
Sarajevo	36	22	1.63	37.94
Paris	20	3	6.66	13.04
Beograd	90	27	3.33	23.07
Berlin	5	1	5.0	16.66
Washington	146	27	5.40	15.60
Total	378	89	4.24	19.05

Comparable constructions, while not impossible, are very rare indeed in English and German, if the capital name is used metonymically:

- (10) South Korea's President Roh Moo-hyun's first meeting with George W. Bush, his US counterpart, in Washington on Wednesday was hailed *in Seoul* yesterday as a happy ending to a period of turmoil in relations between the military allies. [*Financial Times*, May 16, 2003]
- (11) Nach mehr als zwanzig Jahren Krieg sei es äußerst
 after more than twenty years war is.SUBJ it extremely
 schwierig, einen Neuanfang zu finden, heißt es *in Islamabad*.
 difficult a new start to find said.is.3SG it in Islamabad
 [*Frankfurter Allgemeine Zeitung*, December 7, 2001]
 'It is said in Islamabad that after more than twenty years of war it is extremely difficult to make a new start'

Metonymically used names of capitals seem more natural as subjects. Supporting evidence comes from our parallel text corpora. Issues of newspapers appearing on the same day very frequently have articles dealing with the same events, which means that these articles in different languages can be compared and checked as to whether or not the name of the same capital is used metonymically. There are many instances in our corpora where Croatian and Hungarian articles have some non-subject PP counterparts to NP subject use. To illustrate, consider two articles that appeared on May 16, 2003, dealing with then Secretary of State Colin Powell's visit to Berlin. The German article exhibits five instances of metonymic uses of capital names; *Berlin* is used in that way three times, while *Washington* and *Paris* appear once each. The Hungarian article also exhibits five ordinary metonymic uses: *Washington* and *Paris* each appear twice, and *Berlin* only once. However, *Berlin* also appears in the Hungarian article in a locative expression with adposition in an impersonal construction (*Berlinben elgondolkodnak*, lit. Berlin-in think-3PL). The two parallel articles are reproduced in Appendix 1 and Appendix 2, complete with English glosses and translations.

2.4 CAPITAL FOR GOVERNMENT metonymies as subjects

Consolidating the figures from various counts and comparisons and plotting them against each other gives a clearer picture concerning the question of where all the missing metonymies in Croatian and Hungarian have actually gone. If the subject function is found in roughly half of the metonymically used capital names in Croatian, and if this language exhibits fewer capital name metonymies than English and German due to available alternate constructions discussed above, we might then expect that the number of metonymically used capital names functioning as subject should be even higher than 50% in English and German. However, this expectation is not borne out by the grammatical analysis of our corpus. As Table 6 shows, capital name metonymies function as subjects in roughly half of the cases in three out of the four languages, Hungarian somewhat standing out with 55%:

Table 6. Metonymic uses of capital names functioning as subjects

Language	% of subjects
English	48
German	44
Croatian	49
Hungarian	55

The 50% benchmark squares with our previous counts performed on the newspaper sub-corpus of the Croatian National Corpus, but poses an apparent challenge for our assumption that a large portion of contrasts in the productivity of the capital name metonymy can be attributed to the “replacement” of English and German metonymic subjects by PPs and possessive adjectives in Croatian and Hungarian.

2.5 The CAPITAL FOR GOVERNMENT metonymy and topic continuity

In the remainder of this paper we argue that our observation concerning the replacement pattern of metonymic NP subjects is non-trivial because it is one of four strategies available for preserving or maintaining topic continuity in a discourse. By topic continuity or topicality we mean, together with Givón (1983: 7f.), the phenomenon of a series of sentences that have a prominent common participant or participants that can be seen as the leitmotif of the discourse unit. These participants exhibit degrees of topicality depending on the recency of their mention and persistence.

We propose the following: the strategy of “replacing” metonymic NP subjects with PPs is the more natural option in Croatian and Hungarian since they are languages that (i) have prominent systems of impersonal constructions, and (ii) belong to the pro-drop type of languages having rich agreement systems. The second strategy would be to avoid metonymy altogether, while the third, the least natural in Croatian and Hungarian, would be to produce a whole string of repeatedly used metonymies. Finally, an unnatural solution would be to use anaphoric pronouns that would have to agree with either the gender/number of the metonymic target or the metonymic source. This is unnatural, or at

least very marked because it almost invariably leads to the breakdown in the continuity of the topic as such pronouns in subject position are then very frequently interpreted as introducing new referents/topics.

One of the most important discourse-pragmatic functions of metonymy is to enhance cohesion and coherence of the utterance. It is something that is already at the very heart of metonymy as a conceptual operation where one content stands for another but both are actually activated at least to some degree. In other words, metonymy is an efficient means of saying two things for the price of one, i.e. two concepts are activated while only one is explicitly mentioned (cf. Radden & Kövecses 1999: 19). This necessarily enhances the cohesion of an utterance because two topical concepts are referred to by means of one label, and there is consequently, at least nominally, less shifting or switching between these parallel topics.

While zero anaphora topics may persist for longer or shorter stretches, they eventually need to be maintained before they decay. This usually happens by means of a co-referring pronoun – i.e. anaphor, by repeating the expression in question, or by using a related expression (e.g. a synonym). So-called pro-drop languages can tolerate quite long stretches without any maintenance apart from agreement features (number, person, gender), unlike English or German, which obligatorily require at least pronominals to fill the subject slot. Much depends, then, on how easily a language can maintain such “double-barreled” metonymic topics. It appears that English, with its quite flexible system of co-referring pronouns (cf. the use of plural or singular pronouns in coreference with collective terms), but a relatively rudimentary agreement system can achieve relative longevity of such double-barreled and ambiguous topics without incurring too much processing cost.

An attempt to use anaphoric pronouns in pro-drop languages like Croatian or Hungarian in order to maintain such metonymic topics – the most marked or unnatural solution of the four we mention above – would yield strange results. For example, regardless of whether we choose a pronoun according to the gender of the capital, i.e. neuter *ono* ‘it’ for *Sarajevo*, or masculine *on* ‘he’ for *Berlin*, or *London*, or *Washington*, etc., or whether we choose the feminine pronoun *ona* ‘she’ compatible with the target, i.e. the government of the country whose capital is mentioned, a break in topic continuity results because the switch from the topic seems to be too abrupt. Even with more straightforward referents, it is usually assumed that a pronoun in subject position is quite likely to introduce a new topic, or effect a backshift to one of the topics mentioned before the last one. With metonymic double-barreled nouns, such a shift becomes intolerable.

Hungarian has a less elaborate gender system, but nevertheless such a switch to an overt 3rd person pronoun would be unusual, if not impossible, and is not attested in our corpus. On the other hand, we note that pro-drop languages like Croatian or Hungarian, even if they can do without any anaphoric pronouns, must very soon narrow down the reference of the topic in order to be able to select appropriate agreement features. English and German are more likely to gradually determine the ultimate reference of the topic on-line in a step-by-step fashion, i.e. pick it up from the larger context or from one of the consecutively activated knowledge domains or ICMS, while Croatian and Hungarian seem to automatically assign the default metonymic interpretation to capital names in this type of discourse. This is why the range of possible referents of metonymic expressions based

on place names is broader in English and German than in Croatian or Hungarian, as reported in Brdar-Szabó (2002), a phenomenon that we return to in Section 3.

Even if these languages get around the problem of the selection of anaphoric pronouns by avoiding them, the problem of the selection of the appropriate agreement features cannot be easily avoided. Of course, one of the possible strategies is to avoid metonymy altogether, which accounts for a relatively high number of texts in the Croatian and Hungarian subcorpora that exhibit no metonymically used names of capitals. Instead, literal expressions are used such as ‘X’s government’. The closest they then come to metonymy is in the use of the premodifier ‘official’ in front of the name of the capital, which seems to facilitate subsequent anaphoric reference according to the gender features of the metonymic source, or in the formula ‘the government/regime in X’, which we claim below is also metonymic in nature, as illustrated in:

- (12) a. Poslije terorističkog udara na SAD 2001, *vlada u Riyadhu*
 after terrorist attack on USA 2001 government in Riyadh
 je mjesecima odbijala javno priznati da su otmičari
 AUX months-INSTR refused publicly admit-INF that COP hijackers
 koji su u tome sudjelovala većinom bili građani
 who AUX in that took.part for-most-part COP.PART citizens
 Saudijske Arabije.
 Saudi Arabia.GEN
 ‘After the terrorist attack against the USA in 2001 the government in Riyadh has for months refused to publicly admit that most of the hijackers that took part in it were citizens of Saudi Arabia’
- b. Oni, naime, drže da ni međunarodno pravno ni
 they namely think that neither internationally legally nor
 moralno SAD nema pravo napasti Irak i
 morally USA not.has right attack-INF Iraq and
 primijeniti silu protiv režima u Bagdadu.
 use force against regime in Baghdad
 ‘I.e., they think that the USA has neither the moral nor (international) legal right to attack Iraq and use force against the Baghdad regime’

The same formula is of course also found in English:

- (13) a. Details of the accounts were provided by *authorities in Belgrade* as part of an effort to trace the Milosevic regime’s illegal financial dealings.
 [*Financial Times*, September 18, 2001]
- b. Protracted talks with *the authorities in Tashkent* also delayed entry of the first contingent of French troops into Afghanistan. [*Financial Times*, December 7, 2001]

Another unnatural solution to the pressure of maintaining topic continuity, attested both in Croatian and Hungarian texts in our corpus, is to stick to a whole series of metonymic uses of the same capital name within a single text. Striking one and the same chord several times in a text is admittedly a very awkward solution (a strategy more appropriate for non-topics), but it does happen, and even not infrequently. This point is exemplified in the relevant sections of a Hungarian article reproduced below:

- (14) Vita *Phenjan* atombombája körül
 controversy Pyongyang nuclear bomb-POSS around
 [...] Tegnáp aztán ugyanaz a rádió – önmagára
 yesterday however the.same DEF radio itself-on
 hivatkozva – jól érthetően azt mondta, hogy
 citing well comprehensible-ADV that said that
Phenjannak joga van birtokolni atomfegyvert,
 Pyongyang-DAT right is possess-INF nuclear weapons-ACC
 majd ugyanez a kijelentés megjelent a
 and the.same DEF statement appeared DEF
 phenjani lapokban is. Az Egyesült Államok a
 Pyongyang-ADJ papers-in too DEF United States DEF
 múlt héten függesztette fel az Észak-Koreába
 last week-in suspended PREF DEF North Korea-to
 irányuló olajszállítást, amely az 1994-es
 directed oil-supplies-ACC which DEF 1994-ADJ
 úgynevezett keretegyezmény értelmében az
 so.called general.agreement in.accordance.with DEF
 egyik kompenzációs tényezője annak, hogy *Phenjan*
 one.among compensatory measures for.DAT that Pyongyang
 leállította régi típusú atomerőműveit.
 closed old type nuclear.plants-POSS-ACC
 [...] Sok megfigyelő korábban úgy vélte, hogy *Phenjan*
 many observer earlier so thought that Pyongyang
 az egész hírrel, miszerint van
 DEF whole news-with according.to.which is
 atomfegyverprogramja, csak az Egyesült
 nuclear.weapons-programme-POSS just DEF United
 Államokat akarja tárgyaló-asztalhoz ültetni.
 States-ACC wants conference.table-at seat-CAUS-INF
 ‘Yesterday, however, the very same radio station, quoting itself, said very clearly that
 Pyongyang has the right to possess nuclear weapons, after which the same statement
 appeared in Pyongyang papers. The United States suspended last week the oil supplies
 to North Korea, which was introduced as one of the compensatory measures inducing
 Pyongyang to shut down its old-type nuclear plants. [...] Many observers were earlier of
 the opinion that the only goal that Pyongyang wanted to achieve by announcing that it has
 a nuclear weapons program was to bring the United States to the conference table’

With regard to these last two strategies, it becomes clear that they lead either to an absence of metonymies, or to their occasional overuse. The net result is that metonymically used names of capitals are very unevenly distributed in the Croatian and Hungarian subcorpora, generally quite unlike in English and German. What we have just observed seems to resolve the puzzle that we faced above. If there are generally fewer capital name metonymies in Croatian and Hungarian than in English and German, as shown by our counts, then there should also be fewer of them in the subject position due to the availability of alternate structures, as noted above. Our statistics show that there are, however, no sig-

nificant differences in their subject use, which can be attributed to the uneven distribution and particularly to the occasional overuse of metonymic subjects at the token level within a single newspaper article.

For languages such as Croatian and Hungarian, there is a tendency to remove the pressure of maintaining metonymic topic continuity by removing the metonymy from the subject position – simultaneously partly detopicalizing it – by having the name of the capital mentioned in a PP functioning as an adverbial, as illustrated above in examples (8)–(9) and (12). This discourse-functional strategy is supported by the typological characteristics of these languages, most importantly that they are pro-drop languages and have productive subsystems of impersonal constructions that play an extremely important role in these languages. We illustrate the latter with the sets of Croatian and Hungarian examples in (15) and (16), respectively. Both languages have numerous impersonal constructions. In addition to constructions with verbal and adjectival or nominal meteorological predicates (discussed below), there are also constructions with experiencers in the dative or accusative (in Croatian), and in the dative (in Hungarian), and finite verb forms in the 3rd personal singular:

- (15) a. Meni je zima.
me.DAT COP.3SG cold
'I am cold'
- b. Hladno/ toplo/ vruće/ loše/ dobro/ drago mi je.
cold warm hot ill well glad me.DAT COP.3SG
'I am cold/hot/warm/ill/well/glad'
- c. Boli me/ Strah me je.
hurt.3SG me.ACC fear me.ACC is.3SG
'It hurts (me)/I am afraid'
- d. Stid/ sram me je.
shame shame me.ACC is.3SG
'I am ashamed'
- (16) a. (Nekem) tetszik ez a ház.
me-DAT like-3SG this DEF house.NOM
'I like that house'
- b. Melegem van/ Nekem melegem van.
hot-POSS-1SG is.3SG me-DAT hot-POSS-1SG is.3SG
'I am hot'
- c. Fáj nekem.
hurt.3SG me-DAT
'It hurts (me)'

While German exhibits comparable impersonal structures – often competing with personal ones – these are typically translated into English by means of personal constructions with predicative adjectives or verbal predicates and obliques corresponding to subjects in English.

If the term impersonal construction is taken to mean a construction lacking person agreement between the finite verb and the subject, regardless of whether the latter is actually present or not, there are further types of impersonal structures that are present in

all four of the languages under investigation, most notably those with impersonal verbs taking clausal complements (traditionally taken to be extraposed subjects). The most conspicuous differences between the four languages concern the presence of an obligatory expletive or dummy subject in the matrix structure (obligatory in English and German but impossible in Croatian and Hungarian) as well as the productivity of these constructions with verbal predicates (far less productive in English).

Further, there is a whole range of other impersonal constructions that can be productively formed in German, Croatian, and Hungarian, many of them functioning as notional passives. These are structures with *man* 'one' as subject and 3rd person singular verb in German. In Croatian there are constructions with pseudo-reflexive verbs (taking the reflexive clitic *se*) and a zero subject, the verb appearing in the 3rd person singular (neuter) and even taking an accusative NP or a complement clause if it happens to be inherently transitive. Finally, Croatian can also use 3rd person plural verb with zero subject and a complement clause (which would be equivalent to clausal object in a straightforward transitive construction). Hungarian may have a detransitivizing or a reflexive suffix added to the verb. In the latter case the verb is in the 3rd person singular and the subject position is optionally filled with a demonstrative/expletive in the nominative, the verb followed by a complement clause. The verb can also take the usual 3rd person plural ending, but the demonstrative that then stands in the accusative or fuses with a postposition is obligatory.

In any case, impersonal constructions with locative structures that are functionally equivalent to personal structures with metonymically used place names are not completely absent from our English and German subcorpora, but they are extremely rare, particularly so in English. Exact counterparts of Croatian or Hungarian structures with active impersonal verbs, generic subjects, e.g. *they*, and locative expressions are virtually unacceptable. More or less the same effect can be achieved by using a passive construction and having the name of the capital mentioned in the *by*-agent adverbial, as in (17) below:

- (17) The organisation, which is listed as a terrorist group *by Washington...*
[*Guardian*, May 16, 2003]

It is significant in our view that the same pattern of replacement of metonymically used names of capitals is found in some other pro-drop languages that have elaborate agreement systems as well as productive impersonal constructions. Compare the following examples from Polish, Slovenian, Russian, Spanish, and Italian, respectively:

- (18) Neoficjalnie w *Pekinie* mówi się jednak, że
unofficially in Beijing say.3SG REFL nevertheless that
japońscy dyplomacy, którzy byli obecni na miejscu
Japanese diplomats who were present at scene
zdarzenia w Shenyangu, nie zareagowali na interwencję
event.GEN in Shenyang not reacted on intervention
policji na terenie ich własnej placówki.
police.GEN on site their own jurisdiction.GEN
'It is nevertheless unofficially said in Beijing that Japanese diplomats who were present in Shenyang did not react to the intervention of the police on the location over which they have jurisdiction'

- (19) a. *V Washingtonu* so o tem podvomili, prebegli general
 In Washington AUX about that doubted-3PL dissident general
 severnokorejske vojske pa je v izjavah za japonske
 North-Korean army.GEN but AUX in statements for Japanese
 medije potrdil,...
 media confirmed
 'In Washington, they doubted this; the dissident North Korean general has neverthe-
 less in his statements for Japanese media confirmed...'
- b. *Iz Pjongjanga* so Japonski in Južni Koreji
 from Pyongyang AUX Japan-DAT and South Korea-DAT
 sporočili, da se lahko pogajanj udeležijo
 sent-message-3PL that REFL MOD negotiations.ACC take.part
 tudi njihovi predstavniki,...
 also their representatives
 'A message was sent from Pyongyang to Japan and South Korea to the effect that their
 representatives can also take part in negotiations...'
- (20) a. *V Tbilisi* že kategoričeski oprovergajut zjavljenija o
 in Tbilisi however categorical-ADV refute-3PL announcements about
 tom, što kakie-to diversionnye gruppy
 DET.PREP.CASE that some.NOM-PL sabotage group.NOM.PL
 zasylajutsja v Abxaziju. [*Izvestija*, May 7, 2003]
 being-sent in Abkhazia-ACC
 'Tbilisi categorically denies any reports that some sabotage detachments are being sent
 to Abkhazia'
- b. Kak soobščajet Assošiejted Press, pusk rakety ne
 how inform.3SG Associated Press launch missile.GEN.SG NEG
 vyzval obojoj trevogi ni v Vašingtonu, ni v Tokio,...
 caused particular anxiety neither in Washington nor in Tokio
 [*Izvestija*, April 2, 2003]
 'As reported by the Associated Press, the launching of the rocket did not cause particu-
 lar anxiety in Washington or Tokyo...'
- (21) a. La tragedia, la segunda de la misma indole en tres dias,
 DEF tragedy DEF second of DEF same type in three days
 causo consternacion *en Moscu*.
 caused consternation in Moscow
 'The tragedy, the second of this type in only three days, caused consternation in
 Moscow'
- b. *En Washington* se consideraba seguro que importantes
 in Washington REFL considered certain that important
 dirigentes iraquies habian huido hacia el país vecino,...
 leaders Iraqi had fled towards DEF country neighboring
 'It is taken for certain in Washington that important Iraqi leaders had fled to a neigh-
 boring country...'
- c. El clima de desconfianza hacia Paris es tal, que la
 DEF climate of distrust towards Paris is such that DEF
 iniciativa de Paris se percibio *en Washington* como
 initiative of Paris REFL perceived.PAST in Washington as

una manibra preventive para dirigir el curso del debate,...
 INDEF action preventive for steering DEF course of debate
 'The climate of distrust towards Paris is such that its initiative is perceived in Washington as a preventive action to direct the course of the debate..'

- (22) a. Il rischio di un attentato contro il premier
 DEF risk of INDEF assassination against DEF prime-minister
 è considerato "alto" a *Washington*.
 is considered high in Washington
 'The risk of an attempt on the prime minister's life is considered in Washington to be high'
- b. ... a *Berlino* si continua a pensare al modo
 in Berlin REF continue.3SG to think.INF in-such way
 per non essere esclusi dal processo di ricostruzione.
 in-order-to NEG be.INF excluded from process of reconstruction
 'In Berlin, they continue to think in such a way so as not to be excluded from the reconstruction process'

A similar type of replacement of metonymically used NPs in subject position by prepositional or adpositional phrases with adverbial function is also observed in other areas in Croatian and Hungarian in which metonymies are underused, as shown in Brdar-Szabó and Brdar (2004). We argue there that some construction types with locative subjects in English lend themselves to an analysis in terms of metonymy of the type PARTICIPANT FOR SITUATION, while their counterparts in Croatian and Hungarian are again impersonal constructions with locatives as non-metonymic adverbials. Some examples are:

- (23) a. *Bilo je strašno vruće na trgu.*
 COP AUX terribly hot on square
 'It was terribly hot in the square'
- b. *Na trgu je strašno vruće.*
 on square COP terribly hot
 'It is terribly hot in the square'
- c. **?Trg je strašno vruć.*
 square COP terribly hot
 'The square was very hot'
- (24) a. *Nagyon meleg volt a téren.*
 very warm COP DEF square.on
 'It was very warm in the square'
- b. *A téren nagyon meleg volt.*
 DEF square.on very warm COP
 'It was very warm in the square'
- c. **?A tér nagyon meleg volt.*
 DEF square very warm COP
 'The square was very warm'

3. Names of capitals as two-tiered metonymies

In this section we return to the issue of whether or not adverbial replacements for metonymic subjects are themselves metonymic. We would like to argue that such prepositional and adjective phrases in our Croatian and Hungarian data are also full-blown referential metonymies.³ We first consider the meaning of these PP structures and then turn to their function in discourse.

These PPs appear at first sight to be straightforward adjunct/adverbial structures having a literal 'local' sense. That they do not have such a straightforward literal meaning is shown by the oddity of sentences in which they are combined with other PPs that do have a genuine literal locative meaning (and even with some PPs with temporal meaning):

- (25) ³*U Sarajevu na trgovima/ u sjevernom dijelu grada smatraju*
 in Sarajevo in squares in northern part city.GEN consider.3PL
ovu izjavu nezgodnom.
 this statement awkward
 'In Sarajevo in squares and in the northern part of the city this statement is considered
 awkward'

Langacker (this volume:52) poses a series of questions with regard to what should be identified as a nominal referent:

And what should we identify as a person? The physical body? The persona? The soul? All of these? I do not believe there is any single correct answer. The characterization of a nominal referent is multifaceted, with certain facets being more relevant than others in a given context. Our willingness to accept a particular facet as the referent is a matter of degree, with certain options more familiar and conventional than others. Less familiar uses strike us as metonymic, or as cases of profile/active-zone discrepancy.

We believe we are justified in asking a similar question about our PPs. Rather than being literal locatives, we claim these PPs are "two-tiered" metonymies. At the first level of metonymic mapping there is a basic projection from a mental space that is opened by the particular discourse type and topic, i.e., a mental space is set up on the basis of our realization that the utterance in question is in terms of its text type, a newspaper article dealing with politics, specifically with international relations. This mental space also contains elements of encyclopedic knowledge that get projected. These projections trigger the first layer of metonymic meaning. That is to say, *Sarajevo*, *Washington*, and other such names of capitals in our examples are not used to refer to a locality as a whole – not just everywhere or anywhere in e.g. Sarajevo is meant. What is intended is not the whole domain but just a part or parts of it, specifically it is just the sphere of political life, more precisely its foreign affairs aspects. In sum, these expressions should be treated as a sort of active zone phenomenon. This means that even place names in utterances such as:

- (26) The President is traveling tomorrow to *Washington*.

must be recognized as metonymic, although they do not traditionally receive such treatment. The politician in question is not traveling privately for pleasure. He is rather acting

in his official capacity, representing the country, usually with his entourage, and his visit to Washington consists of a whole stereotyped sequence of subevents. If the context (and cotext) is different, i.e. in a different type of paper, or type of articles, the same place name can be used to refer to other aspects of political life, or to the press or media in general that are connected with this locality, its sporting scene, general public, etc.

We claim that this first round of PART FOR WHOLE metonymic mapping takes place in both the straightforward examples of metonymies and the locative expressions alike. The differences between them appear in the second layer of metonymic meaning. The context and the contents of the article then in the second step determine specifically the entity that the capital name refers to, i.e., whether the whole government, just a ministry, or some other institution, legal, economic, or otherwise, is actually meant. This is the stage at which we arrive in our examples at the specific low-level CAPITAL FOR GOVERNMENT metonymy.

In the case of bare capital name NPs we assume that a metaphorical mapping kicks in immediately after the second round of metonymic mapping and so to say cements the specific low-level metonymy. If a capital name stands for an institution that is a collective body, such as a government, it is automatically personalized. This ORGANIZATIONS ARE HUMANS metaphor confers on the capital name a certain amount of agency properties, such as control and responsibility.

There are in our view good reasons to assume that the specific personalizing metaphorical mapping we suggest is actually delayed until the second round of metonymic mappings. Firstly, a capital name used in a weakly metonymic sense in a relatively poor context lends itself to a whole range of interpretations, like any other place name. It could refer to a salient event taking place in the location specified, e.g. *Paris* or a prepositional phrase with this name, such as *after Paris* or *in Paris* used in 2003 or around that time in a sports context, could be used to refer to the World Athletics Championships 2003. In a different context, *Paris* might be used to refer to the domain of fashion. A sentence such as *Paris was really appalling* will hardly be understood as referring to designers only. It will also include the reference to the fashions shows, clothes, etc. But it may also be used to refer to just clothes. In other words, there is at this point a lot of indeterminacy in regard to the specific nature of the connection between the name of a place and the active subdomain (cf. Langacker, this volume: 46). This seems to indicate that metaphorical personalization does not take place at this stage.

Secondly, the ORGANIZATIONS ARE HUMANS metaphor can hardly apply to just any assembly of entities, even if they involve people. What seems to be necessary for the metaphor to apply is that the entity in question should really emerge as a clearly defined one, i.e. as a genuine organization with internal structure and with more or less clear boundaries. This of course does not preclude the possibility that other, less specific types of metaphors, some of which may include elements of personalization, may apply before the second round of metonymic mapping in certain contexts, i.e. in some types of situations allowing a vague reference to people such as, *the whole town*, etc.

We assume that the second layer of metonymic meaning is formed around the locative PPs that interest us here as well, but it is not followed by the metaphorical mapping mentioned above. It is probably blocked by the prepositional form of these expressions. This also means that they exhibit a much lower (if any) degree of agency, i.e., they are

assigned less control and responsibility. We must now recall the findings in Brdar-Szabó (2002), viz. that native speakers of Hungarian and German readily assign the default metonymic interpretation to place names, while resisting other possible interpretations, and that English speakers are more likely to gradually determine the ultimate reference of the topic on-line in a step-by-step fashion, i.e. pick it up from the larger context or from one of the consecutively activated knowledge domains or ICMS. These contrasting processing strategies provide an explanation for the broader range of possible referents of metonymic expressions based on place names in English than in Hungarian or Croatian.

It might be concluded that there is a division of labor between bare NP metonymies and PP metonymies. The latter are a well-suited solution to the functional pressure of providing a means of relatively vague ways of referring to a highlighted subdomain of a matrix domain without investing it with control and responsibility. Note that the effect of the second round of metonymic mapping can always be easily canceled, if need be, in the subsequent text. The PP structures in question, allowing for relative vagueness, are an additional strategy and compensate for the impossibility of more flexible on-line narrowing down of referents due to the default interpretation of straightforward metonymies in languages such as Hungarian or Croatian.

4. Putting it all together

The foregoing discussion enables us to draw a number of conclusions, some of which are more directly related to the capital name metonymy under examination, while others have far-reaching theoretical and methodological consequences.

- First, we note that constraints on the cross-linguistic availability of certain types of referential metonymies seem to be the result of an intricate interplay of conceptual, grammatical, and discourse-pragmatic factors. The marked differences observed initially turn out, upon closer examination, to be far less sharp contrasts, i.e., they are qualitative rather than purely quantitative as languages, due to differences in their morpho-syntactic makeup, may use different metonymy types for certain discourse-pragmatic functions.
- The inventory of formal/structural realizations of metonymy is broadened beyond the traditional confines of nominals and some predicative expressions, functioning as subject or objects, and predicates, respectively. If we allow that the locative expressions in the focus of our paper are (at least weakly) metonymic, we raise general awareness for other potential types of unconventional metonymies not discussed/documentated so far (such as perhaps other types of metonymic adverbials, prepositional phrases, and adpositional structures with other syntactic roles, as well as for phrasal categories headed by other, more marginal word classes and clausal categories).
- The fact that the two codings of the CAPITAL FOR GOVERNMENT metonymy – realized as a bare NP and as a locative adverbial – appear to be partly in complementary distribution across language types in certain grammatical environments, not only legitimates further contrastive-typological research, but also shows that cognitive and structural aspects of language may interact in many interesting ways. Specifically, our

discussion has shown that the availability of metonymy (in the sense of its lexicalization or realization in words with certain functions in given constructions) may also be dependent on some structural factors (in the sense of what is already present in the ecology of a language). Demonstrating this sort of interaction between conceptual structures/processes and linguistic systems does not, in our view, undermine in any way the foundations of cognitive linguistics. On the contrary, it is a welcome corrective to the simplifying textbook view of cognitive linguistics, to which is attributed the assumption that linguistic structures are always fairly directly determined and motivated by cognitive factors. Bearing in mind that the linguistic structures in question that we claim motivate the availability of metonymy may themselves be results of layers of complex interaction between cognitive and structural factors (the ultimate primacy of cognitive factors not ruled out), cognitive linguistics thus becomes a more realistic framework capable of accommodating more authentic data, even if the net result is a more complicated description. Langacker (this volume: 48) warns that “[i]f a construction is indeterminate in some respect, we still have to describe the construction, including its indeterminacy, and we still want our characterization to be explicit and precise, even in regard to the nature and extent of the indeterminacy.” To this we might add that we cannot afford to remain vague or indeterminate about the ultimate motivation of language facts.

- We have demonstrated that the function of nominal metonymies is not purely referential. They have other important functions in discourse such as managing general topic continuity. While keeping the same metonymic source as nominal topic, one still has some room for maneuvering conceptually between more or less distant and more or less established metonymic targets.
- Finally, we have also provided some examples of complex interaction between conceptual metonymy and metaphor, which seem to caution us to be wary of any aprioristic sweeping statements attributing conceptual primacy to one or the other type of mappings. The two processes do not interact in the same way across the board; the nature of interaction may vary from type to type, from case to case, from one layer of conceptual mappings to another layer. At the same time, we have shown the existence of metonymic networking of several metonymic layers, or tiers, in discourse (the “vertical” dimension), which may be interspersed with layers of metaphorical mappings, as well as of chained metonymies (the “horizontal” dimension).

Notes

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1. Lead articles and commentaries were not investigated for reasons discussed below.
2. In such cases DISTANCE IN PHYSICAL SPACE is not the metonymic trigger per se.

3. Heretofore these may have been overlooked as potentially metonymic in meaning due to a focus on English in metonymy research; in our corpus this type of construction is practically nonexistent in English in this function

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Appendix 1

German article (263 words), *Süddeutsche Zeitung* (May 16, 2003, p. 1)

CAPITAL FOR GOVERNMENT metonymies (bold added below): 5 tokens, 3 types

Powell will für Irak-Aufbau werben
 Powell wants for Iraq.reconstruction win-INF

Der amerikanische Außenminister Colin Powell hat vor seinen
 DEF American foreign.minister Colin Powell had before his

Gesprächen mit der Bundesregierung eine Einteilung Europas
 talks with DEF federal.government INDEF division Europe-GEN

in einen alten und einen neuen Teil abgelehnt und sich so
 into INDEF old and INDEF new part declined and REFL thus

von US-Verteidigungsminister Donald Rumsfeld distanziert.
 from US.defence.secretary Donald Rumsfeld distanced

“Unsere Vorstellung ist ein Europa“, sagte Powell am Donnerstag in Sofia.
 Our idea is one Europe said Powell on Thursday in Sofia

Am Freitag wird der Minister mit Bundeskanzler Gerhard Schröder und
 on Friday will DEF minister with federal-chancellor Gerhard Schröder and

Außenminister Joschka Fischer sprechen – die erste Begegnung der beiden
 foreign-minister Joschka Fischer talk DEF first meeting DEF both

Regierungen auf höchster Ebene seit den Verwerfungen
 governments on highest level since DEF condemnation

wegen des Irak-Krieges.

because DEF.GEN Iraq.war

Beide Seiten warnten allerdings vor überzogenen Erwartungen.

both sides warned however of exaggerated expectations

Es wurde verabredet, keine Schuldzuweisung zu betreiben,

it was agreed no assignment.of.guilt to pursue

hie es in deutschen und amerikanischen Regierungskreisen.

was.said it in German and American government.circles

Konkret wurde über die Ausgestaltung der UN-Resolution

concretely was about DEF formulation DEF.GEN UN.resolution

zum Aufbau des Irak gesprochen.

on reconstruction DEF.GEN Iraq talked

Offenbar ist Berlin bereit, die Unterstützung der polnischen

apparently is Berlin ready DEF support DEF.GEN Polish

Militäreinheit für den Irak durch die Nato nicht zu behindern.

military.unit for DEF.ACC Iraq through DEF NATO not to hinder

Umgekehrt erwartet die Bundesregierung in den Formulierungen

conversely expects DEF federal.government in DEF formulations

eine Stärkung der Vereinten Nationen.

INDEF strengthening DEF.GEN United Nations.GEN

Die US-Regierung sieht das Abstimmungsverhalten Deutschlands

DEF US.government sees DEF voting.behaviour Germany.GEN

bei der neuen Resolution als Test für die Bereitschaft zur Zusammenarbeit.

at DEF new resolution as test for DEF readiness for cooperation.

Berlin weigert sich aber, ein deutliches Zeichen der Distanz

Berlin refuses REFL but INDEF clear sign DEF.GEN distance

zu Paris zu geben, wie dies von Washington gewünscht wird.

to Paris to give like this by Washington wished is

Es wird erwartet, dass beide Seiten keine direkte Begegnung chröders

It is expected that both sides no direct meeting Schröder.GEN

mit Präsident George Bush vereinbaren werden.

with president George Bush agree will

Berlin hat auch kein Ersuchen um ein bilaterales Treffen

Berlin had also no request for INDEF bilateral meeting

am Rande der bevorstehenden Gipfeltreffen gestellt.

at margin DEF.GEN forthcoming summit submit

Powell wird in Berlin auch CDU-Chefin Angela Merkel treffen.

Powell will in Berlin also CDU.boss Angela Merkel meet

'Before his talks with the German government, American Secretary of State, Colin Powell, refused to divide Europe into an old and a new one, and thus distanced himself from the Defense Secretary Donald Rumsfeld. "Our idea is one Europe," said Powell in Sofia on Thursday. On Friday the

Secretary is going to talk with the Federal Chancellor Gerhard Schröder and the foreign affairs minister Joschka Fischer, the first meeting of the two governments on the highest level since the condemnation because of the Iraq campaign. Both sides are however wary of exaggerated expectations. According to American and German government sources, it was agreed to refrain from making any accusations. Specifically, the talks focused on the formulation of the UN resolution on the reconstruction of Iraq. Berlin is apparently not about to hinder the support in NATO for the Polish military unit for Iraq. On the other hand, the German government expects the formulations to strengthen the role of the UN. The US government sees the German vote for the new resolution as a test of Germany's readiness for cooperation. Berlin is hesitant to give a clear sign of distance from Paris that Washington would like to see. It is expected that the two sides will arrange no direct meeting between President Bush and Schröder. Berlin did not request a bilateral meeting during the forthcoming summit either. Powell will also meet Angela Merkel, the leader of the Christian Democratic Union.'

Appendix 2

Hungarian article (404 words), *Népszabdság* (May 16, 2003)

CAPITAL FOR GOVERNMENT metonymies (bold added below): 3 tokens, 3 types, 1 PP counterpart

Olajág – Powell Berlinben

Olive.branch Powell Berlin-in

Németország – a német csapatoknak az Irak elleni fellépését

Germany DEF German troops DEF Iraq against action

kivéve – gyakorlatilag mindenben segítette az USA-t,

accepting practically everything.in helped DEF USA-ACC

amikor **Washington** Irakban háborúzott.

when Washington Iraq.in was.at.war

Ez nemcsak a NATO-alapokmány előírta kötelező szövetségi

this not-only DEF NATO-charter stipulated.ADJ binding allied-ADJ

szolidaritásban (légtér-, út-, vasútvonal-használat) nyilvánult meg,

solidarity-in air road railroad use manifested.itself PREF

hanem azon túlmenően is.

but this-on surpassing-ADV also

Egy dolog, hogy mit írtak a német lapok, hogyan vonult

one thing SUB what wrote DEF German papers how rallied

félmillió ember az iraki háború ellen tiltakozva Berlin

half-million people DEF Iraqi war against protesting Berlin

utcáira, más dolog, hogy a Schröder-kormány,

streets-POSS-PL-on another thing how DEF Schröder-government

kiváltképpen a Fischer rugalmasabb külpolitikáját

especially DEF Fischer flexible.COMP foreign.policy-POSS-ACC

tükröző külügyminisztérium, igyekezett összetartani, megerősíteni

mirroring foreign-affairs-ministry tried keep-INF reinforce-INF

a német-amerikai kapcsolatok elszakadt, megmaradt szálait.
 DEF German-American relations broken remaining thread-POSS-PL-ACC

Schröder egyik miniszterének elég volt egy meggondolatlan
 Schröder one minister-POSS-DAT enough was one careless

Bush-bírálat (amelyben bizonyos, Hitlerrel való párhuzamra utalt),
 Bush-criticism which-in certain Hitler-with befitting parallel-on hinted

hogyan repüljön a bársonyszékből.
 that fly-IMP DEF velvet-armchair-from

Anélkül, hogy a félelmetesen mccarthys vonásokat öltő
 without SUBJ DEF awfully McCarthy-ADJ traits-ACC assuming

Bush-féle amerikai vezetési stílus kritikáján érdemben
 Bush-type American leadership-ADJ style criticism-POSS-on really

enyhítenének, **Berlinben** elgondolkodnak az iraki háború tanulságain is.
 moderated-SUBJ-3PL Berlin-in ponder-3PL DEF Iraqi war lessons-over too

Ahogy egyre másra tárják fel a tömegsírokat – az iraki
 as one.after.the.other discover-3PL DEF mass.graves-ACC DEF Iraqi

Srebrenicákat –, úgy válik egyre elhanyagolhatóbbá a különbség
 Srebrenica-PL-ACC thus becomes ever negligible-COMP DEF difference

Milosevics Szerbiája és Szaddám Irakja között.
 Milosevic Serbia-POSS and Saddam Iraq-POSS between

Előre nézzünk, ne a múlton rágódjunk.
 forward look-IMP-1PL not DEF past.on brood-IMP-1PL

A berlini Powell-út mottója mindkét félnek jól jön.
 DEF Berlin-ADJ Powell-travel motto-POSS both side-DAT well comes

Irakról szándékosan kevés szót ejtenek majd, noha ott lesz
 Iraq.about deliberately few word-ACC say-3PL then although there will.be

mindkét fél minden mozdulatában.
 both side every move-in

Amerikának éppúgy szüksége van az Európát nagymértékben
 America-DAT equally need-POSS is DEF Europe-ACC considerably

meghatározó németek együttműködésére, mint a temérdek,
 determining-ADJ German-PL cooperation-POSS-for as DEF innumerable

a vártnál súlyosabb gazdasági (és politikai) problémával
 DEF expected-from serious-COMP economic and political problem-with

küszködő **Berlinnek** az amerikaiak jóindulatú semlegességére.
 struggling-ADJ Berlin.DAT DEF American well.meant neutral.being-POSS-for

Végtére is a német export tizede, a kivitelre kerülő
 After.all also DEF German export one.tenth DEF export-on coming.to

technológia színe-java az amerikai piacokon értékesül.
 technology the.cream-POSS DEF American markets-on sells

Busht pedig lefoglalja stratégiai célja, a világ –
 Bush-ACC however absorbs strategic goal-POSS DEF world
 Amerika számára veszélyes – terroristáktól való megszabadításának
 America-for dangerous terrorists-from liberation-POSS-DAT
 messianisztikus véghezvitele.
 Messianic execution
 Érdeke, hogy erre összpontosíthasson, és ne örlje
 Interest-POSS that this-on concentrate-1SG-SUBJ and not waste-1SG-SUBJ
 fel apparátusa energiái egy részét a
 PREF administration-POSS energies-POSS-ACC one part-POSS-ACC DEF
 szövetségi torzsalkodás.
 allied-ADJ bickering
 Németország nemzetközi tekintélye jól jöhet az
 German international prestige-POSS well come.POT DEF
 amerikaiaknak – éppen a felbolydult Közel-Keleten, az amerikai
 American-PL-DAT precisely DEF bursting Middle.East-in DEF American
 külpolitikai-katonai aktivitás csomópontjában.
 foreign.policy.military activity focus.point-POSS-in
 Emlékeztessünk rá, hogy a közel-keleti rendezési útitérkép, Izrael
 Remind-1PL-IMP on that DEF Middle.Eastern settlement roadmap Israeli
 állam és a palesztinok viszonyát normálisabbá tevő “road map”
 state and DEF Palestinians relations normal-COMP making roadmap
 Joschka Fischer elgondolásán alapul.
 Joschka Fischer conception-POSS-on is.based
 Persze a Bush-tanácsadók is értik a dolgukat, Berlinbe
 Of-course DEF Bush.aides too understand DEF things Berlin-to
 olajággal, mézesmázos szavakkal küldik legfőbb
 oliv.branches-with smooth.tongued words-with send principal
 külügyérüket, Párizs meg jebes megjegyzések, barátságatlan
 diplomat-PL-ACC Paris still icy comments unfriendly
 gesztusok sokaságát kapja. Oszd meg és uralkodj?
 gestures multitude-POSS-ACC receives Divide-IMP PREF and rule-IMP
 [...]

‘Except for providing troops for the Iraqi campaign, Germany helped the U.S. in practically every-thing when Washington was at war in Iraq. This manifested itself not only in providing obligatory forms of solidarity (air, surface, and railway routes), as stipulated by the NATO charter, but in going further than that. It is one thing what German newspapers wrote about a half million people going into the streets to protest against the war on Iraq in Berlin, and another thing how Schröder’s government, and especially how the Ministry of Foreign Affairs mirrored Fischer’s flexible foreign politics in trying to keep and reinforce the remaining threads of German-American ties. One careless criticism of Bush by a Schröder minister (in which he hinted at a parallel with Hitler) was enough for this minister to fly from his armchair. Without really subduing their criticism of the Bush-type

leadership style that comes awfully close to assuming some traits of McCarthy, Berlin is pondering the lessons of the Iraqi war, too. As one mass grave after another is being discovered – Iraqi Srebrenicas – the difference between Milosevic's Serbia and Saddam's Iraq becomes ever smaller. Let us look forward and not brood over the past. Powell's visit to Berlin is well-timed for both sides. They will deliberately avoid mentioning Iraq although it will be present in every move of the two sides. America needs the cooperation of Germany, which has considerable influence in Europe as much as Berlin, which is struggling with innumerable economic and political problems that turned out to be more serious than expected, needs the American well-meant neutral stand. After all, one tenth of German exports, the cream of its technology, is sold on the American market. Bush, on the other hand, is absorbed by his strategic goal of performing the Messianic act of ridding the world of terrorists dangerous to America. It is in his interest to concentrate the energies of his administration and not waste part of them on bickering among allies. Germany's international prestige may come in very handy for Americans in the very region in which it is politically and militarily highly involved – in the boiling Middle East. Let us just point out that the Middle Eastern settlement plan, the roadmap for normalizing the relations between the state of Israel and the Palestinians, is based on Joschka Fischer's conception. Of course, Bush aides are also up to their job: America's highest-ranking diplomat comes to Berlin with olive branches and smooth words, while Paris must do with icy remarks and a host of unfriendly gestures. Divide and rule?

Metonymies we live without*

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1. Introduction

One of the cornerstones of Cognitive Linguistics is the claim that metaphor and metonymy are basic cognitive processes. This assumption has allowed Cognitive Linguistics to distance itself from both the whole of the formal-generative paradigm and traditional metaphor theory, but there is a price to be paid for this distinctiveness. The assumption has a number of far-reaching consequences. Let me try to outline them, even if I run the risk of stating the obvious.

Basic cognitive processes cannot be trifling affairs taking place occasionally, at certain places, and as a matter of mere indulgence or whim on the part of speakers. These processes are vitally important and efficient, and therefore ubiquitous and universal. These processes are primarily conceptual, i.e., they are figures of thought and not just figures of speech. As conceptual phenomena, they are not necessarily realized in language, i.e. lexicalized or grammaticalized, nor are they realized only in language, but to my knowledge, there appears to exist no natural language that does not make use of metonymy and metaphor in one way or another.

If metonymy is indeed as ubiquitous as claimed, we may expect it to be present everywhere in language, both in its lexicon and in its grammar, if the two can be separated, as is traditionally assumed (though see Langacker in this volume on this point). While both metaphor and metonymy are recognized in Cognitive Linguistics as basic processes, it is remarkable that they have been seen as playing very different roles in the organization of the grammatical component.

Metaphorical extensions are assumed to take place in almost all areas of grammar, making it possible to account for scores of phenomena in an intuitively appealing way. The phenomena that were successfully tackled as cases of metaphorical extensions range from modality (the development of epistemic out of deontic modality, as first argued for by Sweetser 1990), to the use of grammatical morphemes such as past tense markers in English (Taylor 1989: 149), to the grammaticalization of the *going to*-future from the verb + adverbial construction (Heine, Claudi, & Hünemayer 1991: 241ff.), to the extension of transitive (Taylor 1989: 206ff.) and ditransitive constructions (Goldberg 1995), to cite a few widely known examples.

To date, linguists have paid less attention in general to metonymy than to metaphor. A shift in interest has only recently become noticeable, beginning at the end of the 1990s. If metaphor research still dominates the field, it is not surprising that studies of the role of metonymy in grammar are also rather scarce, just like the study of its pragmatic function in discourse. Most studies on metonymy, still not concerned with defining the phenomenon and contrasting it with metaphor, or with the interaction between the two, have focused on lexical aspects of metonymy, particularly on the issue of metonymy-induced polysemy.

A number of works of typological provenance on grammaticalization processes have invoked metonymy as an explanatory principle, but on closer inspection it turns out that the concept of metonymy used in such works is, without much exaggeration, only tangential to the concept of metonymy as generally assumed in Cognitive Linguistics. Rather, the term is used in a very broad sense of contiguity, including the study of *adjacent elements in discourse* where, over time, one element takes over the role of the other (see Traugott and König 1991 and Bybee et al. 1994 for such a (non-metaphoric) account of the development of modal expressions).

Studies in grammatical metonymy in terms of *conceptual contiguity* have only recently come to the forefront of attention. Some pioneering studies are Heine (1995), Goossens (1999), Panther and Thornburg (1999a, b, and 2000), Ruiz de Mendoza (1999), Barcelona (2000), Ruiz de Mendoza and Pérez Hernández (2001), and Ruiz de Mendoza and Otal Campo (2002). The prevalent view is that metonymy has an important regulating or motivating role in grammar, i.e., it triggers certain phenomena in grammar in the sense of making them possible or sometimes even necessary. This simplified way of looking at things might suggest that the relationship between metonymy and grammar is one-way traffic such that grammar is taken to be infinitely plastic and therefore easily shaped by metonymic processes. The intention of the present paper, however, is to show that the relationship between grammar and metonymy is much more complex and practically always involves some two-way traffic. The thesis defended herein is that there is mutual accommodation between metonymy and the grammatical system of a particular language. The limiting case investigated in more detail in this chapter is that in which the grammatical system blocks certain metonymic processes.

Before I proceed, I feel that a general note on the legitimacy of this enterprise is in order here. As pointed out above, there is a broad consensus among cognitive linguists concerning the assumption that both conceptual metaphor and conceptual metonymy are basic cognitive operations whose universality is in doubt. Because one of the core assumptions in Cognitive Linguistics is that large areas of language are motivated by the facts of human embodiment (physical, cognitive, and social), i.e. by how these are reflected in cognitive structures, primarily through mechanisms such as conceptual metaphors and metonymies, cognitive linguists have “naturally” exhibited more interest in demonstrating cross-linguistic similarities. In actual fact, the cognitive linguistic success in uncovering all that “hidden” systematicity and universality was long (and often still is) advertised as one of its major comparative advantages over other approaches. However, it seems that this bias towards stressing the universal aspects of language is often based on introspection and decontextualized data. This heuristic was perhaps necessary while the cognitive

linguistic movement was establishing and profiling itself against the background of objectivist philosophy and the formal-generative framework from which it emerged and emancipated itself. This search for universals is now felt to be a potential obstacle to advances in Cognitive Linguistics. Attempts to redress this situation, especially heralded by the rise of usage-based models, as envisaged by Langacker, are ever more conspicuous. A large body of cognitive linguistic research is concerned with the problem of determining which metaphors are universal and which are culture-specific. By the same token, the elucidation of how conceptual metonymy is exploited across languages is an interesting and legitimate enterprise. This also applies to the study of the constraints on the use of metonymy as well as to the study of metonymy avoidance strategies.

Returning to the property of universality of metonymy mentioned above, I claim that it is one thing to assert that metonymies are universal in principle, but a very different matter to proceed from there to the conclusion that metonymic processes are unconstrained. It does not follow from the universality of metonymy that all human languages avail themselves of metonymic processes in exactly the same way. This assumption has been voiced by a number of cognitive linguists, e.g., Lakoff (1987: 78) was among the first to warn that "... such general principles are not the same in all languages, one cannot simply say that anything can stand for anything else in the right context." And indeed, a series of studies has brought to light significant cross-linguistic differences in the availability of certain types of metonymies (Panther & Thornburg 1999a, 2003; Brdar & Brdar-Szabó 2003). What is more, it has been claimed that there is an implicational relationship between types of metonymies based on their availability in a single language as well as across languages.

Even what one might believe to be a stock example of a universal metonymy, viz., the CAPITAL FOR GOVERNMENT metonymy, as in (1) and (2) below (*italics added*), is not exempt from constraints when considered from a cross-linguistic perspective.

- (1) General Pervez Musharraf, Pakistan's leader, acceded to a list of demands presented by *Washington*.
- (2) U.S. presses *Moscow* to act against the proliferation weapons of mass destruction

Several corpus-based comparisons of media discourse in English, German, Croatian, and Hungarian (Brdar-Szabó 2002; Brdar-Szabó & Brdar 2003; Brdar & Brdar-Szabó, this volume) have shown that there are significant cross-linguistic differences in the use of names of capitals as conceptual metonymies: English is the most liberal in their use, while such metonymies, though possible in principle and actually attested, are conspicuously underused in Croatian and Hungarian. However, the contrast is far from being consistent and categorical; a closer inspection of the corpora underlying these studies reveals that the contrast is "soft" but persistent, due to two facts. First, Croatian and Hungarian media texts exhibit uneven distributions of the metonymy CAPITAL FOR GOVERNMENT at both the type and the token levels (for more details see Brdar and Brdar-Szabó, this volume). Secondly, in many cases the "missing" metonymies in naturally occurring samples of Croatian and Hungarian data are not, in principle, impossible, thus bringing these two languages more in line with English. These observations raise the following more general questions:

- (3) i. Why should uneven distributions of metonymies exist in a given language? Are there systematic constraints that might block metonymies? Or, are metonymies systematically avoided because some other linguistic device is preferred over them, as suggested by the second observation above?
- ii. If missing metonymies are in principle acceptable, why are they avoided and what replaces them?

2. The contingent nature of metonymy

Any attempt to answer the questions in (3) must start from some basic assumptions about the nature of metonymy. In a series of recent papers, Panther and Thornburg (2004, 2007) argue that one of the central properties of metonymy is the contingency of the relation between the metonymic source and its target, i.e., this relation is conceptually not necessary.

One of the obvious corollaries of this claim is that the targeted meaning is often (though not always) defeasible or cancelable. Another, less immediately obvious corollary is that lexicalized metonymy can in principle almost always be dispensed with in language: the intended or targeted meaning can always be expressed by some alternative means and not necessarily by means of a metonymic vehicle.

The question of why a metonymy is deployed, avoided, or blocked has not yet been systematically addressed in research and it is just this question the present paper sets out to explore. A fruitful starting point is to consider the cognitive and the pragmatic functions of metonymy. As Panther and Radden (1999: 13) have noted, an advantage of metonymy is that it communicates additional information to what is actually said. It is also a kind of mental shortcut. These characteristics of metonymy are exploited by language users to enhance the coherence of discourse. Moreover, since metonymy is a conceptual operation where one content stands for another, and both are activated at least to some degree, metonymy is a very efficient means of saying two things for the price of one, i.e., two concepts may be activated while only one is explicitly mentioned (cf. Radden & Kövecses 1999: 19).

However, there is a price to be paid for this versatility. As double- or even many-barreled expressions, metonymies maximize polysemy, of both the lexical and grammatical type. At some point and in some situations it is possible that the cost of processing incurred by increased polysemy becomes intolerable. The cut-off point where metonymies become less desirable seems to vary across languages, and even within languages, for example, across discourse types. Such a metonymy-avoidance strategy can be illustrated with some simple examples. Kalisz (1983) shows that the metonymic use of teachers' names to refer to the courses they teach was politically incorrect in Polish. To the best of my knowledge, no such constraints exist in English, German, Hungarian, or Croatian. Variation in the use of metonymies can be observed between different texts within the same general genre, or even between different sections of the same text. On the basis of German, Slovenian, Croatian, and Hungarian data, Tomka (2003) and Brdar-Szabó (2002) show that the COUNTRY FOR GOVERNMENT metonymy is more frequently used in media language than the CAPITAL FOR GOVERNMENT metonymy. The latter metonymy is more likely to occur in

weeklies, i.e. magazines with longer texts than in daily newspapers, in particular in their “hot news” section. Headlines of “hot news” texts are more saturated with the same type of metonymy than the body of the article. Comparable effects have been observed for metaphors as well; see Goatly (1994), where the notion of genre is used to estimate the degree of processing effort for the speaker/hearer.

At this point the two questions in (3) seem to converge into one:

- (4) How do languages avoid using metonymy?

In the remainder of the present paper two short case studies are presented that illustrate the strategies used in different languages to avoid the potentially “harmful” proliferation of polysemy resulting from metonymy.

3. Managing metonymy-induced polysemy

3.1 A case study of stuff: “Animal grinding” and wood(s)

The first case study focuses on the linguistic expression of edible or processable substances of individuated entities, such as animals or trees. The terms denoting such substances display a discrepancy between active zone and nominal profile (in the sense of Langacker, this volume: 49). The term ‘animal grinding’ is commonly used for this type of linguistic expression, a subcase of what is variably called ‘logical metonymy’, ‘logical polysemy’, or ‘regular polysemy’. In other words, one and the same label can be used to refer holistically to the animal as well as to the flesh of the animal in question, not necessarily conceived of as foodstuff. The following sentences illustrate this type of metonymy:

- (5) a. “I would not eat *cat*,” he murmurs.
b. We did not always eat *turkey* for Christmas dinner.

In Cognitive Linguistics (5a, b) are analyzed as WHOLE FOR PART metonymies, specifically OBJECT FOR MATERIAL-CONSTITUTING-THE-OBJECT within the Constitution ICM (Radden & Kövecses 1999: 32). The lexical item labeling the concept of the whole animal stands here only for a particular aspect of the whole animal, i.e. its bodily substance/flesh/meat as processed and used as foodstuff. Even literally, the substance that we use as food is only part of the whole animal’s body, as animals are skinned, boned, etc., and usually it is not the whole carcass that is made use of, but rather some smaller portion of it.

Nouns with the metonymically acquired sense ‘substance’ are reclassified in grammatical terms as concrete non-count mass nouns (a process designated ‘partial conversion’, cf. Quirk et al. 1985). Such nouns contrast with the majority of nouns denoting animals, which are countable and capable of overtly indicating plural at both token and type/species level (though there are some notorious exceptions, e.g. *fish*). Their countable status is indicated by the fact that they may take the whole range of determiners (indefinite, definite, and zero). Replacing the verb *eat* by a verb such as *kill* in (5a, b) results in *cat* taking a definite or an indefinite article, and *turkey* probably taking the indefinite article:

- (6) a. "I would not kill *a/the cat*," he murmurs.
 b. We did not always kill *a turkey* for Christmas dinner.

Although the OBJECT FOR MATERIAL-CONSTITUTING-THE-OBJECT metonymy appears to be fairly productive in English, an examination of corpus data reveals a different picture. While partial conversion is available in principle as an open pattern, it is not regularly made use of. One of the factors restricting the productivity of this metonymy is the well-known historical fact that many lexical items denoting the meat of domestic and wild animals were borrowed from Norman French and these lexical items block the operation of the OBJECT FOR MATERIAL-CONSTITUTING-THE-OBJECT metonymy. Some examples of the borrowed foodstuff terms are italicized in (7):

- (7) cow – *beef*; calf – *veal*; pig – *pork*; sheep – *mutton*; deer – *venison*

If we disregard the cases exemplified in (7) and assume that the OBJECT FOR MATERIAL-CONSTITUTING-THE-OBJECT metonymy is systematic, we might expect that *goat* should be polysemous in the same way, i.e. have a 'count' and 'substance' meaning since a goat is a domestic animal whose meat is widely consumed in many cultures, the English-speaking part of the world not excluded. And indeed a Google search yields a number of relevant examples quite high on the hit list. A search in the news sources in LexisNexis Academic also returned a number of hits (italics added):

- (8) a. Kyle told his mom on Sunday that he was most happy about being able to watch American TV – and not having to eat *goat* anymore. [*The Union Leader*, Manchester NH, March 12, 2002, page A1]
 b. Most Americans turn up their noses at the thought of eating *goat*, but they belong to one of the few cultures with that attitude. In some countries, goat meat is preferred over beef... Maine's Somali immigrants say they like to eat *goat* because it tastes good. [*Portland Press Herald*, November 9, 2002, page A1]
 c. We ate *goat*, fish (with head and tail still attached), pounded yams and amazingly sweet mangoes and pineapples, and drank a liquor concoction made out of palm sap (called sodabi) that went down like rubbing alcohol, yet tasted really good. [*Pittsburgh Post-Gazette*, December 16, 2001, page E1]

It is, however, telling that there is not a single token of the collocation of *eat* and *goat* in the BNC World Edition (co-occurring within the span of five words), or of the collocations of related verbs such as *cook*, *serve*, or *consume* with *goat*. More precisely, there are two tokens of *eat* and *goat*, but the noun phrase is actually *goat meat*:

- (9) a. But the farm would be much more profitable if the British weren't so reluctant to eat *goat meat*.
 b. Other countries don't share our reluctance to eat *goat meat*.

In contrast to the rarity of the collocation *eat goat meat* in the BNC, Google and LexisNexis Academic searches result in a large number of occurrences of this combination. These search results suggest that the term *goat meat* is preferred to the metonymic use of *goat*, a preference that effectively avoids the polysemy of the latter term.¹

In contrast to English, German and Hungarian (perhaps due to contact with German) have an entrenched $N_1 + N_2$ pattern to denote the flesh of animals commonly consumed as foodstuff, with N_1 referring to the animal and N_2 its meat:

- (10) German:
Schweinefleisch 'pig-meat', Rindfleisch 'cattle-meat', Schafsfleisch 'sheep-INFIX-meat', Ziegenfleisch 'goat-meat'
- (11) Hungarian:
sertéshús 'pig-meat', marhahús 'cattle-meat', birkahús 'sheep-meat', kecskehús 'goat-meat'

A word-for-word translation into German or Hungarian of the English examples of the metonymic uses in (8) would be decidedly odd, as the translations would convey the idea that the unprocessed animal as a whole was eaten, complete with bones, skin, innards, hoofs, horns, etc. (a usage that would be more appropriate if the eater is a wild animal).²

The situation in Spanish is in one respect close to English. Nouns used to denote animals can also be used metonymically to refer to their meat, but they can also be preceded by *carne de* 'meat of' (endocentric compounds being relatively rare in Spanish):

- (12) ternera 'heifer/veal', (carne de) cerdo '(meat of) pig', cordero '(meat of) lamb'³
- (13) El médico me ha prohibido el cerdo.
DEF doctor me AUX prohibited DEF pig
'The doctor forbid me to eat pork'

Croatian, which, unlike English, German, or Hungarian, lacks articles to mark partial conversion and in which compounding as a word formation process is virtually absent, resorts to other syntactic or morphological means. First of all, for all cases of animals that are, culturally speaking, less usual or unusual as potential foodstuffs, there is the phrasal expression *meso od X_{gen}* 'meat of X'. Even more important is a cluster of related suffixes, *-ina*, *-tina*, and *-vina*, used to derive names of meat of various animals:

- (14) a. govedina 'beef'
b. svinjetina 'pork', teletina 'veal', ovčetina 'mutton', koz(l)etina 'goat meat', guščetina 'goose meat', piletina 'chicken meat', konjetina 'horse meat', jeletina 'deer meat', jaretina 'kid meat', janjentina 'lamb meat', prasetina 'piglet meat', zečetina 'rabbit meat', nojetina 'ostrich meat'
c. tunjevina 'tuna meat', veprovina 'boar meat', somovina 'catfish meat', kitovina 'whale meat', jelenovina 'deer meat'

Interestingly, in Croatian, names for the meat of almost any animal can be coined by using one of these suffixes, e.g. *tigrovina* 'meat of tiger', *zmijetina* 'meat of snake', *slonetina* 'meat of elephant', i.e., this process is at least as productive as metonymic reclassification in English. Another interesting point is that some of these derived nouns can also denote the skin of the animal, e.g. *jelenovina* 'deer meat' or 'deerskin', or the fur or fat from the animal, e.g. *dabrovina* 'beaver fur' or 'beaver fat', or just the skin of the animal, e.g. *medvjedovina* 'bearskin', *risovina* 'lynx skin'.

If we assume a generalized grinding rule (cf. Gillon 1999) linking a count noun usage for any object to a mass noun usage referring to an aggregate state of the object, we

see that English uses a particular construction in default cases, viz. impersonal existential constructions with a bare singular (i.e. zero-article marked) animal noun following the verb *be*:

- (15) There was cat all over the road.

This substance sense of the noun is expressed in Hungarian by means of a copular construction, the deviation from the normal construction obligatorily being signaled by an intensifier such as *csupa* ‘nothing-but/all’:

- (16) Az úttest csupa macska volt.
the road nothing-but cat was
‘There was cat all over the road’

Finally, in Croatian we note that in addition to an intensifier *svugdje* ‘everywhere’ used in the impersonal construction, the noun denoting the animal is case-marked as partitive (i.e. stands in the genitive case):

- (17) Po cesti je svugdje bilo mačke.
over road was everywhere been-3SG-NEUT cat-GEN
‘There was cat all over the road’

Shifting from the domain of animals as foodstuffs to that of trees/wood(s), we find that in Croatian the same pattern of suffixation is preferred over a metonymic use of tree names. Whereas in English *oak* is used polysemously to refer to the tree, the wood of the tree, and objects made of its wood, in Croatian the wood of the tree is usually referred to by means of a suffixed noun, *hrastovina*, while *hrast* normally means just the tree. There is again a whole series of analogous suffixations:

- (18) *bukovina* ‘wood of beech’, *brezovina* ‘wood of birch’, *borovina* ‘wood of pine’, *orahovina* ‘wood of nut tree’, *cedrovina* ‘wood of cedar’, *vrbovina* ‘wood of willow’

In German and Hungarian alike we witness a distributed use of metonymy or compounds with *-holz* and *-fa*, respectively.

Spanish again sides here with English because one and the same label can be used to refer to the tree and its wood. Consider the following dictionary entries for *encina* ‘oak’ and *haya* ‘beech’ (from CLAVE⁴):

- (19) *encina* ‘oak’
a. Árbol de tronco grueso y corteza grisácea, que se divide en varios brazos que forman una copa grande y redonda...
‘Tree with heavy trunk and grayish bark, branching into several arms forming a great round tree crown...’
b. Madera de esta árbol: *En su habitación tiene un armario de encina.*
‘material from that tree: *In his flat, he has an oak armchair*’
- (20) *haya* ‘beech’
a. Árbol de gran altura, con tronco grueso y liso, ramas altas que forman una copa redonda y espesa, hojas alargadas, de punta aguda y borde dentado:...

‘Tree of high altitude, with heavy and smooth trunk, high branches that form a round glass and thickens, extended leaves, of acute end and dentated edge...’

- b. Madera de esta árbol: *Tengo un cofre de haya que no pesa nada y es muy resistente.*
 ‘Material of that tree: *I have a coffer made of beech that weighs nothing and is very resistant*’

As shown above, English and Spanish names of trees may be used metonymically to refer to their material substance. The noun *wood*, some names of trees, as well as some related nouns can be used in yet another metonymic way. In this case the count noun naming a tree occurs with a plural suffix (traditionally called *pluralia tantum*, cf. Huddleston & Pullum 2002: 343) and the metonymy is of the type PART FOR WHOLE. The linguistic vehicle, the pluralized tree name, stands for a *bounded grouping* of trees. This type of metonymic usage is illustrated in the following examples:

- (21) a. The switch back in *the oaks* below Highlands Ridge has apparently burned. The fire seems to have gone out as it descended into the brush below Gamboa.
 b. Annoying gnats were still present in part of the trail, especially near Dorr Canyon in *the oaks*. They went away at lower elevations.
- (22) a. The historic log Pioneer Cabins are nestled in *the pines*. No rollaways allowed.
 b. To hike on the mesa top in *the pines*, you’ll want to turn left on coast highway and enter the other side of the park just over the lagoon.
- (23) “Alice respected the dignity and spirituality of being in *the redwoods* and felt this grove should be preserved.”
- (24) And I said, quite truthfully, that I lived in *the elms* on Buxton Common, near Purley. So I do.
- (25) a. First night campsite in *the birches*, almost to Fish Lake.
 b. ... and camped with us in *the birches*.
 c. The first written reference to Beaconsfield dates from 1185 where it is spelt Bekenesfeld, although this is popularly thought to mean the “field by the beacon” it may alternatively mean the “clearing in *the beeches*” and the town’s icon is indeed a beech tree.
 d. The dogs struck a bear in *the beeches*. We followed and climbed and walked and climbed and walked. We went across Icy Gulch.

The productivity of the pattern ‘(in) *the Xs*’ is reflected in the large number of toponyms, which includes names of parks, estates, housing developments, etc.

- (26) a. It is now known that untreated effluent from two unsewered residential areas, *The Oaks* and Oakdale, leaks into Werribberri Creek, which flows into Sydney’s main dam, the Warragamba, just 5 kilometres from the dam wall.
 b. Celebration in *the Oaks*TM
 See New Orleans’ historic City Park transformed into a holiday wonderland. Its ancient oak trees are aglow with massive ornaments along the two-mile driving tour that is spangled with over two million sparkling lights and lighted displays.
 c. Now regarded as one of the best examples of ancient woodland in Britain, *Burnham Beeches* in Buckinghamshire was acquired by the Corporation in 1880, in response to a threatened purchase by residential developers.
 d. Houses for sale in Brighton in *The Beeches*, Brighton.

While Hungarian uses some suffixations for groupings of specific trees (*tölgyes* ‘oak woods’, *bükkös* ‘beech woods’, perhaps *barackos* ‘apricot orchard’), in addition it has compounds with *-erdő* ‘woods’ or *-kert* ‘garden’ as the second element (*tölgyerdő* ‘oak woods’, *cseresznyekert* ‘cherry orchard’). The latter metonymy-avoiding strategy is also made use of in German (*Birkenwald* ‘birch woods’). Croatian has a specific suffix, *-ik*:

- (27) *hrastik* ‘oak woods’, *brezik* ‘birch woods’, *bukvik* ‘beech woods’, *šljivik* ‘plum orchard’

Spanish has equivalent suffixes:

- (28) a. *almendro* ‘hazelnut’ – *almendral* ‘hazelnut woods’,
encina ‘oak’ – *encinal/encinar* ‘oak woods’, *higuera* ‘fig’ – *higueral* ‘fig orchard’,
castaño ‘chestnut’ – *castañal* ‘chestnut woods’
 b. *guinda* ‘sour-cherry’ – *guindalera* ‘sour-cherry orchard’

However, in contradistinction to all the other languages discussed here, Spanish has a grammatical conversion pattern relating some types of fruit and fruit trees that actually looks like a case of suffixation. It relates pairs such as *castaño* ‘chestnut tree’ to *castaña* ‘chestnut (fruit)’, *cerezo* ‘cherry tree’ – *cereza* ‘cherry (fruit)’, etc., where the former members of the pair are said to be derived from the latter.

To conclude this case study, the contrasts between English, German, Croatian, and Hungarian observed in this section are what could be called “soft” because the metonymy in question is:

- less than fully productive, although in principle available;
- often avoided, i.e. replaced by special lexical items or syntactic constructions;
- often propped up by constructional, grammatical (opposition between zero and non-zero article, case-marking), and/or lexical means.

3.2 “Soft” and “hard” contrasts in the metonymic coding of linguistic action

Metonymic coding of linguistic action is discussed in a series of papers by Brdar-Szabó and Brdar (Brdar, Brdar-Szabó, Gradečak-Erdeljić, & Buljan 2001; Brdar-Szabó & Brdar 2002, 2003, 2004; Brdar & Brdar-Szabó 2002, 2003; Brdar, Brdar-Szabó, Buljan, & Gradečak-Erdeljić 2002). Languages code linguistic action in various ways. In addition to a number of structures used primarily or exclusively for the purpose of coding linguistic action (e.g. reporting verbs taking complement clauses in indirect speech), English employs constructions with predicative adjectives for this purpose, such as those illustrated in (29):

- (29) a. I must be *open* with her, whatever the cost.
 b. Dear colleagues, I’ll be *brief*.
 c. Arthur was *brief* about his other teachers in his recollections.
 d. The President was *clear* on the matter.
 e. Yes – and be *direct* about the effect of his work.
 f. Sheila wasn’t very *definite* on the point.
 g. At least, I’ve been *open* about it.

Adopting the typology of pragmatic metonymies proposed in Panther and Thornburg (1999a: 335f.), we assume that the examples in (29) are cases of propositional metonymy. We may occasionally come across examples like (29b), which can also be interpreted as an illocutionary type of metonymy, since the statement *I'll be brief* in fact functions as a commissive speech act. However, the illocutionary metonymy appears to be superimposed here on a more basic and conceptually prior propositional metonymy, viz. predicational one.

In predicational metonymy one propositional content stands for another propositional content. Assuming that the locus of metonymic mappings in the examples listed in (29) above is indeed the predicatively used adjective, we are justified in classifying them as **MAN-NER FOR (LINGUISTIC) ACTION** metonymies. All the adjectives in the above examples seem to specify one aspect of the linguistic action involved, namely, the way in which it was performed, carrying more or less strong expectations as to the effectiveness and ultimate result of the linguistic action, or the lack thereof. That they denote the manner in which an implicit linguistic action is carried out becomes obvious from paraphrases such as:

- (30) a. I must *speak openly* with her, whatever the cost.
 b. The President *spoke clearly* on the matter.

On the basis of this background, we can consider how this particular type of metonymy is represented in various languages, paying special attention to whether the adjective can be used metonymically or not, i.e., whether it must be replaced by the expression for the targeted linguistic action. If the metonymic expression is allowed, we check how the active zone is specified, i.e., whether this happens by means of complements, as in English, or by some adjunct-like structures. The term active zone is used here in the sense of Tuggy (1986) and Langacker (1995, but see also Langacker, this volume: 48–52) to refer to an element that points to the intended target of a metonymy and prompts the metonymic reading.

In the aforementioned series of papers Brdar, Brdar-Szabó, and their co-authors show that German, Croatian, and Hungarian (unlike English) seldom allow adjectival constructions equivalent to the ones in (29). Metonymically used manner-of-speaking adjectives (plus optional prepositional complements) are avoided in these languages; instead, the linguistic action is explicitly coded by a verb plus manner-of-speaking adverb, as in the Croatian counterpart of (29e) given below:

- (31) I da – govori izravno o učinku njegovog djela.
 and yes speak directly about effect his-GEN work-GEN

Another option for coding linguistic action in German, Croatian, and Hungarian is the use of a predicative adjective followed by an *adjunct*, realized by a prepositional phrase or a clause. However, while this construction type is also possible in English, it is underused because constructions with an adjective followed by *complement* seem to be the preferred variant. In German, Croatian, and Hungarian the ‘predicative adjective + adjunct’ constructions are the closest that these languages can come to using a metonymy;⁵ complement prepositional phrases are however completely ungrammatical. Below are some Croatian (32) and German (33) examples corresponding to (29f, g):

- (32) a. *Sheila nije bila vrlo određena o tome.
 Sheila NEG-AUX COP very definite about that
 b. ?Sheila nije bila vrlo određena kada je o tome govorila.
 Sheila NEG-AUX COP very definite when AUX about that spoke
 c. ?Barem sam bio otvoren glede toga.
 at-least AUX COP open concerning that
- (33) a. ?Sheila war nicht sehr bestimmt bei diesem/*über diesen Punkt.
 Sheila COP not very definite at this about this point
 b. Sheila war nicht sehr bestimmt, was diesen Punkt betrifft.
 Sheila COP not very definite what this point concerns
 c. Sheila sprach nicht sehr bestimmt über diesen Punkt.
 Sheila spoke not very definitely about this point
 d. Ich war ja wenigstens offen darüber.
 I was well at-least open it-about
 e. Ich habe ja wenigstens offen darüber gesprochen.
 I AUX well at-least open-ADV it-about spoken
 f. Ich war ja wenigstens offen, als ich darüber sprach.
 I COP well at-least open when I it-about spoke

Assuming that both complements and adjuncts can be viewed as active zone phenomena, it is easy to see that specifications of active zones in English tend to be as schematic as possible, whereas German, Croatian, and Hungarian seem to prefer the specification by means of more elaborate adjunct structures. The adjunct PPs and adverbial clauses do not function as arguments; they do not impose a new valency frame on the predicative expression in question and thus do not lead to an increase in grammatical (or constructional) polysemy. Finally, note that an important difference between English, on the one hand, and German, Hungarian, and Croatian, on the other, is that in the latter languages it is far more difficult to interpret the predicative adjective as metonymically standing for the linguistic action unless, as noted above, it is supplemented by some relatively elaborate specifications such as adjunct clauses.

We have thus again observed a situation similar to that in the first case study. In German, Croatian, and Hungarian the MANNER FOR (LINGUISTIC) ACTION metonymy is: (i) often avoided, i.e. replaced by explicit codings of the target concept, or (ii) propped up by various constructional and grammatical means.

4. Conclusions and prospects for further research

As a result of the relative undesirability of metonymies, two types of strategies are used in languages as a way of getting around the problem. The cost incurred by metonymy may be offset or reduced by employing a corrective device that resolves the ambiguity/polysemy of a metonymic expression on the basis of some contextually derivable information.

A second important corrective device may be termed *explicit metonymy marking strategies*. This strategy involves the use of certain formal clues, such as function or gram-

matical words (e.g. articles, dummy *it*), grammatical affixes (e.g. plural suffix, various case endings), or grammatical constructions, which signal non-default meanings and thus prime language users towards the intended metonymic target. While we may agree with Langacker (this volume: 46) that “[e]xplicit indications evoke conceptions that merely provide mental access to elements with the potential to be connected in specific ways, but [that] the details have to be established on the basis of other considerations”, it still appears that explicit linguistic coding may get us not just “in the right neighborhood” from where we have to find the right address by some other means, but that explicit coding may get us right to the right metonymic gate, if not to the very doorstep. In the course of time, the metonymic interpretation of an expression, together with its marker, may “emancipate” itself from its source meaning and thus cease to be a “live” metonymy.⁶

A third important corrective option is the application of a metonymy avoidance strategy. Examples are paraphrases by means of various syntactic devices (e.g. “missing” heads of phrases or modifiers/complements that explicitly identify what would otherwise be the implicit metonymic target), word-formation processes (e.g. specialized affixes, conversion, or compounding, in which the head identifies the intended metonymic target and the modifying element specifies the domain in question), or alternating uses of distinct grammatical constructions.

Metonymy marking and metonymy avoidance strategies may occasionally become almost indistinguishable, or work in tandem, e.g., when conversion is accompanied by formal markers. A detailed examination of both types is a necessary precondition for working out a more comprehensive typology of polysemy resolution strategies in order to show how the two complement and/or reinforce each other. Following Langacker’s warning (this volume: 48) that “indeterminacy in grammar is no excuse for vague or imprecise description”, we should strive for a comprehensive account of how the strategies interact with each other and the results they produce.

In conclusion, there seem to be at least two types of metonymies in terms of their universal viability: (i) metonymies we actually do live with, i.e., those we have because we must have them and we probably could not live without them because they fill an ecological niche in the sense of Radden and Panther (2004: 24f.), so that we do not even notice “the indeterminacy inherent in profile/active zone discrepancy” (Langacker, this volume: 50), and (ii) metonymies we can live with, i.e., those we can tolerate (with or without marking them as such), but also those we can dispense with, or live without, in which case we use some of the above avoidance strategies. The type described in (ii) could perhaps be broken down into finer subcategories, according to whether the metonymies in question are more likely to be lived with or without. Possibly, there is a third general type: metonymies we cannot live with, i.e. metonymies that are not viable for any reason (conceptual or formal), and are therefore never found.

Notes

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1. The motivation for preferring the term *goat meat* over *goat* might ultimately be cultural.
2. The same effect obtains in German and Hungarian if *-fleisch* and *-hús*, respectively, are omitted, except in ostensive contexts in which a dish made out of the meat of one animal is contrasted with dishes made from the meat of other animals.
3. I thank Antonio Barcelona for kindly assisting me with the Spanish data.
4. Cf. <http://clave.librosvivos.net>.
5. In Croatian, these constructions are still considered to be on the verge of acceptability.
6. This issue, from a slightly different perspective of automatic metonymy recognition, has been pursued in a number of publications by Markert and Nissim (2006, 2007). The phenomenon of metaphorical signaling has been discussed in Goatly (1997) and a number of publications by J. Barnden and his collaborators (cf. Wallington, Barnden, Barnden, Ferguson, and Glaseby 2003). “Dead” metonymies are also referred to as “post-metonymies” by Riemer (2002).

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PART 4

Predicate and clause constructions

FORM IS MOTION

Dynamic predicates in English architectural discourse*

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1. Introduction

Cognitive linguists generally assume that “meaning resides in conceptualization” and that “it reflects our capacity to construe the same situation in alternate ways” (Langacker, this volume: 46). The incorporation of the notion of motion into built form is a case in point and has a long tradition in architecture – ever since the philosophical ruminations about space and spatiality that took place within German aesthetics in the eighteenth and nineteenth centuries, the influence of Newtonian mechanics in the nineteenth century, and the work of modern architects in the first third of the twentieth century. The relevance of a dynamic approach to buildings is also attested by the number of current architectural works and events pointing to what might be called the ‘motion-building contract’. Examples of such an approach are evident in the videotape *Frank Gehry: Architecture in Motion*, the exhibition *Building Motion: The Architecture of Zaha Hadid* (held in the Price Tower Arts Center of Bartlesville, Oklahoma), and the book *Flying Dutchmen: Motion in Architecture* about several contemporary Dutch architects.

The pervasiveness of motion in architectural design also shows up in the language used by architects in discussing their work, as exemplified by the following passages retrieved from architectural design magazines:

- (1) “From one building to another, you’re experiencing movement as part of a journey”, claims the architect, who always deploys orientation devices – views, openings, corridors – to make the path of the constantly changing officescape self-guiding and cogent.
- (2) The masonry-framed building’s interiors are as spatially complex as its outward form suggests: sliced, canted, jostling spaces that slide around and between the concrete sections like a bustling crowd.

These passages illustrate that motion metaphors in architecture may refer either to the routes traced by people moving within a building, as in (1), or to the human visual perception of space, as in (2). Indeed, a common assumption in contemporary architecture is that understanding of three-dimensional space can be achieved only through motion:

by moving in space, we understand and “create” space. At the same time, spatial entities may create the illusion of moving and be described accordingly.

The dynamic rendering of built space can be conveyed by means of nouns (*progress*, *rotation*, *flow*) and of adjectives (*jostling* or *kinetic*), yet is achieved mostly by motion predicates.¹ This last aspect is shown below:

- (3) A little circular balcony *flies over* the exhibition area [...].
- (4) The roof volumes *float* ethereally in the stunning landscape.
- (5) [T]he larger biome [building] is almost as tall as the crag on which it *climbs*.

Of course, examples like these are not a prerogative of architectural texts. Thus, as argued by cognitive scholars (Langacker 1986, 1987; Matlock 2004; Matsumoto 1996; Talmy 1983, 1996, 2000), the use of motion predicates for describing static scenes is also a common strategy in general discourse, where we may find descriptions like the following:²

- (6) The following day we set off to walk the Clear Creek trail, which *winds along* the Colorado River.
- (7) Now I know that the road *runs* right *along* the Potomac River.
- (8) The road *rises* sharply here as the tunnel *fans out* and *climbs back into* the air.

However, despite the obvious similarities between both sets of examples, the motion predicates in architectural discourse exhibit a number of idiosyncratic features worth investigating. The first of these may be illustrated by comparing examples (3)–(5) with passages (6)–(8). The motion constructions in the latter three describe the spatial characteristics of roads and trails as if one were moving along them. Although the predicates are not concerned with portraying physical motion but entities allowing for it, they may also evoke the image of people or vehicles *running* or *winding* along them – that is, motion itself.³ This potential for physical motion is not completely lost in architectural descriptions, but is of a different sort. Thus, saying that a given building *climbs on* its site, as in (5), does not evoke the image of a person doing likewise when inside the building but a perceptual – visual – response to a form as if it were moving.

A second difference concerns the characteristics of the entity described in dynamic terms (i.e. the trajectory). General uses of fictive motion tend to describe spatial scenes involving linear trajectory such as roads, rivers, streets, and the like. Should this not be the case, they need be susceptible to being conceptualized as spatially extensible (Matlock 2004). The predicates foreground the trajectory's path-like configuration by evoking simultaneously all the locations making it up, a cognitive process described as *sequential scanning* by Langacker (1986). It is not surprising, then, to find that many such descriptions rely on predicates like *run*, *rise*, *climb*, *go*, or *follow*, which express a change of location along, across, or up/down a path. In contrast, motion constructions in architectural texts apply not only to elongated structures, but also to a wider range of spatial arrangements or shapes. Thus, in addition to such common verbs as *run*, *travel*, *wind*, or *rise*, architects make use of more ‘graphic’ verbs such as *plunge*, *poise*, *crouch*, *nuzzle*, *butt*, *melt*, *blast*, or *slide* – to list but a few of the predicates found in architectural descriptions.

Motion constructions in descriptions of spatial arrangements appear to be motivated by metaphors of visual perception in which particular layouts or appearances (the targets in the mapping) are seen as reminiscent of the kind of movement encapsulated in the metaphorical sources (the motion predicates). A large number of motion predicates point to the presence of the metaphor FORM IS MOTION (Lakoff & Turner 1989) whereby motion is mapped onto form or shape; i.e., our understanding of certain spatial arrangements and topologies derives from a more basic understanding of particular ways of moving. The linguistic instantiations of these image-motion mappings help architects articulate the relationship between spatial configurations in agreement with the visual concerns of architecture.⁴

The purpose of this paper is twofold. The first, taken up in Section 2, is to survey the ways in which dynamic descriptions are used in architectural texts (as opposed to those found in general discourse) in order to determine which aspects of built space are highlighted and to specify the characteristics of the trajectors (built entities), landmarks (contexts), and the types of predicates that are found in these constructions. The second, taken up in Section 3, is to examine in further detail specific subtypes of motion predicates and to bring to light the figurative schemas and processes underlying architectural dynamic descriptions. In so doing, an analysis of the cognitive mechanisms that motivate them is proposed. Section 4 concludes the paper.

2. Motion constructions in architectural discourse

The present study draws upon research on the metaphors used by architects in describing and evaluating built space. The analysis is based on a corpus of 95 reviews from six architectural magazines: *Architectural Record*, *Architectural Review*, *Architectural Design*, *Architecture*, *Architecture Australia*, and *Architecture SOUTH*.⁵

The figurative expressions found in the corpus belong to diverse domains, such as the natural sciences, linguistic description, spatial mechanics, cloth making, music, and experimentation (for a detailed account, see Caballero 2006). The analysis began with a tabulation of the instances of metaphor in the building reviews, i.e. the number of times a given figurative token occurs. The figurative data comprise 1,972 instances, of which 21.1% involve motion metaphors, realized as nouns, verbs (with or without particles), and adjectives.

The corpus contains 282 verbal instantiations metaphorically describing spatial arrangements. Although the constructions fall into the relational predication pattern A IS IN B, their main focus is not solely that of describing a location or scene, but also, and more importantly, that of describing the form or shape of a building by means of evoking the idea of a particular motion, physical action, or state. However, the predicates so used are not equally *imagistic* and *kinetic*. Concerning the first aspect, *fan out* in (9) evokes a more vivid image of spatial arrangements than *run* in (10):

- (9) [A]n amphitheater-like arrangement that *fans out* from the base of the [building].
- (10) A southern deck *runs between* the dining room and the third pavilion [...].

In turn, built space may be described more or less dynamically. By way of illustration, consider passages (11)–(14):

- (11) [The building] has been designed to *sit* in the contours of the sloping fields.
- (12) As a form, it [roof] *settles upon* the neat P&O lines of the hotel.
- (13) A stair *tumbles down* from this first floor incision onto the man-made island.
- (14) One geologically contoured part of the building *heaves up* from the site [...] while another part *thrusts toward* the intersection [...].

In example (11) the posture predicate *sit* (cf. *lie*, *stand*, *crouch*) does not code dynamicity at all (though in certain contexts it can be interpreted as the result of motion). In contrast, *settles upon* in (12) with the meaning ‘assuming a position’ (Levin 1993:262) can be called “weakly” dynamic. Examples (13) with *tumbles down* and (14) with *heaves up* and *thrusts toward* describe a stair and a building, respectively, in forceful dynamic terms. Other dynamic motion predicates such as *fly*, *rise*, *soar*, *hover*, *float*, *run*, and *travel* are also attested. These may or may not express directional movement, but all of them are concerned with motion of some sort (e.g. *float*) and, therefore, have been taken into consideration. Indeed, the instances that describe built arrangements in terms of motion by far outnumber those that portray them as static artifacts. The corpus evidence in this regard is clear: 94 instances of static constructions are found compared to 183 cases of motion constructions. The preference for describing built space in dynamic terms is unmistakable.

As discussed earlier, the motion constructions found in architectural discourse are different from those found in general discourse. As pointed out in Matlock (2004), general discourse usually exhibits trajectors that are stationary and rectilinear (or susceptible to being spatially extended).⁶ The trajectors are also seen as crucial to the overall meaning of the constructions. Matlock distinguishes two types of constructions: one that involves a trajector associated with motion (e.g. a road) and may therefore occur with manner verbs, and a second type whose trajector is not associated with motion (e.g. a cable) and does not allow manner verbs. However, although this distinction applies to general discourse, motion constructions in architectural discourse exhibit different conceptual patterns, which are considered in more detail in what follows.

2.1 Trajectors

In contrast to the typically elongated shape of trajectors in motion constructions in general discourse, the trajectors in architectural texts need be neither long nor rectilinear. Compare (15a) with (15b):

- (15) a. The road *runs along* the coast.
- b. The massive warehouse *runs along* the north side of the site.

The elongated shape of roads and fences in general discourse, as in (15a), may well motivate the use of verbs like *run* or *go*, as well as directional prepositional complements/ad-juncts, with prepositions like *along*, *from*, or *to*, all of which describe the imaginary path traversed by the trajector. In contrast, in architectural discourse, *run* is used to describe

not only elongated buildings or parts of a building (e.g. beams or corridors), but also bulky, massive edifices. Such is the case in (15b) where, jointly with the property of length, the verb highlights the lack of obstacles on the path of imaginary motion of the building thus described. In other words, the expression is primarily concerned with the absence of any other spatial element obstructing the “flow” or continuity of the warehouse in relation to “the north side of the site”.

2.2 Motion predicates

Another difference between motion constructions in general discourse and those in architectural discourse concerns the importance of predicates for the overall meaning of the sentences in question. Before taking this point further, consider the following examples:

- (16) The green prism *crouching* among neo-Corbusian mediocrity.
- (17) [A] three-story tower that *looms above* the reclining coil of the new exhibition wings.
- (18) The interior is organized around a central circulation spine, which *travels* the entire 960-foot length.

In (16) *crouch* foregrounds the trajector’s large size or bulk. Likewise, in (17) *looms* highlights ‘size’ or ‘bulk’ (note that the tower at issue consists of only three floors), yet incorporates the emergent meaning ‘verticality’ (i.e., the building *rises* above other built structures). Finally, in (18) *travels* articulates ‘continuity, extension’ – analogous to *run* in (15a).

Indeed, the choice of verb in architectural descriptions appears to be critical for constructing the spatial arrangements in focus, a construal often aided by the motion/directional particles and prepositional phrases co-occurring with them. Thus, whereas any sort of built artifact may be well described as *lying*, *sitting*, or *resting* in its site (i.e. statically), predicates such as *rise*, *stand*, or *loom* combine the notions ‘height’ and ‘verticality’, portraying buildings as tall and often, but not always, elongated artifacts. Passage (19) illustrates how the notion of verticality may be further reinforced by combining an adjective, a noun, and a manner motion verb:

- (19) On the south-east face, a *spindly* steel framed *cylinder* hung with bells (an abstraction of a traditional campanile), *soars above* the surrounding jumble of roofs.

Verbs like *heave*, *thrust*, *emerge*, *surge*, and *blast* usually predicate bulky buildings, highlighting verticality and force:

- (20) [A] fantastic glazed canopy [...] that *blasts out* from the corner of the building [...].
- (21) It grows with complexity and energy as it *surges from* the protective brick base into a sort of splintering canopy.
- (22) Will Bruder creates a house that *emerges from* its rocky site.

In turn, built arrangements characterized by projected motion on a horizontal plane are predicated by *project*, *cantilever*, *reach*, and *corbel* – the last used almost exclusively in architectural discourse. The following examples illustrate some of these verbs:

- (23) [The building's] roof *cantilevers towards* the street *through* two traffic lights.
 (24) The Price House has concrete-block walls that *corbel out* as they *rise* [...].

On the other hand, short, wide structures are often qualified by means of predicates such as *melt*, *splay*, *spill*, *sprawl*, *expand*, *sweep*, and *spread*, all of which combine the attributes 'width' and 'continuity, extension':

- (25) The glazed restaurant/café [...] seemingly *melts out onto* the surrounding concourse.
 (26) Just behind the screen – a shading device that *splays away from* the building toward the river – are interstitial spaces [...].
 (27) Zapata's supermarket is a beautiful object – it hums with kinetic energy, *sweeping along* and *up* the street like an elegant, silvery comet.

The concept of continuity is also implicit in predicates such as *trail*, *run*, and *travel*, but, in this case, the emergent meaning is 'length' (rather than 'width') as in examples (15b) and (18) above, and in the following passage:

- (28) [A] fountain of water sandwiched between leaning planes of glass *trails* in the structure's wake.

Finally, as shown below, certain verbs are used to highlight particular properties of the sites occupied by built arrangements, even if, in this case, the predicates are not concerned with motion proper but with specifying a particular configuration:

- (29) *Tucked between* existing structures on a tight site, the addition [...].
 (30) It houses the campus radio station, *perched* apparently precariously *over* the south and west edges.

Thus, whereas *tucked* in (29) draws attention to the tight, narrow quality of the space occupied by a building, *perched* in (30) points to some of the difficulties involved in erecting buildings in high places.

2.3 Manner of motion

Motion constructions in architectural discourse often allow manner verbs.⁷ Manner, however, is not a unitary concept (Slobin 1996). Among other things, it may refer to the motor properties, rate, and attitude of motion (e.g. *walk* versus *crawl*, *run*, and *stroll* respectively), or the medium in which motion takes place (e.g. *walk* versus *swim*). Manner-of-motion verbs are relevant to the particular meaning of fictive motion constructions in architectural discourse; the following descriptions serve as illustrations for discussion:

- (31) The new library *eases gently into* a Wild West landscape [...].
 (32) [O]ne whole wall *slides back* on a flush-mounted track [...].
 (33) A concrete stair *weaves between* the structural supports and an undulated gunnite roof.
 (34) [T]wo giant linked conservatories which *clamber up* the crags on the northern side of the pit.

- (35) [T]he masonry blocks *inch out* from the vertical plane as they rise.

All of these predicates specify the type of motion fictively created by built arrangements. Thus, the verb *ease* in (31) evokes the “careful” motion of the library under description, a manner further specified by *gently*; gentleness is also implicit in the use of *slide* in (32). In turn, *weave* in (33) captures the sinuous motion of a staircase, whereas *clamber* in (34) foregrounds effortful movement up a rough surface. Finally, the slow, inch-by-inch outward projection of the blocks in (35) is expressed via *inch out* – a motion predicate that entered the English language in 1599 and which, as is the case with many other motion predicates in architectural discourse, is motivated by cognitive phenomena such as metaphor and metonymy. The figurative motivation of fictive motion constructions in architectural descriptions is considered in more detail in the ensuing section.

3. Figurative motivation of fictive motion constructions in architectural discourse

Cases of figurative motion in spatial descriptions may be seen as instantiations of the metaphorical mapping formulated as FORM IS MOTION in Lakoff and Turner (1989), in which the form or appearance of built space is construed in terms of motion. However, this abstraction – despite its neatness – leaves some questions unresolved, and does not sufficiently account for the complexities implied in the motion constructions found in architectural texts.

In the first place, regarding motion as the source domain in the metaphor may conceal the fact that additional entities may be evoked by motion predicates, which, in turn, points to difficulties often involved in metaphor construal. The problem lies in the abstractness of motion itself, a concept accessed only *in action*, that is, by our various motion experiences or by observing the entities capable of moving in the process of doing so. Concerning the latter, it may well be that motion predicates evoke not only some sense of dynamism, but also those very entities whose movement is evoked by the expressions. By way of illustration, consider the following examples:

- (36) The scheme consists of three discrete elements. The largest is a long, pod-shaped form [...]. *Nuzzling* one end of the huge pod is a 350-seat IMAX theatre [...].
- (37) [A]s it *butts up against* the older houses, the building steps down around an intimate, irregular courtyard [...].

In examples (36) and (37) an IMAX theater and a cultural center are portrayed respectively as if *nuzzling* and *butting up against* other spatial structures in their surrounding context and, in this sense, may be seen as instantiating the metaphor FORM IS MOTION. However, the expressions also evoke the entities prototypically predicated by *nuzzle* and *butt*. Thus, *nuzzle* implies some kind of entity (animal or otherwise) having a nose or muzzle and, therefore, able to effect a pushing movement by using it. In contrast, *butt* may well suggest such disparate entities as cigarettes, rifles, or goats – all of them usual collocates of *butt* in other contexts. *Nuzzle* and *butt* are, in these examples, used to

highlight the partial contact or force of one spatial volume against a wider built ensemble (as explicitly shown in the visuals of the reviews in which they occur). However, one cannot help imagining the aforementioned entities as well, due partly to the conventional meaning and use of both predicates.

The co-activation – or multiple evocation – of diverse metaphors by a single expression is also addressed in Goatly (1997: 86–89). Specifically, Goatly discusses what he calls a *vehicle construction process*, triggered by incongruous collocations and related especially to metaphorically used verbs. He illustrates his point with the expression “gills *kneading* quietly”, where *kneading* denotes an action typically performed by hands and, thus, indirectly equates gills with hands. Likewise, many motion predicates in architectural texts may evoke the entities whose prototypical movement is used to describe spatial arrangements. Such is the case in the manner verbs *step*, *settle*, *clamber*, *crouch*, and *reach*, which instantiate motion metaphors, yet may point equally well to the metaphor BUILDINGS ARE ANIMATE BEINGS since they require agents whose bodies can move. Some of these predicates further specify the limbs involved in the expressions. Thus, whereas *step* and *crouch* incorporate legs in their semantics, manner verbs such as *reach*, *hug*, *embrace*, and *punch* are actions typically performed by the upper limbs. Illustrative passages in architectural descriptions are given in (38)–(40):

- (38) [The architect] built each roof as a permanent shallow pool and, together, the half dozen roofs *step down* the hillside like terraced reflecting ponds.
- (39) The different elements are articulated externally, with the IMAX, which *punches into* the hub [...].
- (40) A cluster of arched tensile canopies *reaches out to embrace* visitors [...].

Indeed, the “anatomical” images evoked in these examples are perfectly congruent with the preponderance of anthropomorphism in architecture, i.e., the ascription of human forms and attributes to buildings is as pervasive in the discipline as motion itself (for a detailed discussion, see Caballero 2006).

Predicates like *hover*, *oversail*, and *float* bring to mind source frames such as BOAT OR PLANE; hence, they manifest a metaphor that may be cast as BUILDINGS/BUILDING ELEMENTS ARE MOBILE ARTIFACTS:

- (41) *A couple of squashed zeppelins* [i.e. building's roofs] *hover* over the solid structures.
- (42) Organization of the teaching pavilions which *oversail* the lakeside promenade is similarly direct.

A related third group of manner-of-motion predicates comprises verbs like *surge* and *flow*, which, as is also the case in descriptions with *float*, invoke the metaphor BUILT SPACE IS A FLUID:

- (43) In the Reyes-Retana House, rooms *flow freely into* each other [...].
- (44) [The library is] a free-standing inverted cone which *floats* on a polygonal timber deck within the lake [...].

- (45) The [canopy] grows with complexity and energy as it *surges from* the protective brick base *into* a sort of splintering canopy.

Finally, other motion predicates suggest a MALLEABILITY schema whereby building is seen as the manipulation of “raw” as well as built space in order to achieve a body of work. Space is portrayed as tangible matter that architects may shape or mould as if it were clay, stone, or wood, and buildings are, therefore, seen as plastic artifacts. This scenario is instantiated by predicates characterizing buildings and their parts as pliable (*fold, unfold*), soluble (*melt*), or flexible (*stretch, splay, spread, flex, extend, expand*) solids whose “movement” results from the application of an external or internal force causing a change of shape or state. The following passages illustrate this point:

- (46) Santiago Calatrava’s kinetic building parts *fold* and *unfold, spread* and *glide*.
 (47) The new building [...] will *stretch* behind the old school.
 (48) [T]he jointed glass shells enclosing the planetarium’s sides open and close in stages, as its jointed frame *flexes*.

As demonstrated above, motion expressions are far from simple and may evoke figurative schemas drawing upon domains other than motion proper. Nevertheless, despite their differences, all the examples seen so far point to the intrinsically visual quality of a large amount of the metaphorical language found in architectural texts. For although a single expression may simultaneously evoke diverse nonarchitectural entities and actions, these are used to highlight physical attributes of the buildings at issue rather than any other trait. In other words, buildings may be indirectly likened to boats, zeppelins, and animate creatures by means of verbs like *oversail, hover*, and *nuzzle*. Yet, the only characteristic of the entities mapped by the metaphor is (an aspect of) their particular spatial configuration (often shape) rather than other mechanical or behavioral properties. Likewise, the motion predicates attributed to those entities are used to describe that configuration as it is visually apprehended. In fact, the entities evoked by the participant structure of the verbs are sometimes explicitly mentioned in the expressions via literal or nonliteral comparisons, as shown in (49):

- (49) The wall enclosing the flats *meanders like a snake* [...].

Here the comparison of the wall’s meandering motion with that of a snake does not activate any other information about this creature but its shape – which contributes to a further specification of the image evoked by the motion predicate used in the architectural description.

Indeed, the expressions from the corpus that best display the graphic motivation of motion constructions in architectural discourse are those that involve denominal verbs like *rake, bunch, ramp, cascade, scissor, funnel, line, fan*, and *corbel*. The corpus yields examples like the following:

- (50) Customers descend to the store from the parking levels by elevators or by stairs that *scissor down* through the three-story space.
 (51) On the dockside, the extrusion *cranks over* the warehouse volume to create an elegantly fractured canopy [...].

- (52) The floor gently *rakes up* to the second level of the old building.
 (53) [T]he square columns *bunch up* and spread out at will.

In this version of the FORM IS MOTION metaphor, the movement conveyed by means of particles and adverbial adjuncts is given a specific shape via the denominal verbs co-occurring with them. Thus, in the expression “stairs that *scissor down*”, the particle *down* is responsible for endowing the image of an open pair of scissors with a motion sense while expressing, at the same time, the direction of “movement”. In turn, *scissor* specifies the shape evoked by the typical arrangement of stairs (or escalators) in shopping centers seen from a given perspective.

This second set of fictive motion constructions is interesting for two reasons. In the first place, it most clearly points to the visual bias of motion constructions in general within the architectural realm. Thus, the main trait mapped onto spatial arrangements is the whole configuration or shape of *scissors*, *fans*, and any other entity that may be used to convey a shape or configuration or topology. In this connection, it is important to note that these denominal verbs only acquire a motion sense when combined with particles capable of imparting a directional meaning. In contrast, in the instantiations of FORM IS MOTION involving predicates like *climb*, *meander*, or *run*, motion is coded explicitly in the verbs, and the adverbial adjuncts are basically concerned with specifying the direction of that movement (as in “the massive warehouse *runs along the north side of the site*”). The differences between the two varieties of the FORM IS MOTION construction, namely those with motion predicates and those with a denominal verb + particle become evident when both construction types are translated into other languages. For instance, Spanish architects also describe spatial arrangements in dynamic terms, as exemplified by motion predicates such as *recorrer* (‘run’, ‘travel’), *planear* (‘hover’), and *fundirse* (‘melt’) in descriptions such as (54):

- (54) En el nivel superior, que alberga las habitaciones, *planea* un pesado fortín de hormigón terroso, de un color pardo desvaído.
 ‘A heavy brownish concrete bunker *hovers over* the upper level/floor occupied by the bedrooms.’

While example (54) shows that Spanish architects describe spatial configurations in terms of motion predicates, denominal verb + particle constructions are not literally translatable into Spanish. Whereas in English nouns may easily be converted into verbs, such is not the case in Spanish, where expressions of manner usually rely on adverbial adjuncts. Thus, a description like “The parking lot *fans out* from the base of the building” appears in Spanish with a motion verb and adjunct: “el aparcamiento *se abre en abanico* desde la base del edificio” (‘the parking lot *opens like a fan* ...’). Both expressions nevertheless rely on an open fan’s shape and illustrate the visual bias of motion constructions in architectural discourse regardless of the general grammatical differences between English and Spanish in the expression of motion (for a detailed study of the expression of motion in English and Spanish see Cifuentes 2008).

Motion constructions with a denominal verb + particle are also especially interesting because they suggest that metonymy may motivate the metaphor FORM IS MOTION, as well

as other visually-biased metaphors used by architects.⁸ In the cases of denominal verb + particle descriptions two figurative processes seem to be at work. In the first, we find a metaphor whereby a building, a building element, or the space occupied by that building is conceptualized as an object with a well-defined and characteristic shape/topology, such as an open pair of scissors, an open fan, a cascade, a heap, or the like. This metaphor, A BUILDING/BUILDING ELEMENT IS AN OBJECT WITH A CHARACTERISTIC SHAPE/TOPOLOGY, is motivated by a metonymy-based process in which the metaphorical target (BUILDING/BUILDING ELEMENT) is metonymically understood as its topology/shape (TOPOLOGY/SHAPE FOR BUILDING/BUILDING ELEMENT) and where the metaphorical source (A VARIETY OF PHYSICAL OBJECTS LIKE FANS, SCISSORS, THE HEAPS OF STUFF GATHERED BY MEANS OF A RAKE, etc.) is also metonymically understood from its typical shape (the shape of fans when open, the shape of scissors when open, the shape of corbels, or the shape of stuff when raked or heaped into a pile). The metonymy in this case is TOPOLOGY/SHAPE FOR FAN/SCISSORS/RAKED HEAP, etc. – a profiling process whereby a whole ICM is accessed via one of its parts (Radden & Kövecses 1999). This metonymic understanding of both metaphorical target and source brings out their structural similarity, which makes their metaphorical connection possible (see Barcelona 2000).

Furthermore, the construal of fictive motion (involving the mental and visual scanning carried out by a viewer) with respect to the shape of a building or building element, adds some further support for the claim presented in this paper of the existence of the general metaphor FORM IS MOTION, since the form of the building element is presented as physical motion along a path. What is interesting is that this path corresponds to the target, i.e. to the form itself. Thus, when a parking lot is described as *fanning out*, it is only the shape of the open fan (i.e. one part of the FAN ICM) that is involved in the predication, even if the whole FAN ICM is evoked (by uttering the lexical item *fan*) to describe the scene; this shape, in turn, is metaphorically mapped by BUILDINGS/BUILDING ELEMENTS ARE OBJECTS (FANS, SCISSORS, ...) onto the form of the surface covered by the parking lot at issue. This latter form is the target in the metaphor FORM IS MOTION and is at the same time the template upon which the path defined by the fictive scanning motion is superimposed. In other words, although such expressions are used to highlight the shape of the built artifacts under review, the whole built ensemble is portrayed as *if* effecting the movement expressed by the denominal verb + particle used in the expressions. Cases like these in which the shape of a built artifact (metaphorically conceived as an open fan, an open pair of scissors, a corbel, a cascade, a heap, etc.) becomes identified with the fictive motion corresponding to the mental scanning of that shape can be treated as excellent instances of *blending*. However, this topic goes beyond the scope of the present paper.

In sum, although dynamic predicates in architectural discourse are basically concerned with only one aspect of the graphic (topological) properties of built spaces (e.g. the surfaces covered by them or any other spatial perspectives/dimensions), the spatial artifacts involved in the expressions are portrayed as if doing the sort of motion coded in the verbs. Accordingly, many of the image metaphors found in architectural discourse in general, and the instantiations of the metaphor FORM IS MOTION in particular, seem to rely on a metonymic selection of certain features characterizing the entities involved in the mapping (and standing for or predicating those traits in the final linguistic

expression). In this regard, the differences between fictive motion constructions involving motion predicates proper and those involving a denominal verb + particle appear to be the following: whereas the latter type highlights the “global shape” of movement – the real or fictive motion event as perceived by a given observer (i.e., what it *looks like*) – those of the first type are concerned primarily with capturing spatial notions proper – usually height, width, and size – i.e. the axes of three-dimensional space. Both types nevertheless highlight the centrality of motion in understanding and talking about space.

4. Summary and conclusion

In the present paper I have examined the use of fictive motion conceptualizations in architectural discourse, focusing primarily on the types of entities and predicates appearing in architectural descriptions found in specialized magazines. These descriptions convey information about what spatial ensembles look like, highlighting particular aspects of their appearance and/or of their immediate context. Moreover, as the examples illustrate, aspects concerning both trajectors (i.e. built entities) and landmarks (i.e. spatial contexts or sites) have been seen as constraining the type of motion predicate used in the constructions, to the extent that all three constituents are indispensable for construing the overall meaning of the expressions. Particularly interesting are the motion predicates used in architectural descriptions that incorporate information about manner of motion, a meaning component mapped onto the visual properties of the spatial entity thus qualified. A possible limitation governing motion constructions in architectural commentary may reside in the agent who construes a visual experience in motion terms, evoked by three-dimensional form. In the case of architects this construal may be regarded as both an individual and a collective experience, resulting from a long training process leading to “seeing” and talking about the world from a particular – disciplinary – perspective. With respect to the passages discussed in this paper, all illustrate the visual bias of practitioners of architecture, or, to use the words of Oxman (2002), architects’ *thinking eye* – a qualification that captures the complex, multiform knowledge structures involved in their work and, therefore, in their thought and language. The paper has addressed as well the figurative motivation underlying the use of motion constructions in architectural discourse. In this regard, it has been proposed that fictive motion constructions are motivated in this textual genre by visually informed metaphors subsumed under the general metaphor *FORM IS MOTION* in which particular layouts or appearances (i.e. the targets in the mapping) are seen as reminiscent of the kind of movement coded in motion predicates (i.e. the metaphorical source schema). These metaphors, in turn, may be ultimately motivated by metonymy (e.g. a part of a schema that evokes a whole schema).

Notes

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1. My use of “built space”, “spatial artifacts”, and “architectural arrangements” reflects the fact that architectural descriptions concern not only buildings, but also the relationship between diverse elements within a building (e.g. roofs, beams, and the like), or describe arrangements that are not buildings *per se* (e.g. parking lots).
2. Retrieved from the British National Corpus.
3. Other expressions involve entities such as cables or hoses, which are static and do not imply a person moving along them. Accordingly, the predicates portraying them in dynamic terms (e.g. *run* or *wind*) would not retain a potential for motion. However, all in all, many motion constructions are used to describe entities associated with human motion.
4. On visual reasoning in architectural design, see Arnheim (1969), Casakin and Goldschmidt (1999), Goldschmidt (1995), and Oxman (2002).
5. The reviews are relatively short texts (500–1500 words plus a number of visuals) that describe and evaluate architecturally remarkable buildings.
6. Matlock (2004) offers a useful survey of work done on fictive motion using both her own research as well as drawing upon the work of cognitive scholars such as Langacker (1986, 1987) and Talmy (1983, 1996, 2000). It is against the background of her illuminating analysis of fictive motion in general discourse that I discuss the idiosyncratic features of fictive motion characteristic of architectural texts.
7. A caveat is in order in this respect. Although the expressions may well be seen as belonging to the first type described in Matlock (2004) in that their trajectors are associated with motion and, accordingly, allow manner verbs, this does not mean that people moving inside the buildings thus predicated do so in the manner encoded by the predicates – in which case, the constructions may be regarded as falling into the type concerned with trajectors unrelated to motion. In other words, describing a building as “*sweeping along and up the street*” does not mean that the people inside move likewise. In this regard, Matlock’s distinction of two types proves irrelevant to architectural discourse.
8. The metonymic motivation of image metaphors is also suggested by Lakoff and Turner (1989) and Gibbs and Bogdonovich (1999). See also Caballero (2006).

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A metonymic analysis of Singaporean and Malaysian English causative constructions*

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1. Introduction

The expression of causativity in recent and past years has been the topic of investigation for a plethora of cross-linguistic studies of various kinds, for example, Comrie and Polinsky (1993) and Shibatani (1976, 2002a), to name a few edited volumes, and a multitude of individual studies (e.g. Song 1996, 2001), some of which will be referred to below, has accompanied them. In most studies, there is a marked distinction shown between single-clause causative structures and bi-clausal causative structures, with the propensity for what is known as clause union associated with lexical, rather than grammatical, causativity. Typically cited examples include such languages as French and Italian (see, e.g. discussions in Comrie 1976; also Achard 2002; Blake 1990; and Palmer 1994). In such studies, there is no loss of an intermediate causee involved in the clause union, and thus no obvious causativity reduction. The present study looks at a different type of clause union in which an (often implied) causee is lost from the resulting construction altogether, and this is apparently occurring at a faster rate in L2 or contact dialects of English than in more established varieties. Such a process involves the reduction of causativity through the loss of intermediate participants.

The study therefore investigates the distribution of what Goldberg (1995) has termed conventionalized scenarios (CSs), i.e. constructions in which the causative act is coded as a single event even with the existence of an intervening causee (1995: 169), e.g., *The invalid owner ran his favorite horse (in the race)*. In the context of Singaporean and Malaysian English, such constructions are found in the present study to be far more frequently used than expressions containing a causative verb followed by a medial NP and past participle, e.g., *I had the drains cleaned yesterday* (henceforth, causative-resultatives or simply, resultatives). It is felt that the latter type of expression is in functional competition with the conventionalized scenarios in such dialects, and that the conventionalized scenarios may have been cognitively derived from the causative-resultative in which the causee is usually no longer expressed but remains as an implicature of the participle complement. In this way, the conventionalized scenario is a syntactically-reduced expression of indirect

causativity. The reasons that they are more prolific, however, may be due to a number of contributing factors, which are discussed later. The study investigates the distribution of these forms in Singaporean and Malaysian English, first reviewing any previous discussion on the use of conventionalized scenarios or their causative alternates (Section 2), and in Section 3 and 4, substratum and contact factors are discussed, as well as the general, historical situation of English in Singapore and Malaysia. In Section 5, the methodology and results of the investigation are explained in detail. Section 6 offers a number of possible hypotheses to account for the apparent frequency of CSs over causative-resultatives in Singaporean and Malaysian English, bringing to light, among other things, the consequences of language contact, in that the reduced salience of agentivity in topic-prominent languages may be the main factor enabling (though not directly causing) the greater tendency towards causativity-reduction. It is hypothesized also that the relationship between resultative constructions and CSs is one in which a resultative construction is replaced by a single-clause transitive construction, through the process of a particular metonymic device operating when the causee is not expressed in the complement.

2. Previous work

To our knowledge, no empirical studies on the use of conventionalized scenarios in English have as yet been undertaken; the present Section will therefore briefly summarize some of the background work that has been done on the categories under investigation, the constructions we have labeled causative-resultatives. We shall also briefly discuss the lexical constraints that may be involved in the derivation of CSs.

2.1 The causative-resultative construction

The causative-resultative construction in the present study is typically defined as of the following surface form: NP CAUSE NP V-*ed*, the complement form being a past participle.¹ This type of construction does not appear to have been isolated as such in the literature; it may be compared with what Talmy (2000) has labeled ‘the caused-agency’ construction, a more general term encompassing many different types of periphrastic causatives, all definable by the fact that the causer is an agentive entity and capable of imposing his or her will on the resulting caused events, and marked by the presence of an infinitive (with or without *to*) in the complement of the medial NP. In the latter semantic category it is possible to classify the active-voice-complement counterparts to the passive-complement construction under investigation; i.e. those of the surface form: NP CAUSE NP (to) V (NP). In the present study, the verb form represented as the first verb of the resultative constructions so described (CAUSE) most frequently appears as a possessive-causative verb, either *have* or *get*, e.g.

- (1) I had my tonsils removed. (ICE-GB: S1A-051)²

Causative-resultatives have also been classified under the label ‘causeless causatives’ (Kemmer & Verhagen 1994: 139), or ‘Inducee-nominal deletion’ (Talmy 2000: 538), referring to those constructions in which the causee has been demoted to the extent that it is absent from the construction altogether. Causeless causatives are seen by Kemmer and Verhagen to represent constructions in which the most peripheral attention is given to the causee participant, as the causative act is described without the need for an overtly marked causee. In many languages, the causee is not deleted, but Talmy (2000: 538) describes the Inducee in the same way that most accounts describe the causee, and gives the example from English:

- (2) I had a shirt made.

as well as Yiddish

- (3) Ikh hob gelozn makhm a hemd.

It is interesting to note that in Yiddish, as well as in Dutch and German, the complement verb is not a participle but an infinitive, e.g. in Dutch (Verhagen & Kemmer 1994: 138):

- (4) Zij laten een huis bouwen.
 3p let a house build
 ‘They are having a house built’ [our interlinear gloss – DZ & SL]

The meaning, however, translates as resultative, when co-occurring with a verb meaning ‘let’.

2.2 Adversative resultatives

Also mentioned in the literature are a number of cases in which the structure NP HAVE/GET NP V-*ed* cannot be held to be causative at all, though it bears the same surface structure features as the causative-resultative. These are adversative resultatives, which are so-named because their complements refer to some kind of adversative result affecting the subject of the main verb. Such examples have been referred to as early as Lakoff (1971) as one of the emerging senses of the three-way ambiguous sentence:

- (5) John got/had his dishes washed.

Lakoff is puzzled by the ambiguities: (i) the adversative, unintentional reading, (ii) the achievement reading, and (iii) the causative reading, though she admits that the adversative sense is one in which the recipient meanings of *get* are focal. The addition of an adverbial expression, e.g. *on purpose* is added to similar constructions to determine whether the responsibility for the action resides in the subject; this is not the case with *be*-passives. If the causative-resultative can be considered an incipient passive itself, then it is still affected by the retention of meanings more closely related to its source meanings, i.e. the subject is still only a recipient, and not yet a prototypical patient. It is interesting that such examples are expressed using the same formal means as causative-resultatives, as they represent a stage of grammaticalization of the *have* or *get* causative-resultative which is bleaching of

all causative meaning. An unambiguous adversative example from the ICE-GB corpus, using *have* as the main verb, shows no residual sense of causativity whatsoever:

- (6) Students failing to disclose this fact are liable to have their registration cancelled.
(ICE-GB W2D-007 015)³

As is shown in Ziegeler (2000a) for the case of the BA-construction in Chinese, the similar rise of an adversative sense in an erstwhile causative construction is an indication that the meanings of causativity are being lost, and the construction is at a later stage of grammaticalization. The subject role is no longer an agent, shifting to become a recipient subject as the meanings of possession gradually take over the earlier meanings of causativity. There are examples in the *OED* dating back to Early Modern English times, e.g.:

- (7) Another had one of his hands burnt.
1719 Defoe. *Robinson Crusoe* II, x.

The rarity of earlier examples attests to the later stage of grammaticalization; one does not deliberately cause one's hands to be burnt, and such uses could be assumed to be on the way towards the passive end of the continuum described above. Similar adversative examples appear in the form of conventionalized scenarios; see Section 2.4 below.

2.3 Conventionalized scenarios

The term 'conventionalized scenario' was first introduced by Goldberg (1995: 168) to describe a causative construction in which there is no actualization of the causativity at all, let alone formal expression of an intermediate causee. The causative senses are thus intuitively derived from knowledge about the world and the way in which causative acts are accomplished. Goldberg gives the following examples:

- (8) a. The invalid owner ran his favorite horse (in the race).
b. Chris cut her hair at the salon on University Avenue.
c. She painted her house (when in fact the painters did the painting).
d. Farmer Joe grew those grape vines.

Goldberg goes on to explain that these examples are conventionalized in the sense that one normally expects a causee to carry out the act described, and that the internal causative structure is being ignored (1995: 169).

It is important in examining such examples not to confuse the process taking place with simple cases of transitivization. Shibatani (2002b: 2) gives an example of a morphologically derived causative verb, *kos-tur* 'cause to run', which could well translate the use of the verb *ran* in (8a). In such instances, it would appear that the causativization process taking place is the same as a transitivization of conventionally intransitive verbs, what may be perhaps a fairly productive process in English. This is not the same as in (8b–8c), in which the verb is originally transitive in the first place. In (8d), the process taking place occurs with a verb which may be either transitive or intransitive, i.e. a labile verb (Haspelmath 1987, cited in Li & Thompson 1994) or one which has been described as a lexicalized causative verb, having

a causative/inchoative function (Croft 1990; Shibatani 2002b: 3). Labile verbs usually have a patient causee, and are thus prime candidates for clause union (see Ziegeler 2004a). What is more important for the present study, though, is that (8a) and (8c) are not competing with causative-resultatives, e.g.: *The invalid owner ran his favorite horse* no more relates to *The invalid owner had his favorite horse (to be) run* than does *The dog-owner walked his dog* relate to *The dog-owner had his dog walked*, and *Farmer Joe grew those grape vines* does not derive from *Farmer Joe had those grape vines grown*. Such forms do not require the reconstruction of an unexpressed causee; as such, they may not, therefore, fall into the description of a conventionalized scenario if that entails, as Goldberg claims (1995: 169), that one normally expects an intermediate causee to carry out the act described.

Talmy's (2000: 540–541) account of a similar phenomenon perhaps serves as a better description, i.e. that of Inducee-conflation. He provides an example from older English (the King James Bible); however, the reference is insufficient to trace the original example. Other examples given include:

- (9) She took all her furniture with her when she moved to New York [*that is, where professional movers did the actual transporting*].
- (10) I cleaned my suit (at the cleaner's).

In none of these examples can there be any likelihood that the process is one of simple transitivity of an intransitive verb, and they cannot be interpreted as the causative alternates of causative/inchoative verb types either. (Example (9) is doubtful in terms of causativity since the act of taking something with one cannot be easily attributable to a third participant.) What is happening is that the construction dispenses with the intermediate causee, either for reasons of lack of salience or for the fact that the causee NP referent is indefinite or non-specific, or simply understood as an integral part of the entire caused event and therefore not in need of overt expression. It is Talmy's suggestion that such examples are derived from conflated caused-agency constructions, e.g. (as adapted from Talmy 2000: 541):

- (11) HAD-ENTITIES-do > did

However, in the present study, is it hypothesized that it is the causative-resultative alternate (NP CAUSE NP V-*ed*), and not the caused-agency alternate as shown in (11), that competes with conventionalized scenarios to produce Inducee-conflation, as the causative-resultative construction shares with it the demotion of the unexpressed causee; in (11) the causee (ENTITIES) is still overtly expressed. In the conventionalized scenario described here, the causee is demoted beyond recoverability. It is felt, therefore, that the conventionalized scenario is a cognitive derivative of the causative-resultative, and as will be seen later in the paper, native speaker intuitions confirm that this is indeed the case.

Conventionalized scenarios may instead be examples of grammatical metonymy. While Panther and Thornburg's (2000) description of causative expressions in English may fall within the classification of a RESULT FOR ACTION metonymy, another possible similar device may be illustrated in the CONTROLLER FOR CONTROLLED metonymy (Kövecses & Radden 1998). Such metonymies include the once-topical *Schwarzkopf defeated Iraq*, which could be better rendered in today's news as:

(12) Bush bombed Baghdad

From our knowledge about the world, we are able to reconstruct the possible intermediate agents, such as the U.S. Air Force, but as with the conventionalized scenarios described by Goldberg (1995), the internal structure of any intervening causative event is being ignored. In interpreting the metonymy, Kövecses and Radden (1998) refer to the presence of an Idealized Cognitive Model, usually abbreviated as ICM (Lakoff & Johnson 1980; Lakoff 1987; Lakoff & Turner 1989; Croft 1990), i.e. a cognitive domain in which specific entities are contiguously located in proximity relationships; in this case it is the Control ICM. Such relationships can be called upon in reconstructing the target or targets of the metonymy, i.e. in the present situation, the Control ICM may assist in retrieving the missing participants of the internal causative structure of the event. Thus, for *Bush bombed Baghdad*, we could suggest that *Bush* stood for *Bush's Air Force*, or in *Chris cut her hair yesterday*, we could suggest that *Chris* stands metonymically for (*Chris and*) *Chris's hairdresser*. However, it is not clear from this metonymic shift whether indirect causativity was involved at all or whether the metonym is indeed a conventionalized scenario, alternatively expressible as a causative-resultative construction such as *Bush had Baghdad bombed*. Given world knowledge, though, there is a more likely possibility that (12) will not be ambiguous between a causative and a non-causative reading, as a conventionalized scenario would be.

Langacker (this volume: 58–60) discusses the shift in profile of composite structure entities such as *a flock of geese*, the grammatical consequences being that the verb will agree with a plural nature of the noun in the post-modifier of the head noun rather than the head noun itself, e.g.: *a flock of geese were flying overhead*. This is a type of grammatical metonymy as well, in that the individual members of the composite structure are seen to be standing for the structure as a whole. If the subject of a conventionalized scenario were also to be considered as referring to a composite entity (e.g. *Chris* (causer) + *Chris's hairdresser* (causee)) then a similar profile shift from causer + causee to causer alone could explain the CS. However, since the multiple participation of the composite structure cannot support flexibility of verb agreement in the same way: **Chris were cutting her hair when I telephoned*, this is no means of determining if the CS is interpretable as a profile shift. The causee participant is present only as an implicit entity in the structure in the first place, and a profile shift must take this into account.

2.4 Adversative conventionalized scenarios

It was noted above that constructions having the form of the causative-resultative may indeed not be seen to be causative at all, and the evidence for this was found in the fact that they expressed situations of adversity involving their subjects; i.e. the subject role could be thought of as a non-causative recipient, not an agent. Similar functions may be found to be associated with conventionalized scenarios, as Talmy, for example, illustrates (2000: 517–518):

- (13) a. I developed a wart on my ear.
 b. I broke my arm (when I fell).

Similar examples are discussed in Davidse (1992: 120) under the classification of SUPERVENTIVE relations; i.e., those not engendered by the participant. In neither of these examples can there be said to be a causative agent as subject, regardless of the formal similarity with the typical conventionalized scenario described above. It could be said, however, that the construction from which they are derived could be the same as an adversative resultative construction discussed above, e.g. *I had/got my arm broken*. In such cases, the intermediate causee (which may be an event or a human participant) is implied in the resultative construction, though demoted to the point of deletion, as in the non-adversative type. The difference between the adversative type and the non-adversative type is that in the latter, the subject may be perceived as the agent of the verb, while in the former, the subject may be perceived as only an Author, to use Talmy's (2000) categorization; i.e. an unintentional causative participant. The acceptability of (13a, b) is thus due to the acceptability of their deriving structures, which are adversative resultatives with unintentionally-causative subjects, and the semantic role remains constant in the derived conventionalized scenario. The fact that such constructions are in common currency may be due to the weakening of causativity in the causer subject, which is not so far advanced in other conventionalized scenarios; that is, the causativity is lost first when there is an environment least susceptible to ambiguity: one does not intentionally cause one's own arm to be broken, and the construction is accepted on those terms. It will be seen later in the study that the responses of Singaporean and Malaysian informants bear out similar predictions on acceptability.

Talmy describes adversative examples as also involving an Undergoer subject,⁴ rather than a recipient subject (not relating to the general classification of macro-roles introduced by Foley and Van Valin 1984), i.e. one that is a sentient being to which something is happening. It also includes the subjects of such non-agentive acts as losing a possession. It may be questioned at this stage, therefore, if there are any lexical constraints on the development of CSs, and careful examination of the prototypical cases suggests that there are: in all instances of CSs, the emergence of CSs corresponding to causative-resultatives is restricted to those in which (i) the subject of the verb is either an affected agent + undergoer, or an author + recipient of the action specified, in other words, both a source and a goal of the causative event at the same time; (ii) that the subject NP of the CS is in a possessor-possessee relationship with the object NP; e.g. in *She_i painted her_i house*, there is a possible CS interpretation, though in *She painted his house*, it is not open to question at all; (iii) that the verbs used in CSs do not usually include accompaniment verbs or those expressing direction away from the causative source, and must refer to a causative change of state or location. Hence, *She led her children into the garden* cannot refer to the intermediate actions of an unexpressed causee either, and cannot be mistaken for a CS. These lexical constraints illustrate the semantic relationship between the CS and the causative-resultative, since in English the causative-resultative requires a verb of possessive acquisition (*have* or *get*) and the corresponding CSs are constrained by the semantics of their counterpart constructions: energy is dissipated from the agent source to an affected entity in its possession (either alienable, such as *house*, or inalienable but potentially alienable, e.g. *arm*, *hair*), and then the result-state becomes the possession of the agent-source, so creating the inference, in the absence of an understood causee participant, that the entire action + result is attributable solely to the agent-source (causer). The same inferences are applicable to the development of the *have*-perfect in English.

3. Singaporean and Malaysian English

The variety of English spoken in Singapore, but to a lesser extent, in Malaysia, is one that is rapidly emerging as a native-speaker variety in the Southeast Asian region. Historically, it arrived via British trade colonization in the early 19th century; however, it is possible that a variety of English resembling China Pidgin English was spoken in the region at an earlier time (see Bao 2001). Whether or not this variety had any influence on the present-day variety spoken in Singapore and Malaysia is another matter. What is certain, however, is that the variety has had a break in its historical transmission, and that its present-day description as an L2 variety reflects its historical origins (see, e.g. Gupta 1991).

The two English dialects of Singapore and Malaysia have been long considered to be relatively indistinguishable in terms of formal features, though the likelihood that they are diverging is now a very real possibility, given the differences in language policy employed by the respective national governments. In Singapore, English became a compulsory medium of education soon after independence (1965), and remains so today, while in Malaysia, the use of English as a medium of education has been less consistent in the past 30 years (it was gradually phased out at all levels of education from 1961, being taken over by Malay, and with Malay becoming the medium of education even at university level in 1983). What does seem to be emerging now as a colloquial variety of English is a unique language which reflects contact features of the region, such as lexical borrowings from Malay and Hokkien, and which in its most informal style is not unlike a Sino-Tibetan language grammatically. This variety reflects most closely the functional needs of its users, and is expected to be the variety represented in the responses to the survey discussed below.

Malaysian English is less rapidly emerging as a distinct marker of national identity. It has been described (e.g. by Baskaran 1987, 1994) as representing a continuum of subvarieties in the same way as Platt (1977) described Singaporean English at earlier times. In status it is less likely to be referred to as an L1 variety, the number of native speakers being considerably smaller than for Singaporean English. However, it was formerly considered to be a variety similar to that spoken in Singapore by earlier researchers such as Tongue (1979), though today the features that once were shared by both varieties are also becoming fewer in number, and the two varieties can no longer be considered one and the same (see Newbrook 1997 for further comment). If that is the case, it might be considered as a more fossilized version of the English that was originally used by both colonies, preserving more of the features of the English of the older generation. Today the typical Singaporean is bilingual in the official language of his or her ethnic group and English (Newbrook 1993: 1). In Malaysia, the situation is less clear-cut, and English has a role as merely a 'strong' second language.

4. Substratum influences

The main substratum languages, if any, likely to have influenced Singaporean English in the past are the southern Chinese dialects such as Hokkien, Cantonese, and Teochew, and

to some extent, Malay and Bazaar or Baba Malay. Tamil is the official language of the Indian community; however, as only less than 10% of the population are Indian and speak a range of Indian languages and dialects, in numbers too small to be of significance (Bao Zhi Ming, p.c.), it is not a dominant substratum language.⁵ For Malaysian English, however, the number of Indian speakers surveyed in the present study who claimed to be educated in Tamil might have raised the likelihood of substratum influence a little beyond what it might represent in Singaporean English. Malay would certainly have more influence on the variety spoken in Malaysia than in Singapore. In more recent years, Mandarin Chinese may be added as an influencing contact language especially in Singapore, as the government's Speak Mandarin Campaign has been in force since 1979 to be used as a means of eliminating regional Chinese dialects among Singaporeans of Chinese ethnicity, meaning less use of regional dialects in contact with English as in Malaysia. However, some features of the original substratum languages have become conventionalized into the local colloquial variety and are passed on from generation to generation, e.g. discourse particles such as *lah* from Hokkien (Alsagoff & Ho). Thus, it is not always easy to distinguish what is carried over as part and parcel of the dialect from its beginnings as an L2 variety, and what is associated with its present-day contact in daily competition with the prescribed Chinese dialect, Mandarin.

Even more variation is found in the substratum forms used to express the causative-resultative than in English. In Malaysian Hokkien, for example, the most preferred expressions used in place of the causative-resultative are those in which no indirect causativity is marked, a construction identical to the conventionalized scenario. The examples in this Section are direct translations in substrate languages of the predicted (English) responses to the questions used as part of the survey described in Section 5.

Hokkien⁶

- (14) a. Wa (khi) ka tau-mor/i.
1sg (go) cut hair/3sg
'I get my hair cut'

There is no passivity allowing for an implied causee participant in the Hokkien translation, though in other examples there is some variation:

- b. Wa (bueq) kio lokun kuat(-khi) i.
1sg (would) call/ask doctor cut(-off) 3sg
'I would get it removed by a surgeon'
- c. Wa hor chia-ui siu-li chia.
1sg let/allow car-place fix car
'I get my car fixed (at the garage)'⁷

The latter two examples allow the introduction of an active causee participant, though an alternative means of translating such expressions need not use a medial causee at all, e.g.:

- d. Wa (khi) siu-li i/chia.
1sg (go) fix 3sg/car
'I get my car fixed'

In Mandarin, similar syntax is used to translate the examples. The following examples are provided by Bao Zhi Ming (p.c.):

Mandarin

- (15) a. Wo ba tou-fa jian le.
 1sg BA hair cut ASP
 b. Wo jian le tou-fa.
 1sg cut ASP hair
 'I get my hair cut'

Sentence (15b) is the preferred means of expressing such constructions in Mandarin, though it should be noted that in (15a), the pre-transitive marker BA, while represented here as a grammatical function word, is grammaticalized from a possession-based lexical source meaning 'take' or 'get', and that English *get*-resultatives have been translated by native speakers of Taiwanese Mandarin into Mandarin BA-constructions in exercises of direct elicitation (see Ziegeler 2000a). It might be suggested then, that there does exist a possessive-causative in Mandarin, though it is less frequently used than a manipulative, single-clause transitive causative expression, and the causative verb is not so closely related to its original lexical sources as *get* might be in English. The other two examples yielded similar results:

- (16) a. Wo ba che xiu-le.
 1sg BA car repair-ASP
 b. Wo xiu-le che.
 1sg repair-ASP car
 'I get my car fixed'
 c. Wo jiao yisheng ba zi qie-le.
 1sg call doctor BA mole cut-ASP
 'I would have a mole removed by a doctor'

Note that there is no alternative, mono-clausal construction for (16c). It seems that, as in Hokkien, the use of indirect causatives and the introduction of a causee participant in Mandarin correlates with the amount of control attributable to the medial causee, and surgical operations are certainly not within the control of the causer, who acts as an instigator of the causative act and nothing more from then on.

Other dominant substratum languages, such as Cantonese, show similar translations, involving conventionalized scenarios in the complement clauses, e.g. (Richard Wong, p.c.):

Cantonese

- (17) a. Ngoh heoi zin tauh faat.
 1sg go cut hair
 'I get my hair cut'
 b. Ngoh lo gaa che heoi saulei.
 1sg take CL car go repair
 'I get my car fixed'

- c. Ngoh seung heoi tuet mak.
 1sg want go remove mole
 'I would have a mole removed'

Like the Hokkien examples, but unlike the Mandarin examples using BA, there is no resultivity explicitly marked in the complement, and the corresponding structures contain more serial verbs than the other two dialects.

The Malay examples are interesting in that they do seem to contain complements expressing result or passivity, though there are preferences for quite different types of constructions (Ismail Talib and Foong Ha Yap, p.c.):

Malay

- (18) a. Saya dapat rambut saya di-gunting.
 1sg get hair my PASS-cut
 'I get my hair cut'
- b. Kalau saya, saya akan minta (supaya) tahi lalat yang ada
 if 1sg 1sg FUT ask (so-that) mole REL exist
 di-hilang-kan.
 PASS-disappear-CAUS
 'If it were me, I would ask (that/so that) any existing mole would be removed'

For (18a), a preferred means of expressing the same thing would be: *saya gunting rambut* – 'I-cut-hair'; similarly, for (18b), an alternative means would be *tahi-lalat saya akan potong* – mole-I-want-remove. The use of *minta* ('ask') in such cases, would not be necessary. In the case of (18b), the sense of hypotheticality in the main clause must be conveyed by an accompanying, overtly expressed conditional clause (*kalau saya* – 'if it were me'), unlike in English where the condition can be merely implied by the use of tense inflections (Foong Ha Yap, p.c.). It is interesting that when the causee is not mentioned, the causative-passive morphology must be expressed, and that a possessive verb (*dapat*) is used in Malay to translate the English causative-resultative. The results will determine whether this has any effect on the Malaysian data overall.

The standard Tamil causative is constructed morphologically by using the main verb and a suffix *-v/bi*, which converts a non-causative verb into a causative one. However, it is being renewed in its function in present-day usage by an auxiliary form, *chei* ('do'), as shown below. Again the distinction between causative result and caused agency is not made, though the main verb is expressed as non-finite when co-occurring with the auxiliary form (examples provided by Shoniah Supramani, p.c.):⁸

Tamil

- (19) a. Naan en mudi-yai vetu-vi-pp-en.
 I my hair-ACC cut-CAUS-FUT-1sg
 'I will get my hair cut'
- b. Naan en mudi-yai vetu-maaru chei-v-en.
 I my hair-ACC cut-PART do-FUT-1sg
 'I will get my hair cut'

It is possible to predict that the effects of substratum tendencies in the marking of causativity may influence the selection of a single-clause, conventionalized scenario structure over a causative-resultative in responding to the questions in the survey, since the means by which causative-resultatives are expressed in many of the substratum and contact languages either do not express indirect causativity at all, or if they do, do not distinguish caused result from caused-agency expressions. Such differences are discussed below.

5. Methodology and results

The original hypothesis for the present study was based on personal observations of what was considered to be an over-extended use of conventionalized scenarios in Singaporean English, in expressions such as *you cut your hair* (when somebody else did it). Although such forms are noted as in current usage in other dialects, it was felt that they were perhaps used a little more frequently in Singaporean English than elsewhere. The only previous observations found of such a feature are in Brown (1999) and Low and Brown (2003:66), who provide examples of imperative uses such as:

- (20) Spray paint your car at our workshop.

seen on Singaporean advertising material, and

- (21) Polish your car while you shop.

observed in a Singapore shopping centre car park. They note that in the first instance, ambiguity is marginally possible, though certainly not in the latter example (21), in which the construction is so highly grammaticalized that the unmarked, main clause causer subject which is not the direct agent of the verb may be co-referenced with the expressed subject of a subordinate clause which *is* actually the direct agent of the following verb. No similar examples have been found, to present knowledge, in Malaysian English, though it was felt necessary to investigate Malaysian English for two reasons: (i) to provide a broader cross-dialectal perspective on the grammatical feature under investigation, and (ii) because it was hypothesized that Malaysian English was not subject to the forces of accelerated language change to the same extent as Singaporean English,⁹ due to its reduced functional significance as a second language in the community. The fact that Malaysian English was less frequently used as a community language may thus enable predictions to be made about the preservation of older forms from previous generations of speakers. It may be considered problematic to make predictions about the grammaticalization patterns in a language or dialect without adequate historical data to back them up, and developing vernaculars rarely offer anything in terms of written records. However, a similar problem in African languages was overcome by studying closely-related languages and different dialects of the same language which were at different stages of development, and then reconstructing the grammaticalization pathways from the available synchronic data (Heine & Reh 1984).¹⁰ Such a method necessitates a cognitive approach in which links between forms are represented as pragmatic devices. In the same way, there is little available historical material on the development of the grammar of Singaporean or Malaysian English,

and thus the possibility that Malaysian English may be grammaticalizing more slowly due to a reduced functional context over the past 30 years is sufficient grounds for undertaking a comparative study: educated Malaysian English in its present-day form, then, could be thought of as retaining for longer periods conservative features likely to have been found in earlier stages of Singaporean English.

5.1 Elicited data

The forms under investigation in the direct elicitation survey were three conventionalized scenario constructions, or their variants, and the production rather than the comprehension of the feature was taken into consideration. The reasons for this were that it would be pointless to produce a conventionalized scenario and attempt to elicit comprehension: in most cases the meaning of the construction was easily retrievable by pragmatic means if it was obvious that there was an intermediate cause, and if not, as in *I cut my hair*, the ambiguity, out of context, would do little to demonstrate what conditioning factors, if any, held for the distribution of a CS across dialects. Any likelihood of distributional constraints may be assumed from the informants' readiness to produce such a form or not given an appropriate context. The three questions used to supply the context were the following (extracted from longer surveys):

- (22) Question 1. What do you do when your hair gets too long?
 Question 2. What do you do if your car has a broken tail light?
 (If you don't have a car, imagine that you do.)
 Question 3. What would you do if you had a mole on your body that is a bit painful and the doctor says it is cancerous?

The questions were designed to elicit such causative-resultative forms as *get it removed*, *have it cut*, *get it fixed*, and variations of these responses, thus also confirming whether the conventionalized scenario is in competition with the causative-resultative in the dialects under investigation. In order to ascertain that responses contained reference to actions with an implied causee, a further supplementary question was added to the original questions (Questions 1 and 2), i.e. for (Q.1): Who is your favorite hairdresser or barber? and for (Q.2): At which garage or repair shop is your car serviced? It was not felt necessary to add a supplementary question to (Q.3), as no ambiguity of the causer/causee relationship was likely.

A preliminary pilot study was conducted on the campus of the University of Manchester, and surrounding areas, using at least 30 subjects of various ages, approximately 80% of whom were students of the University of Manchester. They were approached in places such as coffee shops and canteens, and in student halls of residence. The pilot studies revealed that certain changes needed to be made; in particular, that the supplementary questions were necessary. Other changes were made as required.

5.2 The participants and survey conditions

In the Malaysian groups, the total number of participants varied for each question, as there were a number of respondents who failed to answer all three questions, leaving some questions blank. For this reason the data will be given in percentage proportions for each group, taking question by question, and the cross-dialectal differences will be shown in Section 6 to vary within the groups themselves. However, there were at least 60 respondents in any one dialectal group, as the results will show below.

The largest overall group from which the responses are taken came from the University of Science Malaysia, Penang (220); the other Malaysian group totaling 70 altogether came from University of Malaya, Kuala Lumpur. All the participants were undergraduates, most of them aged under 25. It should be noted that many of the older respondents were teachers of English at secondary schools, but not educated to university level. In the results shown below, the data has been divided into under 35 age group and over 35s, the roughly 35-year cut-off time being almost parallel to the time when English ceased being used as a medium of education in Malaysia.

The surveying in the University of Science Malaysia was taken under classroom conditions, half of the surveys conducted halfway through a lecture, and the other half conducted at the end of a lecture. The informants were permitted 20 minutes to complete the tasks, which, as noted above, included other questions besides the ones listed. The investigator provided no information about the objectives of the survey prior to conducting them, though the subjects were told that they were free to ask any questions afterwards. The surveys at the University of Malaya, Kuala Lumpur, were taken half under classroom conditions and half in canteens and campus recreational places out of lecture hours. The surveys conducted outside the classroom were also given 20 minutes for completion of the total number of tasks. Many respondents found this an opportunity to ask questions after the survey was done.

The Singaporean groups (a minimum of 44 for any question) were almost all taken from undergraduate students under the age of 25, who were approached out of classroom hours in canteens, recreational areas, and in halls of residence at the National University of Singapore. The Singaporean students approached on campus were from various disciplines, and were also given approximately 20 minutes to complete the tasks.

The British control group was a group of first year English undergraduates from the University of Manchester, and was surveyed at the end of a lecture. There was a maximum of 66 and a minimum of 47 respondents for any one question. They were also given approximately 20 minutes to answer the total number of tasks supplied on each questionnaire. They were mainly under 25 in age, there being only 10 over that age in total. Thus, although the conditions for sampling were not controlled in as far as situation or setting was concerned, there was a certain degree of uniformity with regard to the timing of the exercise, and also to the informants' educational level and socio-economic status, all the participants being university students. The results are provided below.

5.3 Survey results

5.3.1 Malaysian English

In Table 1 the following abbreviations apply: CS = conventionalized scenarios; HAVE/GET-res. = *have/get*-resultatives; GET/HAVE/ASK-caus. = *get/ask/have* caused-agency constructions.

It should be noted that the ethnic and hence language backgrounds of the Malaysian respondents were distributed fairly evenly, for Q.1, at 26 Chinese, 41 Malays, and 22 Indians, for Q.2, at 30 Chinese, 39 Malay, and 22 Indians, and for Q.3, 13 Chinese, 21 Malays and 15 respondents of Indian ethnicity.¹¹ Thus, although the data might have been skewed slightly in favor of Malay-speaking respondents, this is not likely to have made a great deal of difference overall. For the Singaporean data, there were no respondents of Indian ethnicity, and less than 10 respondents of Malay ethnicity for any one question; the majority of respondents were from Chinese-speaking backgrounds.

Examples of the Malaysian responses to Q.1 included the following:

- (23) a. When my hair gets too long, I'll cut it short.
 b. I cut my hair.
 c. Go to the hairdresser and get the hairdresser to cut it.
 d. I will have my hair cut.

Table 1. Distribution of causative responses to Q.1, for total population of Malaysian English speakers surveyed (Chinese, Malay, and Indian ethnicities). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS	GET-caus.	ASK-caus.
Under 35	6/62 = 9.6	10/62 = 16.1	42/62 = 67.7	1/62 = 1.6	3/62 = 4.8
35 +	8/22 = 12.9	2/22 = 9	12/22 = 54.5	0	0
TOTALS	14/84 = 16.6	12/84 = 14.2	54/84 = 64.2	1/84 = 1.1	3/84 = 3.5

Table 2. Distribution of causative responses to Q.2, for total population of Malaysian English speakers surveyed (Chinese, Malay, and Indian ethnicities). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS	ASK-caus.
Under 35	5/64 = 7.8	26/64 = 40.6	20/64 = 31.2	13/64 = 20.3
35 +	12/41 = 29.2	13/41 = 31.7	14/41 = 34.1	2/41 = 4.8
TOTALS	17/105 = 16.1	39/105 = 37.1	34/105 = 32.2	15/105 = 14.2

Table 3. Distribution of causative responses to Q.3, for total population of Malaysian English speakers surveyed (Chinese, Malay, and Indian ethnicities). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS	HAVE-caus.	GET-caus.	ASK-caus.
Under 35	5/33 = 15.1	10/33 = 30.3	2/33 = 6	2/33 = 6	2/33 = 6	12/33 = 36.3
35 +	8/16 = 50	4/16 = 25	1/16 = 6.25	0	0	3/16 = 18.75
TOTALS	13/47 = 27.6	14/47 = 29.7	3/47 = 6.3	2/47 = 4.2	2/47 = 4.2	15/47 = 31.9

For Q.2, some of the responses included:

- (24) a. Take it to the nearest car accessories shop and get it replaced.
 b. I will try to get it fixed by a mechanic as soon as possible.
 c. Repair it.
 d. I will fix it immediately.

For Q.3, typical responses included:

- (25) a. I will have it removed immediately.
 b. Remove it by an operation.
 c. Get it cured.
 d. I will go for an operation to take off the mole.

For Q.1 (Table 1), the number of participants available in each of the age + ethnic sub-groups was not sufficient to be able to make a qualified judgment; however, in the combined ethnic groups, there were some interesting differences between the ages. In Table 2, as many as 16.6% of the combined ethnic groups' responses to Q.1 used the *have* causative resultative, while only 14.2% used the *get* form, the conventionalized scenarios figure being 64.2%. In the under 35s, there were 67.7% of conventionalized scenarios, and only 9.6% of *have*-resultatives. *Get* forms yielded 16.1%. This picture was more closely representative of the proportions found for the Singaporean data.

For Q.2 (Table 2), again the ethnic-based groups did not yield sufficient proportions in the age divisions to be able to make assessments based on age + ethnicity; however, for age only, again there was a large number of participants who responded with a *have*-resultative in the 35+ age group: 29.7%. Almost equally as many responded with a *get*-resultative (31.7%), and 34.1% used a conventionalized scenario to answer the question. The total number of CSs was little different from the numbers in the age-group sub-divisions: 32.2% (the under 35s scoring 31.1%). This question yielded the highest proportion of *get*-resultatives overall for the Malaysian group: 37.1%. There were 16.1% *have* forms altogether, and another type of causative, which was observed often to have implicative tendencies in Singaporean and Malaysian English, the *ask* caused-agency (NP *ask* NP to V (NP) – 20.3% in the younger age-group).¹² This appeared in the first question as well, but with scores of less than 5% in any one group.

The final question, Q.3 (Table 3), yielded hardly any conventionalized scenarios for the Malaysian group, only 6.3%. The remainder of the responses were divided among *have*-resultatives (27.6% overall), *get*-resultatives (29.7%), *ask* caused-agency (31.9%), and *have* and *get* caused-agency types (labeled in the tables as simply *causative* – 6% each). There was not a great deal of difference shown between the age-groupings, perhaps the largest amount being 35% of increase for the *have*-resultative by the older age group (though the total numbers are too small to judge the importance of this). The *have*-resultative may perhaps represent an earlier, more conservative form than the *get*-resultative in Malaysian English.

5.3.2 Singaporean English

Tables 4–6 illustrate the distribution of responses in the Singaporean survey (not including responses which did not use a causative construction in answer to the questions).

Table 4. Distribution of causative responses to Q.1: Singaporean English speakers (Chinese, Malay, and Indian ethnicities). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS
Under 25	0	5/40 = 12.5	35/40 = 87.5
25 +	1/21 = 4.7	3/21 = 14.3	17/21 = 80.1
TOTALS	1/61 = 1.6	8/61 = 13.1	52/61 = 85.2

Table 5. Distribution of causative responses to Q.2: Singaporean English speakers (Chinese, Indian and Malay). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS	GET-caus.	ASK-caus.
Under 25	1/31 = 3.2	12/31 = 38.7	15/31 = 48.3	2/31 = 6.4	1/31 = 3.2
25 +	1/17 = 5.8	11/17 = 64.7	5/17 = 29.4	0	0
TOTALS	2/48 = 4.2	23/48 = 47.9	20/48 = 41.6	2/48 = 4.2	1/48 = 2

Table 6. Distribution of causative responses to Q.3: Singaporean English speakers (Chinese, Indian and Malay ethnicities). Right-hand figures are in percentages.

	HAVE-res.	GET-res.	CS
Under 25	9/34 = 26.4	1/34 = 2.9	24/34 = 70.5
25 +	6/16 = 37.5	4/16 = 25	6/16 = 37.5
TOTALS	15/50 = 30	5/50 = 10	30/50 = 60

Typical responses to the survey questions in the Singaporean data included the following, for Question 1 (*What do you do when your hair gets too long?*):

- (26) a. Cut it.
 b. Tie it up, then cut it when I have the time.¹³
 c. Cut.
 d. I go to the hairdresser to get it cut.

There were some tokens of *get*-causatives appearing in the data (Table 4), though overall, the number of conventionalized scenarios was extremely high (e.g. 87.5% as against only 12.5% *get* causative-resultatives). In response to the second question, *What do you do if you notice your car has a broken tail light?* responses from the Singaporean group included:

- (27) a. Repair it.
 b. Replace it.
 c. Repair.
 d. Fix it.
 e. Take it to repair.
 f. I'll repair it.
 g. I'll get it changed.
 h. I will go to the mechanic to get it repaired.

There were 48.3% of conventionalized scenarios for Question 2 (Table 5) – still a large number – there being also a large number of *get* causative-resultatives (38.7%). In response to the third question, *What would you do if you had a mole on your body that is a bit painful and the doctor says it is cancerous?*, there were 70.5% of conventionalized scenarios, 2.9% of *get* causative-resultatives, and surprisingly, 26.4% of *have*-resultatives (Table 6). The relatively high number of *have*-types for this question is notable, as there were none for Q.1, and only 3.2% for Q.2 (the Malaysian group had a similar number at 27.6% for Q.3). Perhaps it could be suggested that *have*-resultatives are associated with professional services of higher skill done by others and therefore are expressed in forms which now appear to be relatively weaker in causativity and thus reflect a formal, more polite style. Such persons are less likely to be under the direct control of the causer, and more likely to be working under their own volition, as the causer cannot control the caused event. It is for this reason that causative forms with more reduced causativity are employed for more remote relationships between causer and caused action.

Examples from the Singaporean data included the following:

- (28) a. Operate it.
 b. Remove it.
 c. Operate on it and remove it.
 d. I'll ask what I can do to get it removed.
 e. I will get it removed, go for an operation.
 f. Have it remove [sic].

Note that in response to this question also, the range of conventionalized scenarios included the verb *operate*, which is often used in informal Singaporean English with the patient (literally-speaking) as the subject of the verb, rather than the surgeon, e.g. *he operated yesterday* can be uttered in full knowledge that the subject of the verb was not a qualified surgeon, but the person being operated on. There is, therefore, no relationship of agentivity between the verb and the subject in such uses. Such expressions are not, strictly speaking, conventionalized scenarios, though (28c) is. The former are perhaps directly related to the syntactic structure of most Chinese dialects, which would not use a passive means of expressing such meanings.

5.3.3 *British English*

Tables 7–9 illustrate the responses supplied by the British control groups in answer to the three questions of the survey (responses which did not include a causative construction are not included).

Examples of data from the British control group included the following responses (to all questions):

- (29) a. Get it cut [Q.1].
 b. Get it fixed [Q.2].
 c. Arrange to have it removed, as soon as possible [Q.3].
 d. I go to the hairdressers to get it cut [Q.1].
 e. Have it removed [Q.3].
 f. I have it cut [Q.1].

Table 7. Distribution of causative responses to Q.1: British English speakers. Right-hand figures are in percentages (percentages not supplied for proportions of figures of 5 or below).

	HAVE-res.	GET-res.	CS
Under 25	7/48 = 13.7	31/48 = 64.5	10/48 = 20.8
25–34	1/3	2/3	0
TOTALS	8/51 = 15.6	33/51 = 64.7	10/51 = 19.6

Table 8. Distribution of causative responses to Q.2: British English speakers. Right-hand figures are in percentages (percentages not supplied for proportions of figures of 5 or below).

	HAVE-res.	GET-res.	CS	GET-caus.	ASK-caus.
Under 25	2/38 = 5.2	27/38 = 71	3/38 = 7.8	4/38 = 10.5	2/38 = 5.2
25–34	0	5/5	0	0	0
TOTALS	2/43 = 4.6	32/43 = 74.4	3/43 = 6.9	4/43 = 9.3	2/43 = 4.6

Table 9. Distribution of causative responses to Q.3: British English speakers. Right-hand figures are in percentages (percentages not supplied for proportions of figures of 5 or below).

	HAVE-res.	GET-res.	ASK-caus.
Under 25	21/40 = 52.5	18/40 = 45	1/40 = 2.5
25–34	1/2	1/2	0
TOTALS	22/42 = 52.3	19/42 = 45.2	1/42 = 2.3

- (29) g. Take it to a garage to get it fixed [Q.2].
 h. Get it removed [Q.3].
 i. I get it cut [Q.1].
 j. I cut it [Q.1]. (“My favorite hairdresser is Toni and Guy ...”)
 k. I cut my hair when it gets too long [Q.1]. (“My favorite hairdresser is called Tina”)

For the British groups, the use of conventionalized scenarios was hardly a feature at all, though for Q.1 (Table 7), the figure of 19.6% showed it was gaining ground, for Q.2, the figure of 6.9%, and for Q.3, zero, showed that it may only be possible to use it in certain contexts. The slightly higher number for Q.1 tallies well with the data from the L2 dialects, as shown in Tables 10a–c: all dialect groups scored high in response to a question which elicits a response likely to be used with greater frequency in everyday life: one gets a haircut every two months or so, and contextual frequency of use would permit faster generalization, regardless of dialect. For Question 2, there is a slightly higher response for CSs in the Malaysian data (Table 10b), 32.2% as against 48.3% Singaporeans. For Q.3, the figure of 70.5% for Singaporeans stands out as anomalous against the other two groups (6% Malaysians and 0% British). What this suggests, then, is that although contextual frequency may be one of the factors leading the change to conventionalized scenarios, it is not the only one, as cancerous moles do not occur so frequently as to provide sufficient a cause for claiming such a factor as instrumental in the Singaporean case. There are also a greater number of respondents of Chinese-language backgrounds in the Singaporean group, which may have affected the results, although it is noted that for Mandarin at least,

a causative verb (*bǎ*) comes into operation in the translation of responses to Q.3 (see (16c). Notwithstanding the substratum and contact language effects, what this may suggest is that the fact that the causee is dispensed with entirely in the expression of such causative events as having surgery reflects the inevitability of indirect causativity in such circumstances: in other words *the encoding of indirect causativity is reduced most where it is not needed* (as noted earlier for adversative constructions), as it is obvious that one does not perform surgery on oneself, and thus the use of a conventionalized scenario in such situations would not be susceptible to any likely ambiguity.

5.3.4 Combined results (all age groups)

Tables 10a–10c provide a comparative overview of the results for each question, combining Malaysian, Singaporean and British data. Table 11 compares the average scores for causative resultative constructions compared with averages for conventionalized scenarios for each group.

Table 10a. Combined results for all respondents for Q.1

	HAVE-res.	GET-res.	CS	HAVE-caus.	GET-caus.	ASK-caus.
Malaysian	16.6%	14.2%	64.2%	0%	1.1%	3.5%
Singapore	1.6%	13.1%	80.1%	0%	0%	0%
British	15.6%	64.7%	19.6%	0%	0%	0%

Table 10b. Combined results for all respondents for Q.2

	HAVE-res.	GET-res.	CS	HAVE-caus.	GET-caus.	ASK-caus.
Malaysian	16.1%	37.1%	32.2%	0%	0%	14.2%
Singapore	4.2%	47.9%	41.6%	4.2%	2%	2%
British	4.6%	74.4%	6.9%	0%	9.3%	4.6%

Table 10c. Combined results for all respondents for Q.3

	HAVE-res.	GET-res.	CS	HAVE-caus.	GET-caus.	ASK-caus.
Malaysian	15.1%	30.3%	6%	6%	6%	36.3%
Singapore	30%	10%	60%	0%	0%	0%
British	52.3%	45.2%	0%	0%	0%	2.3%

Table 11. Average scores for causative-resultatives and conventionalised scenarios across all dialect groups

	HAVE-res.	GET-res.	CS
Malaysian	15.9%	27.2%	34.1%
Singaporean	11.9%	23.7%	60.3%
British	24.1%	61.4%	8.8%
Av. Totals	17.3%	37.4%	34.4%

The distribution of CSs suggests, then, that for Singaporean speakers, there is an inverse correlation between the use of conventionalized scenarios and the intervening role of causee participants; i.e., when the task is unambiguously carried out by a causee participant, the use of CSs is more readily licensed because indirect causativity does not need any overt marking. The situation for Malaysian speakers and for British speakers more closely follows the pragmatic guidelines, so that causativity reduction does not occur where causativity needs to be overtly marked. This could also explain why the figures are relatively low for Q.2; the job of fixing a car sometimes does not require the services of another participant, and, although the potentiality for ambiguity was eliminated by the use of supplementary questions for such questions, the relatively lower figures for conventionalized scenarios (32.2% Malaysian, 48.3% Singaporean) tend to correlate with the possibility that such events are not so obviously causative as getting one's hair cut or having an operation; i.e. they present a greater need to disambiguate causative from non-causative meanings by the use of other forms (the use of the *get*-resultative for the Singaporean group, at 38.7%, showed only 10% of difference from the number of CSs). In the British group, the *get*-resultatives also formed the majority (74.4%). Thus the apparent tendency is for the British subjects to use a causative construction where causativity is obvious from the context and needs to be overtly marked, for the Singaporean subjects to dispense with one because causativity is understood in the context and therefore does not need overt marking, and for the Malaysian subjects to follow behind the British tendencies, in the overt marking of causativity, but to a lesser extent than the British. From the small range of contexts elicited in the present study, it appears that causativity marking is pragmatically-conditioned in Singaporean English and to a lesser extent in Malaysian English, and the discourse context eliminates the need for overt formal encoding, whilst at the same time *covertly* marking the presence of indirect causation with the reduced mono-clausal construction, while in British English the form-function correlation is more overtly expressed. Linguistic economy is thus manifest in faster rates of change in Singaporean English, with reduction of morphology concomitant with the reduction of need to use it.¹⁴

Also interesting is the closeness of the average scores shown in Table 11: the cross-dialectal competition between the *get*-resultatives and the conventionalized scenarios is clearly illustrated by the fact that there is only 7.3% of difference between the average British score for *get*-resultatives (61.4%) and the average Singaporean score for CSs (68.7%), and that the average scores overall for both constructions show less than 2% of difference (35.5% and 37.2% respectively). Furthermore, the average use of CSs by British speakers in the survey is almost as infrequent as the average use of *have*-resultatives by Singaporean speakers (8.8% to 9.8%), indicating that they may be serving to replace an existing member of the paradigm that is on the way out. Further evidence could be provided in the form of diachronic studies.

6. Mechanisms of change

It seems evident from the data that CSs are in competition with other causative constructions, especially resultatives, when a causative construction is selected to answer the

survey questions, and that the competition applies to all dialects. It is questioned above what specific means allow the kind of alternation that appears and that is rapidly generalizing in Singaporean and Malaysian English, and to a minor degree, in British English. The needs of linguistic economy in such highly commercialized societies, where speed of transaction, including verbal transaction, is relatively salient, may affect the pace of language change, but the external reasons for change cannot account for the internal mechanisms by which the change occurs. It has been considered above that a particular metonymy, the CONTROLLER FOR CONTROLLED metonymy, will not adequately explain the cognitive link between the two co-existing forms expressing the same function. It is also clear that substratum features, in which resultative-causativity is not necessarily morphologically coded, cannot explain the entire story, as Q.3 in the survey usually invites a causative serial verb construction in most of the substratum languages, and yet for the Singaporean group at least, the scores for conventionalized scenarios were almost as high as for the first question. It is possible that substratum and contact patterns may reinforce a change that is already underway in the L2, as the score of 19.6% of CSs for the British speakers for Q.1 certainly does not reflect any substrate tendencies. Other possible effects, however, may include alternative metonymic devices. The possible role played by grammaticalization is also considered.

6.1 Metonymy

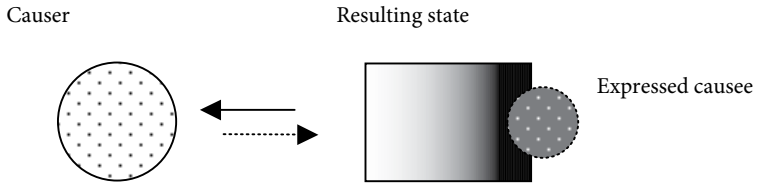
Although the present study hypothesizes a cognitive link between the two construction forms, the direction of the change cannot necessarily be predicted from the data. Historical studies reveal that the causative-resultative construction appeared as early as the end of the 12th century (e.g. Baron 1977), but it is impossible to suggest how long it has been in competition with the conventionalized scenario, since, as noted earlier, conventionalized scenarios contain open class items, which makes them impossible to retrieve from corpora. What is likely, though, is that there is a cognitive device that may be triggering the syntactic replacement of the causative-resultative with the conventionalized scenario, and in spite of the absence of an intermediate syntactic stage, the cognitive link must remain in order for the change to be permitted. In the case of the causative-resultative, some of the former meaning has been lost, but sufficient of it remains to allow a bridge to the next construction. In the present study, the cognitive link is considered to be in the form of a metonymy. In Panther and Thornburg (2000), the possibility was discussed of a RESULT FOR ACTION metonymy to explain the way in which stative verbs could be used in the imperative with a resultant-state complement, e.g. *Have your passport ready*. However, the metonymic description proposed in the present case is not simply a matter of predicate metonymy; the participants must also be accounted for. In the example, *I had my hair cut*, there is no causee expressed, though one is implied, and the subject is both source + goal, or indirect agent + recipient/undergoer of the causative act. Therefore, *I had my hair cut* can be regarded as a metonymic substitution for the content expressed by *I had my hair cut by my hairdresser/Vidal Sassoon*, etc. At this stage, the causee is implicit in the construction, and the construction involves only a first stage metonymy: CAUSED ACTION-RESULT FOR CAUSEE-CAUSED ACTION-RESULT. Thus it can be seen that the responsibility for the action is already being

defocused from the causee to the causer. At a second stage, the metonymic source in the former stage (namely, CAUSED ACTION-RESULT) becomes the metonymic target in the final stage of the conventionalized scenario by virtue of the metonymy: CAUSED ACTION FOR CAUSED ACTION-RESULT. It could be argued that the shift in participant roles in the causal chain should be explained as a metonymy also, but since the “parent” causative-resultative construction need not even contain an overt causee participant in the first instance, there is no necessity to account for such replacement at later stages. The metonymy may represent a compression (Fauconnier & Turner 2000) of the entire causal chain, which, if the intermediate stage is removed, appears as CAUSED ACTION FOR CAUSEE-CAUSED ACTION-RESULT. Fauconnier and Turner (2000: 290) describe cause-effect as one of the input spaces for vital relations of conceptual integration; the metonymic process described above compresses the cause-effect chain from causer + action + result (with causee implicit) to causer + action. These links are illustrated in Figure 1.

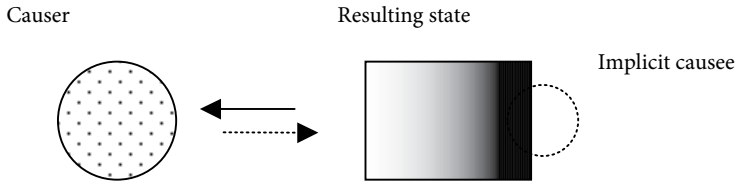
In Figure 1, the participants are represented by circles and the resulting states and actions by means of boxes. At the first stage, the causative-resultative construction is shown with the expressed causee marked as a smaller circle, darkened to represent a high degree of participation in the accomplishment of the resulting state. An example correlating to this stage could be *I had my hair cut by Vidal Sassoon* (for adversatives, the ‘causee’ could be simply an unintended action on the part of the causer). In the causative-resultative constructions (Stages 1 and 2), the causer is shown as lightly shaded to indicate decreased participation, and the arrows pointing both ways indicate that the stages are ambiguous between a transfer of cause to the resulting state and a receiving of the resulting state by the same causer; in other words, the degree of causativity is reduced (indicated by dotted arrows), as the causer becomes the recipient of its own agentive actions (indicated by solid arrows). At Stage 2 the causee is marked as an empty circle (CAUSED ACTION-RESULT FOR CAUSEE-CAUSED ACTION-RESULT) to suggest only implied participation, e.g. as in *I had my hair cut*. The increase in causativity attributable to the causer is shown in the third stage (CAUSED ACTION FOR CAUSED ACTION-RESULT). At Stage 3 the causer is shaded more heavily to indicate participation in the causative event; i.e., the causer appears to directly manipulate the entire caused event, as in *I cut my hair*. The Caused-Action in the CS now stands for its implied representation in the Stage 2 causative-resultative construction, i.e., part of the meaning of the “parent” form is transferred to its activating metonymy through the contiguity domain of the Control ICM.

The positional shifts in the boxes shown throughout the four stages indicate the transfer of causative ‘weight’ from the right hand side in Stages 1 and 2, where it is associated with the role of causee to the left hand side in Stages 3 and 4, where it is associated with the role of causer. The heavier shading on one side of the boxes corresponds to the heavier weight assignment of the causative control, shifting from the causee participant in Stages 1 and 2, to the causer participant in Stages 3 and 4. In the last stage, 3a, the adversative CS is represented by lighter shading in the causer circle itself, marking weaker causativity, and a diminished responsibility in the caused event e.g., as in *I broke my leg*.

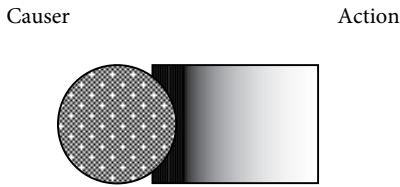
The model depicted in Figure 1 is based on patterns that do not necessarily take into consideration substratum factors. Substratum patterns might result in the co-opting of a structure based on the L1, which, if it is a Chinese dialect such as Hokkien or Cantonese,



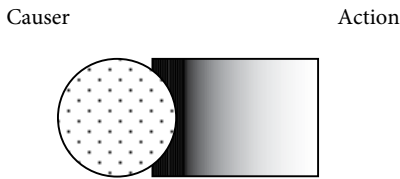
1. CAUSEE-CAUSED ACTION-RESULT (causative-resultative): *I had my hair cut*



2. CAUSED ACTION-RESULT FOR CAUSEE-CAUSED ACTION-RESULT: *I had my hair cut* (causative-resultative, implicit causee)



3. CAUSED ACTION FOR CAUSED ACTION-RESULT: *I cut my hair*



3a. CAUSED ACTION FOR CAUSED ACTION-RESULT: *I broke my leg* (adversative CS (adversative CS (adversative conventionalized scenario)))

Figure 1. Illustrative model representing the way in which the CAUSED-ACTION FOR ACTION-RESULT metonymy motivates the development of a conventionalized scenario

will not have a causative-resultative or any causative construction with a passive complement. While the possibility of substratum influence is likely, a stronger argument must account for change in the absence of contact features, especially since the resultative form is represented in all dialects in some proportion, and similarly, since the CS is represented to some degree in the British English control group. It could not, therefore, be argued that the speakers are not exposed to the alternative variants. What is not accounted for, though, is why the metonymically motivated Stage 3 construction has been more frequently resorted to in the Singaporean and Malaysian responses than in the British English ones. This is discussed in Section 6.2.

Additionally, there are also likely to be differences in the energy transfer strength illustrated for *have*-resultatives and *get*-resultatives, stronger causativity indicated as shown by a solid arrow rather than a dotted one. Similarly, in the adversative conventionalized scenario illustrated in 3a in Figure 1, the energy transfer to the causer is weakened, as the causer of an adversative act is not an intentional Agent, but is an unintentional Effector (Van Valin & La Polla 1997) or Undergoer (Talmy 2000). Although, as Talmy (2000: 517) claims, such constructions with Undergoer subjects are not really causatives but only mistakable for causatives, the indirect causative force remains in a weakened form as a responsible influence on the effect,¹⁵ and it is for this reason that it would not be useful to illustrate the adversative model in a different form from the non-adversative model. The absence of causativity in the matrix subject does not inhibit the use of the CS as long as the subject is a participant in the event, and such events include changes in physical condition, such as breaking legs and developing warts. Adversative CSs, then, are not excluded from the description.¹⁶

6.2 Grammaticalization

The question of the role of grammaticalization has not been raised since it is a speculative one, and an answer would require more research into the historical background of such constructions. However, it should be noted that verbs such as *have* and *get* originally referred to dynamic means of acquisition, such as 'take' or 'put' in Old and Middle English (see Ziegeler 2004b), and that *get* still retains meanings of causal acquisition (cf. *I'll get the mail* vs. *I'll have the mail*, the latter referring only to the end-state of possession). Early appearances of adversatives using *have* are still found in Early Modern English (see (7) above), but one would be unlikely to hear such examples used in preference to adversative CSs today, e.g., *I leaned over the fire and had my hand burnt* is of questionable acceptability. This is because *have*-resultatives no longer have adversative meanings, being replaced (renovated) in this function today by *get*-resultatives. The former adversative *have*-resultative, though, could have been ambiguous between an adversative causer-initiated action and an adversative act performed by an implicit (malevolent) causee. In order to resolve the ambiguity, the construction is renovated by the metonymy CAUSED ACTION FOR CAUSED ACTION + RESULT, as described above, in order to determine the causer's involvement in the action, however weakened the causativity. If the renovation takes place with *get*-resultatives rather than the CS, the problem still remains (even today) that the involvement of another participant cannot be ascertained where the causee is not expressed. The changes relating

to adversatives with *have*, then, might eventually generalize to other (non-adversative) environments, whenever the causer's role in the event is considered to be relatively salient. If this hypothesis is correct, then the metonymic changes taking place are due to weakening of the original semantics of dynamic causativity associated with possessive causative verbs due to grammaticalization and a broadening of meaning from those of 'take' and 'get' in *have*-resultatives to passive meanings of static possession or receipt.

Such replacements in grammaticalization theory are termed renewals, or renovations (see, e.g. Lehmann 1995). The approach used to investigate such changes diachronically is onomasiological, in which the progress of a grammatical function (e.g. reflexive causativity) is studied from the point of view of the varying grammatical forms that may serve that function through time (see Traugott 1994 for more details), e.g. *have*-resultatives, *get*-resultatives, and CSs. In the study of conventionalized scenarios as a syntactic replacement for a causative construction, a similar approach is upheld, and it may be seen from the data that *have*-resultatives are reduced in frequency relative to *get*-resultatives. However, there is another case for discussing grammaticalization in regard to the results, and that is in relation to the slower tendency for British (L1) speakers to adopt the change, vis-à-vis the L2 Singaporean and Malaysian speakers. It may be questioned, therefore, why the British speakers are more reluctant to employ conventionalized scenarios to express the same functions than the Singaporean and Malaysian respondents.

The development of the syntactic category of subject is discussed by Shibatani (1991) as a viable instance of grammaticalization, which exhibits cross-linguistic variation, being further advanced in English than in languages such as Japanese. Shibatani considers that the role of subject is the result of the merging of topic and agent nominal and the generalization of agent over other semantic roles (1991: 103). The idea that subjects are grammaticalized topics is not new; Lehmann (1976) first introduced the possibility that subject-predicate languages in Indo-European were developed out of topic-comment languages.

In English, however, the senses of agentivity that have been generalized over the subject nominal emerge as what were once referred to as selection restrictions (Lehmann 1976; Li & Thompson 1976). Little understanding was given at the time to formally defining what selection restrictions may represent in semantic terms. It is also stated by Li and Thompson (1976) that topics do not in general exhibit evidence of selection restrictions with the verb. What this may suggest for the purposes of the present study is that for speakers of topic-prominent languages, there may be a much wider distribution of verb arguments than for those with subject-predicate structure. In the case of Singaporean and Malaysian English, the majority of the influencing contact languages are all of the former type, and it has been claimed that for colloquial Singaporean English, topic-comment structure is preferred to subject-predicate structure (Bao 2001), allowing all major phrasal categories to serve as topics. The influence of the sentence structure of the contact languages on the local English dialect means that a wider range of subjects may be permitted than is usual in L1, non-contact dialects. Thus, for Singaporean and Malaysian speakers, conventionalized scenarios, such as *I cut my hair*, and *I remove it (a mole)*, tend to be more acceptable if the causer is understood as in a less tightly integrated agentive relationship with the verb. On the other hand, the British speakers will tend to reject the alternative use of such forms if the relationship between the verb and the subject is understood as more

agentive, and more tightly integrated as in a subject-predicate sentence structure. For the Singaporeans and Malaysians, greater freedom of discourse structure patterned on substratum and contact language models permits a looser, more context-based interpretation to be given to such expressions; hence the greater frequency of use shown. It is thus an enabling factor, though not a causal factor, for the Singaporean and Malaysian speakers. The change itself cannot, though, be accounted for by such phenomena, only the contrast with the control group.

7. Conclusions

It has been proposed in this cross-dialectal study that the relationship between the causative-resultative construction and the conventionalized scenario with which it is in competition is due to a metonymic shift, in which the causer is reinterpreted in terms of the causer + implicit causee together, with the action implied in the resulting-state of the passive participle being reinterpreted a transitive action in the CS. The metonymy has been identified as the CAUSED ACTION FOR CAUSED ACTION + RESULT metonymy, the final stage of a two-stage metonymy in which the CAUSED ACTION + RESULT chain stands for CAUSEE-CAUSED ACTION + RESULT chain as an earlier stage.

The cross-dialectal data demonstrated that, for Singaporean and Malaysian respondents, the more frequent use of conventionalized scenarios according to the tasks shown was permitted by the fact that such constructions may reflect the contact presence of topic-prominent discourse structure in the dialects, so enabling less restriction on the co-occurrence of verb and subject in environments where L1 dialects might be restrained by the ambiguities with non-causative constructions of the same surface structure. In addition, the patterns for marking causativity in the substratum and contact languages discussed often do not reflect any difference from non-causative structures, and such features may provide the model on which the local dialects are replicated (see Heine & Kuteva 2005).

There remains much further work to be undertaken on the differences in the expression of causativity resulting from contact with languages of an origin genetically unrelated to the language in focus, and the present study barely scratches the surface in the field of cross-dialectal studies. Further work would be desirable in the field of historical corpus linguistics to enable constructions containing open-class verb items, such as CSs, to be retrieved and compared to their grammaticalized functional equivalents. There is also a need to explore further the role of the subject in grammaticalization, and the effects in contact situations of different stages of grammaticalization coming together. While the present study may serve as a springboard for more investigation in such areas, there are still many aspects that the present paper has not had the scope to discuss, and remain to be uncovered in future studies.

Notes

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ABBREVIATIONS:

ACC: accusative

ASP: aspect

BA: pre-transitive marker

CAUS: causative

CL: classifier

CS: conventionalised scenario(s)

GET/HAVE/ASK-caus.: *get/ask/have* caused-agency constructions

HAVE/GET-res.: *have/get* causative-resultatives

FUT: future

PART: participle or converb

PASS: passive

REL: relator

1sg: first person singular

3sg: third person singular

1. For the purposes of the present study, the term 'construction' will be used to refer to the causative types under investigation, in keeping with the use of the term by Goldberg (1995). Bencini and Goldberg (2000: 650) actually use a *get*-causative-resultative, *Dana got the mattress inflated*, to illustrate an example of a resultative construction according to Goldberg's (1995) use of the term.
2. Such constructions are to be considered distinct from what is known as the *get*-passive, as discussed in Givón and Yang (1994), in which the medial NP is considered an ellipted reflexive of the subject. The coding for these examples refers to the text category and hierarchy within the ICE-GB corpus; for (S1A-051) – face-to-face conversation.
3. The text codes listed in the ICE-GB refer to this example (W2D-007 015) as from administrative, or regulatory writing.
4. The use of the term Undergoer may appear to be inconsistent with the use of the term Author, as previously discussed, and Talmy is not very clear on the differences; however, there is a subtle distinction: in the first instance, the adversative event appears to be initiated by an agentive act but with no knowledge of its adversative consequences, e.g. *The careless kid (accidentally) broke his arm in hitting it playfully with a hammer* (Talmy 2000: 517). However, in the case of the Undergoer, the initiating event is not agentive: *The hapless fellow (by misfortune) broke his arm when he fell* (2000: 517). Since the grammatical form of the conventionalized scenario is the same in both cases, it may be most accurate to consider the ambivalent subject role as a type of 'involved recipient'.

5. It should be noted that some aspects of Indian English grammar are shared with Singaporean English grammar; e.g. the use of the progressive with stative verbs, and the use of plural marking on collective or partitive nouns (Trudgill & Hannah 1986).
6. Examples are provided by Sarah Lee.
7. The tilde marks nasalization.
8. We are grateful to Greg Anderson for assistance with the morphological analysis.
9. That Singaporean English has been subject to more accelerated language change processes relative to L1 dialects has been observed in studies on the grammaticalization of modals (e.g. Ziegeler 1996, 2000b). It is noted in Heine and Reh (1984: 90) that such acceleration is also characteristic of pidgins.
10. This method has also been discussed by van der Auwera (2001: 26) in examining closely related 'clusters' of languages with similar features.
11. Note that only the variants of causative forms were considered in the results; the overall number of respondents supplied here may thus differ from the numbers appearing on the tables.
12. Givón (1973: 894) describes an implicative verb as implying the truth of its complement structure; further discussion may be found in relation to causative verbs in Givón (1997).
13. The question of a gender bias in the data was not explored, but could make an interesting starting point for further investigations of the survey questions, especially of Qs.1 and 2.
14. This is a feature of other areas of the grammatical system, e.g. tense and aspect marking (Ho & Platt 1993), and zero-plural marking on generic NPs (Ziegeler 2003).
15. We are grateful to an anonymous referee for drawing our attention to this point.
16. It may be questioned at this point how the resultative construction of Goldberg (1995) can still be used to describe adversative resultatives, when obviously there is no Cause (X causes Y to become Z) in the underlying semantics of the entire construction. The analysis of such forms in terms of Construction Grammar would require much more scope than is possible in the present paper, and remains a challenge for future investigation.

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Metonymy in indirect directives

Stand-alone conditionals in English, German, Hungarian, and Croatian*

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1. Introduction

The metonymic motivation of indirect speech acts has received increased attention in recent Cognitive Linguistics literature (cf. Panther & Thornburg 1998, 1999, 2003a; Pérez Hernández & Ruiz de Mendoza 2002; Radden & Seto 2003; Stefanowitsch 2003; and Brdar & Brdar-Szabó 2002, 2003, 2004). In accordance with other researchers, I am well aware of the fact that metonymy alone does not do the whole job of motivating this phenomenon, and that it is equally important to reveal the role of other conceptual processes, such as metaphor and blending, as well as to demonstrate their interaction with metonymy. At the same time, I think it is a legitimate task to document in a detailed study the role of one of these processes. Langacker (this volume: 45) considers such conceptual processes to be crucial for grammar and analyzes them as main sources of indeterminacy in language. The present paper is part of a larger project on the exploitation of illocutionary metonymy in indirect speech acts. Here I focus on indirect directives in English, German, Hungarian, and Croatian, as illustrated in the examples given in (1a)–(1d), respectively:

- (1) a. Could you open the window?
b. Könntest du das Fenster aufmachen?
c. Kinyitnád az ablakot?
open-2SG-SUBJ DEF window-ACC
d. Možeš li otvoriti prozor?
can-2SG Q-PART open-INF window-ACC

The examples in (1) demonstrate that the four languages under scrutiny exhibit a well-entrenched use of at least one type of indirect directive; in the above cases the questions literally inquire about the *ability* or *willingness* of the addressee to perform the action of opening the window.

Following the scenario approach for directive speech acts in Panther and Thornburg (2003b: 130), I assume that the precondition of a request may metonymically evoke the

core of the request scenario or the whole scenario. The comparison of the four largely equivalent sentences in (1), as well as an analysis of the relevant examples discussed in prior research (cf. Panther & Thornburg 1999 on the POTENTIALITY FOR ACTUALITY metonymy in English and Hungarian, and Pérez Hernández 2001 on indirect directives in English), invite the expectation that cross-linguistic variation will be minimal in terms of the role of metonymy. Nevertheless slight differences in the availability of certain metonymies are seen in the contrast between the Hungarian sentence (1c) with a subjunctive verb and the three other examples under (1). What is at stake in (1c) is the *potentiality* to perform the requested action, i.e. the willingness of the addressee, while in (1a), (1b) and (1d), it is the *ability* of the addressee to perform the requested action. All in all, there seem to be differences only in the precise type of metonymic mapping, while the common metonymic motivation in all these cases can hardly be denied.

All of the four languages compared here exhibit furthermore a wide range of metonymically motivated indirect directives; some expression types however seem to be far more frequent in naturally occurring utterances in English and German than their counterparts in Hungarian and Croatian. In other words, some indirect directive constructions seem to appear to be less conventionalized as pragmatic strategies in Hungarian and Croatian. However, this hypothesis should be tested in a detailed survey of the corpora available for the four languages. Another respect in which the cross-linguistic differences could be significant concerns the range of structural sub-patterns involved in metonymic mappings.

The present paper focuses on cross-linguistic differences in the exploitation of a special construction type, viz. stand-alone conditionals that function as indirect speech acts. Such conditionals are associated with a high degree of indeterminacy (for the notion of indeterminacy cf. Langacker, this volume).¹ The problem is outlined in Section 2; a survey of the relevant data is given in Section 3, and the analysis is in Section 4. The results of the analysis are interpreted in Section 5 against the background of cross-linguistic data on the availability of other metonymy types in the languages under scrutiny.

2. The problem

My starting point is the observation of a striking difference between English and German, on the one hand, and Hungarian and Croatian, on the other, concerning what we may call stand-alone conditionals. The first two languages exhibit dependent conditional clauses – dependent *wenn*-clauses and *if*-clauses, respectively – that function as independent speech acts (cf. Panther & Thornburg 2003b), while Hungarian and Croatian apparently do not seem to exhibit any comparable examples of this phenomenon, at least not for indirect directives. English and German examples are given in (2) and (3), respectively:

- (2) a. If you will come to order. (Panther & Thornburg 2003b: 127)
 b. I turned to him and said: If you will perhaps follow me, sir. (BNC)
 c. Look, Violet said, I'm not what you think, so if you will just go away. (BNC)
 d. If you will come with me, gentlemen. (BNC)

- (3) Wenn Sie jetzt bitte zahlen wollen. (Panther & Thornburg 2003b: 128)
 'If you now want to pay'

My native speaker intuition in Hungarian tells me that this construction type cannot be used to express an indirect directive. Further evidence is supplied by the study of translation equivalent texts; given in (4) is an example taken from a play by Friedrich Dürrenmatt and its Hungarian translation. The German original exhibits an indirect request expressed as a dependent *wenn*-clause.

- (4) a. DER ZUGFÜHRER: Wenn gnädige Frau sich nur nicht bei der Eisenbahndirektion beschweren. Es war ein reines Mißverständnis. *Der Zug beginnt sich in Bewegung zu setzen. Der Zugführer springt auf.* (Dürrenmatt: *Der Besuch der alten Dame*, p. 17)

The Hungarian translation of (4a) contains a full-fledged direct speech act formulated as:

- b. VONATVEZETŐ: Nagyon kérem, nagyságos asszonyom, ne tegyen panaszt a vasútigazgatóságon. Hiszen az egész csak félreértés volt. *A vonat lassan megindul. A vonatvezető felugrik.* (Hungarian translation of Dürrenmatt by Fáy Árpád)

The constructions at issue in the utterances under examination are repeated below for convenience with interlinear glosses.

- (5) a. Wenn gnädige Frau sich nur nicht bei der Eisenbahndirektion beschweren.
 if Madam REFL only not with DEF railway-board complain
- b. Nagyon kérem, nagyságos asszonyom, ne tegyen
 very-much beg-1SG Madam, not lodge-POL2SG-IMP
 panaszt a vasútigazgatóságon.
 complaint-ACC DEF railway-board-on

At this point the question arises whether the above contrast is merely an idiosyncratic feature of a particular translation or whether it is a systematic cross-linguistic difference. If it can be established empirically that the exploitation of stand-alone conditionals as indirect speech acts – especially as indirect directives – does not work in Hungarian and Croatian while it is possible in English and German, such a finding would lead to the another intriguing question: Is there any correlation between this particular cross-linguistic contrast and the availability of other metonymy types in the four languages under scrutiny? I propose an answer to the latter question in Section 5. In what follows immediately, I attempt to answer the first question.

3. The data

The main aim of this section is to establish whether the above contrast in metonymy exploitation between German and Hungarian is an idiosyncratic feature of one particular translation or whether it is more accurately characterized as a systematic cross-linguistic difference. Broadening the perspective somewhat, a Croatian translation of (5a) is:

- (6) VLAKOVOĐA: Molit ću lijepo, milostiva gospođo, nemojte
 Conductor: beg-INF AUX-FUT kindly Madam do-not
 se žaliti upravi željeznice.
 REFL complain board-DAT railway-GEN

As is evident, there is no stand-alone conditional clause in the Croatian translation. Instead, the speech act is identified by the first part of the utterance and its content is explicitly stated in the remaining part. Interestingly, the speech act identifying verb is marked for future tense.

To decide whether or not the above Hungarian and Croatian translations of a sentence in the German original of Dürrenmatt's play exemplify general structural tendencies of these languages, a representative parallel corpus-based investigation of the phenomenon in the four languages is necessary. For this purpose the available corpora for English, German, Hungarian and Croatian have been searched for *if*-, *wenn*-, *ha*- and *ako*-clauses, respectively.² Only the stand-alone clauses were retrieved and the indirect requests identified as such. The search results are, in sum: corpus-based investigations have not proved to be useful regarding the construction type under scrutiny, firstly because of its low token frequency in English and German, and secondly because of its complete absence in the Croatian and Hungarian corpora. Relevant research literature and reference grammars also bear out these findings for Croatian and Hungarian (cf. for example Vidaković (2001), which is a detailed cross-linguistic study of indirect conditionals, and which does not contain any stand-alone conditionals for Croatian). Given these findings, additional empirical investigation methods were used, i.e., (1) translation tests using data from experienced translators, highly competent in both source and target language, and with native speaker competence in the target language, and (2) acceptability judgments by native speakers.

The translation test was carried out on the basis of the following two German sentences:

- (7) Wenn Sie jetzt bitte zahlen wollen.
 if you now please pay-INF will
- (8) Wenn gnädige Frau sich nur nicht bei der Eisenbahndirektion beschweren.
 if Madam REFL only not with DEF railway-board complain

Four test persons per language were instructed to provide the most natural equivalents of these sentences in their mother tongue, viz. in Hungarian or Croatian, respectively. Example (7) was translated into Hungarian in the following variants:

- (9) a. Kérjük, fizessenek.
 beg-3PL pay-IMP-3PL
- b. Kérem fizessen.
 beg-1SG pay-IMP-3SG
- c. Tessék kiegyenlíteni a számlát.
 please settle-INF DEF bill-ACC
- d. Megkérhetném, hogy akkor most fizessen?
 could-ask-1SG that then now pay-IMP-3SG

- e. Tudna esetleg most fizetni?
could-2SG perhaps now pay-INF
- f. Mindjárt zárunk.
presently closing-3PL

For example (8), the following translational equivalents were provided:

- (10) a. Kérjük, ha lehet, nagyságos asszony ne tegyen
beg-3PL if possible Madam not lodge-POL2SG-IMP
panaszt a vasúti igazgatóságon.
complaint-ACC DEF railway-board-on
- b. Csak arra kérném a nagyságos asszonyt, hogy a vasúti
only for-that beg-1SG-SUBJ DEF Madam-ACC that DEF railway
igazgatóságnál ne tegyen panaszt.
board-with not lodge-POL2SG-IMP complaint-ACC
- c. Csak a vasúti igazgatóságnál ne tegyen panaszt
only DEF railway board-with not lodge-POL2SG-IMP complaint-ACC
kérem a nagyságos asszony.
beg-1 SG DEF Madam
- d. Remélem, a nagyságos asszony nem akar reklamálni a
hope-1SG DEF Madam not want-3SG complain-INF DEF
vasúti igazgatóságnál.
railway board-with
- e. De ugye nagyságos asszony nem tesz panaszt a
but really Madam not lodge-3SG complaint-ACC DEF
vasúti igazgatóságnál.
railway board-with

The same test sentences were also translated into Croatian by four native speakers of the target language:

- (11) a. Molim Vas, ako biste sada bili voljni platiti.
beg-1SG you if would now been willing pay-INF
'I beg you, if you were now willing to pay'
- b. Biste li sada htjeli platiti?
would Q-PART now like pay-INF
'Would you now like to pay?'
- c. Molim vas da sada platite.
beg-1SG you that now pay-2PL
- d. Biste li, molim Vas, sada platili.
would Q-PART beg you now pay-PART-2PL
- (12) a. Samo da se milostiva gospođo ne žalite
only that REFL Madam not complain-IMP-2PL
upravi željeznice.
board-DAT railway-GEN
- b. Samo Vas molim, gospođo, da se ne požalite željezničkoj upravi.
only you beg-1SG Madam that REFL not complain railway board-DAT

- c. Molim milostivu gospođu da samo ne ulažu pritužbu kod
beg-1SG Madam-ACC that only not lodge-3PL complaint with
uprave željeznice.
board railway-GEN
- d. Poštovana gospođo, samo se, molim Vas, nemojte žaliti
Madam only REFL beg you do-not complain
upravi željeznice.
board-DAT railway-GEN

In order to check if stand-alone conditionals can be interpreted as indirect requests in Hungarian the following test sentence was presented to native speakers with the instruction to answer the question whether the sentence makes sense as it stands, and in case it does, to specify its meaning. Furthermore, the test persons were asked to try to complete the sentence in any meaningful way. As for the first sentence:

- (13) Ha most leszállna.
if now get-off-2SG-SUBJ
'If you would get off now'

the test persons provided the uniform judgment that the above sentence does not make sense in this form, indicating that the sentence cannot function as an indirect directive. When they tried to complete the above stand-alone conditional, they produced the following:

- (14) a. Ha most leszállna, akkor eltekinenénk a pótdíjtól.
if now get-off-2SG-SUBJ then forbear-1SG-SUBJ DEF extra-fare-from
- b. Ha most leszállna, akkor még elérné a csatlakozást.
if now get-off-2SG-SUBJ then yet make-2SG-SUBJ DEF connection-ACC
- c. Ha most leszállna, akkor jobban elférnénk.
If now get-off-2SG-SUBJ then better have-more-room-3PL-SUBJ

The same acceptability test was repeated for Croatian, also asking two other native speakers for their judgments:

- (15) Ako biste vi sada izašli.
if would you now leave
- (16) Kada biste vi sada izašli.
When would you now leave

While (15) was seen as perhaps less than absolutely unacceptable if the pronoun *vi* 'you' were removed, (16) was emphatically rejected as not meaningful. The completion test resulted in the following examples:

- (17) a. Ako biste vi sada izašli, pa da povjerenstvo može ocijeniti rad.
if would you now leave so that committee could evaluate paper
- b. Ako biste vi sada izašli, bio bih sada naj sretniji na svijetu.
If would you now leave would be-1SG now happiest on world

- (18) a. Kada biste vi sada izašli, mogli bismo se dogovoriti oko
 when would you now leave could be-COND-1PL REFL agree about
 procedure.
 procedure
- b. Kada biste vi sada izašli, bio bih vrlo zadovoljan.
 when would you now leave be-PART would very satisfied

The results of the tests carried out in the investigation can be summed up as follows: On the basis of empirical evidence derived from corpus analysis, translation tests, acceptability judgments, and completion tests, it was found that neither Hungarian nor Croatian exploits stand-alone conditionals as independent speech acts, at least not as indirect directives. If this observation can be restricted to the use of stand-alone conditionals as conventionalized constructions in the sense of Goldberg (1995) and Stefanowitsch (2003), then it would implicate only that Hungarian and Croatian do not exhibit this construction type as a conventionalized means of expression. That stand-alone conditionals cannot be interpreted as meaningful utterances in these two languages – not even as instances of creative language use – has more far-reaching consequences because this implicates that the inferencing processes that work successfully in English and German, as demonstrated by Panther and Thornburg (2003b), do not work for Hungarian and Croatian. All this leads to the question: Why is this the case? To find an answer I first take a closer look at the data in cross-linguistic perspective with the aim of deciding whether the analysis offered by Panther and Thornburg could be applied in a negative way to Hungarian and Croatian.

4. Analysis of data

In this section I take as my starting point Panther and Thornburg's (2003b) analysis of stand-alone conditionals functioning as indirect directives against the background of their model of speech act scenarios, in this particular case their Request Scenario, whose structure and components are presented in Figure 1.

If we conceive of speech acts as involving a scenario with several parts (as e.g. Panther and Thornburg do), we realize that the central part of these speech acts, the one which normally determines the type of speech act and after which it is named, is in fact not present explicitly in the case of indirect speech acts. There is instead always a more peripheral part of the scenario, which stands metonymically for another illocutionary act, i.e. for another part of the speech act scenario, or for the whole speech act. The conceptual distance between the central part of the speech act scenario and the part that is explicitly used in an utterance can, of course, vary. It is assumed that the more peripheral the part is that is used metonymically, the more tentative is the whole. As shown in Section 3, the empirical evidence from Hungarian and Croatian gives support to the claim that there are language- and culture-specific preferences and restrictions in the metonymic exploitation of some parts of a given illocutionary scenario. In this section I substantiate this claim by analyzing the data in more detail, comparing my findings with the analysis of directive *if*-clauses carried out by Panther and Thornburg.

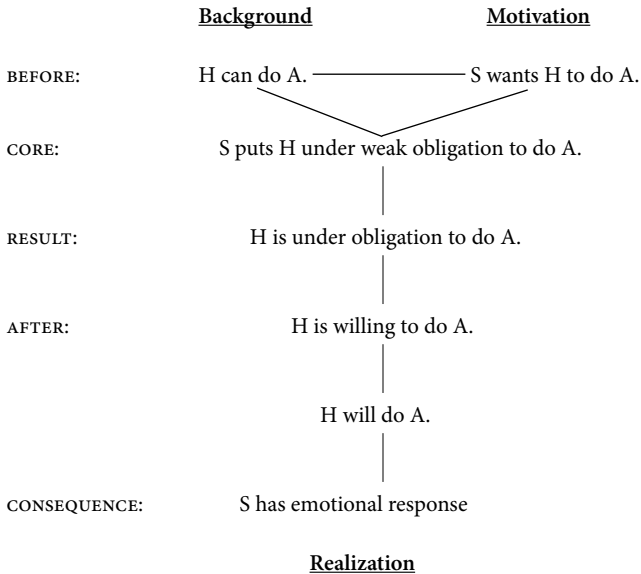


Figure 1. The Request Scenario (Panther & Thornburg 2003b: 130)

I briefly reprise Panther and Thornburg's presentation of the metonymic structure of the two illustrative utterances represented by Figures 2 and 3, which demonstrate the inputs to the Request scenario. The analysis shows that several elements of the hypothetical space of the *if*-clauses can be linked in an explicit or implicit way to subcomponents of the Realization, Background, and Motivation branches of the Request scenario. The activation of the remainder of the scenario by explicit and implicit inputs is represented in shaded boxes in the two figures below.

- (19) If you will come to order.
 (20) If you could explain it isn't that I really want to go home.

The main difference between English and German on the one hand, and Hungarian and Croatian on the other, lies in the fact that in the former languages some elements of the hypothetical space of a truncated conditional clause can serve as explicit or implicit inputs for the activation of the Request scenario, while in the latter languages elements of a truncated conditional clause have no access on their own to subcomponents of the Request scenario.

As empirical evidence from Hungarian and Croatian shows, in these two languages there are no natural language data (either from spontaneous speech or writing) or data from translation tests providing evidence for the existence and use of stand-alone conditionals with directive pragmatic force. Furthermore, the constructed examples cannot be interpreted by native speakers in the required way. All this suggests that Hungarian and Croatian require an explicitly expressed consequent proposition that is obligatory if it is to serve as explicit input to appropriate subcomponents of the Request scenario. On the other hand, consequent propositions that are only implicitly inferable are not tolerated as inputs for the activation of the remainder of the Request scenario. It is possible for ex-

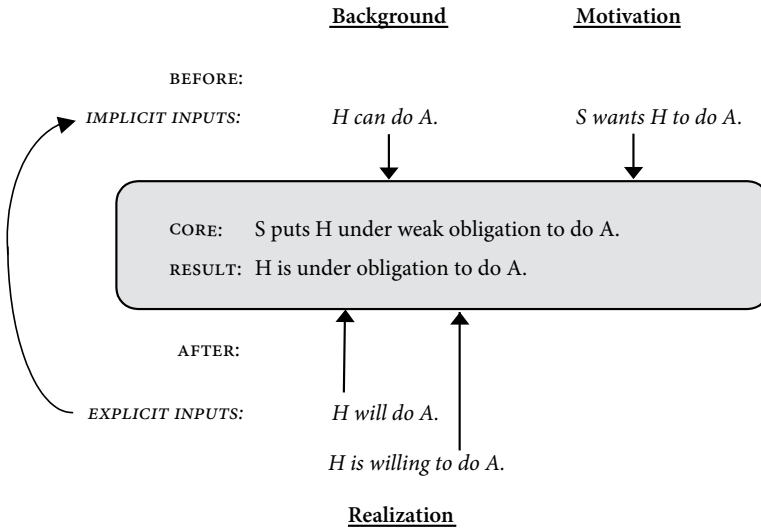


Figure 2. Inputs to the Request Scenario for utterance (19)

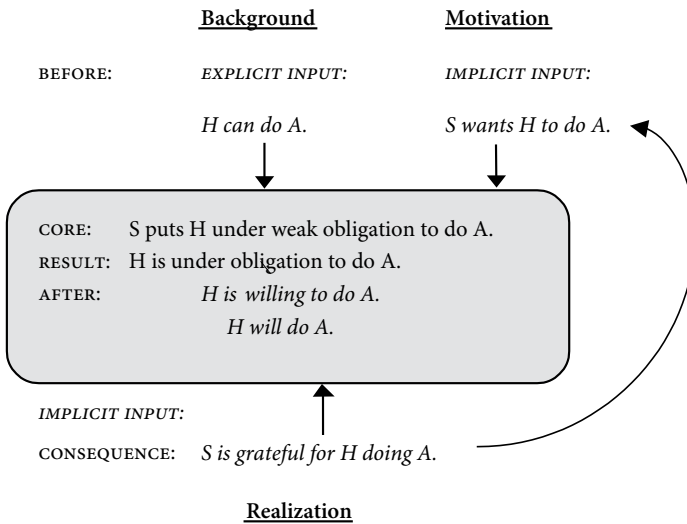


Figure 3. Inputs to the Request Scenario for utterance (20)

ample in Hungarian to use a conditional clause completed by a consequent proposition as indirect directive, as in the following example:

- (21) Hálás lennék, ha segítene nekem.
 grateful would-be if help-SUBJ-2SG to-me

The inputs to the Request scenario are represented in Figure 4.

metonymy lies at the heart of this construction's pragmatic meaning. As a manifestation of indeterminacy in grammar, as Langacker (this volume) puts it, metonymy must be investigated with regard to how it correlates with other kinds of indeterminacy in the same language and in cross-linguistic terms. For the time being this larger question must remain unanswered. For the present study, metonymy as motivation for cross-linguistic differences can be approached from at least three perspectives.

The first is to calculate the overall productivity of metonymy in certain general domains and functional areas in the languages compared. In a usage-based model, frequency data have an important theoretical status, as there seems to be a correlation between higher token frequency and entrenchment.⁴ The productive use of metonymic models in several functional areas of a language seems to have a domino effect, i.e., the use of metonymic models may spread to other areas of the same language. In prior research it has been shown that metonymy is in general more productive in English and German than in Hungarian and Croatian (cf. Panther & Thornburg 1999; Brdar-Szabó & Brdar 2002, 2004). Such findings harmonize with the results of the present investigation that has again demonstrated the availability of a metonymy-based construction type in the former languages and its absence in the latter languages.

Apart from general frequency counts, it is worthwhile to look at the productivity of relevant metonymy types from a cross-linguistic perspective and to calculate their relative weight. Empirical cross-linguistic studies have amply demonstrated that a metonymy typology along discourse-pragmatic lines (cf. Panther & Thornburg 1999) is useful for this purpose and highly revealing in this context. The main discourse-pragmatic metonymy types – referential, predicative, and illocutionary metonymy – have been shown to be subject to different constraints, which thus leads to significant cross-linguistic differences. Initial pilot studies demonstrated quantitative differences in the exploitation of referential metonymy between English, German, Hungarian, Croatian, and Slovenian (cf. Brdar-Szabó 2002; and Tomka 2003). In a more fine-grained study, marked differences initially observed have been shown to be “far less sharp contrasts, i.e. qualitative rather than purely quantitative as different languages, due to differences in their typological makeup, may use different metonymy types for certain discourse-pragmatic functions” (Brdar-Szabó & Brdar 2003a: 102). Constraints in the cross-linguistic availability of certain types of referential metonymies seem therefore to be the result of a complex interaction between conceptual, grammatical, and discourse-pragmatic factors.

Correlations of illocutionary and predicational metonymy seem, however, to be of even more importance. A series of studies has demonstrated significant qualitative and quantitative cross-linguistic differences in the availability of certain predicative metonymy types across several cognitive domains (Brdar-Szabó & Brdar 2002, 2003b, 2004). It has been claimed in Brdar-Szabó and Brdar (2003b) that one of the decisive factors having the strongest influence on the productivity of metonymic models actually cuts across different discourse-pragmatic metonymy types, viz. the distinction between frame-based and scenario-based metonymies. In the same study it is suggested that it could be worthwhile to check whether metonymies involving a scenario-like ICM are in general cross-linguistically more readily available than those that are frame-based.⁵ The results of the present study seem to be partly in accordance with this hypothesis, as it has been demonstrated

that there is a wide range of different scenario-based illocutionary metonymies available motivating several types of indirect speech acts in the four languages under scrutiny. There is however also some disharmony between the empirical evidence of the present study and this hypothesis because the construction type that is missing in Hungarian and Croatian is motivated by a scenario-based illocutionary metonymy, and the hypothesis does not predict any constraints on the availability of this metonymy type. Does this mean that the hypothesis should be given up or at least be modified? Modification seems advisable because the first version of the hypothesis applies in the first place to one-level metonymies.

One should not overlook the fact that the motivation of stand-alone conditionals does not rest on one simple scenario-based illocutionary metonymy, but rather on a whole chain of metonymies, i.e. on a multi-level metonymy involving a mix of metonymy types. This fact suggests that the complexity of metonymic layering (resulting from a combination of several superimposed metonymies of the same functional type, or from a mix of functionally different types) has to be considered as another important aspect in metonymy typologies and also as a new factor in motivating certain cross-linguistic differences. Further research is needed to ascertain whether there are significant cross-linguistic differences in the exploitation of metonymy chains, and if there is any upper limitation in the complexity of multi-level metonymies. For the time being, the impact of the complexity issue on metonymy typology remains an open question.

Notes

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1. It is almost unnecessary to say that the grammar of conditionals in this part reflects the highest possible degree of indeterminacy.
2. The following corpora were used: The British National Corpus, The BNC World Edition on CD; Digital Dictionary of the 20th Century German Language (DWDS, Das Digitale Wörterbuch der deutschen Sprache, 100 million word core corpus, <http://www.dwds.de>); Hungarian National Corpus (Magyar Nemzeti Szövegtár, <http://corpus.nytud.hu/mnsz>); Croatian National Corpus (HNK, <http://www.hnk.ffzg.hr>).
3. See among others Barcelona (2002), who describes the ubiquity of metonymy, and Langacker (this volume: 46), who holds that grammar is “basically metonymic, in the sense that the information explicitly provided by conventional means does not itself establish the precise connections apprehended by the speaker and hearer in using an expression.”
4. For the notion of a usage-based model see among others Barlow and Kemmer (2000) and Langacker (2000).
5. Brdar-Szabó (2004) demonstrates the productivity of scenario-based predicative metonymies in the realm of verbal idioms in five languages. Cross-linguistic differences have been revealed only with respect to preferences in focusing on the beginning or end of the scenario.

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PART 5

Metonymic and metaphoric motivations of grammatical meaning

The metonymic and metaphoric grounding of two image-schema transformations*

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1. Introduction¹

Image schemas are abstract topological constructs that underlie the conceptualization of a great variety of cognitive models (cf. Johnson 1987). Some productive image schemas are the notions of three-dimensional space (especially containers), which underlie such expressions as *He's in trouble*, *She has a lot of love in her heart*, movement along a path (e.g. *Christmas is getting closer*), or orientations (e.g. *Prices are going up*). Image schemas have been described as one of the structuring principles of what Lakoff (1987) has called *Idealized Cognitive Models* or ICMs. In this context, Lakoff (1987: 440–444; 1989: 120–123) has studied what he terms *image-schema transformations* as an essential mechanism in the formation of the radial structure of conceptual categories. According to him, such transformations are very natural relationships between image schemas that motivate polysemy.² Among the most productive transformations, the 'path-end-of-path' transformation and the 'multiplex-mass' transformations figure prominently.

There is experimental evidence that image schemas can be manipulated by means of operations such as rotation or projection, i.e., as if they were physical objects that can be apprehended. These transformations have an experiential basis. As a prototypical example, Gibbs and Colston (1995: 31) explain the case of a shepherd who attempts to direct a flock of sheep. If the shepherd wants to carry out this task properly, first of all he will have to keep all the sheep together. If one or more sheep go astray, the flock will no longer be considered a group. The shepherd will work hard to group the sheep in such a way that all of them make up a metaphorical whole. To this end, he will have to make them follow the same route. This not only constitutes a case of the multiplex-mass transformation but also exemplifies the path-end-of-path transformation.

The main objective of our paper is to analyze the metonymic and metaphoric grounding of the two image-schema transformations, path-end-of-path and multiplex-mass, and to examine the way in which these processes have an effect on the conceptual and linguistic structure of expressions based on these transformations. For this purpose, we make use

of some innovations by Ruiz de Mendoza and his collaborators in the conceptual theory of metaphor and metonymy (cf. Ruiz de Mendoza 2000, 2005; Ruiz de Mendoza & Pérez 2001; Ruiz de Mendoza & Santibáñez 2003; Ruiz de Mendoza & Peña 2005). These proposals are elaborated in Section 2. Sections 3 and 4 provide detailed examinations of the path-end-of-path and the multiplex-mass transformations, respectively. It is postulated that image-schema transformations are a case of what Langacker (this volume: 49) has termed profile/active zone discrepancy.

2. Some theoretical tools of analysis

Our point of departure is the conceptual theory of metaphor and metonymy, as propounded by Lakoff and a number of his associates for well over twenty years now (cf. Lakoff & Johnson 1980, 1999; Lakoff & Turner 1989; Lakoff 1987, 1993).³ In this theoretical approach, metaphor is explained as a domain-external cognitive mapping (or set of correspondences) from a source to a target domain, where the source allows us to understand certain aspects of the target. For example, in the conventionalized metaphor LOVE IS A JOURNEY, lovers are seen as travelers, the love relationship as a vehicle, the lovers' common goals as the destination of the journey, and difficulties in the relationship as impediments to travel. Thus, an expression like *We are going nowhere* focuses on the lovers' problem in determining what they have to do in order to reach their goals. On the other hand, metonymy is generally seen in terms of whole-part (e.g. COMPANY FOR WORKER: *Samsung is producing a new phone this year*), part-whole (e.g. HAND FOR WORKERS: *We cannot hire new hands to do the job that the strikers did*), or part-part (e.g. ORDER FOR CUSTOMER: *The ham sandwich doesn't want to pay the bill*) relations within a conceptual domain where one of the terms of the relation (the source) stands for the other (the target).⁴

2.1 Metaphor and constraints on metaphor

One of the concerns of metaphor theory has been to set appropriate constraints on metaphoric mappings, i.e., not anything can be set in correspondence with anything. In this connection, Lakoff (1990, 1993) proposes that there is a universal property of metaphor, which is captured by what he terms the *Invariance Principle*, according to which a metaphoric mapping always preserves the topological or image-schematic structure of the target domain in a way that is consistent with corresponding structure in the source.⁵ Thus, if we map a lion's mane onto human hair, such features as the length, thickness, or even the undulating aspect of the lion's mane is mapped onto corresponding features of the person's hair (which must be long, thick, and undulating). If we map a person onto a tree (as in personification), we will see the top of the tree as the person's head, the leaves as his hair, the branches as his arms and fingers, and so on. We do not map the head onto the branches, or the arms onto the leaves. However, as observed by Ruiz de Mendoza (1998), consistency between the source and target domains goes well beyond image-schematic configurations into all kinds of generic-level structure. For example, in PEOPLE ARE ANIMALS (attributed)

animal behavior or moral values are often mapped onto corresponding human behavior or values (e.g. courage is associated with lions, stubbornness with mules, deceitfulness with foxes). But we do not map animal behavior onto physical features or animal physical features onto human behavior. This observation has led Ruiz de Mendoza (1998) to postulate the *Extended Invariance Principle*, according to which a metaphoric mapping preserves all kinds of generic-level structure, whether image-schematic or not.

Lakoff (1993) has proposed that, as a corollary of the Invariance Principle, it is not possible to map a source domain element that has no corresponding element in the target. This corollary would explain why in the metaphorical expression *He gave John a kick* the person who “receives” the kick does not have it afterwards. The Invariance Principle would thus constrain the mapping, in which an action is seen as a transfer of possession, in such a way that the possession component would be discarded. However, as observed in Ruiz de Mendoza (2005), this description falls short of accounting for one of the crucial meaning effects of “giving a kick”, i.e., that the person who “gets the kick” is affected by it. The existence of this meaning component can only find a correlate in the source if we develop the ‘kick’ (the figurative object of the transfer of possession) metonymically into the ‘effects of the kick’, which is an adequate match for the possession element (the receiver of the kick figuratively possesses the effects of the kick rather than the kick itself). The underlying principle here, which has been called by Ruiz de Mendoza (2005) the *Mapping Enforcement Principle*, ensures that no item in the target domain of a metaphoric mapping will be discarded if there is a way to find a corresponding item in the source.⁶

There is still a third constraining factor in metaphoric processes that has been termed by Ruiz de Mendoza and Santibáñez (2003) the *Correlation Principle*. According to this principle, for a source item to qualify as a target element counterpart, the item in question needs to share all the relevant implicational structure of the target element. Imagine that after watching a heated political debate that ends in a fiery argument, somebody remarks in a hyperbolic fashion: *It was not a debate; it was nuclear war*. The metaphor used is ARGUMENT IS WAR, where debaters are enemies in a battle, where the weapons map onto the kind of arguments used by the contenders, and where the effects of war map onto the consequences of the debate. The intensity of the debate is captured by the hyperbole, which is based on finding the right source domain (not just conventional war but an extreme form of devastating conflict). A different source item (e.g. small-scale warfare) would not do to capture the intended meaning since it would not share with the target (where we have extremely severe contention that has gone beyond proportion for the context of a debate) a comparable range of meaning effects.

2.2 Metonymy

Lakoff and his collaborators have suggested that metonymy has a predominantly referential role, a view contested in Ruiz de Mendoza (2000), since metaphor may also be used referentially (e.g., *There goes the damned rat that betrayed me*) since much of metonymic activity is non-referential (e.g., *Be fast*, meaning ‘walk fast’). Ruiz de Mendoza also distinguishes between two basic kinds of metonymy (see Figures 1 and 2): (i) *source-in-target*

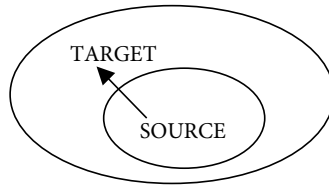


Figure 1. Source-in-target metonymy

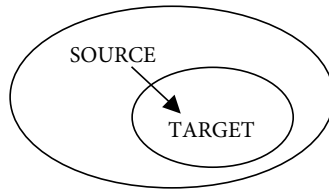


Figure 2. Target-in-source metonymy

metonymies, which work by expanding the initial point of access into a fully-fledged domain of reference or *matrix domain*;⁷ and (ii) *target-in-source metonymies*, which work by highlighting a subdomain of the source (thereby reducing the scope of the conceptual material to be brought to bear upon interpretation), which is the matrix domain.

By way of illustration, consider the following examples:

- (1) The fur coat has left without paying.
- (2) He is pouring out his soul for the whole world.

Sentence (1) should be interpreted within a restaurant frame. A woman who is wearing a fur coat has ordered something but has left without paying. Someone else refers to the woman by mentioning a contextually salient item of clothing that she is wearing. This is a case of a source-in-target metonymy since a person's clothes are part of our knowledge about such a person (the customer within the restaurant frame), as represented in Figure 3. This is thus a case of domain expansion, as opposed to (2), where we find a case of highlighting and subsequent domain reduction that results in a target-in-source metonymy.⁸

In sentence (2) we have a target-in-source metonymy that is incorporated into the target of the metaphor THE BODY IS A CONTAINER FOR EMOTIONS, which further combines with EMOTIONS ARE FLUIDS (cf. Kövecses 2005: 36–43 for this and related metaphors). The body is conceptualized as a container and the contents, the soul, are in fact emotions. This interpretation is possible thanks to a target-in-source metonymic operation whereby the soul stands for its figurative contents (emotions), as shown in Figure 4.

The expression *pouring out his soul* is further enriched by the metaphor VISIBLE IS KNOWN since by figuratively 'pouring out' his emotions, the subject is making them visible and thus known to other people.

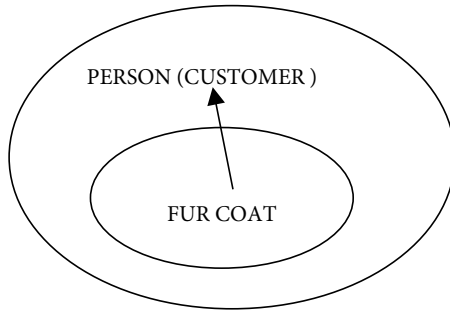


Figure 3. The *fur coat* metonymy

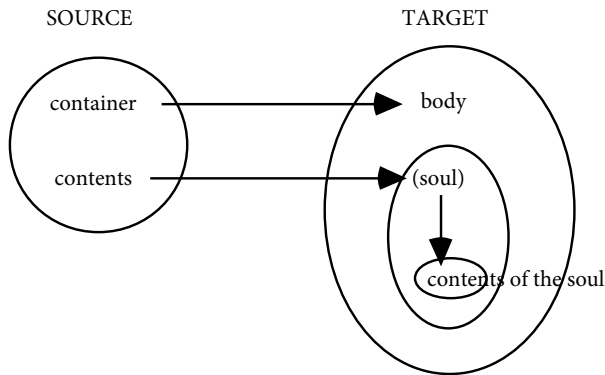


Figure 4. The SOUL FOR EMOTIONS metonymy

One of the main concerns of cognitive studies of metonymy has been to classify metonymies (see Dirven 1993, 2002; Kövecses & Radden 1998; Radden & Kövecses 1999). Ruiz de Mendoza's source-in-target/target-in-source division is based on the kind of domain-subdomain relationship that holds between the source and the target domains. There is another criterion for the classification of metonymy that has been provided by Kövecses and Radden (1998) and Radden and Kövecses (1999). These authors argue that metonymy may work at different levels of genericity. Thus it is reasonable to claim that different kinds of metonymy result from the level of abstraction of their source and target domains. Low-level metonymies such as ORDER FOR CUSTOMER exploit non-generic cognitive models whereas high-level metonymies like POTENTIALITY FOR ACTUALITY (Panther & Thornburg 1999), EFFECT FOR CAUSE (Panther & Thornburg 2000), and PROCESS FOR ACTION (cf. Ruiz de Mendoza & Pérez 2001⁹) work at a higher level of abstraction since they involve generic cognitive models.¹⁰ In order to illustrate the relevance of postulating high-level metonymic activity for linguistic analysis, take examples (3) and (4) below:

- (3) Don't worry; be happy!
- (4) John walked the dog.

The semantic import of imperatives with stative predicates (e.g. 'stand' in *Stand behind the yellow line*) has been discussed by Panther and Thornburg (2000) in terms of the high-level metonymy RESULT FOR ACTION. Since imperatives typically require an action predicate, the only way a stative predicate can occur in the imperative construction is through the activity of a metonymy whereby the result of an action stands for the action itself. In view of this, sentence (3) would be roughly paraphrasable as 'act in such a way that, as a result, you will be happy'. According to Ruiz de Mendoza and Pérez (2001: 329) the imperative construction with a stative predicate is a clear case of what they call *grammatical metonymy*, i.e. a high-level metonymic mapping that brings about consequences in terms of the standard grammatical rearrangement of clause elements. In turn, sentence (4), which, from the point of view of the representation of experience, is a case of the so-called ergative pattern (i.e. a verbal form constructionally used to emphasize the cause-effect aspect of the verbal process; cf. Halliday & Matthiessen 2004), is also an example of what, from the point of view of argument structure, has been called *valency extension* (Dik 1997). The intransitive predicate *walk* is used transitively by adding to this predicate an extra argument, an instigator (*John*). This process is licensed by a grammatical metonymy that Ruiz de Mendoza and Pérez (2001: 334) have labeled ACTIVITY FOR (CAUSED) EVENT. More specifically, example (4) constitutes a metonymic elaboration of 'walk' into 'cause to walk'. The grammatical (here syntactic) consequence of this process is the conversion of a canonical one-argument structure into a two-argument configuration. Ruiz de Mendoza and Pérez have also observed that grammatical metonymies have an impact on a number of areas in grammar (for example, modality and argument structure). Thus, phenomena like the subcategorical conversion of nouns (e.g., *There were three Johns at the party*; NAME FOR PERSON), the recategorization of adjectives (e.g. *blacks, nobles*; PROPERTY FOR PERSON), or of verbs (e.g. *a deep cut, a bad scratch*; ACTION FOR RESULT) are metonymically motivated. In this paper we show that grammatical metonymies such as ACTION FOR RESULT can underlie the construal and conceptualization of some image-schema transformations. Consider now the contrast between (5) and (6), which serves to illustrate one final taxonomic criterion:

- (5) All hands on deck.
- (6) He had his tongue in his cheek when he said that!

Example (5) is a linguistic realization of the source-in-target metonymy HAND FOR PERSON, in which the source domain, 'hand', is a subdomain of the target domain, 'person'. In (6), part of a situation, i.e., one where the protagonist pushes the inside of one of his cheeks with his tongue, stands for the whole situation in which the protagonist is speaking humorously. Even though both examples are cases of low-level, source-in-target mappings where the part stands for the whole, they differ in the ontological nature of their domains. In other words, while in (5) we have an entity standing for another entity, in (6) what we find is part of a situation standing for the whole of it. Ruiz de Mendoza and Díez (2003: 193–196) refer to metonymies like (5) as *propositional metonymies*, while those like (6) are labeled *situational metonymies*. In our analysis of the metonymic motivation of image-schema transformations we find that all examples fall into the propositional kind.

3. The 'path-end-of-path' transformation

According to Lakoff (1987: 442), the path-end-of-path transformation is grounded in the common experience of following the path of a moving object until it comes to rest, and then focusing on where it is. In our view, this transformation is partly explainable in terms of what Langacker (this volume: 49) refers to as profile/active zone discrepancy. An *active zone* is a relevant facet of meaning with respect to a domain or relation. It may or may not coincide with the entity profiled against a base domain. Thus, the word *trumpet* in the sentences *I saw the trumpet* and *I heard the trumpet* profiles (i.e. designates) the same entity but is interpreted in terms of different active zones (the physical entity and the sound emitted by the trumpet when played, respectively). As Langacker observes, in cases where profile and active zone do not coincide, there is profile/active zone discrepancy, which involves our *reference point* ability, i.e. our ability to make use of one entity to provide mental access to another (e.g., 'trumpet' may give access to the 'sound of the trumpet'). In much the same way, the path-end-of-path image-schema transformation involves a shift of focus that gives rise to a discrepancy between the notions of 'path' (the construct profiled against the domains of space and motion) and of 'end-of-path' (whose base domain is the 'path' itself). The 'end-of-path' may thus be best interpreted as an active zone in certain uses of the PATH image-schema. Since in the transformation the 'path' gives access to the 'end-of-path', it follows that the transformation calls for the language user's reference point ability to make the shift of focus. In our view, the reference point ability involved in this case, as we try to make evident below, takes the form of a high-level metonymy. Thus, saying that an image-schema transformation is a shift of focus or a matter of profile/active zone discrepancy is insufficient to account for all the cognitive activity involved in the process and for its full meaning impact. In our view, high-level metonymic activity is the crucial motivating factor in active profile/active zone discrepancy in the case of the path-end-of-path image-schema transformation.

3.1 Literal transformations

The PATH image-schema underlies the conceptualization of a large number of linguistic expressions. Just like other image schemas, it consists of a series of structural elements plus an internal logic. The structural elements are a starting point, an end point, a direction, and some points that connect the origin with the destination. There is also an associated logic to the schema. For example, if we go from a starting point to an end point we have to go through all the intermediate points along the path and the farther we are from the origin the more time has gone by since starting (cf. Lakoff 1989: 119). Cognitive mechanisms like metonymy allow us to establish conceptual relationships between domains and subdomains. In this connection, if we think of the PATH schema as a conceptual domain with each structural element being a subdomain, it should be possible to map the whole schema onto any of its structural elements or the other way around. Lakoff (1987: 120) states that the transformation that relates examples (7a) and (7b) results from the perspectivization of one of the structural elements of the PATH image-schema, viz. the destination.

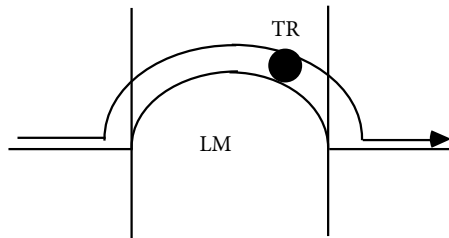


Figure 5. Image schema for *She and Guy walked over the bridge*

- (7) a. She and Guy walked over the bridge.
 b. She and Guy live over the bridge.

The image-schematic structure of (7) is diagrammed in Figure 5.

In order to better understand Lakoff's explanation, let us first consider examples (8) and (9) below, which Lakoff analyzes in terms of the notions of *trajector* (TR) and *landmark* (LM), borrowed from Langacker (1987) as generalizations of the concepts *figure* and *ground*.¹¹

- (8) The plane flew over.
 (9) The bird flew over the yard.

According to Lakoff (1987: 419), the central sense of *over* comprises aspects of 'above' and 'across'. For instance, in (8) the plane is regarded as a trajector that travels along an imaginary path. The landmark is left unspecified but we know that it is identified with what the plane is flying over. There may be contact between trajector and landmark or lack of contact. This is the central sense of the 'above-across' sense of *over*. There also exist other special cases stemming from this central sense that are obtained by providing further information about the nature of the landmark and by specifying whether there is contact or not. In this connection, in (9), the trajector (the bird) travels the distance from the boundary on one side of the landmark (the yard) to the other side of it. There is no contact between trajector and landmark. The trajector describes a path along which it travels. As was the case with (8), the PATH image schema interacts with this sense of *over*. The starting point and the destination are not linguistically encoded. However, we know that they are the extreme boundaries of the landmark. In (9), the beginning of the yard and the end of the yard are regarded as the starting point and the destination, respectively. The directionality is traced by the trajector, which is mapped onto a bird. The SURFACE schema is also present in this example since the yard is conceived of as a surface. This sense of *over* cannot interact with the CONTACT schema since the trajector and landmark are kept at a distance all the time and the emphasis is on the movement of the trajector to the other side of the landmark. In cases like (9), the landmark is extended and there is no contact between trajector and landmark. However, contact between trajector and landmark is also possible. Consider example (7a). The PATH, SURFACE, and CONTACT schemas interact. The interpretation of (9) holds for (7a). The difference is that in the latter, different points of the landmark are in contact with the trajector when the latter is moving along a meta-

phorical path. Both (9) and (7a) are examples of dynamic states of affairs. Thus, it should come as no surprise that the PATH image schema underlies their construal. In this case, the landmark is also extended but there is contact between trajector and landmark. A problem arises when we analyze examples like (7b), which designates a non-dynamic state of affairs yet partially incorporates the sense of *across*. Here, Lakoff simply postulates a shift of focus or what he calls a transformation. In our own view, however, the focalization of the end point in (7b), the bridge, is the result of metonymic activity, whereby in mentioning the matrix domain, i.e. the whole PATH schema, we make reference to one of its subdomains, the destination. Even though Dewell (1994: 375) does not make explicit the underlying metonymic operation, he does allude to it in the following paragraph in clear connection to Langacker's notion of 'active zone':

Segment profiling: A path expression can be used to describe a characteristic segment of that path. There is probably a more general principle underlying this transformation and the TR-part profiles. Cf. Langacker's (1984) "active zones" and Lakoff's (1987: 417–418) discussion of "correspondences within an ICM" such as the use of window to refer to the pane or to the opening or to the frame or to the whole.

The combination of *live* and *over* in (7b) creates an incompatibility that is solved if we disentangle the meaning implicit in this expression, which could be tentatively reformulated as 'She and Guy live at the end of the path which runs over the bridge'. Sentence (7b) is the result of a transformation that operates between (7a) and (7b) and is licensed, as has been proposed, by a metonymic operation of the target-in-source kind. The main focus is on the result of the action and not on the action itself. In other words, it is not the action of going from one side of the landmark to the other that is highlighted but the resulting state of being on the other side of the landmark. There is no motion in this example even though the PATH schema is present by means of the focalization of one of its structural elements.

The path-end-of-path transformation abounds in the English language, as is attested by the following examples:

- (10) a. Harry walked through that doorway.
b. The passport office is through that doorway.
- (11) a. Sam walked around the corner.
b. Sam lives around the corner.
- (12) a. Harriet walked across the street.
b. Harriet lives across the street.
- (13) a. Mary walked down the road.
b. Mary lives down the road.
- (14) a. Sam walked past the post office.
b. Sam lives past the post office.

All (b) instances above are the resultant counterparts of their (a) versions as licensed by a grammatical metonymy of the target-in-source kind, ACTION FOR RESULT. Example (10a) describes a state of affairs in which Harry, the agent, carries out an action (walking through a doorway). In (10b) the action is implicit while the linguistic expression focuses

on the result.¹² The rest of the examples follow the same rationale, the crucial difference among them being the kind of path and movement along the path that is evoked. Thus, there is a curving movement in (11), a (typically) straight movement to the opposite side of a flat surface in (12), a (fictive) downward movement along a path in (13), and a (typically) straight movement beyond a given point in (14). Note that ACTION FOR RESULT is a development of a more basic metonymy whereby a whole path stands for part of it (e.g. the end of the path). The ACTION FOR RESULT metonymy incorporates the idea of 'motion along the path' (which is itself an image schema that is subsidiary to the PATH schema) while further specifying the resultant component present in the (b) examples.

3.2 Non-literal transformations

The examples we have just discussed involve motion and location in space. However, the path-end-of-path image-schema transformation also hold for metaphorical expressions. Consider the following pair of examples:

- (15) a. He got over the flu.
b. I'm glad you are over the flu.

In (15a) and (15b) the flu is metaphorically seen as an obstacle on a path and 'getting over' the obstacle as overcoming the flu. As is the case with the examples in the previous section, (15b), the non-dynamic counterpart of (15a), is the result of the high-level metonymy ACTION FOR RESULT. Prior movement of the agent to the end of the figurative path is implicated. Figure 6 represents the metaphorical correspondences of (15b) once the high-level metonymic shift has taken place. Note that the metonymy places in focus the correspondence between the destination (a highlighted element of the metaphoric source) and the resultant state in the target.

Contrast now the situation we have just described, illustrated by example (15), with the one for literal transformations, as illustrated in the previous section with respect to examples (7b) and the (b) examples from (10) to (14). Literal transformations do not involve real paths but figurative paths that the protagonist moves along in the speaker's mind. The perspective is that of the conceptualizer (the speaker), not that of the subject (the trajector). In this connection, Langacker (1991: 326–330) uses the term *mental scanning*. In the examples we are referring to, the movement along, across, or over the path is subjective in the sense that it is the conceptualizer that traces it mentally in order to locate the trajector somewhere with respect to some reference point. In these cases movement is subjective since nobody actually moves. For instance, when someone says that *Harriet lives across the street*, this does not mean that either the speaker or Harry ever walked across the street to Harriet's house from the vantage point indicated in our utterance. The comparison between literal and non-literal transformations may be revealing not only because of the metaphorical status of the latter, but also because of a crucial difference in their conceptual structure. For example, if you say you are over the flu, it is presupposed that you got over it or that you had it. This presuppositional structure is different from that in examples like *She and Guy live over the bridge*, where, as has been said, the sentence does not presuppose

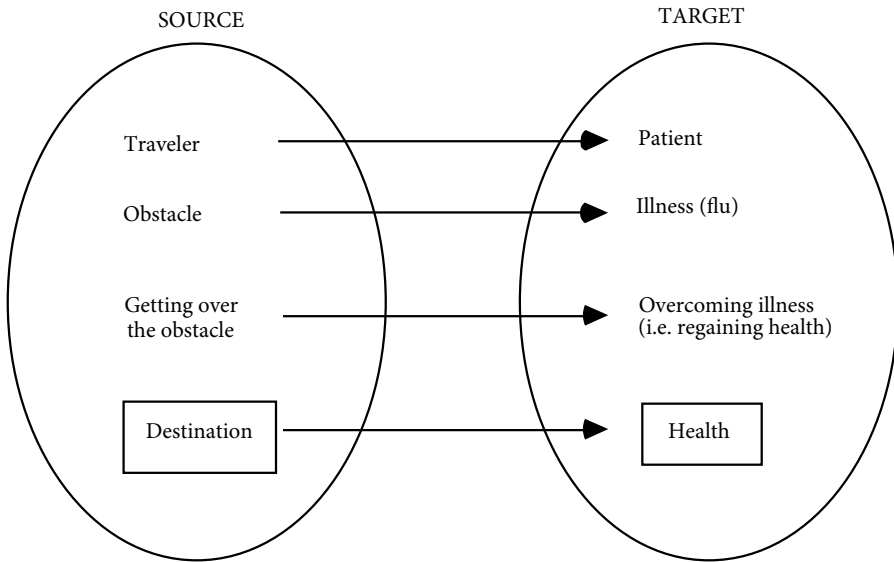


Figure 6. Metaphorical correspondences for *over the flu*

that the protagonists move or walk over the bridge to get home. It is just a hypothetical situation. In other words, the source domain of the metaphor in (15b) involves actual motion. It is not a case of mental scanning. The state of affairs pictured in (15b) does not result from the conceptualizer's mental projection of a path but from real motion, which is not the case with the examples of literal transformation. In fact, the metaphor in (15b) has actual movement in the source by application of the *Correlation Principle*, which guarantees the best possible match in the source for each target element.

Metonymic activity, in contrast, is essentially the same whether the transformation is literal or non-literal. Thus, by the application of the ACTION FOR RESULT metonymy, we focus on an aspect or element of a domain because we want to highlight it. However, the whole matrix domain is also relevant to the interpretation of the expression in question. For instance, in *She and Guy live over the bridge*, the whole PATH schema, not just the end-of-path, bears upon interpretation. In the same way, all (b) instances of examples (10) to (14) focus on the resultant state of an event.

3.3 Further path transformations

Even though Lakoff has considered only the possibility that an expression can serve to focus on the destination of a path, there are other elements belonging to the PATH image schema that can be profiled (see Dewell 1994: 355). Take the following examples:

- (16) The plane flew over the hill.
- (17) The bird flew over the yard.

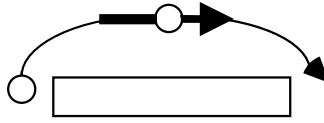


Figure 7. Profiled central region (Dewell 1994: 355)

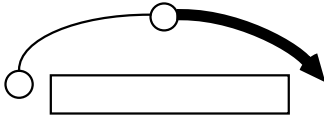


Figure 8. Profiled downward trajectory (Dewell 1994: 356)

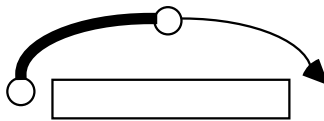


Figure 9. Profiled upward trajectory (Dewell 1994: 356)

In these examples the foregrounded element is the central region of the path created by the movement of the trajectors: the plane in (16) and the bird in (17) (Figure 7).

The rest of the trajectory, that is to say, its upward and downward parts, remain backgrounded. We could postulate the existence of a target-in-source metonymic operation whereby the matrix domain consists of the *PATH* schema, which stands for one of its sub-domains, the central region of the trajectory. Other examples (cf. (18)) profile a downward trajectory (Figure 8) and others (cf. (19) and (20)) an upward movement (Figure 9).

- (18) Sam fell over the cliff.
- (19) The plane climbed high over the city.
- (20) The sun came up over the mountains.

In (18) Sam is the moving entity or trajector that describes a trajectory and the landmark is the cliff. The semantic configuration of the verb leads us to think that it is only Sam's downward movement that is focused on. However, the linguistic expression refers to the whole image schema in order to evoke one of its parts, the downward trajectory. On the other hand, in (19) and (20) the foregrounded element is the upward trajectory of the plane in (19) and of the sun in (20), even though the linguistic expression could make us wrongly assume that the profiled aspect is the *PATH* matrix domain.

The main function of these target-in-source metonymies is to highlight a given element or situation. Moreover, another function of metonymies of this kind is related to the principle of cognitive economy.¹³ As we have already pointed out, the expression *She and Guy live over the bridge* means ‘She and Guy live at the end of the path which runs over the bridge.’ The metonymic expression is much simpler than the non-metonymic one. Since a compact linguistic expression is capable of giving access to a large amount of conceptual material, the transformation is very effective in terms of processing cost; this being so, it is only natural that this image-schema transformation is so productive in English.

4. The ‘multiplex-mass’ transformation

According to Lakoff (1987:442), this is what is natural about the multiplex-mass image-schema transformation: “As one moves further away, a group of individuals at a certain point begins to be seen as a mass. Similarly, a sequence of points is seen as a continuous line when viewed from a distance”. In our view, this description suggests that there is a metaphorical operation underlying this kind of transformation in which, on the basis of a construal phenomenon in everyday life, we perceive collections consisting of bounded individuals as unbounded entities (i.e. substances). However, as discussed below, Lakoff’s description is only one of at least two possible subcases of the multiplex-mass transformation, the second one being grounded not only in metaphor but also in metonymy. We discuss the second subcase in some detail below. Now, let us focus our attention on the first subcase.

The MULTIPLEX schema, in Lakoff’s conception, is used to refer to a group of separate entities of the same kind (i.e. a collection) that do not make up a whole. This schema applies to a series of individualized entities and not to them as a whole. On the other hand, the MASS schema consists of a group of entities that constitute a whole. The COLLECTION image schema, which has been studied as subsidiary to the PART-WHOLE schema (see Peña 2003:204–205; 2008:1060–1061), includes the following structural elements: several parts, which are (perceived as) similar to one another, a whole, and an overall configuration. According to its internal logic, the existence of several parts does not guarantee that there is a whole. There may be situations in which parts belong to different wholes or in which parts are located in different places. Conversely, if there is a whole located in a given place, the parts are necessarily located in the same place. Consider again the shepherd example. If some sheep go astray and do not follow the trajectory of the others, the group as such will not exist any more. Parts are prototypically contiguous to one another, so if all of the sheep are not together in a given place, there will not be any contiguity among them and we will not be able to perceive them as a group or a mass.

Lakoff exemplifies the multiplex (MX)-mass (MS) transformation by means of several alternate constructions. Consider those in (21) below:

- (21) a. *All men are mortal.* (MX)
 b. *All gold is yellow.* (MS)

Lakoff (1989: 121) has contended that it is common for expressions like *all*, *a lot*, and other quantifiers that have a MASS schema to have a MULTIPLEX schema too. He has also asserted that there are verbs that take part in both schemas, especially verbs of liquid movement such as *pour*, *spill*, or *flow*. Consider now the constructions in (22):

- (22) a. He poured the juice through the sieve. (MS)
 b. The juice poured through the sieve. (MS)
 c. The fans poured through the gates. (MX)

Example (22a) expresses an action where the verb *pour* is used transitively. *He* fills the slot of the agent and *the juice* that of goal of the action. *He* is a volitional agent who controls the action. In (22b) *pour* is used intransitively. Ruiz de Mendoza and Pérez (2001: 334) have postulated that transitivity should be explored in connection with grammatical metonymy. Consider expressions (23) and (24), which we have already discussed in connection to the notion of grammatical metonymy:

- (23) The door opened.
 (24) John walked the dog.

As mentioned in Section 2.2, these are cases of what Dik (1997: 8–15), in dealing with argument structure issues, has called *quantitative valency reduction* and *extension*, respectively. From a semantic perspective, which is more in consonance with an analysis in terms of ergativity (Halliday & Matthiessen 2004), Ruiz de Mendoza and Pérez (2001) have noted that these two phenomena are metonymically motivated. Thus, (23) could be interpreted in the light of the grammatical target-in-source metonymy PROCESS FOR ACTION, while (24) constitutes a linguistic realization of the grammatical source-in-target metonymy ACTIVITY FOR (CAUSED) EVENT. In (23), in spite of the fact that the agent of the action is not made explicit in syntactic terms, we assume at the conceptual level that someone carried out the action of opening the door. In (24), the activity of walking stands for the whole event, which includes an instigator of the action. Both cases are instances of grammatical metonymy since they involve the recategorization of a predicate and bring about some consequences for the syntactic configuration of the sentences.

We illustrate the metonymy PROCESS FOR ACTION in our analysis of (22). Dik (1997) proposes a typology of states of affairs (SoAs) in terms of such parameters as control and dynamism. If we take into account these two parameters, it is possible to distinguish between situations and events; the former lack dynamism, a feature that characterizes the latter. In turn, situations are subdivided into states, if they are non-controlled, and positions, if they are controlled. Events can be classified into processes, if they are non-controlled, and actions, which are controlled. Díez (2002: 311) has pointed out that the relationship that holds between actions and processes takes place between a domain and a subdomain and is thus potentially metonymic since processes can be defined as non-controlled actions. In other words, processes lack the subdomain of ‘agent’.

Since juice cannot pour by itself, at the conceptual level we understand that there is an agent that carries out the action specified in (22b). The linguistic expression, however, presents the action as if it were a process. If (22b) looks like a process in syntactic terms, it should come as no surprise that there is no explicit agent since processes are not char-

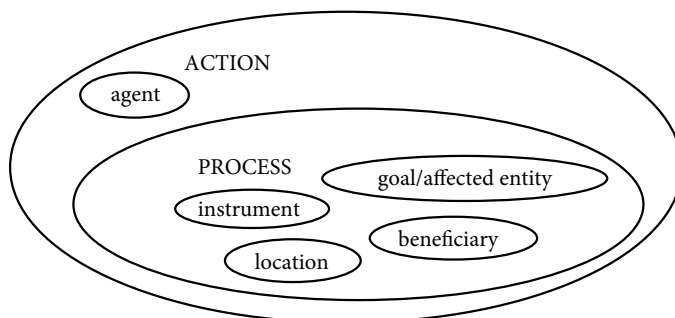


Figure 10. The Action Frame (Díez 2002: 311)

acterized by control and as a consequence cannot assign the semantic function of agent. Sentence (22b) is a case of valency reduction of the predicate in which the verb *pour* behaves as if it were intransitive. As has been contended by Díez (2002: 311), the metonymy PROCESS FOR ACTION serves the function of assigning the affected entity a privileged position in the sentence and is thus made more prominent than if it filled the slot of the second argument, which is usually the position it occupies, as has been observed by Dik (1997). Díez (2002) has also noted that this metonymic mapping is motivated by the principle of cognitive economy. Examples (22a) and (22b) designate the same state of affairs by means of different syntactic configurations. Sentence (22b) is more economical in cognitive terms in the sense that it conveys the same information as (22a) but makes use of fewer arguments in its syntactic structure. While in (22a) the two arguments ‘agent’ and ‘goal’ are necessary, in (22b) only one of them is needed since in syntactic terms it constitutes a process.

Expression (22c) is also metonymically motivated, but in combination with the CROWD/HUMANS IS LIQUID metaphor (Goatly 2004). In the metaphor, the movement of fans from one side of the gates to the other is seen in terms of the way a quick and abundant flow of a liquid would behave in similar circumstances. The metaphor seems to be a simple, straightforward one. However, there is an apparent mismatch between the source and target domains of this metaphor in terms of the Correlation Principle, since the implicational structure of the source and target domains is different. In principle, each of the fans in the target, taken individually, has the power to decide what to do and where to go; in contrast, the liquid substance in the source is but a natural force, without agency. Even if taken collectively, the fans may be seen as exercising some form of (collective) will power, or at least as the instigators of their own movement. Thus, while an expression like **John poured the fans through the gates*, where John acts as the instigator of the action, is not feasible, it would not be impossible to say *The fans poured themselves through the gates*,¹⁴ with “the fans” appearing in first argument position. The solution to this apparent mismatch is to be found in the joint activity of the Correlation and the Mapping Enforcement principles. The Correlation Principle requires that the implicational structure of the target be preserved in the source. However, this is not possible unless some modifications are made in the source. Thus, what we actually have in the

target is a large number of fans, which, on the spur of the moment, move together in the same direction, through the gates, in an uncontrolled manner. In the source, in contrast, ‘pouring’ requires an agent that controls the way liquid is caused to flow. Furthermore, in the target the fans are individual entities that act collectively (i.e. behave in the same way), while the liquid in the source is not a collection but a mass. The natural way to solve these discrepancies is found in the activation of a metonymic mapping, PROCESS FOR ACTION, plus a multiplex-mass transformation. The metonymy has the function of allowing us to see controlled movement as if it were uncontrolled spontaneous motion. The transformation, in its turn, is but a consequence of the metaphorical correlation between people and substances, whereby we understand relevant aspects of the perceived behavior of a collection of people in terms of corresponding aspects of the observed behavior of flowing liquids.¹⁵

Let us now take the second subcase of the multiplex-mass transformation, which, as we mentioned above, has a somewhat different experiential grounding:

- (25) a. There are cats all over the road. (MX)
 b. There is cat all over the road. (MS)

First, by way of contrast, consider the problem a sentence like (25a) poses for accounts of language that are not sensitive to profile/active zone discrepancy phenomena. For example, Jackendoff (1991: 18) argues that nouns can be characterized in terms of boundedness. In accordance with other authors (Gruber 1967; Talmy 1978), Jackendoff claims that the distinction between count and mass nouns parallels that between temporally bounded events and temporally unbounded processes. Thus, the referent of a count noun like *apple* cannot be divided into several parts or pieces and still be called by the same name. On the other hand, the referent of a mass noun like *water* can be divided into several parts and still be called by its name. The same holds for events and processes. Events behave like count nouns and processes like mass nouns. In this vein, Jackendoff (1991: 19) describes -b (unbounded) constituents as “entities whose boundaries are not in view or not of concern”. Plurality is another important feature in connection with nouns. Bare mass nouns, which are unbounded, and bare plurals, which are bounded, can appear in expressions of distributive location like *There was water all over the floor* and *There were books all over the floor*. The main difference between these two kinds of noun is that while plural nouns entail a series of distinguishable individuals, this is not the case with mass nouns. Jackendoff (1991: 20) calls the entities normally expressed by plural nouns *aggregates* and those normally expressed by mass nouns *substances*. In (25a), we find an expression of distributive location in which a plural (and bounded) noun occurs. The problem arises when it comes to analyzing examples like (25b).¹⁶ According to Jackendoff only bare mass nouns and bare plurals can appear in expressions of distributive location. So again we are faced with a case of what Langacker calls profile/active zone discrepancy. A way to sort out the discrepancy is to understand (25b) as a case of subcategorical conversion involving a multiplex-mass image-schema transformation, which is in turn grounded in the target-in-source metonymy OBJECT FOR MATERIAL CONSTITUTING THAT OBJECT (cf. Kövecses & Radden (1998: 51) for the original formulation of this metonymy).

However, the situation is more complex, since the MULTIPLEX schema here does not designate a homogeneous collection but rather the heterogeneous constituent parts of an individual entity. In (25b) the different parts of a cat are strewn all over the road, which seen from the perspective of the speaker, are construed as an undifferentiated mass of dead cat flesh. So, again we have a metaphor where the various parts of a whole (the target) are seen as a single unified object (the source). Through the OBJECT FOR MATERIAL CONSTITUTING THAT OBJECT metonymy the metaphorical source is further developed thereby allowing us to perform the subcategorical conversion from a countable (bounded) to a mass (unbounded) noun. This activity is again regulated by the Correlation and Mapping Enforcement principles. Note that in order to come to terms with our construed perception of the dead cat parts in the target, the source cannot have an integrated bounded object but the image of an unbounded entity, which calls for the metonymic mapping.

The difference between expressions involving MULTIPLEX and MASS schemas is also a matter of communicative effects. Thus, the expression containing a MASS schema seems to reinforce the speaker's negative attitude towards the state of affairs denoted by the expression itself. Consider the use of *too much*, followed by a countable noun, as in (26) and (27):¹⁷

- (26) Our dollar strength will drop thus we will have to spend more. The only issue I have is *too much immigrant* and foreign worker coming to Singapore.
- (27) They have *too much car* in production and they need to clear it off for new models to come in.

In these examples, each group of entities of the same kind (whether homogeneous or not) is seen as an object, which is in turn characterized in terms of its constituting material thereby producing the subcategorical conversion from countable to mass. Ruiz de Mendoza and Otal (2002: 101) have further observed that metonymic developments of this kind have a peculiar form of syntactic consequence, which makes them qualify as cases of grammatical metonymy, as evidenced by the requirement of an adjunct for the syntactic configuration to be acceptable. Otherwise, neither the conversion nor the underlying image-schema transformation seems possible. Compare in this respect the following expressions:

- (28) a. *There is cat. (cf. There is a cat)
b. There is cat all over the road.
- (29) a. *There is too much chair. (cf. There are too many chairs)
b. There is too much chair in the picture for me.¹⁸

The (a) versions are not grammatical. An adjunct must be added in order to form a grammatical sentence, which gives subcategorical conversions required by this subcase of the multiplex-mass transformation a special constructional value.

5. Final remarks

Our proposal has made explicit the metonymic and metaphorical basis of two image-schema transformations: path-end-of-path and multiplex-mass. We have been able to observe that the path-end-of-path image-schema transformation has a sound metonymic basis of the target-in-source kind whose main function is to refer to and highlight a subdomain by mentioning the matrix domain. In spite of the fact that at first sight it might seem that this violates the principle of cognitive economy, it does not. On the contrary, target-in-source metonymies obey this principle. In this connection, the analysis of some examples has revealed that, on many occasions, this metonymic operation allows us to simplify the syntactic structure of several expressions. For instance, we have noted that in the case of the PROCESS FOR ACTION metonymy a compulsory argument of an action, the agent, has been omitted because it can be inferred from the context or because explicitly mentioning this element might prove redundant. Furthermore, this conceptual mechanism serves the additional function of singling out some aspect of a given action. The reason for this is that the main effect of target-in-source metonymies is to highlight a subdomain of a matrix domain. We have also observed that the expressions we have analyzed belong to the kind of metonymy that Ruiz de Mendoza and Otal (2002) have called propositional rather than situational. Furthermore, when examining the multiplex-mass transformation, we have become aware that a special kind of grammatical metonymy should be postulated since there are some metonymies that have both morphological and syntactic consequences. In these cases, the transformation seems also to involve metaphor and to operate at the propositional level.

Finally, our contention that image-schema transformations are simply a construal phenomenon motivated by metaphor and/or metonymy ties in with Langacker's proposals on indeterminacy in that in all cases there is a discrepancy between the event profile and the reference point dominion, which, in our view, is solved by the activation of metaphor or by high-level metonymies like ACTION FOR RESULT and PROCESS FOR ACTION. Thus, in the case of the path-end-of-path transformation, the path, which is the reference point, would afford mental access to a broad range of possible targets, which are potential active zones, but the conventionalized ACTION FOR RESULT pattern motivates the selection of 'end-of-path' as the relevant target.

Notes

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1. Except for cases where we discuss examples from the relevant literature, all other examples in this paper have been obtained from Google searches and the British National Corpus. However, except where indicated through endnotes, we have simplified the actual occurrences for the sake of convenience.
2. In fact, Lakoff's analysis of the preposition *over* was his starting point for the consideration of image-schema transformations. In this connection, Dewell (1994: 351) has also examined this preposition to demonstrate the use of image-schemas and natural image-schema transformations as an alternative to bundles of distinctive features.
3. The amount of literature on metaphor and metonymy in Cognitive Linguistics is impressive, which makes it impossible to do justice to it in a brief section. For a review of a large portion of the most relevant studies, the reader is referred to Ruiz de Mendoza and Otal (2002). In this section we focus our efforts on some relevant theoretical insights developed by Ruiz de Mendoza and his collaborators over the past five years. These insights prove useful in the ensuing discussion of image-schema transformations.
4. The relevance of postulating part-for-part metonymies has been called into question in Ruiz de Mendoza (2000), where a number of arguments of a cognitive and communicative kind are given in this respect. However, the possible controversy around this issue (cf. Barcelona 2002) does not affect the development of the present paper since purported part-for-part metonymies are in any case inconsequential for the phenomenon we seek to analyze.
5. The Invariance Hypothesis has caused quite a stir in Cognitive Linguistic circles. The original idea was initially debated and reformulated by cognitive linguists like Brugman (1990) and Turner (1990). The main problem was Lakoff's failure to distinguish the notion 'image-schematic' from 'topological' and the inability of the hypothesis to predict when source and target properties are preserved. More recently, Haser (2005: 150) has brought up a related problem. She argues that it is inconsistent to say with Lakoff, that, for example, interiors are mapped onto interiors, since the interiors of the target domain do not exist before the metaphorical mapping takes place. Thus, in *I'm in a good mood*, where *mood* is conceptualized as a container with an interior, the container and its interior are only in the source. We believe the property-preservation problem is solved by the interaction of the Invariance Principle (or in fact, Ruiz de Mendoza's 1998 extended formulation) with the Correlation Principle and general requirements of relevance, as will be seen subsequently. As for Haser's criticism, it is obvious that it does not affect metaphors where source and target are entities (e.g. PEOPLE ARE ANIMALS/PLANTS). But, in our view, it does not create any problem for metaphors with an abstract target either. In *I'm in a good mood*, we see the speaker as if inside a state or condition that may have some effect on him (in the same way as the conditions inside a real container may have some effect on its contents): there is no mapping of the interior of the container onto the 'interior' of a state, but onto the conditions associated with the state. Haser's criticism is a typical case of straw man argumentation.
6. We believe that the activity of the Mapping Enforcement Principle is important to understand the intricacies of metaphor-metonymy interaction (as described in Ruiz de Mendoza & Díez 2002 and Ruiz de Mendoza & Peña 2005), and of other phenomena such as double metonymies, first identified in Ruiz de Mendoza (2000), as in AUTHOR FOR WORK FOR MEDIUM (e.g. *Proust is on the top shelf*, where 'Proust' means 'a book containing Proust's work').
7. The label 'matrix domain' seeks to highlight the dependency relationship between a subdomain and the domain it belongs to.
8. Note that the format for metonymy diagrams that we have chosen tries to capture the formal aspects of domain inclusion (i.e. domain-subdomain) relationships, which are commonly accepted to be a distinguishing feature of metonymy (cf. Barcelona 2002, 2003). The kind of domain-inclusion relationship (e.g. part-whole, specific-generic, agent-action, and so on) is a matter of the ontological nature of the mapping.
9. Ruiz de Mendoza and Pérez (2001) refer to such metonymies with the label ACTION FOR PROCESS (e.g. *The window closed*). This label originally tried to capture the fact that there is a recategorization of

the verb (from 'someone closed the window') whereby an action becomes a process. However, as correctly pointed out by Panther (2003:267–288), the actual metonymic reasoning goes in the opposite direction, i.e., the hearer is faced with a process that stands for an action, which would justify the more accurate label PROCESS FOR ACTION. Accordingly, we henceforth make use of the latter label to refer to this kind of metonymic mapping.

10. For the labels 'action' and 'process' we draw on Dik's (1997) terminology in his typology of states of affairs (SoAs), which is further discussed in Section 4. Actions are dynamic, controlled SoAs; processes are dynamic, non-controlled SoAs.

11. Langacker (1987) defines the notion of trajector as the figure within a relational profile, while the landmark is any salient structure other than the trajector of a relational predication or the profile of a nominal predication.

12. Talmy's notion of fictive motion is relevant here. Talmy (1996, 2003) distinguishes three kinds of motion events: *factive* or real motion (e.g., *The boy ran from the tree to the fence*); *metaphorical* motion (e.g., *The smell came into the room*), where we experience a non-physical entity as if it were a moving object; *fictive* motion, which captures a perceptual feeling of motion as we scan with our eyes (e.g., *The road runs from the river to the mountains*). When we say that someone *lives over the bridge* there is no explicit motion predicate, but the preposition *over* suggests motion and a path of motion. The verb-preposition clash, discussed below, is resolved through metonymic activation whereby the path and its associated motion stand for a destination of motion at the end of the path, which is compatible with the stative verbal predicate *live*. Because of its metonymic motivation, *lives over the bridge* can be considered a special case of non-perceptual fictive motion, where space is scanned mentally (see Section 3.2. for the notion of mental scanning).

13. This special ability of metonymy to compact meaning arises from its syntagmatic nature (cf. Jakobson & Halle 1971:90–96; Dirven 1993, 2002), whereby metonymy is capable of suggesting relevant associated information that is not explicitly mentioned. The situation with metaphor, because of its paradigmatic nature (based on similarity and contrast), is exactly the opposite. As noted by Ruiz de Mendoza and Peña (2005: 261), metonymy achieves economy in either of two ways. In cases of domain expansion, the speaker works by providing limited information that has to be developed by the hearer into a relevant conceptual representation. This operation is economical for hearers since it is up to them to determine how much conceptual material is to be brought to bear on interpretation. Irrelevant material may thus be left out. In cases of domain reduction, metonymy is a matter of giving global access to a matrix domain and allowing the hearer to determine the relevant subdomain. It is economical for the speaker since it is the hearer that has to determine the relevant subdomain.

14. This construction, which presupposes a degree of agent-control of the action, is rare but attested. A Google search yields the following related example: ... *drunken fans poured themselves onto the field* ... (<http://thediamondangle.com/books/rocky.html>; accessed on August 10th, 2005).

15. Goatly (1997: 105–106) has observed that there is a tendency for the verb to have a different valency when it has a metaphorical meaning than when its meaning is literal, as in *John stuck the label to his suitcase* vs. *John stuck to his promise/to the facts*, etc. We believe that this phenomenon is in part a consequence of the activity of the high-level metonymy PROCESS FOR ACTION. Thus, in *John stuck to his promise* there is implicit agent's control since John is willfully keeping his promise. But the action is presented as if it were a process, thereby highlighting the connection between John and the process in which he is involved, while backgrounding John's actions with respect to keeping his promise. This is also the case of some literal uses of *stick*, as in *The glue stuck to John's hands*, where prominence is given to the process of the glue adhering to John's hands, while whatever John did that triggered the process is left out of focus.

16. Examples (26) and (27) must be analyzed in the same way.

17. Examples accessed on September 20th, 2008, through Google searches, at: http://tomorrow.sg/archives/2008/02/27/budget_2008_speech_on_budget_sta.html, and http://www.motortrader.com.my/asp/forum/post.asp?method=ReplyQuote&REPLY_ID=417534&TOPIC_ID=29296&FORUM_ID=30
18. Example accessed on September 20th, 2008, at: <http://www.flickr.com/photos/snowsoulmate/265785299/>

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Motivation of construction meaning and form

The roles of metonymy and inference*

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1. Introduction

1.1 Goals and organization of the chapter

This chapter is devoted to the presentation and discussion of preliminary results of a series of case studies concerned with the multilevel operation of metonymy in grammar and discourse. These studies are based on authentic texts. The discussion centers on two types of results of these case studies:

- i. The role of metonymy in constructional meaning and form; the discussion of this topic constitutes the bulk of the paper (Sections 2, 3, and 4).
- ii. The primacy of the inferential role of metonymy (Section 5).

The overall conclusions are presented in Section 6.

The following section deals with the corpus and analytical levels in the studies, with previous investigations into the role of metonymy in constructional meaning and form, and with some basic notions and technical terms.

1.2 Corpus and analytical levels

A small corpus was gathered for the case studies, consisting of the texts included in the Appendix. The text in case study A is a short constructed conversation, whose acceptability has been confirmed by a native speaker. Hence it can be regarded as an “authentic” text. The role of metonymy in constructional meaning and form has been investigated at each of the traditional levels of the grammatical hierarchy, i.e. morpheme, lexeme, phrase, clause, sentence (yet bearing in mind the well-known difficulties inherent in a neat distinction of grammatical levels). The chapter is concerned with the role of metonymy in grammatical constructions. Therefore, the important role performed by metonymy in meaning construction beyond the sentence (i.e. discourse meaning) in the corpus is not the primary concern of this essay.

1.3 Previous studies

Metonymy is regarded by cognitive linguists as a fundamental cognitive model, together with metaphorical, image-schematic, and propositional models (Lakoff 1987: 77–90, 154). All of these models play a crucial role in the semantic structure and the grammar of languages, as Cognitive Linguistics has shown. The grammatical relevance of metonymy has only recently begun to be explored, but there is already a substantial body of research demonstrating the metonymic basis of a large number of grammatical phenomena. Langacker (1999: 67) states that though “usually regarded as a semantic phenomenon, metonymy turns out to be central and essential to grammar”, and that grammar is “a rich source for the investigation of metonymy. At the same time, a recognition of its prevalence and centrality is critical not just for describing grammar but for a realistic assessment of its basic nature”. Langacker (this volume: 46), furthermore, adds that grammar is “basically metonymic, in the sense that the information explicitly provided by conventional means does not itself establish the precise connections apprehended by the speaker and hearer in using an expression”; that is, grammar only provides a blueprint of that information.

Among the many studies on the interaction of grammar and metonymy, we may mention the following (the list is simply illustrative):

- i. The metonymic nature of a great many instances of active zone / profile discrepancy (Langacker 1993: 33–35; 1999: 200–201; this volume): topic constructions, certain relational subjects or objects (like *a novel*, standing for the relation ‘X write / read a novel’ in *Zelda began a novel*), certain descriptive adjectives (like *fast* in *Therese is fast*), syntactic “raising” (Langacker 1991b: 189–201; 1995; 1999: 317–360), and relative-clause constructions. Brdar and Brdar-Szabó (2004) is an excellent paper on the cross-linguistic differences between English constructions with metonymy-based “raising” adjectives and the corresponding constructions in other languages.
- ii. Various aspects of clausal constructions (Caballero, this volume; Ziegeler & Lee, this volume; Brdar-Szabó, this volume; Peña & Ruiz de Mendoza, this volume).
- iii. Certain types of conversion (Dirven 1999; Kövecses & Radden 1998: 60, commenting on Clark & Clark 1979; Radden 2005: 16–17; Barcelona 2004).
- iv. Other word-formation processes, including certain types of derivation and compounding (Panther & Thornburg 2002; Radden 2005: 17–20; Thornburg & Panther 2000; Barcelona in press on *bahuvrihi* compounds; Basilio, this volume; Palmer, Rader, & Clarito, this volume).
- v. Aspectual shift (Panther & Thornburg, this volume) and the use of stative lexemes (verbs, adjectives, etc.) in dynamic contexts (Panther & Thornburg 2000).
- vi. Proper names and noun phrases (Barcelona 2004; Brdar, this volume; Brdar & Brdar-Szabó, this volume), including generic NPs (Radden 2005: 20–22; this volume).
- vii. Grammaticalization processes (e.g. Traugott & Dasher 2002; Mihatsch, this volume).

Two useful surveys on the wide-ranging interaction between metonymy and grammar are Ruiz de Mendoza and Pérez Hernández (2001) and Ruiz de Mendoza and Otal Campo (2002). They discuss most of the above-mentioned grammatical areas where metonymy has a motivating role, to which they add nominalization, valency extension

and reduction, modality, and anaphora (on this issue, see also Langacker 1999: Chs. 7, 9; this volume).

1.4 Some basic notions

Before presenting the relevant results of the above-mentioned case studies, I briefly clarify my usage of a number of technical terms that occur throughout the present chapter.

Metonymy

The standard cognitive linguistic notion of metonymy presents a number of problems (referentiality as a necessary requirement for metonymy, ‘stand-for’ relationship, mapping, distinction from metaphor, degrees of metonymicity, strength of the mapping, contingency, implicitness of target, etc.). It would take a long article to discuss each of these in some detail (see e.g. Barcelona 2003a). Therefore, I simply present here my own general definition of *schematic* metonymy and what I take to be the necessary and sufficient conditions for metonymicity:

A metonymy is a mapping of a cognitive domain, the source, onto another domain, the target. Source and target are in the same functional domain and are linked by a pragmatic function, so that the target is mentally activated. (Barcelona 2002: 246)

By ‘functional domain’ I mean a ‘frame’, in Fillmore’s (1985) terms, or an ‘Idealized Cognitive Model’ (ICM), in Lakoff’s (1987) terms. A ‘pragmatic function’ (Fauconnier 1997) is a privileged connection between two roles in a functional domain (e.g. CAUSE-EFFECT, AUTHOR-WORK, etc.). This definition would cover both ‘marginal’, ‘peripheral’ metonymies (cf. the activation of the PANE domain in the concept WINDOW in *John broke the window*) as well as traditionally undoubted instances of metonymy as in *I drank a cup* (where CUP, the CONTAINER, activates its liquid CONTENT). However, ‘peripheral’ instances of metonymy have not been considered for the purpose of this study.¹

Construction

In Cognitive Linguistics, a *grammatical construction* is a conventional pairing of form and meaning, including pragmatic meaning (Fillmore 1988; Fillmore, Kay, & O’Connor 1988; Goldberg 1995; Lakoff 1987: 462–586; Langacker 1987, 1991a). In this broad sense, grammatical constructions include lexemes as well as phrases, clauses, or sentences, since all of these structures are arrangements of form conventionally paired to one or more meanings (Langacker 1987: 58). A construction, more specifically, is an abstraction or schematization of the formal and semantic commonalities ranging over a number of ‘usage events’, or particular individual expressions. The term ‘constructional schema’ is used by Langacker (1987) to designate such schematizations. Morphemes are not regarded by Langacker as types of grammatical constructions because “the simplest kind of symbolic unit is a morpheme, in which a semantic and a phonological structure participate as unanalyzable wholes in a symbolic relationship” (Langacker 1987: 58) and because grammar “involves the syntagmatic combination of morphemes and larger expressions to form progressively

more elaborate symbolic structures. These structures are called ‘grammatical constructions’ (Langacker 1987:82). In the same volume, Langacker states (409): “A grammatical construction consists in the bipolar integration of two or more component structures to form a composite expression”. That is, although for Langacker morphemes are, like constructions, ‘symbolic units’ (i.e. conventional pairings of a semantic structure with a phonological structure), they are not grammatical constructions. However, I include one instance of morphemic meaning in Section 3 on metonymy-motivated constructional meaning, both because of the essential similarity of morphemes to constructions as conventional symbolic units and because other cognitive linguists, e.g. Goldberg (2006), also regard morphemes as constructions.

Prototypical and non-prototypical constructional meaning and form

Characterizing the *prototypical meaning* (or *prototypical sense*) of a construction is sometimes problematic. The problem normally arises with lexemes, which tend to be highly polysemous. Prototypicality is a matter of degree and it is subject to social, cultural, historical, and individual variation. Reliable prototypicality ratings (both as regards form and meaning) can ultimately be obtained through psycholinguistic experimentation. But, since I could not possibly conduct an experiment to test the prototypicality of every sense or form I came across in my corpus, I simply took into account certain indirect “signals” to decide on the prototypical status of a meaning or form.

In cognitive psychology, a prototype is the category member exhibiting the highest number of attributes shared by all or most members of the category and no or few attributes in common with members of neighboring categories, so that the prototype maximizes category consistency and / or category distinctiveness, and, as a result, functions as a model, as a cognitive reference point, for the whole category (Rosch & Lloyd 1978). It is enormously difficult to establish the role of the supposed prototypical constructional meaning in maximizing its semantic difference from semantically neighboring constructions. Therefore, I considered only the number of semantic attributes shared by the purported prototypical constructional sense with the other senses of the same construction.

The distinction between prototypical and non-prototypical forms of constructions is even more problematic. In principle, prototype effects should also occur in the area of constructional form. The *schematization* (Langacker 1987:68–75) of linguistic form provides the latter with a conceptual dimension. This is why linguists distinguish between a phonological structure and its phonetic realizations, or between the phonological or (ideal) graphemic forms of morphemes (or of higher grammatical constructions) and their actual instantiation in discourse. Henceforth, the term *constructional form* is shorthand for ‘phonological / graphemic form of a construction’, not for its actual phonetic instantiation or for its actual written instantiation in one particular usage event. If the schematized forms of a construction are types of concepts, then they can constitute one or more conceptual categories. Consequently, it should be possible for “form categories” to exhibit the same prevailing mode of categorization as other conceptual categories, namely prototype categorization. These form categories can be regarded as small cognitive frames or ICMs, with well-defined elements and relations; one of these relations is the *meronymic*

PART-WHOLE relation, which often gives rise to a metonymic connection between certain forms standing in that relation, especially when a certain form constitutes a salient part of another; see Bierwaczonek (2005) for a detailed discussion of form metonymies.²

Like other prototypical category members, a constructional form is prototypical if it maximizes category consistency and/or category distinctiveness. It maximizes category cohesiveness by being the form with the largest set of “form attributes” in common with other forms in the same form category. For example, the full form of the stative locative construction represented by the two coordinate clauses in *John lives in Manchester and Mary lives in London* is obviously the form with the largest number of form attributes (in this case, the three syntactic constituents described informally as NP, locative V, and locative PP) in common with any other form in the same form category. This category consists of the set of all the morphosyntactic forms of the same type of stative locative construction, including the elliptical form of the second clause of the example *John lives in Manchester and Mary in London*. The full forms of certain English lexemes also often have a larger number of form attributes in common with the corresponding reduced forms than vice-versa. The full forms constitute a small form category with their reduced forms (see below and also Section 4.2).

A constructional form maximizes category distinctiveness when it shares its form attributes with no or few other form categories. For example, most of the “strong” and “full” forms of English lexemes and the “full” forms of English syntactic constructions would have prototypical status in terms of this criterion with respect to “weak” or abbreviated lexical forms and elliptical morphosyntactic constructions. Whereas, for example /ə/, as a “weak”, necessarily unstressed, alternative form to the object pronoun form /hə:/, shares its form attributes with an enormous number of phonological lexical forms (especially in word-final unstressed position: *mother, caller*, etc.), the full form /hə:/ only shares its form attributes with a few lexical items at word-initial position, such as *herb, hurdle* (and even in these cases the “similar” part in those other lexical forms would necessarily be stressed, whereas the full object form is not stressed except when emphatic – the stressed form then constituting a further form in the form category centering around /hə:/). More importantly, the phonological sequence /hə:/ is seldom found word-finally in the phonological form of other lexemes. All of this allows /hə:/ to maximize the distinction of the category ‘object forms of the feminine personal pronoun’ from other lexical form categories, whereas /ə/ minimizes that category distinctiveness. This maximization of category consistency and distinctiveness is the reason why in ambiguous contexts, the form /ə/ is categorized correctly by reference to the full form /hə:/. In a sequence such as /'kɔ:lə/, the phoneme /ə/ would be interpreted as representing the object form (as in *Call her now!*) rather than a part of another lexical form (say the derivational morpheme {er} of *caller* in *Caller now!*) on the basis of the syntactic and pragmatic context and by reference to the full (prototypical?) object form of the feminine personal pronoun: If the context may lead to confusion, the clarification would often invoke that full form directly (*I mean, call her now – I am not talking about any new caller*). The reason is that the strong form has a focal role in category cohesiveness and distinctiveness.

However, there are a number of qualifications to be made regarding the notions of prototypical / non-prototypical constructional form outlined above. One of them is that,

especially with lexical items subjected to inflection, it is not easy to decide which one is the prototypical form of the whole construction. One would be inclined to regard as prototypical the full (i.e. non-abbreviated) and uninflected form of the construction, for example, the citation form of the verb *speak*, rather than the inflected forms *speaks*, *spoke*, *spoken*, *speaking*. However, if the citation form is prototypical, its role in the cohesiveness and distinctiveness of the category is probably due simply to the fact that the average English speaker (doubtless due to schooling) uses it as the reference-point from which to conceptualize the form category (*speaks* is a form of the verb (*to*) *speak*) (for this type of problem, see Barcelona, in preparation b).

Another qualification is that the forms of the same lexeme may cluster around more than one form. This typically occurs in certain morphologically irregular lexemes such as *be*, *have*, or the personal pronouns, which can have one or more specific form categories, each including “strong” and “weak” forms. The cluster including the object forms of the feminine personal pronoun is a subset within the whole set of the forms of the pronoun. The form category including the 3rd person singular forms of the present tense of *be* (*is*, *'s*), the one including the various forms of the 2nd person singular and the 1st and 3rd person plural of *be* (*are*, *'re*) are both subsets within the whole set of the forms of this verb. Therefore, prototypicality in these cases would operate within restricted form categories.

The third qualification is that, as stated above, prototypicality is a matter of degree and it is subject to social, cultural, historical, and individual variation. The attribution of prototypical status is thus, relative to context, which means that few if any meanings or forms should be regarded as prototypical by definition, irrespective of context. Prototypes are *context-dependent* (Roth & Shoben 1983). In the case of constructional form, especially in the relation between strong and reduced forms, full forms are considered prototypical to the extent that they seem to have a focal, cognitive reference-point function with respect to the whole form category, a function which is especially important in categorization tasks in contexts where other clues (syntactic, semantic, or pragmatic) may be missing or insufficient. But in a context of naturally occurring discourse, there would also be arguments for regarding reduced forms rather than full forms as prototypical. For example, weak forms are far more frequent in speech (and in writing in some cases) than full forms, according to one of my anonymous reviewers. However, though frequency is an important criterion in prototypicality, it is by no means the only or the most important one; in other words, it is not clear that the weak forms should be regarded as prototypical even in naturally occurring speech just for that reason. Another contextual factor impinging on the identification of prototypical forms is social and geographical variation: The prototypical member of a form category may differ across different social and/or geographical variants of a language.

The fourth qualification concerns the apparent contradiction, pointed out by the same reviewer, between the prevailing tendency in Cognitive Linguistics to suspect synonymy and recognizing that full and reduced forms would be forms of the *same* construction that would be paired to the same meaning. It must be clear that I do not hold that the full forms are perfectly synonymous with their phonologically or morphosyntactically reduced forms. The non-prototypical form (even if clearly relatable to the prototypical form) inevitably involves at least a subtle distinction in meaning (often of a social, atti-

tudinal, or stylistic nature). The question is, then, are we still in the presence of the same construction or of two different constructions, one pairing full forms with their conventional meaning(s) and another pairing reduced forms to their conventional meanings? This is admittedly a complex issue and not easy to answer. In Barcelona (in preparation b) I suggest that the “non-prototypical” form-meaning pairing should be regarded as an instance of the “prototypical” form-meaning pairing connected to it by “categorizing relations” (Langacker 1987:379).

In any case, when a reduced form (e.g. an elliptical form of a syntactic construction) metonymically activates the full form, it does not “mean” the same thing as the full form. The part simply *activates* the whole form, i.e., the elliptical syntactic form activates the full syntactic form. These cases are different from the one mentioned by the same reviewer (as an argument against the role of metonymy in ellipsis), namely, stand-alone conditionals such as *If you will come with me, gentlemen*, which Brdar-Szabó (this volume) argues convincingly to constitute indirect directive speech acts. These stand-alone conditionals, though probably originating in full conditional constructional forms, cannot be regarded as elliptical variants of the latter since they are routinely used in contexts providing no clues to the recoverability of the ellipted main clause. Whatever the role of metonymy in the putative development of these stand alone conditionals from full forms, they are no longer understood as elliptical and therefore metonymy plays no role in this respect – it plays an essential role, though, in their use as indirect directives. Real instances of ellipsis where a part of the form activates the whole form are discussed in Section 4.2.3.1, among others, in this paper.

The inferential, motivational, and referential functions of metonymy

As Thornburg and Panther (1997) and Panther and Thornburg (1998) have claimed, metonymies are ‘natural inference schemata’. Metonymy has this inferential role because of its ability to mentally *activate* the implicit pre-existing connection of a certain element of knowledge or experience to another. The referential function of metonymies is thus a useful (hence extremely frequent) consequence of their inference-guiding role since what we do when we understand a referential metonymy is to *infer the referential intentions of others* (Nerlich & Clarke 2001). Of course, the output of this inferential activity may become a matter of routine (and get lexicalized), so that the referent of a metonymic noun phrase or of a metonymic nominal construction may, in the right context, be automatically accessible to the interpreter without any cognitive effort. When this metonymy-guided referential meaning is lexicalized and becomes an established sense of a grammatical construction (typically a lexeme), this metonymy may be said to be also ‘motivational’.

Whether or not it has a referential role, a metonymy has a motivational role when it crucially guided the inferences leading to the development of a constructional meaning or form, whose entrenchment then leads it to acquire unit status, i.e. to be used in a largely automatic fashion (Langacker 1987). An important point is that these functions are not mutually exclusive and that they often co-occur in the same usage event. Several examples of these functions are presented in the remainder of this chapter.

2. Some figures

For more details on the statistics in this section, see Barcelona (2005; in preparation a). Four texts (called A, B, C, and D, and provided in the Appendix) form the empirical basis of my analysis. The four texts total 352 words, in which 143 metonymies were found to operate at some level. These numbers show that metonymy occurs very frequently, reflecting the fact that it operates not only at the lexical level, but also, as we have seen, at other grammatical levels (and even beyond the sentence). Moreover, metonymy operates not only on the plane of constructional meaning but also on the plane of constructional form. Motivational metonymies are very frequent. Of the 143 metonymies in the corpus, 79 are motivational metonymies (55.24%) and 63 (44.05%) are purely inferential metonymies (as already stated, the detailed discussion of purely inferential metonymies is left out of this paper). Of the motivational metonymies, those motivating constructional meaning are slightly less frequent (38, i.e. 26.57% of the total of 143) than those motivating constructional form (41, i.e. 28.67% of the total of 143).

Of the total of 38 metonymies motivating constructional meaning, those motivating *prototypical constructional meaning* amount to 27 (71.05% of the 38 total); of these, one motivates prototypical morphemic meaning, 22 motivate prototypical lexical meaning, three motivate prototypical phrasal meaning, and one motivates prototypical clausal meaning.

The total number of metonymies motivating *non-prototypical constructional meaning* is 11 (28.94% of all metonymies motivating constructional meaning); of these, 10 affect lexical meaning and one affects clausal meaning.

Of the total number of metonymies motivating the form of constructions in the four texts, those motivating prototypical constructional form are relatively infrequent overall (four metonymies, i.e. 4.2% out of a total of 41), and they all motivate lexical form. By contrast, the metonymies motivating non-prototypical constructional form are relatively frequent and occur in the four texts (36, i.e. 87.8% of all metonymies motivating constructional form); of them, 25 motivate lexical form, six motivate phrasal form, and five motivate clausal form.

The number of metonymies motivating non-prototypical constructional form seems to increase with the length of the text, especially if the text has an informal colloquial nature, since the frequency of weak forms and ellipses (which tend to be metonymy-based) is higher in this type of text). Length and colloquial character explain why these metonymies cluster in text D.

A number of purely inferential metonymies (19 in all) that guide pragmatic inferencing to a non-conventional meaning of a construction are also found in the corpus; of these metonymies, 10 operate at phrase level and nine operate at clausal / sentential level. In these cases (some of which will be discussed in Section 5), a given grammatical construction (typically one above lexeme level) activates a meaning that does not correspond to any of its (prototypical or non-prototypical) conventional meanings.

For reasons of space, only a representative sample of motivational or purely inferential metonymies affecting constructional meaning or form identified in the four texts is analyzed in the remainder of this chapter. Full treatment will appear in Barcelona (in preparation a).

3. Metonymy-motivated constructional meaning

3.1 Prototypical meaning

3.1.1 Prototypical meaning of derivational morphemes: {ful} (in *armful*; text D)

The suffix *-ful* is a derivational morpheme that derives nouns from nouns. It originates in the adjective *full*. Its meaning is ‘the quantity of X that fills or would fill Y’ (adapted from Webster’s, the OED, and the OALD, s.v. *-ful*); in this case, it refers to the “amount” of Mary’s body that fills Tyrone’s arm(s). This standard sense of the morpheme seems to be based on the metonymy DEGREE TO WHICH A CONTAINER IS FILLED FOR QUANTITY OF CONTAINER’S CONTENT. That is, the domain of quantity is activated not directly by the domain of content, but by the domain of the *degree to which the container has been filled* by the content, within the ICM of FILLING. In this example, the content has reached the maximum degree of filling and the container (a metaphorical one in this case, namely Tyrone’s arms) is “full” as a result. This metonymy also motivates other conventional linguistic expressions in which a measure of the capacity of a container is a metonymic source activating a certain quantity of the content: *Give me half a glass of beer / She just drank two inches*).

The “container” (sometimes a metaphorical one) is specified by the lexical morpheme, {arm} in this case, in the derived noun. Other examples of the use of this morpheme are *bottleful*, *boxful*, *canful*, *worldful*, *churchful*, etc., and metaphorically, *armful*, etc. That is, a *churchful* denotes ‘as many as a church can hold’, the meaning of *bottleful* is ‘as much as a bottle can hold’, etc. (both definitions taken from the OED).³

3.1.2 Prototypical meaning of words arising by derivation

Of the various types of morphological derivation (affixation of derivational morphemes, conversion, lexical stress alternation, compounding, etc.), certain types of compounding and conversion occurring in the corpus have been found to be motivated by metonymy.

3.1.2.1 *Compounding: The quantifier quasi-determiner and quasi-pronoun* How much...? (text A). To the extent that this combination can be regarded as a semi-institutionalized compound lexeme, its prototypical quantitative meaning seems to have arisen on the basis of the metonymy UPPER END OF QUANTITATIVE SCALE FOR WHOLE SCALE (see Kövecses & Radden 1998: 51). The marked expression would be *How little did you buy?*

3.1.2.2 *Conversion of lexical category: The noun* Interstate (text C). *Interstate* means ‘interstate freeway’ in this paragraph. In sentences (4) and (6) it is later confirmed that *interstate* designates a type of highway. The use of the lexeme *interstate* as a noun (even in the plural) in the sense ‘interstate freeway’ is quite conventional in American English, and it arises by conversion from its adjectival use, according to Webster’s and other dictionaries (see below).⁴ Its grammatical behavior is not restricted to that of a pre-head modifier; it also occurs as the head of an NP that can perform a variety of syntactic functions: subject, object, subject complement, etc.⁵

This is one of the many cases that raise an important issue in grammatical theory and in lexicology, namely, that of the limits of the lexeme. The issue is this: When a lexical form, without changing the basic form of its lexical morpheme, develops a special meaning and

behaves grammatically in a very different way from the one it displays in its prototypical sense, should it be regarded as a different new lexeme, or just as a special sense of the same lexeme? The answers to this question can be reduced to two: (a) the new form-meaning pairing is a special member of the old lexeme, even if it changes its grammatical class; (b) the new form-meaning pairing is treated as a new different lexeme only if its association to the new meaning brings about a change of grammatical class, that is, a conversion from verb to noun, noun to verb, noun to adjective, etc., as in *run* (noun) vs. *run* (verb). The second answer is the solution adopted by most standard dictionaries, although, probably for practical organizational reasons, they are not always consistent in this respect.

In this paper I have adopted criterion (b). This means that *interstate* in the sentence under analysis is to be treated as a noun rather than an adjective. However, the situation is not that simple. The original sense of the adjective lexeme *interstate* in American English was ‘between (U.S.) states’, as in *interstate commerce* or in *interstate border*, and, in this sense, it functions almost exclusively as a syntactic modifier never taking the plural morpheme. These grammatical constraints, and the semantic fact that the lexeme designates a relation rather than an entity, probably leads most standard dictionaries (like Webster’s, the OED, and the OALD) to class the lexeme as an adjective. This is the only word class label given for *interstate* in Webster’s; the OED and the OALD also register its noun use, though they do not reserve a separate entry for it.

In text C, the lexeme *interstate* does not change the form of its lexical morpheme in its new meaning ‘interstate freeway / highway / expressway’. Its meaning is quite different, though, as the lexeme does not simply denote a relation in this text but a type of entity characterized by being involved in a relation, i.e. a typical nominal meaning.

However, the key factor in deciding whether we have one lexeme with two meanings (thus polysemy) or two different lexemes with the same basic form is whether or not the difference in meaning brings about a change in grammatical class. With the relational sense ‘between states’, the written form *interstate* and its corresponding spoken form code at best a non-prototypical adjective, since they are non-gradable (**interstater*, **more interstate*, **very interstate*) and they cannot be used predicatively (**This road is interstate*). On the other hand, when the same forms denote a type of entity (‘a highway between states’), they code a prototypical or near-prototypical count noun (*The federal government is building an expensive new interstate*), since they can then take plural morpheme (*All interstates are necessary*, they can be the head of an NP with typical nominal syntactic functions (*The new interstates increased the mobility of the American people*), and they may occasionally take the genitive morpheme (*The interstate’s length is 2000 miles*).

Taking into account lexicographic tradition and the grammatical behavior of these forms in the two different senses registered above, I will assume the existence of two homonymous lexemes, each symbolizing a different though related meaning and belonging to a different grammatical class: ‘interstate-adjective’ (a non-prototypical adjective) and ‘interstate-noun’ (a prototypical noun). The latter lexeme arises from the adjective lexeme. This is, therefore, an instance of adjective-noun *conversion*.

This conversion is due in part to a process of entrenched contextual ellipsis of the head in the phrasal constructions ‘interstate highway / freeway / expressway’ (‘entrenched’ in Langacker’s (1987) sense). Ellipsis is very often motivated by metonymy, as we see below.⁶

There seem to be two *metonymies* involved in the ellipsis and in the subsequent conversion and creation of the noun lexeme.

At the formal level, the ellipsis stage (which still coexists with the emergence of the new lexeme) is made possible in part by the metonymy MODIFIER FOR MODIFIER-HEAD CONSTRUCTION (see Section 4). At the level of content, the conventional meaning of ‘interstate-noun’ is motivated by the metonymy DISTINCTIVE POLITICAL-GEOGRAPHICAL PROPERTY (LINKING TWO STATES) OF A FREEWAY / HIGHWAY/ EXPRESSWAY FOR THE FREEWAY / HIGHWAY/ EXPRESSWAY, which is a manifestation of the higher-level metonymy DISTINCTIVE PROPERTY OF A CATEGORY FOR THE CATEGORY (‘being between states’ for ‘freeways located between states’). We find the same metonymy underlying the use of the form *black* for ‘black person’; see Kövecses and Radden (1998). This metonymy accounts for the choice of the property or relation INTERSTATE as a metonymic reference point activating the whole frame INTERSTATE FREEWAY / HIGHWAY/ EXPRESSWAY, and in this respect, it provides part of the conceptual basis for the MODIFIER FOR MODIFIER-HEAD CONSTRUCTION metonymy mentioned above, which selects, on the constructional form level, the lexeme *interstate* (adjective) as the metonymic *salient* reference point for the conventional constructional form ‘interstate freeway’. In this way, the ellipsis of the head *freeway* is motivated both on the level of meaning and on that of form.

The lexeme *interstate* (noun) is a recent addition to the lexicon; the corresponding adjective preceded it historically and is still the lexeme most frequently associated with the form *interstate* or its corresponding spoken form. Therefore, whenever *interstate* (noun) is meant by a speaker or writer, the listener or writer depends in part on the overall context to infer that the form used instantiates the noun rather than the adjective. This context then triggers the two metonymies mentioned above, which guide inferencing to the right morphosyntactic class. In this sentence, the insertion of *interstate* in the sequence *driven west on Interstate 70* clearly sets up the ROAD TRAVELLING FRAME (specifically set up by *driven west ... from Denver to the Continental Divide*), and the HIGHWAY FRAME (specifically set up by the sequence *X 70*, because U.S. highways are normally named by post-nominal numerals, e.g. *U.S. Highway 101, Interstate 70*). The activation of both frames constitutes a powerful trigger for the operation of the content-level and form-level metonymies mentioned above, which guide the inference of *Interstate* as a form of *interstate* (noun). In other words, these metonymies, besides having a motivational role in the creation of the lexeme, also often have an inferential role in the categorization of its forms in context. This role is still necessary, given that *interstate* (noun) often alternates in discourse as a way of designating a type of highway (see e.g. http://en.wikipedia.org/wiki/Interstate_70), with phrases such as *interstate highway*, where *interstate* functions as a pre-nominal modifier.

3.1.2.3 *Conversion: The verb park* (sentence (6) of text C; in the form parking). The original sense of the noun *park* (borrowed from Old French *parc*) was in medieval English law ‘an enclosed tract of land, held by royal grant or prescription, for keeping beasts of the chase. (Distinguished from a *forest* or *chase* by being enclosed, and from a *forest* also by having no special laws or officers)’ (OED). That is, it was an area of land legally preserved for hunting.

A number of more specific meanings seem to have evolved from this one, possibly by metonymy ('area of land containing pasture, woods, lakes, etc., surrounding a large country house or private estate'; 'an area of public land, specifically an area in or near a city, usually laid out with walks, drives, playgrounds, etc.'). One of these later senses is 'a space set aside for leaving vehicles temporarily' (Webster's; also registered as sense 5b by the OED). This is the sense we are interested in. On the basis of this sense of the *noun*, a new lexeme, namely the verb *park*, is derived by conversion. (The OED explicitly states that the verb comes from the noun.) This conversion is based on a metonymic shift: DESTINATION FOR MOTION. This is a frequent metonymy that motivates numerous other instances of noun-verb conversion, like the verb *to land*, *to porch* (a newspaper), *to short-list the candidates*, etc. (see Kövecses & Radden 1998: 55, 60; Dirven 1999).

Obviously, *parking* here is a nominalization of the verb *park*. The motivation for all nominalizations is metaphorical (the reification metaphor discussed by Langacker 1991a: 22, 34–35, 363–365). So, in this case, metonymy motivates the noun-to-verb conversion, and metaphor motivates in part the derivation of the verbal noun *parking*.

3.1.2.4 *Compounding: The noun breakfast (text D)*. The conventional meaning of this noun lexeme is in part based on metonymy. It results from the combination in Old English of the lexical morphemes {breca} 'break' and {fast} 'fast', i.e. 'abstain from eating'. Even though the lexeme was formed in Middle English, its two components are still transparent in Present Day English. The definition of the prototypical sense of this lexeme is, according to the OED, 'That with which a person breaks his fast in the morning; the first meal of the day'. The metonymy is BREAKING FAST FOR THE MEAL WITH WHICH THIS IS DONE, i.e. ACTION FOR INSTRUMENT.

3.1.2.5 *Conversion of a subcategory into another subcategory of the same lexical category: The transitive verb pass (sentence (4) of text C)*. The sense in which this verb is used here is either 'to go by a person or thing' or 'to proceed past a person or thing, to leave behind or on one side as one goes on', both registered as sense 28 by the OED. This sense is derived, as the OED states, from the intransitive sense 'to go by', registered as number 12 by the OED, which derives, in turn, according to the OED, from sense 1 ('to go on, move forward, proceed, to make one's way'). However, the two transitive sub-senses in OED entry 28 are, as the OED itself declares, even more common than the intransitive senses; in fact, most of the senses of the lexeme are transitive or causative, and are connected to sense 28, as they profile a spatial or metaphorical landmark as direct object. Therefore, sense 28 is clearly one of the prototypical senses around which the polysemy network in this lexeme is organized. The extension from sense 12 to sense 28 simply consists of giving focal prominence to an element (the landmark) that is already implicit in the basic semantic configuration responsible for sense 12 and does not seem to be due to metonymy. However, a metonymic motivation can be claimed for the extension of sense 1 to sense 12. The general sense 'to go on' implies the possibility that the path of forward movement includes a number of salient reference points, a number of static landmarks: When movers make their way, they often proceed by, along, next, or past, a number of static spatial reference points. That is, the notion of FORWARD MOTION includes, as a specific subclass, the notion of FORWARD MOTION BY / ALONG A STATIC ENTITY. But in sense 1, this possibil-

ity is not even part of the profile of the lexeme, i.e. of the conceptual structure coded by the lexeme. This possibility is simply invoked on the basis of encyclopedic knowledge. Now the extension from FORWARD MOTION (CATEGORY) to FORWARD MOTION BY / ALONG A STATIC ENTITY (MEMBER) can be claimed to be guided by the metonymy CATEGORY (FORWARD MOTION) FOR MEMBER (FORWARD MOTION BY / ALONG A STATIC ENTITY). In sum, sense (or sense-group) 28, the relevant sense in this passage, seems to have been *indirectly* motivated by metonymy. Together with other factors, this semantic change brings about a change in lexical subcategory (intransitive → transitive).

3.1.2.6 *Conversion of a subcategory into another subcategory of the same lexical category: The absolute relative adverb why (text D).* This lexeme occurs in Tyrone's second turn (*Is that why you ate so little breakfast?*), meaning 'the reason for which' (sense 3 in Webster's). This lexeme seems to be derived from the homonymous interrogative adverb meaning 'for what reason?' (as in *Why did he do it?*) when used in nominal indirect interrogative clauses,⁷ such as *Tell me why he went*, which typically have a direct object function within the main clause. This use of interrogative *why* as the element introducing an embedded nominal clause opens up the way for its use in other types of embedded subordinate clauses, in this case, a relative clause with an implicit antecedent ('reason').

The passage from the interrogative meaning and use to the relative meaning and use probably comes about through a metonymy. The meaning of the interrogative adverb in indirect interrogatives may be summed up as involving *request for information (interrogation) about the reason or cause for a certain state of affairs* (this state of affairs being described by the rest of the subordinate clause). This complex meaning is a reference point for only one of its salient components, namely, the reason for the state of affairs. That is, INTERROGATION ON THE REASON FOR A STATE OF AFFAIRS maps onto THE REASON FOR THE STATE OF AFFAIRS, which thus becomes highlighted, eventually displacing the questioning part of the meaning of the lexeme. From 'for what reason (X happens)', *why* comes to mean 'the reason for (X happening)'. This new meaning brings about the creation of a new homonymous lexeme (a relative adverb lexeme).

This activation of the REASON component in the original meaning of this adverb seems to have been mediated by the, chronologically older, non-absolute use of the adverb preceded by an explicit mention of the lexeme *reason*, as in *Is that the reason why you ate so little breakfast?* This use is not restricted, in contrast to the absolute use of the relative adverb, to instances in which the relative clause is the predicate of the complex clause (OED: *We can perceive the reason why a small proportion of carbonic oxide is always formed during the decomposition of nitre by charcoal*).

3.1.3 *Prototypical lexical meaning arising through polysemy*

This sub-section deals with the cases in the corpus in which a prototypical sense of a lexeme has emerged as an extension from another (historically older) sense of the same lexeme. Therefore, these cases are in principle different (despite their similarities) from the derived lexemes arising by conversion: Though most of the conversions discussed in the previous section are historically instances of polysemy, they should no longer be regarded

as such from a synchronic perspective, as the new meaning gave rise to the emergence of a different lexeme, not just to an additional sense within the same lexeme.

3.1.3.1 *The prototypical sense of the verb drive (text C, sentence (1), appearing as driven).* This verb is used in the text in one of its synchronically prototypical senses, namely 'drive a car', an extension from one of the senses of the verb *drive* in the OED ('to guide a vehicle or the animal that draws it, to act as a driver'), which itself derives by metonymy and metaphor from a more general sense (details in Barcelona, in preparation a). The role of metonymy and metaphor in the extension leading from OED sense 2 to the 'drive a car' sense is also quite complex (details in Barcelona, in preparation a), but at least the following metonymies can be pointed out: CATEGORY (VEHICLE) FOR SUBCATEGORY (MOTOR VEHICLE) + CATEGORY (MOTOR VEHICLE) FOR PROTOTYPICAL SUBCATEGORY ((MOTOR)-CAR).

3.1.3.2 *The prototypical quantifier and multal meaning of lot in the quasi-determiner phrase a lot (of) and the quasi-pronominal phrase a lot (text D).* For limitations of space I can only present here a brief summary of the evolution of the meaning of this noun from its historically basic sense (synchronically, still one of the prototypical senses in the polysemous network of the noun). I briefly discuss the role of metonymy in the emergence of its quantifier sense and of its more recent multal sense. The various steps leading to the purely quantifier sense and the additional multal sense are summarized in Table 1.

Before continuing, an important fact to highlight is that both the basic sense and most of the extended senses recorded in the table are still alive, and that their metonymic connection is not only a matter of history; that is, even if the various extended senses are accessed and used directly by present-day native speakers, the semantic connections of these senses to each other (including their metonymic connections) can be reactivated at any time for various purposes.

As can be seen, the first three extended senses (what I call OED 1b, OED 1c, OED 2)⁸ are motivated (among other factors) by metonymy. Here I discuss only the motivation of the initial quantitative sense and of the multal sense (for a full treatment of the role of metonymy in the semantic evolution of *lot*, see Barcelona 2006b, in preparation a).

Prototypical sense 2 paves the way for another sense of the lexeme, OED sense 8a:

A number of persons or things of the same kind, or associated in some way; a quantity or collection (of things); a party, set, or 'crew' (of persons); also, a quantity (of anything). Now only *colloq.*, except with reference to articles of commerce, goods, live stock, and the like. Often with some degree of depreciation, either implied, or expressed by an epithet (cf. sense 3).

OED sense 3 is now obsolete:

In the *Ormulum*: A part, portion, or division of anything; a number of things forming part of a larger whole. *Obs.* (cf. sense 8).

OED sense 3 is older than sense 8 but later than sense 2, and thus seems to have been a link between senses 2 and 8. The OED entry for sense 8a actually includes a conglomerate of senses. A detailed study of these senses would require too much space, but they all presuppose the two (now obsolete) senses gathered by the OED in entry 3: 'a part, por-

Table 1. An outline of the role of metonymy in the extension of lot from a concrete to a multal quantifier noun

Main motivation of the extensions: A chaining of a series of metonymies (Barcelona 2005; Hilpert 2007), and one metonymy-based metaphor (Barcelona 2000b; Radden 2000)

Basic sense: ‘Object used in deciding a matter by chance by drawing / casting lots’ (OED 1a)

Extensions:

- 1 Metonymy: INSTRUMENT (OBJECT USED IN THE ACTION OF CASTING LOTS) FOR ACTION (THE ACTION OF CASTING LOTS)
→ (OED 1b) ‘Casting or drawing of lots to obtain a decision’
 - 2 Metonymies:
 - ACTION (CASTING LOTS) FOR RESULT (DECIDING / CHOOSING BY CASTING LOTS)
 - ACTION (ACT OF DECIDING / CHOOSING BY CASTING LOTS) FOR RESULT (THE ACTUAL CHOICE MADE BY CASTING LOTS; specifically THE COURSE OF ACTION DECIDED IN THIS WAY)
 - (OED 1c) ‘The choice resulting from the casting of lots’
 - 3 Metonymy: ACTION (THE COURSE OF ACTION DECIDED IN AN ACT OF CHOOSING; specifically a division of property) FOR PATIENT (THE OBJECT DIRECTLY AFFECTED BY THAT COURSE OF ACTION; specifically, THE PIECE OF PROPERTY AFFECTED BY THE DIVISION SO DECIDED / CHOSEN)
→ (OED 2) ‘What is assigned by lot to a person as his share or portion in a distribution of property’
 - 4a Metonymy: MEMBER ([PORTION OF] PROPERTY) FOR CATEGORY ([PORTION OF] ANY ENTITY)
→ (OED 3a, obsolete) ‘A part, portion, or division of anything’
 - 4b Metonymy-guided implicature. Metonymy: ENTITY (PORTION) FOR SALIENT PROPERTY (MEASURABILITY)
→ (OED 3b, obsolete) ‘A **number** of persons or things forming part of a larger whole’
 - 5 Metonymy: ENTITY (PART IN A WHOLE) FOR SALIENT PROPERTY (CONNECTION TO PARTS AND TO WHOLE) → Metaphor CATEGORY STRUCTURE IS PART-WHOLE STRUCTURE
→ (OED 8a-1) ‘A number of persons or things of the same **kind**’
Metonymy: MEMBER (PEOPLE OR THINGS FORMING A CATEGORY) FOR CATEGORY (ANY ENTITIES FORMING A CATEGORY)
→ (OED 8a-2) ‘A quantity of entities belonging to any **category**’
 - 6 Metonymy: WHOLE SCALE FOR UPPER END OF THE SCALE
→ ‘A **great** number or amount’
-

tion, or division of anything’ and ‘a number (of things or persons) forming part of larger whole.’⁹ This second sense appears in examples cited by the OED (spellings adapted to contemporary English) such as *This lot of all Christian folk*, i.e. ‘This portion of all Christian people.’

The first of these senses is directly linked to sense 2 and motivated by a generalization of the notion ‘(portion of) property resulting from its division by lot’ to the notion ‘(portion of) any entity resulting from any type of division’. This generalization is facilitated, if not directly motivated, by the metonymy MEMBER ([PORTION OF] PROPERTY) FOR CATEGORY ([PORTION OF] ANY ENTITY). This would be the *fourth metonymic extension*.

The second of these senses is due to the highlighting of an implicature invited by the notion ‘portion resulting from the division of an object into parts’. This implicature is ‘the portion can consist of smaller parts which can be counted, and even if the portion cannot be divided into smaller parts, its “size” can be measured’. In other words, the notion of

portion invites the notion of *quantity* or *amount*. This implicature is guided, in my view, by the metonymy ENTITY FOR SALIENT PROPERTY. A salient property of a portion is its measurability (quantifiability), hence the sense ‘*number* (of things or persons) forming part of a larger whole’.

These two metonymies now definitively free OED sense 3, and its heir, sense 8a, from any direct connection to the original ‘lot-casting’ frame. This decontextualization, together with the fact that people or things are often understood as members of classes (categories), explains why the lexeme *lot* can now be applied to a ‘*number* of people or things’. The importance of the obsolete senses in OED entry 3 for the emergence of the present day quasi-determiner and quasi-pronoun is that they contribute the first *quantitative* sense of the noun lexeme *lot*.

The main senses in 8a then seem to arise as a generalization from the second sense in OED entry 3: from ‘*number* (of things or persons) forming part of a larger whole’ to ‘*number* of persons or things of the same kind, or associated in some way’, and from the latter to ‘*a quantity* of anything’. The various parts of a whole have at least one attribute in common, namely, their connection to each other and to the whole. This inherent attribute can be metonymically highlighted: ENTITY (PART IN A WHOLE) FOR SALIENT PROPERTY (CONNECTION TO PARTS AND TO WHOLE) and this metonymic highlighting motivates the metaphorical mapping of the notion PART-WHOLE STRUCTURE onto the notion CLASS / CATEGORY STRUCTURE, since the members of conceptual categories or *kinds* also show various types of connections linking the members to each other and to the category. This metaphor licenses the extension from ‘*number* (of things or persons) forming part of a larger whole’ to ‘*number* of persons or things of the same kind, or associated in some way’, i.e. to ‘*number* of people or things forming part of a conceptual category’.

The latter sense is generalized to ‘*a quantity* of anything’ on the basis of the metonymy MEMBER (PEOPLE OR THINGS FORMING A CATEGORY) FOR CATEGORY (ANY ENTITIES¹⁰ FORMING A CATEGORY), i.e. anything forming a category.

As the OED states, the senses gathered in entry 8a are now in restricted use, but they contribute the abstract quantitative sense applied to entities in the same category that leads directly to the present day quasi-determiner and quasi-pronoun. One normally uses the determiner *a lot of* or the pronoun *a lot* to denote a number of entities belonging to the same category (or to an amount of the same type of substance). In *I ate a lot of chocolate and a lot of biscuits* one refers to *two* amounts of two different categories, and in *I ate a lot*, one (in principle) refers to an amount of edibles.

The *multal* meaning of the present-day determiner and pronoun (‘*a great number* or *amount*’) is registered in entry 9 of the noun lexeme *lot* in the OED, which defines it as follows:

A considerable number, quantity or amount; a good deal, a great deal. Used in sing. (*a lot*) and plur.; also as quasi-adv. Often *absol.*, without explicit mention of the persons or things intended. Also with adjective, as *a good lot*, *a great lot*, (*this, that*) *little lot*.

As can be seen, this sense is in fact the determiner and pronominal sense. It seems to be motivated by the metonymic connection between the notions A QUANTITY OF ANY NON-COUNT ENTITY OR A NUMBER OF ANY COUNT ENTITIES FORMING A CATEGORY, on the one

hand, and A LARGE QUANTITY OF SUCH ENTITY / A GREAT NUMBER OF SUCH ENTITIES, on the other. The route of extension can be reconstructed as follows: The notion ‘a number of entities / an amount of an entity’, that is, the notion of QUANTITY, can evoke the top degree in the scale of quantity, on the basis of the metonymy WHOLE SCALE FOR UPPER END OF THE SCALE (Radden & Kövecses 1999: 32). That is, the notion of quantity can evoke metonymically the notion ‘high / great quantity.’ Other instances of semantic intensification seem to be motivated by the same metonymy.¹¹

Once the noun *lot* acquires the sense ‘a great number or amount’, its frequent use as the head of the indefinite NP *a lot* before partitive *of* (*a lot of books / money*) becomes lexicalized as a sort of compound lexeme and grammaticalized in the determinative syntactic function. This NP thus becomes entrenched as a quasi-determiner.¹² As Langacker (this volume: 60) correctly argues, *a lot of* has not yet become a full quantitative determiner, since the major constituency break still occurs after *a lot*, not after *of*. However, NPs of the form *a lot of* + *Noun* exhibit a variation in profile: when the profile is determined by the prepositional complement (*A lot of students have sat for the exam*; note the plural verb, determined by *students*), the behavior of *a lot of* approximates that of prototypical determiners.

In Table 1 the metonymies motivating the various semantic extensions are claimed to be chained to each other and to interact with one metaphor. There is no space to discuss in any detail the issue of metonymic chaining. Suffice it to say that the chain represented by Table 1 is (in the terminology proposed in Barcelona 2005) a *mixed metonymic chain*, because the metonymies are not always directly connected to each other. For example, the two metonymies motivating extension 5 are connected by an intervening metaphor; the connection between the second metonymy motivating extension 2 and the metonymy motivating extension 3 is facilitated by the non-metonymic highlighting of a conceptual element in the historical ‘lot-casting’ frame, namely the division of property as one of the typical issues to be decided. Only the three metonymies motivating extensions 1 and 2 seem to be directly linked to each other, as the target conceptual entity of the first one becomes the source of the second one, whose target becomes the source of the third one. However, since all of the metonymies that seem to have motivated the extensions of *lot* are directly or indirectly connected to each other, they can be claimed to constitute a metonymic chain.¹³

3.1.3.3 *The prototypical quantitative meaning of the determiner much in the comparative quasi-determiner phrase as much (as) and in the comparative quasi-pronominal phrase as much (text D).* For the sake of brevity, the investigation of the role of metonymy in the development of the quantitative meaning of *much* (‘a great amount’) is omitted here.¹⁴ This sub-section is simply concerned with the development of the quantitative meaning of the compound comparative quasi-determiner *as much (as)* (*They have as much money as you*) and of the homonymous pronoun. The phrase we find in text D (*as much*) is a phrasal pronoun. There exists also an adverb homonym (*He loves you as much as John*).¹⁵

The prototypical meaning of the determiner lexeme *much* profiles the top region on the scale of quantity. But the prototypical meanings of the compound comparative quasi-determiner *as much (as)* and of the homonymous compound comparative quasi-pronoun

do not select any specific region on that scale. In both of these compound lexemes, *much* becomes a lexical morpheme, {much}, which retains only a general, neutral quantitative meaning. This subtle semantic shift is, in my view, motivated by the same metonymy that motivates the neutral quantitative meaning of *how much* (see 3.1.2.1 above): UPPER PART OF SCALE FOR WHOLE SCALE. That is, the neutral activation of a quantitative measurement scale is conventionally activated in English by its upper part. This metonymy seems to be quite productive in English: *How old are you? / He is six feet tall*, etc.

The development of the quasi-pronoun *as much* from the homonymous compound quasi-determiner lexeme preserves the general quantitative meaning of the latter. The earliest instances of the pronominal use of *much* registered by the OED are dated later than the earliest instances of the determiner use. Hence the pronominal use of *as much* must have followed its determiner use. The emergence of the quasi-pronoun homonym is due, as in the pronoun *a lot*, to ellipsis guided by metonymy. The ellipsis of the nominal head in the complex noun phrase construction *as much + NP+(as)* eventually led to the emergence and entrenchment of the quasi-pronoun with a very similar meaning ('an identified type of entity in the same number or amount') to that of the quasi-determiner ('the same number or amount of X (a variable type of entity)').

The ellipsis seems to have been motivated in part by SALIENT PART OF FORM FOR WHOLE FORM. The most salient part of the NP schema *as much + NP* is the form *as much*, because it provides the essential quantitative meaning to the overall NP, and because (as required by ellipsis) the ellipted noun phrase can be supplied from context (in text D, the ellipted noun phrase is necessarily *food*). This metonymy is both inferential and motivational.

Similar remarks can be made about the development of the quasi-pronoun *a lot*.

3.1.4 *Prototypical meaning of phrasal constructions: The Continental Divide as a phrasal name (text C)*

The OED (s.v. *continental*) describes the meaning of this phrase, which it terms a "special collocation" of the adjective *continental*, as 'a divide separating two river systems of a continent; *spec.* the divide in North America separating rivers flowing into the Atlantic from those flowing into the Pacific'. The same dictionary registers s.v. *divide* this meaning for the phrasal name *the (Great) Continental Divide*: 'that of the Rocky Mountains'.

The conventionalization of this phrase as an alternative name for the Rocky Mountain ridge can be regarded as the result of taking one of the roles performed by the Rockies within the cognitive domain of NORTH AMERICAN GEOGRAPHY, namely that of CONTINENTAL BASIN DIVIDE, as a reference point to activate the whole ROCKY MOUNTAINS frame. This would be a PART FOR WHOLE metonymy: SALIENT PROPERTY OF AN ENTITY (ROLE AS CONTINENTAL BASIN DIVIDE) FOR THE ENTITY (THE ROCKIES). The knowledge about the Rockies shared by most speakers includes their role as a divide separating rivers flowing into the Atlantic from rivers flowing into the Pacific, apart from other salient properties such as their size or their location. This role is used to activate the whole conceptual frame.

This is an entrenched metonymic model that motivates the conventional meaning of the phrasal construction *The (Great) Continental Divide* so that once the construction has been mastered, the metonymy normally plays no role in guiding an inference to its mean-

ing. However, in ambiguous contexts or with speakers not familiar with the construction, the metonymy would again be instrumental in arriving at the conventional prototypical meaning of the expression.

3.1.5 *Prototypical meaning of a clausal construction: The epistemic conditional*

“If you have ever driven west on Interstate 70 from Denver to the Continental Divide, you have seen Mount Bethel”

The sentence under scrutiny is a sentence consisting of a complex clause, which in turn includes a subordinate conditional *if*-clause. The meaning we are concerned with here is the *overall prototypical grammatical or constructional meaning* of the whole complex clause.

The canonical meaning of the type of conditional construction represented by this complex clause is ‘epistemic necessity’. The sequence protasis-apodosis in it, in its most obvious interpretation, can be glossed as: ‘If I can *assume* it to be a true fact that you have ever driven west on Interstate 70 from Denver to the Continental Divide then I *necessarily have to conclude* that you have seen Mount Bethel’.

This clause is an instance of the type of conditional constructions called *epistemic conditionals* by Sweetser (1990: 116–117; 1996), who claims that they are a metaphorical extension from what she calls *content conditionals*, also called *predictive conditionals* by Dancygier (1993). ‘Content’ or ‘predictive’ conditionals are the normal, regular conditionals, as in *If it is sunny, she’ll go out*.

In the semantic structure of content or predictive conditionals, according to Sweetser (1990: 115), there is often assumed to be a causal or at least an “enablement” relationship, positive or negative, between protasis and apodosis: The most likely interpretation of *If it is sunny, she’ll go out* is that the occurrence of sunny weather will cause or enable her to decide to go out (and conversely, that the absence of sunny weather will cause or enable her to decide not to go out).

There is not enough space in this paper to discuss Sweetser’s claim that the extension from content to epistemic conditionals is motivated by metaphor. As I have argued elsewhere in detail (Barcelona 2006a), there are powerful grounds for claiming either that metonymy underlies the metaphor motivating the extension or that it motivates the extension directly, therefore making a metaphorical account unnecessary. In this Section I will only discuss the second of these two alternative metonymic accounts, i.e. the exclusively metonymic motivation for the extension.

Before examining this metonymic account, it is necessary to explore in some greater depth the role of epistemicity in conditional constructions. In a predictive conditional, the speaker as conceptualizer (the speaker is normally also the conceptualizer or reasoner) is not normally in the ‘scope of predication’, and is simply in the ‘ground’, to use Langacker’s terms (1999: 5–7, 22, 49–53), whereas the connection between protasis and apodosis is in profile, and thus included in the scope of predication. The construal of the situation is thus objective rather than subjective (Langacker 1999: 6; 1987; 1991a; 1991b: Ch. 12); that is, the situation is not primarily *presented* as conceptualized by the speaker. However, the speaker / conceptualizer, as part of the ground, is always present, and he / she necessarily takes a stance towards the validity of the causal or enabling connection between protasis and apodosis. Such a stance is, in Fillmore’s (1990a, b) terms, an ‘epistemic stance’,

and it simply remains implicit in the normal understanding of these constructions. But it is presented as being in the conceptual foreground (what Langacker calls the 'objective scene' or 'immediate scope') in epistemic conditionals, in whose interpretation it figures prominently and explicitly.

Once the epistemic domain becomes prominent in the meaning of a conditional sentence, the sequence of verb forms is free from the constraints required by a predictive meaning. This greater freedom brings about the conventionalization of a number of special morphosyntactic forms for epistemic conditional constructions. These forms exhibit a variety of verb phrase form sequences that would normally be inadequate to symbolize a predictive meaning: future-future, past-present, present-present, perfect-perfect, etc. (see Sweetser 1996; Fillmore 1990a, b). This conventional epistemic conditional meaning is paired to a set of conventional forms, resulting in a number of *conventional epistemic conditional constructions*. The sentence under analysis exhibits one of these forms (perfect-perfect).

The highlighting and consequent prominence of the speaker's epistemic stance can be claimed to be due to metonymy. That is, the relation or proposition consisting in a causal connection between a hypothetically satisfied condition and a result activates its salient concomitant sub-relation, namely the built-in epistemic conditional connection between satisfied condition and result.

This is a WHOLE FOR PART metonymy, because the assertion of the causal link between the satisfaction of a hypothetical condition and the production of the result implicitly includes a premise-conclusion connection between both, since the speaker / conceptualizer always takes an epistemic stance in all types of conditionals. Let us examine again the content conditional *If it is sunny, she'll go out*. A possible paraphrase capturing the speaker's implicit epistemic stance would be (with the words reflecting the epistemic stance in parentheses): 'If (it is a fact that) the weather is sunny, then (I can conclude that) this fact will cause or enable her to decide to go out'. This internal metonymic mapping triggers the inference to epistemic meaning – epistemic necessity – in the text analyzed in this case study.

This metonymic explanation also accounts for the structural parallelism between predictive and epistemic conditionals because in both types of constructions the basic elements are the same (speaker / conceptualizer and causal connection between condition and result). The metonymy simply activates the *roles* of premise and conclusion that are respectively implicit in every condition and every result in a conditional construction.

This metonymic explanation also helps us to understand the non-discrete nature of the distinction between content or predictive conditionals and epistemic conditionals. The sentence under analysis in this case study is a blend of prototypical predictive and prototypical epistemic conditionals. The presence of *ever* (*If you have ever driven*) adds a tinge of hypotheticality to the clause that approximates it to predictive conditionals, even though the sequence of verb forms decidedly favors an epistemic reading. A metonymic account is better suited to accommodate these cases, as it helps us to view the source (hypothetical condition-result in this case) and the target (premise-conclusion) as conceptually contiguous.

The role of metonymy in the meaning of the epistemic conditional construction is twofold: *to motivate* constructional meaning (it motivates the conventional epistemic

meaning of the construction), and *to guide the inference* to this meaning. The inference is fairly routinized in most cases, but given the formal similarity of this construction to predictive conditional constructions, especially in the protasis, some inferential work may occasionally be necessary in the frequent ambiguous cases that occur. This inferential work is guided again by the same metonymy that gives rise to this meaning.

3.2 Non-prototypical meaning

For lack of space, only one instance of the several instances occurring in the corpus is discussed in some detail in 3.2.1 and a discussion of some of the others is outlined in 3.2.2.

3.2.1 *Conversion of a lexical subcategory into another lexical subcategory of the same lexical category: The intransitive meaning of the verb reduce (text D)*

This lexeme probably gets its (non-prototypical) intransitive meaning ('becoming reduced'; see Webster's entry for *reduce* as an intransitive verb) on the basis of the metonymy ACTION [CAUSING X TO BECOME REDUCED IN GENERAL] FOR RESULT [X BECOMING REDUCED IN GENERAL],¹⁶ a metonymy that seems to account in part for the intransitivization of a great many English verbs. The specific non-prototypical intransitive sense we encounter in this sentence ('lose weight, as in by dieting'; see Webster's same entry) likewise is partly motivated by the metonymy CATEGORY [BECOMING REDUCED IN GENERAL] FOR MEMBER [BECOMING REDUCED IN WEIGHT]. Therefore, the second metonymy seems to be *chained* to the first one, since the target of the first is the source of the second.

The prototypical *transitive* meaning is 'to lessen in *any way*, as in size, weight, amount, value, price, etc.; to diminish' (Webster's entry for *reduce* as a transitive verb, sense 3).¹⁷ The non-specification of the dimension affected by the reduction is preserved in the first intransitive meaning ('becoming reduced'), but the reduction is specified as one of weight in the second intransitive sense (which is a conventional sense, as witnessed by the fact that it is registered in standard dictionaries). The fact that a specialized sense has developed with respect to weight and not with respect to other possible dimensions may be due to social factors, in addition to the metonymy.

Given that the three senses are still alive (see OED sub-entries 26a, c, and e in the entry for verb *reduce*), these metonymies, besides being mainly motivational, may still play occasionally a minor inferential role, in cases in which the verb might be ambiguous between two of these senses (e.g. the two intransitive senses mentioned). This ambiguity is virtually eliminated in text D, in which Mary's mention that she had gotten fat automatically tilts the scales in favor of the 'slimming' sense. However, the second of the above-mentioned metonymies (CATEGORY [BECOMING REDUCED IN GENERAL] FOR MEMBER [BECOMING REDUCED IN WEIGHT]) further facilitates this interpretation.

3.2.2 *Some other instances of metonymy-based non-prototypical lexical meaning in the corpus*

All of the following examples are also instances of conversion of a lexical category into another lexical subcategory; given the limitation of space I have had to leave out other

interesting cases, which require an extended discussion, and simply comment very briefly on the following cases (see Barcelona in preparation a for the details of these cases and for the cases left out):

- *As*, in sentence (4), *as you pass the base of this peak...* of text C. The non-prototypical temporal sense (simultaneity) of this conjunction is an extension of its manner sense motivated in part by the metonymy (COMPLEX) RELATION [MANNER + EQUIVALENCE] FOR (COMPONENT) SUB-RELATION [EQUIVALENCE], since this metonymy captures the abstract similarity between equivalence in manner and equivalence in time span.
- *Peak*. In sentence (4) this noun is clearly used in an extended sense, i.e. as referring to a mountain with a pointed top. This non-prototypical sense arises on the basis of a PART (PEAK) FOR WHOLE (MOUNTAIN) metonymy.
- *Once* (sentence (6) in text C). The basic, prototypical meaning of this adverb lexeme is the strict multiplier sense ‘one time only’, according to the OED (sense 1a), which profiles a *specific* and *bounded* time span. In sentence (6) of text D, however, this lexeme is used in the sense that the OED describes as ‘at one time in the past; on some past occasion; formerly’, which profiles a *nonspecific* and *unbounded* past time span. This second sense may be claimed to be connected by metonymy, with the aid of contextual factors, to the prototypical sense. There are two metonymies involved: SPECIFIC INDEFINITE (POINT IN THE PAST) FOR INDEFINITE (POINT IN THE PAST), a sort of MEMBER FOR CATEGORY metonymy, a sense generalizing or sense-loosening metonymy; and BOTTOM FOR TOP OF SCALE, which guides the inference from ‘only once’ (in the prototypical meaning) to ‘never’, which in turn leads to ‘past time’, i.e., the concept ‘only one time’ can give rise, by implicature, to the inference that the situation described by a clause with *once* in its multiplier sense, *never* occurred again, that is, that it remained in the past.

4. Metonymy-motivated constructional form

The various qualifications on the distinction between prototypical and non-prototypical constructional forms discussed in Section 1.4 are taken into account in the ensuing discussion.

4.1 Prototypical form

4.1.1 *Prototypical lexical form due to contextual ellipsis (partially) motivated by metonymy: The conversion of non-prototypical adjective interstate into a prototypical noun*

In 3.1.2.2 we saw:

- i. that, at the formal level, the lexeme *interstate* (noun) (a prototypical noun) has emerged from the lexeme *interstate* (adjective) (a non-prototypical adjective) by grammatical conversion due to a process of entrenched contextual ellipsis¹⁸ of the head in the phrasal constructions ‘*interstate highway / freeway/ expressway*’.¹⁹

- ii. that, at the formal level, the ellipsis stage (which still coexists with the new conventional nominal lexeme) is made possible in part by the metonymy MODIFIER FOR MODIFIER-HEAD CONSTRUCTION. That is, the modifier *interstate* would activate in an appropriate context the whole modifier-head constructions ‘interstate highway / freeway / expressway.’

This metonymy is an instance of the generic metonymic type SALIENT PART OF FORM FOR WHOLE FORM, in turn a PART FOR WHOLE metonymy, which accounts for other entrenched instances of elliptical constructions (Barcelona, in preparation a). If the modifier is a salient part of the constructional form, this is so for semantic reasons: The modifier encodes a property or a relation of the entity designated by the head, which is salient enough to serve for identifying, classificatory, or distinguishing purposes. Hence it may be an excellent reference point to the head entity. That is, as claimed in 3.1.2.2, the formal saliency of the modifier that licenses the metonymy SALIENT PART OF FORM FOR WHOLE FORM is in this case the same saliency that licenses the content metonymy DISTINCTIVE PROPERTY OF A CATEGORY FOR THE CATEGORY, on the content plane. Another formal factor that adds to the saliency of premodifiers is their temporal precedence (in the spoken mode) or their linear precedence (in the written mode).

Note the similarity of this ellipsis to the connection between *gasoline* and its abbreviated form *gas* (Barcelona, in preparation a); in this case, too, a salient part of the canonical constructional form stands for the whole construction. The difference is that the abbreviated form in this case results in a *new construction* (a new form-meaning pairing, i.e. the noun *interstate*), not just in a new form (*gas*) of the same construction (the lexeme *gasoline*).

The main role of the SALIENT PART OF FORM FOR WHOLE FORM metonymy in *interstate* (noun) is motivational: It indirectly motivates on the formal level the existence of the lexeme *interstate* (noun), by motivating the ellipsis whose entrenchment gave rise to the grammatical conversion. Since the form *interstate* (and the corresponding spoken form) may still be interpreted in certain contexts as an ellipsis for the phrasal constructions ‘interstate freeway / highway / expressway’, the metonymy may occasionally guide inferencing at the level of morphosyntactic categorization; that is, it may also often have an inferential role.

4.1.2 *Prototypical lexical form due to contextual ellipsis (partially) motivated by metonymy. The conversion of prototypical cardinal numeral determiners into cardinal numeral pronouns: (the digestion of a young man of) twenty / (if I am) sixty-five (text D)*

The pronouns *twenty* and *sixty-five*²⁰ have apparently also emerged from regular weak ellipsis: *He is twenty years old* → *He is twenty*; *He is twenty years of age* → *He is twenty*; *I am sixty-five years old* → *I am sixty-five*. This recurrent ellipsis is doubtless due to the repeated association in a noun phrase of a cardinal numeral determiner with the sequences *years old* and *years of age*. The ellipsis has led to the conversion of certain cardinal numeral determiners²¹ into cardinal numeral pronouns with a specific meaning, namely that of age measurement. That is, a sentence such as *Those men are thirty* is not normally understood

as meaning that the men are thirty in number, but that they are aged thirty. The reason for this meaning is that these pronouns originate in an elliptical postmodifier²² noun phrase or in a predicative noun phrase, the noun phrases coding in both cases age measurement: *A woman twenty years of age / She is twenty years old.*

As in so many other instances of ellipsis, metonymy plays a role in the ellipsis leading to this lexical conversion. The metonymy is, again, SALIENT PART OF FORM FOR WHOLE FORM. The salient part of the form of the age-measuring NP is the measuring term, i.e. the numeral, because it is the first element in the elliptical NP, and because, semantically, in this case the exact measure is more salient (as it is the more informative element) than the measured element (which by default is age or a set of years).

Ellipsis is frequent with cardinal numerals in general, if the context is informative enough: *I found ten (people), Ten (sheets) are enough, We had only twenty (students) at class yesterday.* But cardinals acquires the specific age-measuring sense after *be* with a personal subject, or at least a subject to which age can be attributed: *I am twenty / ?My cat is two / ??This table is twenty.*

This meaning also arises after a PP with *of* modifying a personal head or at least one capable of aging. In these cases, the ‘age’ mental space is normally also active in the current discourse space, to use Langacker’s term (1999: 238–239; 2001). This space is activated in this text by means of the adjective *young* (*a young man of twenty*; see text D).

4.2 Non-prototypical constructional form

4.2.1 Non-prototypical form of lexemes

4.2.1.1 *The abbreviated form gas of the noun gasoline (text A).* This is, according to standard dictionaries, the colloquial U.S. abbreviation, also quite common in British English, of the standard forms *gasoline* or *gasolene* of the lexeme *gasoline*. This non-prototypical form is licensed by the metonymy SALIENT PART OF FORM FOR WHOLE FORM. The spoken segment /gæs/ and the written segment <gas> are the most prominent segments of their respective full forms, given their initial position (in both the spoken and the written canonical forms) and given that in the spoken canonical form /gæs/ bears primary stress. To these purely formal factors we might add a semantic factor: both segments are capable of evoking the basic meaning of the lexeme readily, whereas segments such as /li:n/ of the spoken form and *line*, or *lene*²³ of the written form would not be as efficient for that purpose.²⁴

4.2.1.2 *The weak form /ə(r)/ for /hæ:(r)/ (text A).* Let us assume that Mary (unlike John) is a British speaker. The same metonymy, SALIENT PART OF FORM FOR WHOLE FORM, helps the hearer categorize the phonological sequence /ə(r)/ as a phonological form of the oblique form of the lexeme *she* in British English.²⁵ This categorization is possible because /hæ:r/, which is the whole “strong”, prototypical object form of the lexeme before a vowel, is evoked by a representative subset of it (the /ə:r/ sequence). There are probably one or more intermediate metonymic links in the network linking this non-prototypical oblique form of *she* to the prototypical form. Two likely links are these two weak forms before vowels: /hə:r/, which retains the /h/ phoneme; and /ə:r/, which drops the /h/ but retains the length-

ening of /ə/ and the corresponding vocalic quality accompanying it.²⁶ Again, the saliency of /ə(r)/ is obvious: vowels tend to be acoustically more prominent than consonants, especially if the consonant is a pre-vocalic glottal fricative like /h/, which tends to be deleted in rapid speech. In the written medium, 'er is more capable of evoking *her* than just *h*. All the other weak forms occurring in text D are also due to the same metonymy: In *n't for not* (text D), the metonymy is only motivational; in the remaining weak forms in that text, the metonymy is motivational, but under special circumstances (if, for example, the situation prevents them from hearing or reading the co-text surrounding the weak forms) it can also help hearers / readers to infer the lexical category intended.

4.2.1.3 Hwy. as a non-prototypical written form of the noun lexeme highway. This abbreviated form also arises, like most abbreviations, on the basis of the metonymy SALIENT PART OF FORM FOR WHOLE FORM. A sequence of letters, or rather, of graphemes (i.e. of idealizations of alphabetical symbols analogous to the phonemes of the spoken medium) is used here to stand for the canonical full written form of the lexeme because this sequence is very likely to activate (with help from the context) the canonical written form of the lexeme in the reader's mind. If the writer had abbreviated *Highway* as *Iwy*, for example, he would hardly have succeeded in leading the reader to the target form.

4.2.2 Non-prototypical form of phrases

4.2.2.1 *The elliptical form table for the noun phrase the table (in by the right of table and at right rear of table, both of them parts of stage directions in text D).* Noun phrases with a count nominal head normally require a determinative element in English. And when the noun phrase referent is definite, the determinative element must be a definite determiner like *the*, a demonstrative (*this*, *that*), *whose*, etc., or a non-classifying genitive NP (*That French woman's hat*). The word *table* stands for *the table*, which instantiates the canonical form of definite noun phrases with a count nominal head, namely 'determinative + count nominal'.²⁷ The connection between the form of the NP without a determinative and the full form of the NP is, once more, one of part to whole. The nominal can activate the full noun phrase, so that *table*, as used in this context, is interpreted as an abbreviation of *the table*. The factors responsible for this activation are, first, the co-text, which makes the referent of the NP definite (the table is definite for the reader, thanks to the mention in the long initial stage direction for this play of this (round) table with several chairs in the center of the room); second, and from a cognitive viewpoint, the metonymic part-whole connection between a SALIENT²⁸ PART OF A FORM and the WHOLE FORM; third, this reduced form of the NP is acceptable only in certain styles characterized by using a number of abridgment conventions, one of such styles being the style of stage directions.

Therefore, metonymy, together with other factors both motivates the development and conventionality of this non-prototypical form of definite count NPs, and guides inferring to its morphosyntactic categorization.

4.2.2.2 *The elliptical form at right rear of the prepositional phrase at the right rear (in the final stage direction in text D).* Again we have here the reduced form of a definite noun phrase. The noun *rear* is always singular, so its classification in terms of count / non-count

does not make sense, which makes it impossible to categorize the absence of the article as a zero article. The phrase *right rear* stands here for *the right rear*, which responds to the canonical form of definite singular-only noun phrases, namely ‘Determinative + (optional modifier) + singular only nominal’.

The same factors (with one addition) described above for the case of *table* standing for *the table* are responsible for the reduction of *the right rear* to *right rear*: The co-text (or linguistic context) is responsible for the definiteness of *table*, which entails the definiteness of *right rear*; the cognitive context (i.e. the conceptual frame for TABLES, which stipulates that these objects have part-whole structure) facilitates the transmission of the definiteness of the whole (the table) to the part (its rear section). The metonymy SALIENT PART OF FORM FOR WHOLE FORM facilitates the establishment and recognition of the contextually definite noun phrase *right rear* as a reduced (non-prototypical) form of the NP *the right rear*. Finally, the stage direction style is responsible for the conventionality of this variant form of the construction.

4.2.3 Non-prototypical form of clauses and / or sentences²⁹

4.2.3.1 *Elliptical form of a complex sentence / clause: Matrix clause ellipsis (in Only when kindness fails, text B)*. The abstract canonical form of the complex sentence / clause would be something like ‘Matrix part of the main clause + *when* clause.’³⁰ This ellipsis is *formally* possible because a subordinate clause introduced by a subordinator (*when*) can act as a metonymic reference point for the whole complex clause / sentence. So we have once more the metonymy SALIENT PART OF (CONSTRUCTIONAL) FORM FOR WHOLE (CONSTRUCTIONAL) FORM. The full contextual value of the (reconstructed) complex clause / sentence of course depends on the complex meaning inference invited by Speaker B’s utterance.

The SALIENT PART OF FORM FOR WHOLE FORM metonymy would help us reconstruct an elliptical clause / sentence even in nonsense sequences like:

- A: *Does it often rain here?*
 B: *Only when kindness fails*

Of course, it would be very difficult to arrive at any sensible inferences on the basis of this reply (other than B is trying to be funny, or that he has gone mad), but in any case the reply would automatically be understood as elliptical for *It often rains here only when kindness fails* on the basis of SALIENT PART OF FORM FOR WHOLE FORM.

The difference between ellipsis and active-zone interpretation is that the target of an active zone metonymy is relatively variable and dependent on background knowledge (see Langacker, this volume: 48–52). *Clubs* activates in the first utterance of text B ‘the convenience / usefulness of building / establishing / having clubs’. In strict ellipsis the target is uniquely recoverable; that is, in the previous nonsense dialogue, the ellipted part can only be *It often rains here*. In weak ellipsis the eligible elements for recoverability belong to a finite set (see 4.1.1).

4.2.3.2 *Elliptical form of a complex sentence / clause: Subject ellipsis (in Smiles affectionately, text D)*. Subjectless declarative clauses are restricted to certain types of style. One of these is the style of stage directions in the text of plays. The lack of an overt grammatical

subject in these clauses is regularly due to ellipsis: The name of the character that is supposed to smile affectionately is given immediately before, so that the subject of *smiles* can be inferred easily from the co-text. The recognition of *smiles affectionately* (i.e. a 'Verb Phrase + X' schematic structure, also called traditionally the (syntactic) predicate) as a stylistic variant of the prototypical schematic declarative clause structure 'NP Subject + Predicate (Verb Phrase + X)' is facilitated again by the metonymy SALIENT PART OF FORM FOR WHOLE FORM, a metonymy that seems to motivate in part the conventionalization of most types of ellipsis. The predicate, consisting of the verb phrase and its complementation ('Verb Phrase + X'), is normally a more salient part of the clause, and more capable of evoking the whole of it, than the subject phrase in isolation; that is, other things being equal, *smiles affectionately* is more likely to be categorized as a (defective) clause than just the noun phrase *She*. Therefore the predicate constituent can be a metonymic reference point activating the whole clausal form.

4.2.3.3 *Elliptical form of a simple sentence / clause: Partial ellipsis caused by anaphorical uses of auxiliaries* (In Tyrone's sentence: *You didn't*, and in Mary's sentences *No one else in the world could without dying of indigestion and You surely have, James; all of them in text D*). Let us analyze these examples one by one.

(a) Tyrone's reply: *You didn't*.

According to Quirk et al. (1985:122, 125, 874), the auxiliary *do* acts in this context as an anaphorical operator coding ellipsis of what they call '(syntactic) predication'.³¹ This operator can receive clause negation by means of the negative lexeme *not*. This is precisely the situation we find in this part of Tyrone's reply: the sequence *eat a lot* has been ellipted from the complete clause form *You didn't eat a lot*.

In my view, *didn't* is used here to stand for and activate a more complex grammatical structure of which it is a *part*. Therefore, the conventionalization and automatic recognition of this negated auxiliary as coding predication ellipsis is facilitated by its part-whole connection to the larger structure integrating it. This connection is metonymic: SALIENT PART OF FORM FOR WHOLE FORM. The negated operator is salient because it provides *new information*, whereas the rest of the clause is given information in this context. The negated operator is also salient because it provides contrastive information since it negates the preceding affirmative statement by Mary (*I ate a lot*), and because it is the first element in the operator-predication sequence.

It is interesting to contrast this use of anaphorical *do* with the use we find in this part of Mary's reply to Tyrone's utterance: *You expect everyone to eat the enormous breakfast you do*. According to Quirk et al. (1985:905), this use of *do* is an instance of what they call 'stranded operator', which codes predication ellipsis. Their reason for positing an operator role for *do* and predication ellipsis both in these cases and in cases like the use of *didn't* in Tyrone's reply is that *do* can often be associated with predication ellipsis in such typical operator environments as clause negation, subject-operator inversion, and emphatic operator constructions: 1. *Rupert wanted to attend the bullfight, although his wife didn't (want to attend the bullfight)* / 2. *I don't like living in the country. Do you (like living in the country)?* / 3. A: *Does she like playing with dolls?* B: *Yes, she DOES (like playing with dolls)*.³² But in Mary's reply the ellipsis would be an instance of quasi-ellipsis, since

the insertion of the ellipted syntactic predication results in an ungrammatical sequence, or at best an odd one (**You expect everyone to eat the enormous breakfast you do eat*). Therefore, Quirk et al.'s account of the use of *do* in this case has the disadvantage of involving the assumption of quasi-ellipsis.

An alternative explanation for the use of *do* (and of other verbs like *can*, *would*, *have* etc.) as an operator coding predication ellipsis might be to regard it as an anaphor for the whole (syntactic) predicate. While this alternative makes sense in examples (1) (*didn't* would stand for *didn't want to attend the bullfight*, i.e., we find here the same type of *do* use as in Tyrone's reply) and (3) above (*does* would stand for *likes playing with dolls*), it is less appealing to regard *do*, in the co-text provided by example (2), as replacing the predicate (*Do you?* → **Like living in the country you?*). Similarly, in the relative clause in Mary's reply, *do* cannot be said to stand for the predicate, among other reasons, because a part of it (the direct object of *eat*, namely, the NP *the enormous breakfast*) is already copied into the relative clause by the zero relative pronoun (the relative clause is *Zero relative pronoun + you do*). That is, if *do* were replaced by the whole predicate, the result would be as follows: *You expect everyone to eat the enormous breakfast you do* → **You expect everyone to eat the enormous breakfast + Zero relative pronoun + you eat the enormous breakfast*. This stranded use of *do* is thus similar to the one in example (2) in the problems it poses for this alternative account.

Neither of the two accounts, then, seems fully satisfactory. However, the account suggested by Quirk et al. (1985) has the advantage of relating the stranded use of *do* to other uses in which it is not stranded and also acts as an operator. In the reduced clauses in examples (1)–(3) above, *do* certainly seems to play the same role, without changing its form, that it plays in their fuller counterparts: In *Yes, she DOES*, the form *DOES* seems to play much the same role as in *Yes, she does like playing with dolls*. This is why their analysis seems preferable, in the absence of a better account.

Assuming that this analysis is correct, is the particular type of stranded *do* found in Mary's reply motivated by metonymy? One feels tempted to claim that the SALIENT PART OF FORM FOR WHOLE FORM metonymy that has been claimed above to motivate negated operator *do* in Tyrone's reply (*you didn't*), also motivates the stranded *do* in Mary's reply. However, operator *do* cannot occur in non-reduced, non-emphatic affirmative declarative clauses (cf. **you do eat an enormous breakfast*, where *do* is not emphatic). Therefore, it can hardly be said to be a natural part of a larger structure, for which it would constitute a metonymic reference point. It could be claimed that the operator is implicit in the syntactic predicate of non-reduced, non-emphatic affirmative declarative clauses, so that it could emerge for the purposes of activating the whole syntactic predicate. However this claim is somewhat forced. The provisional conclusion is that metonymy is *not* relevant in the conventionalization of this use of *do*.

(b) *No one else in the world could without dying of indigestion*

The use of *could* here is similar to the use of *didn't* that was analyzed in (a) above. Again we find an auxiliary used as an operator coding predication ellipsis on the basis of its salience within the overall structure that includes it. The motivation for this reduced form of a clause is, once more, the same metonymy, namely SALIENT PART OF FORM FOR WHOLE FORM. The operator is salient, firstly because it is informationally new as

compared with the ellipted predication, secondly because it is the first element in the operator-predication sequence, and thirdly because, being a modal auxiliary in this case, it denotes the modality, which, as an attitudinal comment on the rest of the clause, is usually more salient than it. This explains why *could* can act as a metonymic reference point for *could eat the enormous breakfast you do*.

(c) (*You surely*) *have* (, *James*)

It is not clear whether *have* is here used as an abbreviation for *have kept your appetite*, or for *have the digestion of a young man of twenty*. The rest of the scene provides no clues about this.³³ But, given its proximity to the abbreviated clause *You surely have*, the second possibility is the more likely.

Thus we find a full, non-auxiliary verb, *have*, used as an operator. This verb and *be* are the only full verbs in English that can be used as operators for the purposes of clause negation, inversion with the subject in interrogation, and coding ellipsis.³⁴ Like the uses of *didn't* and *could* discussed above, this use of *have* codes predication ellipsis; that is, *have* here evokes the whole sequence *have the digestion of a young man of twenty*, of which it is a part. Once more, the metonymy at work is SALIENT PART OF FORM FOR WHOLE FORM, *have* being salient this time, not because it is informationally new (it is mentioned in the immediately preceding context), but because it is the first element in the predicate (hence it can be used to evoke the rest of the predicate) and because it schematically denotes the relationship of possession between the subject (*You*) and the ellipted object (*the digestion of a...*) that is conveyed by the clause. In other words, *You surely have* can activate in this context *You surely have the digestion of a young man of twenty*.

5. The primacy of inferential metonymy in the processing of constructional meaning, form, and discourse understanding

I claimed in Section 1.4 that metonymies basically have an inferential function and that their referential and motivational functions are consequences of their inferential function. I also claimed that these functions are not mutually exclusive and that they often co-occur in the same usage event. In the present section I briefly explore these claims on the basis of the data and analyses in my case studies.

If one observes the various instances of constructional meaning and form with a metonymic motivation discussed in Sections 3 and 4, it should be clear that the motivational and/or referential role of these metonymies is grounded in their inferential role. In all of these cases, the first time the particular constructional meaning was used, hearers / readers necessarily had to go through a (probably very brief) metonymy-guided inferential process to identify the meaning intended by the speaker, or the canonical form that the speaker was trying to evoke. Given space limitations, I comment in some detail on only one of those cases as a way of illustration, but similar comments could be made on all the others (for an excellent general treatment of motivational processes in language, see Radden and Panther 2004).

Let us examine again the only instance of metonymy-motivated prototypical meaning of derivational morphemes found in the case studies, namely {ful} in *armful* (text D). As stated in Section 3.1.1, this meaning is ‘the quantity of X that fills or would fill Y’ (compare also *bottleful*, *cupful*, *boxful*, etc.). The first time hearers encounter a derived noun like *bottleful*, the context is probably rich enough to activate a relevant frame / mental space to help them identify the meaning of the derivational morpheme (i.e., *He drank a whole bottleful of whisky*), and granting that they know the basic meaning of the lexeme *full* (where this derivational morpheme originates), they are helped in the identification of the meaning of the derivational morpheme by the metonymy DEGREE TO WHICH CONTAINER IS FILLED FOR QUANTITY OF CONTENT FILLING IT, which crucially guides an inferential process of the following form:

- i. The hearer’s unconscious grammatical knowledge of English grammar includes the knowledge that, as an adjective, *full* normally profiles a property of containers. This property consists of the container’s inner space being completely occupied by the content.
- ii. It also includes the knowledge that, in the constructional form *Determiner + Noun + Adjective*, adjective takes a head position, normally corresponding to a noun, hence profiling an entity, not a property; in other words, it is converted into a noun.
- iii. The entity now profiled by the deadjectival noun is easily identified due to the metonymic connection between the degree to which the content fills the container and the amount of the content (DEGREE TO WHICH THE CONTAINER IS FILLED FOR QUANTITY OF CONTENT FILLING IT).

As can be seen, the context, including the grammatical context, is also relevant for the development of the new meaning (which brings about a recategorization of *full* as a noun and eventually as a nominal derivational morpheme, and which thus becomes the prototypical meaning of the morpheme). But the metonymy guides the crucial inferential step leading to this new meaning.

The morpheme {ful} has achieved unit status as a noun-deriving morpheme with the canonical meaning described above, so that it is automatically understood as such whenever it is suffixed to a nominal lexical morpheme that can be literally or metaphorically construed as a container (*a bottleful*, *a roomful*, *a handful*, *an armful*). On the basis of a further metonymy, a conventional non-prototypical sense of the morpheme has developed, namely ‘the type of content reaching the maximum degree of filling’, so that e.g. a *roomful* designates not only ‘as much or as many as a room will hold’ (prototypical sense), but also ‘the persons or objects in a room’ (see *Merriam-Webster’s Online Dictionary* at <http://www.merriam-webster.com/dictionary/roomful>). Both of these senses would normally be arrived at automatically in discourse processing.

However, there may be occasions (typically when the context is ambiguous or too poor) when a hearer / reader processing particular occurrences of the constructions discussed in Sections 3 and 4 may have to engage in the same inferential process that motivated the emergence of their meaning or form, despite their current conventionality. This inferential activity is guided again by the same metonymy that guided the original process. Just consider again the emergence of *interstate* as a noun profiling a type of highway. The

two metonymy-guided inferential processes respectively motivating its meaning and the categorization of its form as a noun may occasionally have to be repeated by the processor in ambiguous contexts (see the sub-sections in Sections 3 and 4 concerned with the conversion of the adjective *interstate* into a noun with the aforesaid profile). Other instances in Sections 3 and 4 in which the motivational role of metonymy frequently co-exists with its inferential role are the quasi-pronouns *a lot* and *as much*, the phrasal name *The Continental Divide*, the epistemic conditional construction, the intransitive meaning of the verb *reduce*, the forms *table* and *right rear* for *the table* and *the right rear*, and probably all of the other instances discussed in Section 4.

With respect to the interaction between the inferential and the referential functions of metonymy, my data do not support the common claim that metonymy is used fundamentally for referential purposes. Of all the metonymies discussed in this paper, only three of them have a clearly referential function (i.e., they are instrumental in directing attention to the intended referent in a referential NP), and in these three cases, this referential function is a consequence of the motivational role of the metonymy in question, this role itself being a consequence of the inferential role of that metonymy. Those three cases are the two metonymies involved in the prototypical meaning of the noun *interstate* and in its prototypical form, and the metonymy involved in the prototypical meaning of the phrasal name *The Continental Divide*. In all other cases, the construction involved is either not (the head of) a referential NP, or if it is, the metonymy does not play any essential role any more in identifying the intended referent. For instance, the quasi-pronominal NP *a lot* is referential in text D, but the metonymy that motivated its emergence as such, to the extent that it may still be alive (i.e. to the extent that it still plays an inferential role) only affects the categorization of the form as elliptical, hence as quasi-pronominal, but it does not activate the intended referent of the NP. The referential role of metonymy is more frequent when it does not at the same motivate the conventional meaning of a construction (see below), but even considering all the very frequent instances of non-motivational metonymies in my four case studies, referential metonymies are still relatively infrequent in my corpus (12 out of 143 metonymies). This is due in part to the fact that my notion of metonymy is not limited exclusively to nominal metonymies (i.e. those operating over nouns or noun phrases); it also includes other types of lexical and phrasal metonymies: predicational, propositional, and illocutionary metonymies (Panther & Thornburg 2003b: 4), and purely inferential metonymies.

To close this section, I provide two examples of the very large number of non-motivational (i.e. inferential) metonymies identified in my case studies. The first comes from text A and the metonymy is at the same time referential. Here, *'er* is a metonymy-based weak form of *her* (see Section 4 above on this weak form), which is in turn a conceptual anaphor to the car involved in the situation (the car is probably visible or active in the current discourse space; hence the anaphor is definite), with the aid of a conventional personification metaphor that maps sexed animate beings onto complex objects, typically vehicles, like cars, trucks, or ships. The active zone metonymy *CAR FOR GASOLINE TANK* activates the relevant part of the car that is a direct participant in the relation 'X filling up Y with gasoline'. This metonymy is instrumental in activating the intended referent (the conceptual antecedent) of *'er* in this brief piece of discourse. But the metonymy *CAR FOR*

GASOLINE TANK, though serving both an inferential and a referential function, does not motivate a constructional meaning in this case, a lexical meaning, since 'gasoline tank' is not one of the conventional senses of the lexemes *her* or *car*.

The second example corresponds to text D, and the metonymy (or rather, the metonymic chain) is purely inferential, i.e. not at the same time motivational or referential. It simply guides, in part, an implicature. Mary's utterance (*Oh you! You expect everyone to eat the enormous breakfast you do. No one else in the world could without dying of indigestion*) invites the two following chained implicatures: (i) 'Mary claims that Tyrone eats too much', and (ii) 'Mary implies that Tyrone is a glutton'. The first implicature is triggered by the metonymy EFFECT (DYING OF INDIGESTION) FOR CAUSE (EATING TOO MUCH), which in turn triggers the metonymy DEFINING PROPERTY (EATING TOO MUCH) FOR CATEGORY (GLUTTONS), which, together with the metaphor QUANTITY IS SIZE (*enormous breakfast*) triggers the second implicature (actually acknowledged by Tyrone in his reply). As can be seen, neither metonymy motivates a constructional meaning or form or helps activate the intended referent of a referring expression in the text: They have a purely inferential role. Recent research has demonstrated the ubiquity of metonymy in pragmatic inferencing (see e.g. Panther & Thornburg 2003a; Barcelona 2003b, 2005, in preparation a; and Radden et al. 2007). However, despite this ubiquity, my position is that pragmatic inferencing cannot be reduced to metonymy. Metonymy is simply a frequent conceptual guide to pragmatic inferencing, but it normally operates under the pressure of pragmatic communicative principles (notably relevance) and on the basis of contextual and co-textual information (see Barcelona 2003b).

6. Summary and conclusion

In this chapter I have presented some representative instances and detailed analyses of constructional meaning and form whose motivation is at least in part due to metonymy. Most of the paper has been concerned with discussions of metonymy-motivated constructional meaning and form.

The majority of the instances of prototypical constructional meaning motivated by metonymy are instances of lexical meaning. Most of these arise either by metonymy-motivated conversion or by compounding, but in some cases they arise via metonymy-motivated polysemy. I have also included some other morphosyntactic examples: a derivational morpheme, a phrasal construction, and a clausal construction whose respective prototypical meanings turn out to be motivated by metonymy.

All of the instances of non-prototypical meaning discussed in this paper concern lexical meaning, and of these, all are due to metonymy-motivated conversion of a lexical category into another lexical subcategory; however, there occurred one instance in text D of a defective clause used as a formula (*Thank God*) whose standard meaning is motivated by the metonymy EFFECT (GRATITUDE TO GOD) FOR CAUSE (THE RELIEF GIVEN BY THE BENEFICIAL EVENT OR SITUATION). Its detailed discussion was not included in this paper for lack of space.

As for constructional form, two instances were discussed of prototypical lexical form, both due to contextual ellipsis motivated in part by metonymy, this contextual ellipsis in turn being one of the factors involved in the lexical conversion leading to the emergence of a new homonymous lexeme (*interstate* as noun, and cardinal numeral pronouns).

A substantial number of non-prototypical constructional forms were identified in the case studies (lexical form, especially weak forms, phrasal forms, and clausal forms). In all of these cases the metonymy at work is SALIENT PART OF FORM FOR WHOLE FORM.

A final section was devoted to discussing briefly the interaction of the fundamental inferential role of metonymy with its motivational and referential roles. It was argued on the basis of the data presented that the motivational and referential roles are manifestations of the inferential role of metonymy, and, in particular, that metonymy is used referentially much less often than is usually thought. It was suggested that motivational metonymies may often regain their inferential role under special circumstances, and (by discussing one additional example taken from the texts) that referential metonymies are more frequent when they do not at the same time motivate constructional meaning. Finally, an example of one of the numerous purely inferential metonymies occurring in the text samples was briefly discussed to distinguish them from inferential motivational ones.

This sort of in-depth study of metonymy across a set of randomly chosen texts differing in size and in style is useful to enlarge and deepen our understanding and appreciation of the important function of metonymy in constructional meaning and form and also in pragmatic inferencing and discourse comprehension.

Notes

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1. As stated in Barcelona (2003a), this definition is useful in stressing the abstract commonality between the two examples, but it may be necessary to use more constrained definitions for classificatory purposes. Some of those definitions are presented in Barcelona (2003a). They are not reproduced here for lack of space.

2. Meronymy is the semantic relation on the basis of which PART FOR WHOLE OR WHOLE FOR PART metonymies operate. But meronymy is a static semantic relation whereas metonymy is a dynamic conceptual operation leading to the activation of one of the two conceptual elements related meronymically.

3. The sense of this morpheme is different in *playful*, where it is an adjective-forming morpheme and means 'full of', 'having', 'characterized by'. This sense of the morpheme (or is this a different morpheme?) is metaphorically motivated since an abstract notion, typically a process (play, joy, etc.) is understood as a physical "content", and a person, a behavior (a hug), etc., is understood as a metaphorical container.

4. The earliest occurrence registered by the OED (2nd edition) of the noun *interstate* in this sense dates from 1968.

5. In Quirk et al.'s (1985) terminology, this term is equivalent to 'predicate nominal'. That is, in *That is an important interstate*, the NP *an important interstate* is the subject complement in the clause.

6. A metonymic analysis of ellipsis is in the spirit of Jakobson's (2002) conception of metonymy as a phenomenon operating on the syntagmatic axis of language.

7. This is confirmed by the OED, entry II-5-d for the lexeme *why*. The indirect interrogative use of the adverb is older than its absolute relative use.
8. I subdivided the two separate senses actually included by the OED as its sense 1 in its entry for *lot* (noun) into two separate senses (1a and 1b), for ease of reference. The same applies to senses 3a and 3b, but not to 8a, which is the numbering actually used by the OED.
9. An initial bifurcation, already present in sense 3, is the application of *lot* to groups of people or to groups of things.
10. Including count and non-count entities.
11. This metonymy also accounts for the use of the verb *to speed* to indicate ‘going too fast’. The noun *speed* denotes the neutral scale of velocity, but its conversion to the verb class denotes the upper end of the scale, as in *Henry is speeding again*, paraphrasable by ‘Henry is going too fast’ (Radden & Kövecses 1999: 32). In Spanish, the quantitative partitive expression *pedazo de*, in one of its colloquial uses, is also subject to semantic intensification on the basis of the same metonymy: *Tiene un pedazo de casa* means ‘He has a very big house’. Here the relevant scale is a scale of size.
12. Similarly, the use of the noun *lot* in the plural before partitive *of* leads to the emergence of the quasi-determiner *lots of*. A determiner is a type of lexeme whose syntactic function is always that of determinative. A determinative is a pre-head element in a noun phrase that provides the grounding of the NP with respect to the identification of its referent. In English, this function is performed by determiners or by an embedded genitive NP with certain meanings (see Quirk et al. 1985: Ch. 5).
13. In Barcelona (2005, in preparation a), the notion of metonymic chaining and its various types is treated at length and studied empirically on the basis of the same five case studies reported on in the present chapter.
14. This meaning seems to have been motivated by a metaphorical mapping of SIZE (Old English *micel* meaning ‘great, large’) onto QUANTITY (‘a great number / amount’), so metonymy plays a minor role, if any, in its development, aside from its role in motivating the metaphor itself (see Barcelona 2000b).
15. As with the adverb *a lot*, in the adverb *as much (as)* the quantitative meaning is metaphorically mapped onto an INTENSITY meaning (*He loves you as much as John / He loves you a lot*), a FREQUENCY meaning (*He smiles as much as everybody else / He travels a lot*), or other meanings that involve some scale of measurement.
16. For a similar treatment, see Ruiz de Mendoza and Otal Campo (2002: 95–100).
17. The first intransitive sense evolved historically after the transitive sense (see entries 26a and 26c of the OED), and the second intransitive sense evolved historically after the first intransitive sense (see entry 26e of the OED, which dates its first occurrence in 1926).
18. The term ‘ellipsis’ is used throughout the whole essay in a broad sense, including ‘prototypical’ instances of ellipsis, i.e. what Quirk et al. (1985: 888–890) call ‘strict ellipsis’ and less canonical types of ellipsis, like what those authors call ‘weak ellipsis’. The following are the minimum requirements for strict (i.e. prototypical) ellipsis, adapted from those set by Quirk et al.: (a) the precise recoverability of the missing expression; (b) the defectiveness of the elliptical structure; (c) the grammaticality of the construction once the missing form is inserted; (d) the equivalence in truth value – an aspect of its overall meaning – between the elliptical construction and its canonical counterpart; (e) the recoverability of the missing expression from the co-text, rather than from the pragmatic or situational context; (f) the fact that the missing expression is an exact copy of the antecedent. According to these requirements, both *I’m happy if you are (happy)* and *She sings better than I can (sing)* would be elliptical, even if the inserted expression in the non-elliptical counterpart of the second sentence is not identical with its antecedent (requirement (f) is not satisfied). The first sentence would exhibit strict ellipsis and the second would exhibit weak, i.e. non-canonical ellipsis. On the other hand, *She works harder than him (*works)* fails to satisfy criteria (a) and (c); it would be ‘quasi elliptical’, according to these authors. But *The door opened and (then / after /*

afterwards / thereupon) *Mary entered* would not be elliptical by most criteria, except for criterion (c); it should be treated as an instance of pragmatic implication rather than of ellipsis.

19. As stated in the previous note, ellipsis prototypically involves verbatim recoverability of the missing elements. In this case, the ellipted element is one of a finite set. Normally, only the nouns *highway*, *freeway*, or *expressway* collocate, as heads, with the modifier *interstate* in a context where the U.S. TRAVELLING or the U.S. TRANSPORT frames are active; more rarely we find the collocation *interstate road*. If other frames are invoked, the range of possible heads is different (*interstate commerce / love songs*, etc.). Therefore, the type of ellipsis that we find here is not an instance of strict ellipsis, i.e. prototypical ellipsis in Quirk et al.'s terms but of weak ellipsis, i.e. non-prototypical ellipsis.

20. Quirk et al. (1985: 394) categorize *five* as in *She was only five* ['five years of age'] as a pronominal use of these numerals.

21. Numerals are treated as a type of determiners called post-determiners by Quirk et al. (1985: Ch. 5) because they regularly occur before the noun head, but after typical determiners (called by them 'central determiners'), which regularly precede the noun head immediately. Central determiners are articles and demonstratives. Other postdeterminers are such quantifying expressions as *a lot of*, *much*, *as much*, *little*, etc.

22. A postmodifier (Quirk et al. 1985) is a modifier phrase (which can sometimes consist of an embedded NP) that occurs after the head.

23. Variant spellings of this lexeme are <*gasoline*>, <*gasolene*>, and less commonly <*gasoleine*> or <*gazoline*> (see the OED).

24. The phonological transcription system that I have followed throughout is basically the one established by Daniel Jones (1969).

25. The variants with linking *r* constitute additional forms of the corresponding full or reduced forms and are members of the same form category, as does the stressed (emphatic) variant of the full form.

26. My source for the identification of these strong and weak forms in British English is Jones (1969: 131). If *Mary* had been an American speaker of the East or the South the stressed pronunciation would have been, according to Kenyon and Knott's (1953) pronouncing dictionary, /hə(r)/ and the unstressed ones /ə(r)/ and /hə(r)/.

27. 'Nominal' designates any noun-headed construction embedded in the overall NP. Cf.: *The [man]* and *The [intelligent man]*. Both *man* and *intelligent man* are nominals in this sense.

28. The head nominal, when its occurrence is not directly predictable from the context (compare with *a lot* above, where the predictability of the nominal head leads to the development of the pronoun *a lot*), is the element bearing the main conceptual content in a noun phrase. In this sense, it is *normally* more salient than the determinative.

29. The sequence *Only when kindness fails* is treated below as instantiating both an elliptical complex clause and an elliptical complex sentence: It is a sentence consisting of just one elliptical complex clause (i.e. a clause consisting of an elliptical main clause that includes a subordinate clause); the sentence is called complex by extension. But it would be just an elliptical complex clause included in a *compound* elliptical sentence if the reply had been, for example, *Only when kindness fails or when patience proves useless*.

30. Main clauses typically include subordinate clauses, which are their constituents. A *when*-clause is normally an adverbial adjunct within the main clause. The part of the main clause left after taking away the subordinate clause is sometimes called the *matrix* part of the main clause, or simply the matrix clause.

31. See Quirk et al. (1985: 79ff). The term '(syntactic) predicate' reflects the traditional division of the clause into subject and predicate. This division was maintained by generative grammarians under the formula $S \rightarrow NP VP$. In line with Quirk et al. (1985: 61), I reserve the term Verb Phrase for the clause constituent consisting of a full verb (i.e. not an auxiliary verb), optionally preceded by other 'helping' verbs, typically auxiliaries, but also by catenative verbs (*want to*, *keep*, etc.) or by semi-auxiliary idioms

like *be going to*. The term ‘predication’ designates the part of the predicate that remains after discarding the operator (i.e. the first or the only auxiliary, the full (copular) verb *be* or the possessive verb *have*, which is the verbal element involved in operating clause negation, interrogation, and emphatic statements). In *You didn’t eat a lot*, the predication is *eat a lot* and the operator is *didn’t* (the negator is also a part of the operator section).

32. Small capitals are used to signal the syllable with the special stress and intonation signaling either emotive emphasis or ‘information focus’ (see Quirk et al. 1985: Ch. 18).

33. In the rest of the stage direction after Mary’s last utterance in the passage and in the utterances that she and Tyrone exchange immediately afterwards, the topic of the conversation switches to their children, to Tyrone’s cigar, and to real estate bargains.

34. As is known, the use of possessive verb *have* for negation and subject-verb inversion is more frequent in traditional British English than in American English, which normally requires *do*-support in these cases.

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Appendix

Text A

The brief conversation on which this study has been done was slightly adapted from Radden (2000: 94–95) by adding two fictional speakers (John and Mary) and checked with a native speaker of American English.

John: How much gas did you buy?

Mary: I filled 'er up.

Text B (a well-known joke, attributed to W. C. Fields)

Speaker A: Do you believe in clubs for young men?

Speaker B: Only when kindness fails.

Text C (randomly selected from: <http://hikingincolorado.org/beth.html>. Sequential numbering has been added before each sentence for ease of reference.)

MOUNT BETHEL

(1) If you have ever driven west on Interstate 70 from Denver to the Continental Divide, you have seen Mount Bethel. (2) Several miles (?) before approaching the exit for Hwy. 6 which leads to Loveland Pass you will see a pyramid shaped peak just to the north of the Interstate. (3) This roadway icon stands out like a sore thumb (cliché) due to its prominence and near perfect triangular shape. (4) As you pass the base of this peak on the highway you will notice two very steep avalanche chutes which lead directly to the summit. (5) This is the route I chose for my ascent. (6) I pulled off the highway to begin my hike from where it looked as though there once may have been a parking area at the base of the western-most avalanche chute and well off the highway right-of-way.

Text D (a fragment of the initial conversation in Act 1 of Eugene O'Neill's play *Long Day's Journey into Night*)

Tyrone's arm is around his wife's waist as they appear from the back parlor. Entering the living room he gives her a playful hug.

TYRONE You're a fine armful now, Mary, with those twenty pounds you've gained.

MARY (*smiles affectionately*). I've gotten fat, you mean, dear. I really ought to reduce.

TYRONE None of that, my lady! You're just right. We'll have no talk of reducing. Is that why you ate so little breakfast?

MARY So little? I thought I ate a lot.

TYRONE You didn't. Not as much as I'd like to see, anyway.

MARY (*teasingly*). Oh you! You expect everyone to eat the enormous breakfast you do. No one else in the world could without dying of indigestion. (*She comes forward to stand by the right of table*).

TYRONE (*following her*). I hope I'm not as big a glutton as that sounds. (*With hearty satisfaction*.) But thank God, I've kept my appetite and I've the digestion of a young man of twenty, if I am sixty-five.

MARY You surely have, James. No one could deny that.

She laughs and sits in the wicker armchair at right rear of table . . .

Metonymy and metaphor index

In this index we follow the widespread convention of notating metonymies as SOURCE FOR TARGET and metaphors as TARGET IS SOURCE. Some page numbers, however, direct the reader to a discussion of a particular metonymy or metaphor where this strict notation is not used. Most metonymies in this index are of the WHOLE FOR PART, PART FOR WHOLE, or PART FOR PART types, but are not classified into these types because this classification is normally quite obvious and because not all metonymies can be grouped under these types. However, the pages in the chapters where these terms are used explicitly appear in the index.

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