CORRESPONDENCES, COMPOSITIONALITY, AND GRAMMAR

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My purpose is to present some basic notions of **cognitive grammar** (Langacker 1987; 1990; 1991), with special emphasis on the extent of semantic compositionality and the nature of grammatical dependencies. I will start by asking a very basic question that hardly anybody ever bothers to ask: Why should there be such a thing as **grammar**? The way we answer this question may well determine how we think about grammar and ultimately how we analyze it.

I suggest that grammar would not exist if lexical units were available to symbolize every conception we wanted to express. But they are not. Lexical units form a limited set, while the conceptions we want to encode linguistically are open-ended and indefinitely varied. To overcome this, we resort to **complex expressions** consisting of multiple lexical elements. Each lexical **component** evokes some facet of the overall conception, one singled out precisely by virtue of being susceptible to individual symbolization. Collectively, these individually symbolized conceptual "chunks" give enough information about the **composite** conception intended by the speaker that the addressee, in context, is able to reconstruct some approximation to it. However, this reconstruction requires some indication of how the conceptual chunks are supposed to fit together. The role of grammar is to provide this information.

Grammar, I claim, is nothing more than conventional patterns for effecting the **conceptual integration** of component elements and for **symbolizing** their conceptual integration via their **phonological integration** (e.g. by linear juxtaposition). Grammar is thus **symbolic**, reducing to form-meaning pairings. As shown in Figure 1(a), a **symbolic structure** resides in the association between a **semantic** (or conceptual) **structure** (abbreviated with capital letters) and a **phonological structure** which serves to evoke it (given orthographically in lower case). The theory of cognitive grammar effects a major theoretical unification by reducing all of lexicon and grammar to **assemblies of symbolic structures** (also known as **constructions**).
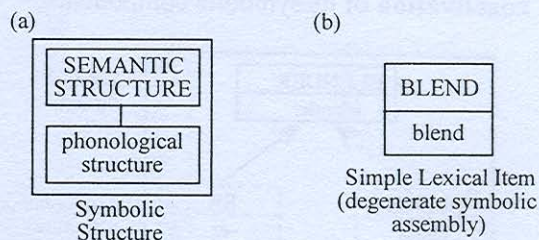

Figure 1

Lexicon comprises the set of **fixed expressions** in a language, both simple and complex. **Simple** lexical items (i.e. morphemes) are **degenerate** symbolic

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assemblies consisting of just a single symbolic element. An example is the verb *blend*, abbreviated in Figure 1(b). Most lexical items are **complex** (or polymorphemic), to some degree analyzable into smaller symbolic elements. Such expressions consist of assemblies in which the **composite** symbolic structure—the overall meaning and phonological shape—is construed in relation to its symbolic **components**. An example is *blender*, represented in Figure 2. The component symbolic structures are the stem *blend* and the ending *-er*; their semantic and phonological integration gives rise to the composite expression. Let me emphasize that the composite symbolic structure is an entity in its own right, not simply the sum of its components. It generally has **emergent** properties not predictable from its components on the basis of regular compositional patterns—e.g. a *blender* is conventionally understood as indicating an object rather than a person, as having a certain approximate size, as being used for food and drink in particular (as opposed to paint or cement), and so on. This composite conception is however understood in relation to the process of blending as well as the notion of agentivity or instrumentality conveyed by *-er*. It is **analyzable** to whatever extent the **activation** of the composite expression induces the **coactivation** of its symbolic components.
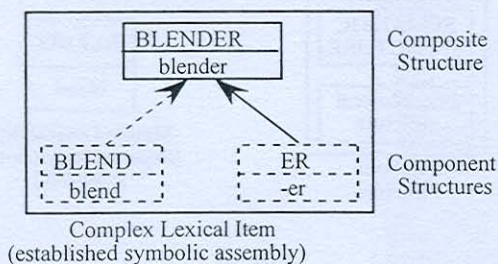

| BLENDER | Composite |
| blender | Structure |

| BLEND | ER | Component |
| blend | -er | Structures |

Complex Lexical Item
(established symbolic assembly)

Figure 2

Blender is typical of complex lexical items in that, despite being largely analyzable, its composite meaning is more elaborate than anything predictable in terms of the compositional pattern it instantiates. How and why does this circumstance so commonly arise? It happens because expressions are first constructed and understood in specific contexts by language users with a wide range of cognitive abilities and vast stores of world knowledge. Drawing on all these resources, the speaker and addressee arrive at elaborate contextual understandings that an expression's component symbolic elements, combined in accordance with regular compositional patterns, can only hint at—the expression's **compositional meaning** at best approximates its actual **contextual value**. If an expression is repeatedly used and establishes itself as a lexical item, extra-compositional facets of its contextual values that consistently occur are naturally incorporated as part of its **conventional linguistic meaning**.

This development is sketched in Figure 3, where [[A]/[a]] and [[B]/[b]] are component lexical items that combine to form a composite expression. In these particular diagrams, boxes with angled corners enclose established, conventional linguistic structures (called **units**), whereas boxes with rounded corners represent novel structures. In Figure 3(a) the lexical units [[A]/[a]] and [[B]/[b]] combine to form a composite structure whose full contextual meaning is considerably more extensive than just the compositional meaning (A + B). If the composite expression should become established as a lexical item, recurring aspects of its contextual meaning will naturally remain as part of its conventional semantic value, along with (or even in lieu of) its compositional meaning. Thus, as shown in Figure 3(b), it is usual for a complex lexical item to have a

conventional meaning that diverges from its compositional value, if only by being more specific.
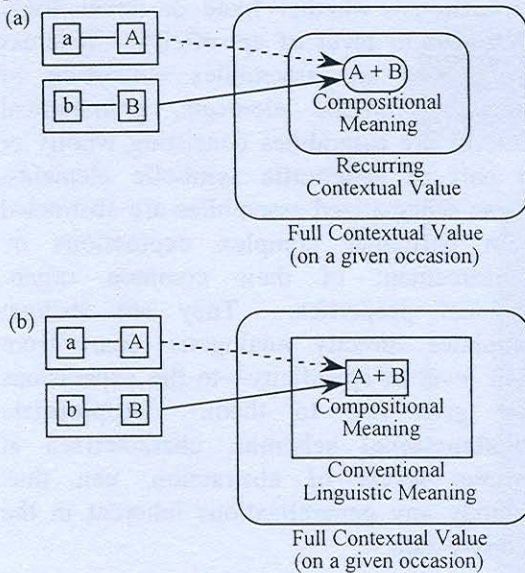

Figure 3

Observe that these extra-compositional features are present, and part of how the expression is actually understood, at every stage, from first occurrence to established lexical item. The compositional meaning has something of a hypothetical status: it never occurs in isolation, but only as a kind of "scaffolding" enabling the language user—drawing on all available resources—to "reach" the expression's full contextual meaning. In cognitive grammar, I describe this typical discrepancy between compositional and full contextual meaning by saying that language exhibits only **partial compositionality**. Fauconnier (1985) makes the same point by emphasizing the elaborate process of **meaning construction** that intervenes between linguistic expressions and the situations described. Normally the compositional meaning substantially

underspecifies the intended composite conception, whose role in determining how component elements are understood in the first place is at least as important as the role of components in determining the composite conception.

Partial compositionality and meaning construction are as essential for novel expressions as they are for lexical items. Whether morphologically or syntactically derived, novel expressions exhibit the discrepancy between hypothetical compositional meaning and actual contextual understanding that is typical of lexical items. However, since the expressions are novel, these extra-compositional factors are not yet conventional, hence theorists usually dismiss them as being non-linguistic. In this way the semantics of novel expressions becomes compositional as a matter of definition, by excluding what does not conform. It may in principle be possible to impose a line of demarcation, but in practice it is difficult, and drawing the line in any particular place is likely to prove arbitrary. I see the distinction between the "linguistic" and the "extra-linguistic" as graded rather than dichotomous.

Be that as it may, a strictly compositional semantics, limited to semantic specifications that are indisputably linguistic, would account for only a small portion of what goes into the actual understanding of expressions, a portion that falls considerably short of what is naively understood as constituting their meanings. To interpret even a simple, prosaic sentence like *The ball is under the table* we have to invoke both general and contextual knowledge. If Figure 4(a) represents a normal understanding of the sentence, we must nonetheless recognize that

the sentence is equally applicable to a wide variety of other situations, such as those in 4 (b), any one of which would be immediately accepted as its value in the proper context. Its strict compositional meaning abstracts away from all of the factors that distinguish these varied situations. What we naively regard as the expression's normal "meaning" is actually a canonical interpretation arrived at on the basis of general knowledge concerning the usual size of balls and tables, their default-case placement and orientation, etc.

Figure 4
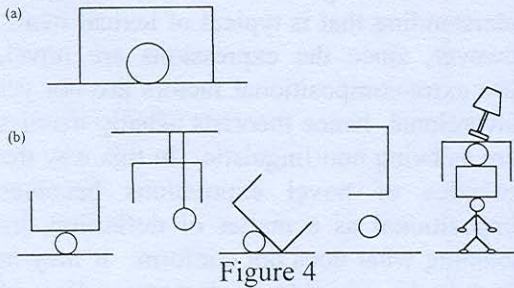
Nonetheless, there is such a thing as grammar, and it does have an essential role in the process of constructing and under-standing expressions. Grammar consists of conventional patterns for putting together symbolic assemblies; i.e., for integrating component symbolic structures to form composite structures. These patterns thus embody the compositional principles of a language. They specify the compositional value of instantiating expressions, and thereby constrain or partially indicate their actual, contextual meanings. Grammatical patterns are necessarily invoked in the processing of novel expressions, and continue indefinitely to provide systemic motivation for fixed expressions originally constructed in accordance with them.

In cognitive grammar, these compositional patterns are characterized as assemblies of symbolic structures. They differ from actual expressions—whether fixed or novel—only in regard to **level of specificity**. Whereas expressions are assemblies consisting of specific symbolic elements, grammatical patterns are assemblies consisting wholly or in part of **schematic** symbolic elements. These schematized assemblies are abstracted from particular complex expressions by reinforcement of their common organ-izational properties. They are abstract templates directly analogous—apart from their level of specificity—to the expressions that give rise to them. Appropriate **constructional schemas**, characterized at various levels of abstraction, can thus embody any generalizations inherent in the primary data.

What do symbolic assemblies look like? For meaningful discussion, I need to introduce just a few concepts and notations regarding semantic structure. First, a lexical item is best thought of as providing **access** to various **domains** of knowledge pertaining to the entity it designates. A form like *table*, for instance, provides access to knowledge concerning the stereotypical shape of tables (as well as common departures from the stereotype), the typical size of tables and the range of variation, their part/whole structure, the substances they are made from, the functions of tables, their usual placement and spatial orientation, how they relate to chairs, how much they cost, and so on. Even ignoring polysemy, the access a lexical item provides to such domains is flexible, open-ended, and highly context-dependent; it is doubtful that precisely the same set of specifications are ever activated, to precisely the same degree, on two different occasions.

This variability is one reason why the notion of compositional meaning may be just a convenient fiction—without fixed and well-delimited components, a unique compositional value cannot be computed.

This is not to say, however, that all facets of this encyclopedic knowledge are equal or that access to it is random. Lexical items are learned through social interaction, and the access they afford to cognitive domains is in large measure shaped and constrained as a matter of shared linguistic convention. Certain specifications are far more central and important than others, and certain domains are accessed on virtually every occasion, others hardly at all. Thus, lexical items do have established conventional meanings—it is just that these meanings are neither precisely delimited nor fully determinate.

Thus, as the basis for its meaning, an expression evokes a number of cognitive domains, which collectively provide its conceptual **content**. This content—what I call the conceptual **base**—does not however constitute its meaning. An expression's meaning is a function of both the content it evokes and a particular way of **construing** that content. Construal includes such factors as the **perspective** taken on a situation, the **level of specificity** at which it is conceived, and the relative **prominence** accorded various substructures. Linguistic structures and elements—both lexical and grammatical—incorporate construal as an inherent and essential aspect of their conventional semantic value.

An especially important kind of prominence is what I call **profiling**. Within its conceptual base—the array of content it

evokes—an expression is construed as **designating** or **referring to** some substructure, which is thus a kind of focus of attention. I say that it **profiles** some element within its base; hence an expression's profile is its **referent** within the conception it evokes. Diagrammatically I indicate the profile with heavy lines. The word *hypotenuse*, for example, evokes as its base the conception of a right triangle, and within that base it profiles the side opposite the right angle, as seen in Figure 5(a). Expressions with the same conceptual content can differ semantically owing to the alternate profiles they impose on it. As shown in 5(b), for instance, *iris* and *pupil* presuppose the conception of an eye but profile different substructures within it.

(a) Conceptual Base   *hypotenuse*

(b) Conceptual Base   *iris*   *pupil*

(c) Conceptual Base   *admire*   *admirer*
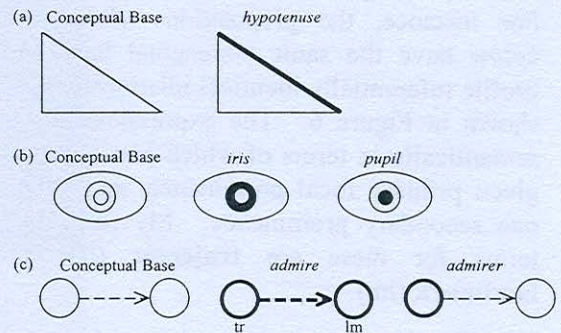   tr   lm

Figure 5

Either **things** or **relationships** can be profiled—using both terms in a broad and abstract sense. An expression's profile determines its grammatical class: a noun profiles a thing, whereas classes like verbs, prepositions, and adjectives profile different sorts of relationships. As abbreviatory notations, I use circles for things and various kinds of lines or arrows for relationships. Thus, using a dashed arrow for a mental

relationship, the diagram on the left in Figure 5(c) can be interpreted as a representation of someone admiring something (a very sketchy representation, but one sufficient for specific limited purposes). The verb *admire* can then be described as profiling this mental relationship (including its participants), whereas *admirer* is a noun (despite having the same conceptual content) because it profiles a thing, namely the person engaging in the mental activity.

Expressions that profile relationships accord varying degrees of prominence to the relational participants. There is usually a **primary focal participant**, the one the expression is concerned with locating or characterizing, and often a **secondary focal participant** evoked for that purpose. For instance, the prepositions *above* and *below* have the same conceptual base and profile referentially identical relationships, as shown in Figure 6. The expressions differ semantically in terms of which participant is given primary focal prominence, and which one secondary prominence. My respective terms for these are **trajector** (tr) and **landmark** (lm).
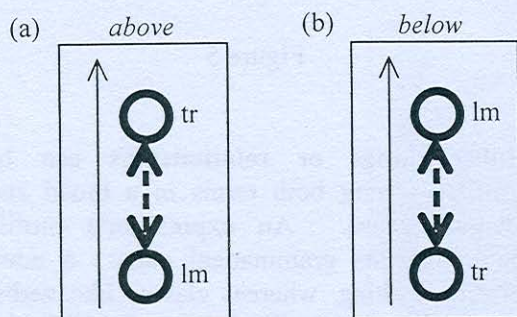

Figure 6

We can now examine some representative symbolic assemblies. Consider the compound *jar lid*, sketched in Figure 7. This construction comprises the two component symbolic structures *jar* and *lid*, as well as the composite symbolic structure *jar lid* resulting from their integration. These symbolic structures constitute an **assembly** by virtue of a set of **correspondences** that link them together (represented by dotted lines). Correspondences hold between both semantic and phonological substructures. Moreover, there are both **horizontal correspondences**, between facets of the two component structures, and **vertical correspondences**, between facets of the component and composite structures. Semantically, the profile of *jar* corresponds to the schematic container evoked by *lid* as part of its conceptual base. Phonologically, *jar* is equated with the word (W) which precedes *lid* in the linear sequence. Also, each semantic and phonological element corresponds to a particular composite structure element.
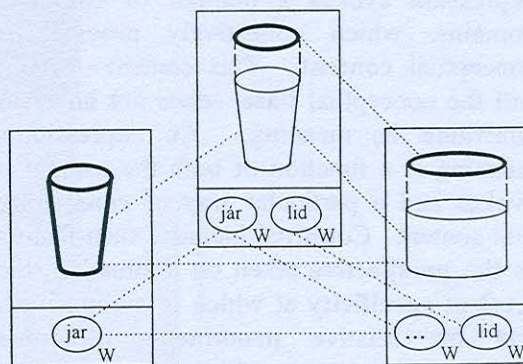

Figure 7

Jar lid is a specific expression. It instantiates a general pattern in English for constructing noun-noun compounds. As shown in Figure 8, this pattern is given by a constructional schema; i.e., a schematized symbolic

assembly incorporating the abstract commonality observed across a wide range of noun-noun compounds. As the reinforced commonality of these instantiating expressions, it is precisely analogous to them except that the component and composite structures are schematic rather than specific. Semantically, for instance, the first component is simply characterized as a noun; i.e., it profiles a thing, which corresponds to a thing that is somehow associated with the profile of the second noun, which is also profiled at the composite structure level.
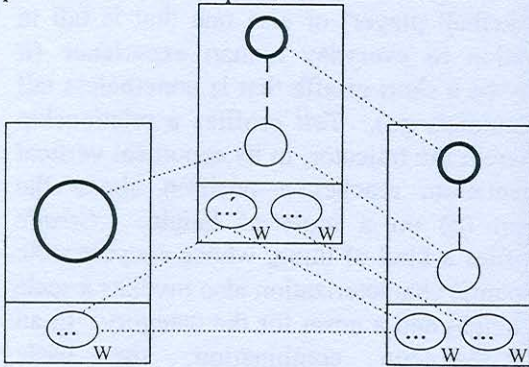

Figure 8

Viewed in terms of composition, we can say that a constructional schema specifies a conventional pattern for integrating the two component structures to form the composite structure. Correspondences are instructions for effecting this integration: they indicate which substructures of the components are to be equated and thus superimposed (or "unified") at the composite structure level. The schema comprises both a pattern for semantic or conceptual integration as well as a pattern for phonological integration (such as linear juxtaposition), the latter serving to symbolize the former. I claim that all of grammar reduces to symbolic assemblies of this general sort. Grammar is thus **symbolic** in nature. It is not distinct from semantics

and principles of semantic composition, but rather incorporates them as one of its two essential facets. Describing grammar independently of meaning is analogous to writing a dictionary and neglecting to include the definitions.

Let us focus on the semantic side of grammar. I have stated that, from the standpoint of composition, correspondences amount to instructions regarding which elements to superimpose in forming the composite conception. There is however another, arguably more fundamental way to think about them. As noted, the speaker has some coherent conception to express, and the addressee attempts to reconstruct it from linguistic cues. Because no single lexical item will convey it, the speaker **dissociates** this integrated conception into smaller conceptual "chunks" susceptible to individual linguistic coding, in the hope that these will provide the requisite cues. These chunks are not analogous to the tiles of a mosaic—they are not separate and discrete, nor do they completely "cover" the target conception. They are better likened to a collage. As seen in Figure 9, these pieces overlap (sometimes quite extensively). They also fail to cover the full intended conception, leaving many facets completely unexpressed. Their coverage of it is both redundant and highly selective. Even in prosaic examples, the addressee has to draw on other resources to supplement the limited cues they afford.
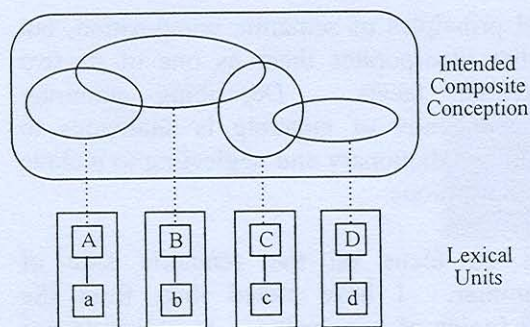
Figure 9

The key notion here is **overlap**. Correspondences represent the distortion engendered by dissociating the integrated composite conception into separate chunks for purposes of symbolic encoding. Vertical correspondences reflect the inherent overlap between such a chunk and the composite conception it is extracted from. Horizontal correspondences indicate how two chunks overlap with one another. What it means for elements of two component structures to correspond is that each element projects to the same element at the composite structure level. In the case of *jar lid*, for example, the profile of *jar* and the schematic container evoked by *lid* both correspond to the unprofiled jar that figures in the expression's composite structure. *Jar* makes reference to this composite structure element in specific terms, whereas *lid* does so schematically. It is in fact quite common for component structures to overlap in precisely this way.

On this account correspondences are inherent and indispensable to grammar—a direct and ineluctable consequence of the very existence of complex expressions and grammatical patterns. Correspondences figure in the characterization of every construction and are the basis for all grammatical dependencies. Adding or adjusting a correspondence can drastically affect an expression's meaning, form, and grammatical behavior. The key to an explicit and revealing grammatical analysis thus lies in elucidating the correspondences linking component and composite structures at multiple levels of organization. To gain some appreciation of these claims, let us consider some further examples.

It is well known that an expression like *tall giraffe* is ambiguous: it can designate either a giraffe that is tall for giraffes (e.g. a giraffe basketball player) or else one that is tall in relation to everyday human experience (it may be a short giraffe that is nonetheless tall as animals go). *Tall* profiles a relationship wherein the trajector, in its canonical vertical orientation, reaches a position above the norm (n) on a scale of height. *Giraffe* profiles a kind of thing, whose encyclopedic semantic characterization also invokes a scale of height and a norm for the category. In an adjective-noun combination, the basic correspondence, labeled (a) in Figure 10, holds between the trajector of the adjective and the profile of the noun. The special case in which *tall giraffe* refers to one tall **for giraffes** is characterized by the addition of a second correspondence, (b), which equates the norm for *tall* with the category norm for *giraffe*. That is all there is to it—the ambiguity resides in the presence vs. the absence of a single correspondence in addition to the basic one.
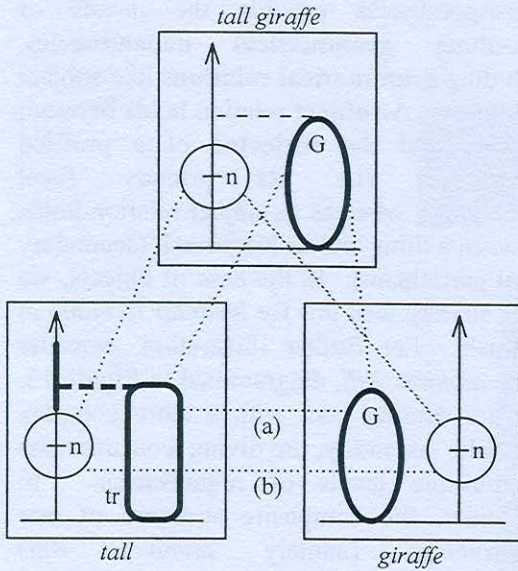
tall giraffe

(a)

(b)

tr

tall   *giraffe*

Figure 10

body-part expressions in particular, hence the object's profile is contained in a larger circle representing the individual the body part belongs to. The special feature of this construction is the second correspondence, labeled (b), which specifically equates this individual with the verb's trajector (eventually manifested by the subject). Possession need not be separately encoded because it follows from the semantics of the object noun together with the sub-construction's additional correspondence.

Consider a Spanish example. Whereas in English we say *I raise **my** hand, He opens **his** mouth, They close **their** eyes*, etc., in Spanish there is no overt possessive—the object nouns take the definite article: *Levanto **la** mano, Abre **la** boca, Cierran **los** ojos*. How is possession conveyed without being individually symbolized? It happens because the grammatical conventions of Spanish include a special construction, a subcase of the general direct-object construction, which incorporates an additional correspondence.

In Figure 11, representing 'raise the (one's) hand', the double arrow indicates the trajector exerting force on the landmark, and the single arrow, the landmark's resultant motion. Correspondence (a) equates the landmark of the verb with the profile of the object noun phrase. This is the basic correspondence characteristic of the direct-object construction in general. The subconstruction in question is defined for

levantar la mano

tr

lm

M

tr   lm

(a)
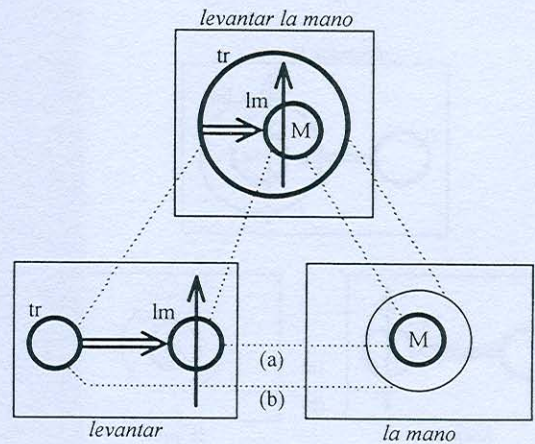
(b)

levantar   *la mano*

Figure 11

A further aspect of this construction is reflected in the diagram by the position of the double arrow inside the trajector. The expressions with the definite article alone imply that the force exerted to move the body part is transmitted through the body in the normal way in which the part in question is inherently moved. By contrast, if I use one body part to apply external force to another, e.g. if I use one hand to lift the other, this is instead described with a construction involving both the definite article and the reflexive clitic: *Me levanto **la** mano*. This is a special case of the more general

construction with the definite article and an indirect object pronominal clitic, the reflexive clitic being used because the subject and possessor happen to be the same. Observe in Figure 12 that in the composite structure the force is applied from outside, as it would be if two different people were involved (in which case correspondence (b) would be lacking, and *le* would be used instead of *me*). The motion is induced extrinsically, so a third argument (given as lm_2, i.e. a secondary landmark) is needed to indicate whose body is affected.
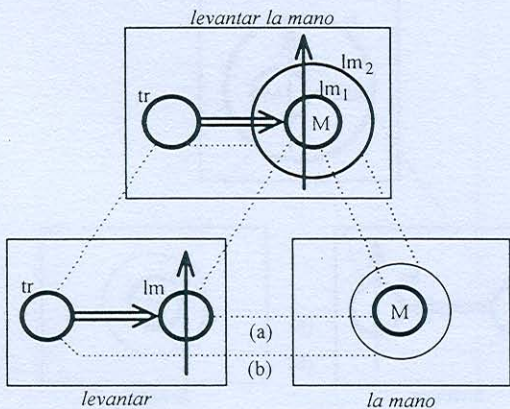

Figure 12

Both these constructions illustrate the notion of **partial compositionality**, i.e. the emergence at the composite structure level of specifications not inherited from any component element. Whether force is transmitted intrinsically or applied extrinsically is not determined by any individual lexical item, but is rather a property of each construction as a whole. The same is true of the coincidence of subject and possessor in the first instance, and the indirect object status of the possessor in the second instance.

Correspondences provide the means of describing **grammatical dependencies**, including **grammatical relations** like subject and object. A **subject** relation holds between a thing and the **trajector** of a profiled relationship (i.e. its primary focal participant), whereas an **object** relation holds between a thing and its **landmark** (secondary focal participant). In the case of objects, we have already seen this for *levantar la mano* in Spanish. For further illustration, consider *Alice admires Bill*, diagrammed in Figure 13. We are dealing here with a more complex symbolic assembly, involving constructions at multiple levels of organization. In particular, the composite structure of one construction (namely *admires Bill*) simultaneously functions as component structure with respect to another (combining with the other component, *Alice*, to form *Alice admires Bill*). This common feature of complex symbolic assemblies is what linguists recognize as **constituency**. While cognitive grammar thus accommodates constituency, it is seen as being more flexible and less essential or fundamental than in other theories.
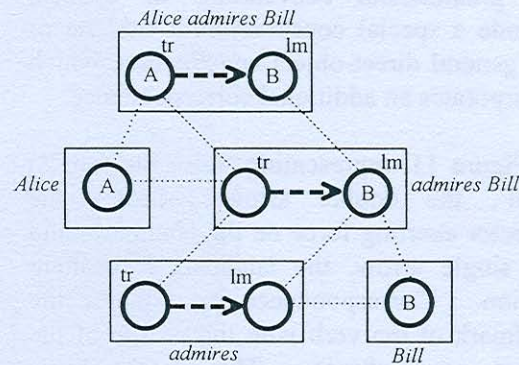

Figure 13

Here, though, our interest lies with correspondences. By tracing along

correspondence lines, both vertical and horizontal, we see that the profile of *Alice* corresponds to the trajector of *admires*, as well as the trajector of *admires Bill* and of the entire clause *Alice admires Bill*. *Alice* thus bears the subject relation with respect to all of these profiled relationships. Likewise, the profile of *Bill* corresponds to their landmarks, so *Bill* is their object. Observe that, while this symbolic assembly happens to exhibit constituency, it is not essential to this characterization of subjects and objects—these are not defined config-urationally in terms of constituent structure, but rather in terms of correspondences and the trajector/landmark asymmetry among relational participants (a matter of focal prominence, a facet of construal).

Thus, if we vary constituency, as in *Bill Alice admires*, the same grammatical relations obtain, since correspondences and trajector/landmark asymmetry remain unaltered. This is shown in Figure 14.
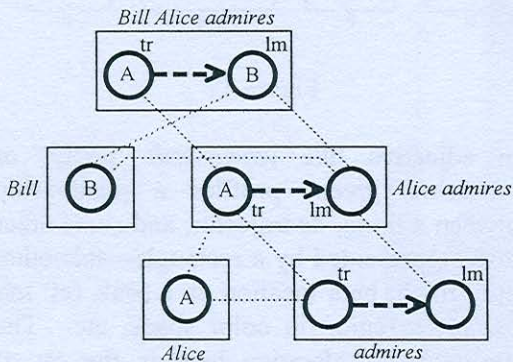

Figure 14

Consider next the dependency between a relative clause and the noun it modifies, as in *the package that I was expecting*. This involves a correspondence between the profile of the head and some element in the relative clause, in this case the landmark of the profiled relationship; in Figure 15, it is represented by the horizontal correspondence line at the lower level. Thus, even when functioning as subject with respect to the main clause, as in *The package that I was expecting arrived*, the package is also understood as the landmark (hence the object) of both the relative clause as a whole, and ultimately of its verb (although I have not shown the clause's internal structure— only its composite representation).
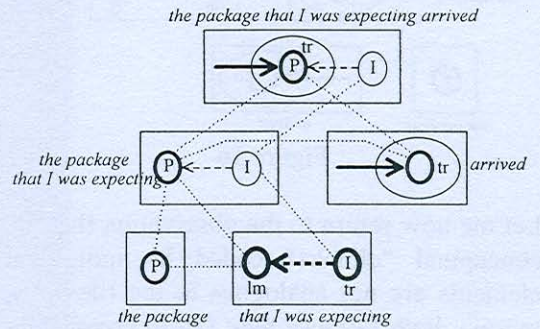

Figure 15

A well-known problem is how to deal with cases where the relative clause and its head are discontinuous, as in *The package arrived that I was expecting*. It is commonly assumed that the dependency between the clause and its head can only be accounted for if they form a constituent at some stage in a derivation. Thus a transformation of "relative clause extraposition" has sometimes been posited to derive the surface form from its putative underlying representation (in which the relative clause and its head do form a constituent). In cognitive grammar there is no need for such a derivation. Grammatical dependencies are matters of correspondence, hence conceptual overlap, and constituency is incidental to their characterization. English

happens to allow an alternate construction with different constituency, as diagrammed in Figure 16. In this construction the relative clause combines with the main clause as a whole, even though it is only certain participants in the two clauses that are connected by the correspondence effecting their integration.
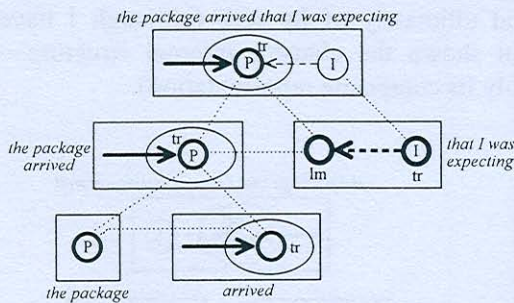

Figure 16

Let me now return to the observation that the conceptual "chunks" coded by individual elements are not analogous to the tiles of a mosaic, both because they fail to completely tile the composite conception to be conveyed, and also because they are overlapping rather than discrete. It may now be evident that all constructions are based on some kind of conceptual overlap, represented by correspondences. Therefore linguistic coding inherently involves a certain measure of **redundancy**. Often grammatical convention requires elaborate redundancy, even the repetition of identical or semantically equivalent markings. Such redundancy is evidently quite natural and presumably serves a communicative function. We have no reason to believe that maximal economy of expression is an overriding principle of language design.

An example of full redundancy is provided by postpositional expressions in Luiseño (a Native American language of southern California, from the Takic branch of Uto-Aztecan). When the object of the postposition consists of a noun modified by an adjective, a copy of the postposition occurs on both the noun and the adjective, as in *ki-nga yawaywi-nga* (house-in pretty-in) 'in the pretty house', or *palvun-ik konokni-yk* (valley-to green-to) 'to the green valley'. Such expressions are formed as shown in Figure 17.
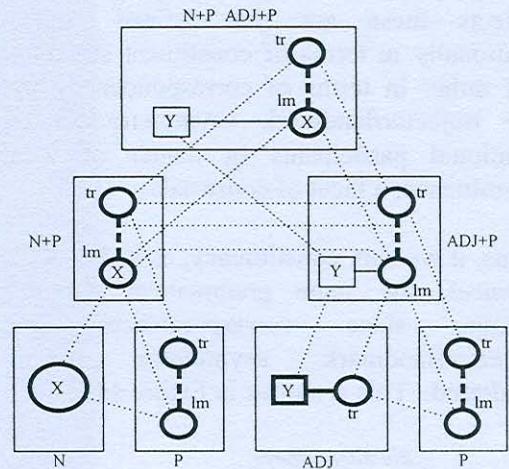

Figure 17

An adjective like *yawaywish* 'pretty' or *konoknish* 'green' profiles a relationship between a thing, its trajector, and some other entity, represented by a rectangle—this other entity might be a location on a scale (cf. *tall giraffe*), a region in color space, etc. The important consideration here is the set of correspondences specified by the multi-level constructional schema. In accordance with the usual pattern for object constructions, the postposition's landmark corresponds to the profile of the noun. When the postposition combines with an adjective, its landmark corresponds to the adjectival trajector,

deriving a relational expression in which the relational landmark exhibits the property specified by the adjective. At a higher level of grammatical organization, the composite structure of the noun+postposition expression combines with the composite structure of the adjective+postposition expression, both of which profile locative relationships. In the higher level construction, these relationships are fully equated: their trajectors correspond, their landmarks correspond, and the relationships themselves are identified. Hence, in the final composite conception, everything collapses onto a single locative relation whose landmark exhibits a certain property. While there is redundancy of expression, every element is meaningful. This construction merely pushes to a somewhat greater extent the conceptual overlap inherent in all constructions.

Morphologically, adjectives look just like nouns in Luiseño, so an alternative analysis which treats them as such might be considered. On this account, a form like *yawaywish* would translate as 'pretty one' (not just 'pretty'), and *kicha yawaywish* as '(the) house, (the) pretty one'; i.e., the modifying construction would be appositional in nature. What then would be the analysis of expressions like *ki-nga yawaywi-nga*? Literally, it would translate as 'in (the) house, in (the) pretty one'. In terms of the diagram, nothing would be altered except that the adjectival element would instead be nominal. Instead of profiling the relationship wherein the trajector exhibits property Y, it would profile only the trajector, a thing, making it a noun. That thing having property Y would be an unprofiled facet of the base, just as it is at higher levels of organization.

In the symbolic view of grammar I propose, all grammatical elements have some kind of meaning, however abstract (or schematic) it might be. One kind of element whose meaningfulness has sometimes been doubted is a **possessive** marker, such as English *'s*. This marker is used for so many different types of relationships that finding a common semantic property may seem hopeless. Here is a small sample: *the doctor's wallet, the dog's tail, Bill's uncle, the cat's fleas, her anxiety, the teacher's situation, our train, your candidate, Lincoln's assassination*. Finding a common semantic property is indeed hopeless if one only considers objective properties of the situations described. However, linguistic semantics is a matter of conceptualization, residing in cognitive processing. A critical aspect of linguistic meaning is how a situation is **construed**, including the **dynamics** of a conceptualization, i.e. how it develops and unfolds through processing time. This dynamicity is the key to the semantic characterization of possessive constructions (Langacker 1993).

We have a basic cognitive ability—manifested in countless ways every day—to invoke one conceived entity as a **reference point** for purposes of establishing mental contact with another, which we can call a **target**. For instance, I might identify a person in relation to somebody well enough known to serve as a reference individual (e.g. *the woman suing Bill Clinton*). Or I might find Toledo on a map by looking for Madrid—a salient, easily located reference point—and then scanning downward. A reference point's **dominion** is the set of potential targets it gives access to (e.g. the set of towns readily located in relation to

Madrid). The components of a reference point relationship are indicated in Figure 18.

C = conceptuali
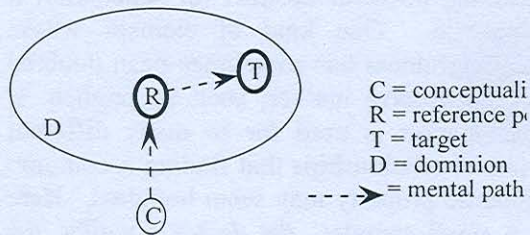R = reference p
T = target
D = dominion
- - - ➤ = mental path

Figure 18

I believe a possessor is reasonably described schematically as a reference point providing mental access to the possessed. This nicely conforms to the prototypes (ownership, whole/part, and kinship relationships) and is sufficiently flexible to accommodate the full range of examples. Moreover, it accounts for the usual irreversibility of possessive expressions: *the wallet's doctor, *the tail's dog, *the uncle's Bill, *the fleas' cat, *the anxiety's her, *the situation's teacher, *the train's us, *the candidate's you, *the assassination's Lincoln. Reversing a possessive relationship is usually infelicitous because a reference point relationship is inherently asymmetrical (one entity providing a natural path of access to the other). The semantic value of a possessive marker like 's is thus to indicate a reference point relation between the possessor and the possessed. It is not a matter of any specific conceptual "content", but rather an aspect of dynamic conceptualization, involving a path of mental access on the part of the conceptualizer. In a conceptualist semantics, it is nonetheless a valid and essential component of meaning.

I analyze **topic** constructions as another manifestation of the reference point ability.

Whereas a possessive construction specifies a reference point relation between two things, a topic construction specifies such a relation between a thing and a proposition, as sketched in Figure 19. The domain of knowledge evoked by the topic constitutes the dominion in which the target proposition is to be interpreted and incorporated. In simple examples, that proposition consists of the process expressed by a clause. (A solid arrow represents this process, and a circle its major participant.)
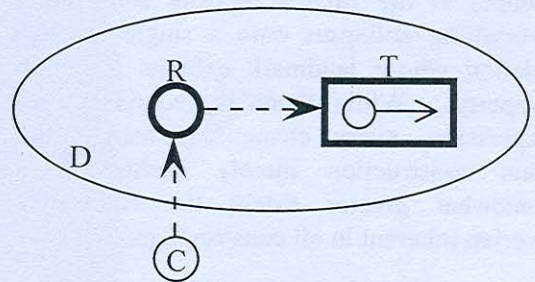

Figure 19

Consider, then, a simple clause-external topic construction, e.g. *Bill, Alice admires him*, diagrammed in Figure 20. The basic correspondence, labeled (a), identifies the entire clause *Alice admires him* with the target proposition accessed via the topic *Bill*. The second correspondence, (b), identifies the topic itself with some entity associated with that proposition, in this case its landmark. It is by virtue of there being such an entity (though it is not always overtly expressed) that a proposition is interpretable with respect to the topic.
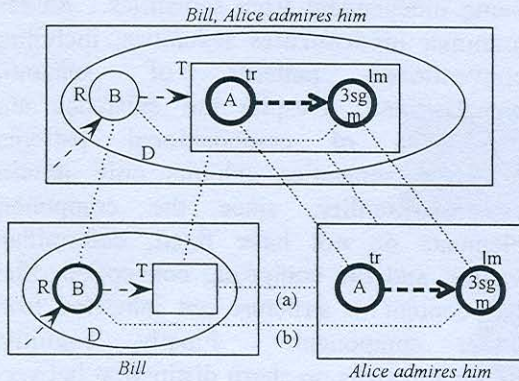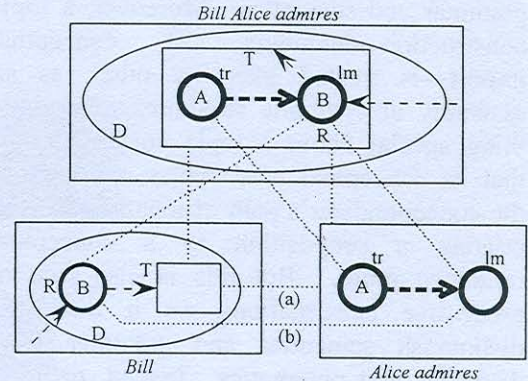
Figure 20

Figure 21

We can now return to a previous example, *Bill Alice admires*. Figure 14 was incomplete, in that no attempt was made to show the topic status of the object *Bill*. We are now in a position to do that. This too is a topic construction, the difference being that here the topic is internal to the clause, the same nominal simultaneously functioning as topic and as direct object. In this composite construction, diagrammed in Figure 21, correspondence (b) directly establishes *Bill* as the clausal object, just as (a) establishes it as the clause-internal topic. In Figure 20, the target proposition already had a direct object, *him*, and correspondence (b) indicates that the topic is coreferential to it. Here in Figure 21 the proposition that combines with the topic lacks an object (*Alice admires*), and the topic construction provides it. It is a dual-purpose construction representing a special case of ("inheriting from") both the topic and direct object constructions.

This characterization of possessive and topic constructions has implications for the traditional distinction between semantics on the one hand, and discourse/pragmatics on the other. In cognitive grammar, I have never posited a sharp distinction between them, only a gradation. Linguistic meaning arises by invoking cognitive domains of any sort, which provide an array of conceptual content, and construing this conceptual base in accordance with the specifications of linguistic elements. As speech unfolds, speakers apprehend both the ongoing discourse and the circumstances of the speech situation, in all its dimensions. These contextual understandings are themselves cognitive domains. They can be invoked like any other domain as the conceptual base for the meanings of linguistic elements. In schematized form, they are part of the conventional semantic values of such elements.

The notion "topic" pertains to discourse and information structure. I have suggested, however, that it manifests the same reference point ability as possessive constructions, whose characterization is indisputably part of

grammar and semantics. Moreover, a topic construction—including its conceptual import—is treated like any other, as an assembly of symbolic structures. The only thing special about a topic construction is that its conceptual base makes reference to the conceptualizer's path of mental access in relating a proposition to a conceptual reference point. But this is also true of possessive constructions, so it does not distinguish semantics and grammar from discourse and pragmatics. Indeed, paths of mental access are an essential part of construal, which is basic to semantics.

I suggest, then, that cognitive linguistics offers a promising approach to discourse, pragmatic, and interactive phenomena. It provides ways of describing them explicitly as an intrinsic part of an overall characterization of language structure. I expect this to be a major focus of cognitive linguistics and cognitive grammar in the coming years.

Let me conclude by restating some essential points. Grammar forms a gradation with lexicon and is fully describable by **assemblies of symbolic structures** (form-meaning pairings). Symbolic assemblies are linked by **correspondences**. These correspondences are indications of **conceptual overlap**—they represent the distortion engendered by dissociating the integrated composite conception into separate chunks for purposes of symbolic encoding. Grammatical **dependencies** are special cases of correspondence. Grammar is **conventional**. The grammatical patterns of a language—in the form of **constructional schemas**—have to be specifically learned and explicitly described. However, grammar is not **autonomous** in the sense of

being independent from semantics. Rather, grammar **incorporates** semantics, including conventional patterns of semantic composition. Despite the existence and importance of compositional patterns, linguistic semantics exhibits only **partial compositionality**, since the component elements do not have fixed, determinate values, and the composite conception often has content or structure not inherited from either component. Finally, cognitive grammar posits no sharp distinction between **semantics** and **discourse/ pragmatics**, treating both in a unified way.

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