A STUDY IN UNIFIED DIVERSITY: ENGLISH AND MIXTEC LOCATIVES

by

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Among the fascinations of natural language is its amenability to being characterized by two apparently contradictory statements: (i) that all languages are basically alike; and (ii) that languages may be fundamentally different from one another and can vary without essential limit. Linguistic theorists face the challenge of simultaneously accommodating the observations and insights that support these opposing positions. A theorist who has had considerable success along these lines is Anna Wierzbicka. In positing her universal semantic metalanguage, Wierzbicka claims that all languages exhibit a fundamental commonality in their lexicogrammatical structure. At the same time, the limited array of elements in this metalanguage are combinable to form higher-order semantic structures of indefinite complexity and essentially infinite variability. This diversity-out-of-unity is not unlike the great profusion of life forms on earth, all governed by strands of DNA comprising different sequences of just four nucleotide bases.

Though quite different in many respects, the theory of **cognitive grammar** (Langacker 1987a; 1990a; 1991) shares Wierzbicka's vision of a basic unity underlying the impressively rich diversity of structures encountered both within a language and cross-linguistically. The theory claims, for example, that lexicon, morphology, and syntax form a continuum fully describable as assemblies of **symbolic structures** (i.e. symbolic pairings between **semantic** and **phonological** structures). It thereby achieves a unified account of phenomena traditionally but problematically assigned to distinct 'components' of the grammar, while at the same time recognizing and accommodating the continuous parameters of variation that render symbolic assemblies so diverse.[1] Cognitive grammar adopts a similar perspective with respect to cross-language comparison. On the one hand it emphasizes the semantic and grammatical uniqueness of every language. Formal differences are taken as symptomatic of semantic differences. Moreover, every language evolves vast inventories of constructions each of which embodies a particular way of construing certain kinds of situations.

This effusion of symbolic resources is nonetheless seen as manifesting a common human potential deriving from biological endowment, bodily experience, and basic cognitive abilities. A limited array of descriptive constructs have been proposed that are central to the characterization of lexicogrammatical structure in all its diversity.

This paper focuses on unity-in-diversity in the domain of locative expressions. It discusses why languages vary so greatly in how they code such a fundamental aspect of human experience. Examined in particular are two languages – English and Mixtec – whose representations of spatial relationships are strikingly different. A comparison of their descriptions in cognitive grammar will serve to elucidate the specific nature of both their divergence and their commonality. Briefly considered as well is the frequent path of grammaticization whereby nouns evolve into adpositions.

1. General Observations

One does not go very far out on a limb in asserting that every language has ways of expressing spatial location and paths of spatial motion. Nor is there much risk in suggesting that such notions are in some sense basic, as witnessed by the propensity of locative expressions to grammaticize (note the infinitival *to*) and to serve as the basis for metaphorical extension to other domains of experience (e.g. *go out on a limb*). This seems only natural. We are, after all, spatial creatures who must occupy and navigate a spatial world. We are also creatures whose primary sense – vision – is specially suited for the detection and representation of spatial relationships.

Because they are fundamental and utterly ubiquitous, spatial relations are easily taken for granted. Scholars tend to think of them as being readily describable and well-understood. Also, since spatial experience is quite similar for all people in many basic respects, there is a tendency to assume that its linguistic expression is roughly comparable from language to language. Such factors are hard to measure, and it is not unlikely that these attitudes have some basis. The actual investigation of locative systems has nonetheless brought unanticipated findings and raised theoretical issues that are far from resolution. To take just one example, the work of Herskovits (1985; 1986; 1988) and especially Vandeloise (e.g. 1985a; 1985b; 1988; 1991; 1994) raises the question of the extent to which spatial prepositions

are actually spatial in nature. They show that normal prepositional usage is replete with examples which seemingly vitiate any straightforward geometric characterization. We say, for instance, that a pear is *in* a bowl even when it rests on a mound of fruit which raises every part of it above the uppermost part of the bowl and thus places it wholly outside the bowl's convex closure. Vandeloise argues that prepositional meaning is more fundamentally a matter of *function* than of spatial configuration. The functions *container* and *contents* allow one to describe the distribution of *in* more coherently and revealingly than does spatial inclusion.

In recent years, empirical investigation has turned up considerably more variety in the linguistic coding of spatial relations than theorists might have contemplated a priori. For instance, not every language instantiates the familiar pattern of describing the location of objects mainly in relative terms, i.e. in relation to other objects. An attested alternative, exemplified by the Australian language Guugu Yimídhirr (Haviland 1992; Levinson 1992), is to rely primarily on fixed directions:

> ... There are languages that encode very few 'prepositional' notions, do not use left and right in an extended spatial sense, and indeed require the conception of spatial relations in a fundamentally non relative manner... In Guugu Yimithirr... nearly all spatial descriptions involve essential reference to something like our cardinal directions... To describe someone as standing in front of the tree, one says something equivalent (as appropriate) to 'George is just North of the tree'..., or to tell someone where you left your tobacco 'I left it on the Southern edge of the Western table in your house', or to ask someone to turn off the camping gas stove 'turn the knob West' and so on (Levinson 1992: 2-3).

Let us briefly note just a few other departures from the Standard Average European style of expressing locative relationships. Cora (a Uto-Aztecan language of Mexico) is striking for the sheer density of locative expressions. It is usual for a clause to harbor at least one and commonly several locative elements in the form of adverbial particles, adpositional constructions, and verb-prefix combinations. Also striking is the central role the system accords to topographical features (e.g. 'off to the side in the face of the slope at a medium

distance'), which it projects metaphorically to other domains, including the human body (Casad 1982; 1984; Casad and Langacker 1985). Another Mexican language, Zapotec (Oto-Manguean), is noteworthy for the highly regular way in which a complete set of seven body-part terms are applied to other kinds of entities (MacLaury 1989). A comparable pattern of extension is one factor in the Mixtec locatives discussed below.

Even these few examples should make it clear that languages vary quite substantially in the kinds of information conveyed by locative expressions as well as their conventional ways of construing and portraying objectively similar situations. Of course, extensive commonalities can also be noted. English too makes use of cardinal directions, topographical features, and the metaphorical extension of body-part terms. The contrast with the languages cited is thus not absolute but more a matter of emphasis or centrality, as measured by such factors as frequency, specificity, systematicity, and degree of grammaticization. Pending a comprehensive cross-linguistic survey, it seems reasonable to expect a certain number of basic spatial notions (e.g. *contact, separation, inclusion, proximity, line, surface, source-path-goal*) to figure prominently in the locative systems of all languages. I also suspect one would find many interesting parallelisms by comparing in detail the verb-prefix systems of Russian (as analyzed in Janda 1984; 1988) and of Cora (Casad 1982; 1993). A primary function of each system is to specify the location or configuration of the verbal process in **image schematic** terms (cf. Johnson 1987; Lakoff 1987).

The cross-language similarities of locative systems should therefore not be underestimated, and later sections will emphasize certain abstract commonalities in the systems of English and Mixtec. The point remains, however, that every language develops a unique and extremely rich inventory of conventional symbolic resources for expressing relations in space and (by extension) in other domains. Whatever their specific nature, the universal constraints and conceptual primitives underlying locative systems allow extraordinary diversity with respect to their combination into higher-order structures as well as the conventionally determined ways of applying such structures to particular kinds of situations in space and myriad other realms of experience.

Although we have focused thus far on diversity in the content of locative expressions, languages also show substantial variation in

regard to its formal manifestation. Noteworthy here is the exploration by Talmy (1975; 1991) of language-specific patterns in the 'conceptual conflation' of events, i.e. the packaging of distinguishable event components into single lexemes. In the case of spatial motion, Talmy documents alternate ways of packaging conceptual components pertaining to the manner of motion, its path, and properties of the mover ('figure') as well as the entity with respect to which it moves ('ground'). He observes, for example, that Atsugewi (a Hokan language of northern California) has a series of verb roots that conflate the idea of motion or location with properties of the figure, e.g. *qput* 'for dirtlike material to move/be-located'. It further has a series of verb suffixes that specify both a path and properties of the ground, as in *-ičt* 'into a liquid'. The two combine productively to form verb stems compactly encoding what has to be expressed in English via lengthy periphrasis: *qputičt* 'for dirtlike material to move into a liquid'.

Hence there is nothing inevitable about the English-type pattern of coding paths and locations by means of prepositional phrases. Some languages have very few preposition-like elements and rely on other devices for conveying comparable information. Palauan, for example, evidently has just one (Georgopoulos 1985: 43). Another language with very few prepositions is Chalcatongo Mixtec (an Oto-Manguean language spoken in Mexico), as described in Brugman 1983 and Brugman and Macaulay 1986. A comparison of the English and Mixtec systems will be our main concern in what follows.

2. The Mixtec System

From the anglocentric perspective, the variety of Mixtec described by Brugman and Macaulay is noteworthy for the essential absence of elements clearly identifiable as adpositions. Whereas English generally uses a prepositional phrase to specify a spatial path or location, the Mixtec equivalent instead contains a noun-noun compound, the first component of which is a body-part term:

(1) *nindeč ̌ęi̧   saà šini žúnu*   'A bird flew over the tree'
     flew   one bird head tree

Of the three elements found that might be considered prepositional, two derive historically from body-part terms, while the third is non-locative (benefactive) and possibly analyzable. Brugman thus suspects that there are no 'primary prepositions' in the language.

The lexemes that function as the first member of these path- or location-specifying compounds are *šini* 'head', *haʔà* 'foot/leg', *sikɨ* 'back [animal]', *ini* 'stomach', *ndaʔa* 'hand/arm', *žata* back [human]', *čìì* 'belly', and *nuù* 'face'. They are the basic terms for the body parts in question and are recognized as such even in locative uses. Both these lexemes and the compounds they form show the behavior we expect of nouns, e.g. they can be possessed and act as clausal subjects:

(2) *šini -rí   ʔúʔù*   'My head hurts.'
    head-my   hurt

(3) *ndaʔa   žúnu   táʔnu*   'The tree's branch is breaking.'
    hand   tree   break

Brugman discusses their categorial status in some detail and concludes that they are best analyzed as nouns even in locational expressions. She does however allow that in these uses the body-part terms are less than fully noun-like, having undergone to varying degrees a process of abstraction and grammaticization.

Example (3) illustrates the extension of terms for the body to designate the analogous parts of other kinds of entities. While this type of metaphor is quite frequent in English (*the foot of my bed, the shoulder of the road, the face of the slope*, etc.), in Mixtec it has to be described as highly pervasive if not systematic. The body-part nouns in question can even be applied to facets of other body parts. Thus in (4), *nuù* 'face' refers to the palm of an open hand, and in (5), *ini* 'stomach' designates the interior of a closed fist.

(4) *hítuu   nuù   ndàʔa-ri*   'It [chalk] is lying on my hand.'
    lie   face   hand-my

(5) *hítuu   ini   ndàʔa-ri*   'It [chalk] is lying in my hand.'
    lie   stomach   hand-my

Despite their interest, we will not dwell on the specifics of these extensions (Brugman discusses them at some length). Our concern is rather to understand how these constructions work in principle.

More is involved than just metaphor. Compare (1) with (6):

(6) *súʔunu-ro   hísndée   šini   žúnu   wąą*   'Your clothes are on that tree.'
    clothes-your   be:on   head   tree   that

In (6), the 'head' of the tree is straightforwardly identified with its upper part. The clothes are directly in contact with that part. By contrast, sentence (1) carries no implication that the bird touched any part of the tree. It merely indicates that some or all of the bird's flight occurs in a region of space *contiguous* to the top of the tree (hence the translation with 'over'). Likewise in (7) and (8):

(7) *ndukoo   haʔa   žúnu*   'He is sitting at the foot of the tree.'
    sit   foot   tree

(8) *rùʔù   nindii-ri   nùù   maría*   'I am standing in front of Maria.'
    I   stand-I   face   Maria

Sentence (7) does not entail that the subject is touching the trunk or roots of the tree, nor does (8) mean that I am standing on Maria's face. Once again, they merely indicate that the subject occupies a region contiguous to the part named by the body-part term, whether this is used in its basic sense or is understood metaphorically.

Examples like (1), (7), and (8) are clearly instances of **metonymy**. Mixtec has a regular and productive pattern of semantic extension whereby terms that refer to parts of the body (or their metaphorical analogs) are instead used to designate regions in space *associated* with the parts in question. In a systematic fashion, each term can thus receive any of four basic interpretations. First, it may simply designate a part of the body, as in (2). Alternatively, as seen in (8), it may be construed metonymically as designating the region in space contiguous to the body part. A third option, exemplified in (3) and (6), is metaphorical transfer from the body to the corresponding part of some other kind of entity. Finally, metaphor and metonymy can both be involved, as in (1) and (7). Here the term winds up

designating the region in space contiguous to the metaphoric analog of a body part.

Grasping these metaphoric and metonymic patterns constitutes a first level of understanding of the Mixtec locative system. A second level is attained by considering the noun-noun compounds in relation to the locational verbs they co-occur with. This was done by Brugman and Macaulay (1986), who give them the approximate glosses 'be located', 'be standing', 'be sitting', 'be lying', 'be in', 'be on', and 'be in (hidden from view)'. One evident reason why the Mixtec system strikes us as 'exotic' is the different strategy it employs for the lexical packaging of conceptual components ('conceptual conflation' in Talmy's terms): some of the *relational* content that English conveys by means of prepositions is apparently subsumed by the verb stem. Its complement can thus be nominal (a noun-noun compound) instead of relational (like a prepositional phrase). As it stands, however, this description is little more than impressionistic. It remains to achieve a more explicit characterization spelled out in precise technical detail. A main concern in what follows will be to approximate this third level of understanding.

3. Some English Locative Constructions

A brief examination of English locatives will serve to lay the groundwork for comparison, as well as to introduce some basic notions of cognitive grammar. The theory claims that grammar forms a continuum with lexicon, and that its characterization reduces to assemblies of *symbolic* structures (each residing in the association between a *semantic* and a *phonological* structure – its two **poles**). The reduction of grammar to symbolic assemblies requires a conceptualist semantics that recognizes our ability to structure and portray the same conceived situation in alternate ways. This capacity to impose alternate **construals** on the same conceptual 'content' is pertinent to the description of every semantic structure, and thus every symbolic structure. Inherent in selecting a particular lexicogrammatical element or construction is the implicit decision to construe things in a certain way. Since grammatical elements are usually quite schematic in terms of their content, their primary semantic contribution lies in the construal they impose (cf. Talmy 1988b).

Let me cite just a few examples of construal (for detailed discussion, see Langacker 1987a; 1988; 1990a; To appear-b). We have, first, the ability to conceive and portray a situation at different levels of specificity and detail (e.g. *hammer* vs. *tool* vs. *thing*). We also have the ability to conceive of one structure against the 'background' of another, as in metaphor, where the source domain provides the background for construing the target domain. Previous discourse is another kind of background. A third dimension of construal is 'perspective', including 'vantage point', 'reference point', and a variety of other factors. Sentence (9), for example, describes Joan's position as seen from Tom's vantage point, invoking Bill as a reference point for this purpose.

(9) *When Tom entered the room, Joan was standing on Bill's left.*

In addition, various kinds of 'prominence' have to be recognized and distinguished. Two of these – **profiling** and **trajector/landmark alignment** – are pivotal in the characterization of grammatical structure.

Within its conceptual **base** (the content it evokes), an expression always selects some substructure as its **profile**, defined as the entity it *designates* (its *referent* within the conceptualization). The word *lid*, for instance, evokes as its base the schematized conception of a container and its cover, choosing the latter for its profile. An expression can profile either a **thing** or a **relationship**, in accordance with abstract definitions of these terms (Langacker 1987a; 1987c). For expressions that profile relationships, an additional kind of prominence comes into play: the degree of salience accorded the relational participants. It is usual for one participant to stand out as the entity a relational expression is concerned with locating, characterizing, or assessing in some fashion. This is called the **trajector**. Often the profiled relationship makes salient reference to a second participant, called a **landmark**. The verb *see*, for example, profiles a perceptual relationship in which the status of trajector and landmark is respectively conferred on the perceiver and the entity perceived. Trajector and landmark status can be thought of metaphorically as primary and secondary spotlights of 'focal prominence' that can be directed at various entities within a scene.

The nature of an expression's profile determines its grammatical category. Abbreviatory notations for some basic classes are given in

Figure 1, where heavy lines indicate profiling. A circle represents a thing, and a line connecting two entities stands for a relationship. A relation is either **simple** or **complex**, depending on whether it reduces to a single configuration or has to be characterized as a series of configurations. A **process** is a complex relation whose evolution through time (t) is rendered salient. The labels tr and lm identify a profiled relation's trajector and landmark. Although these focused participants are shown as things, it is also possible for another relation to function in either capacity. The dotted **correspondence** lines indicate that the component states of a complex relation all have the same trajector and the same landmark.
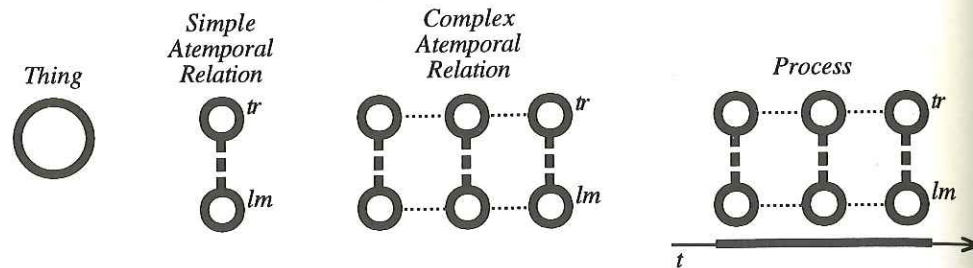

Figure 1

A noun profiles a *thing*, as do pronouns, determiners, and complex nominal expressions. Expressions with a *process* for their profile include verbs, finite clauses, and the clausal equivalent of determiners (in the case of English, tense and the modals – see Langacker 1985; 1990b; 1991). Various kinds of non-processual relations (said to be **atemporal** because their evolution through time is backgrounded) are designated by such classes as adjectives, adverbs, infinitives, and participles. Of prime concern here are prepositions and prepositional phrases, which profile atemporal relations having a thing as their landmark. The profiled relation is simple for prepositional expressions that specify a *location*, and complex when they describe a *path* (which can be analyzed as a series of locational specifications).

Consider the preposition *on*, sketched on the lower left in Figure 2. In its basic sense, *on* designates a simple (i.e. single-configuration) relation of contact and support, canonically along the vertical axis.

This relation is indicated by the double-headed arrow. Its trajector and landmark are both things, and each is characterized only schematically (so far as the preposition itself is concerned). Grammatical **constructions** serve to combine the preposition with other elements which specify these focal participants in finer detail. Figure 2 represents the prepositional-phrase construction, in which a noun phrase specifies the preposition's landmark. In the terminology of cognitive grammar, the two **component structures** – *on* and *the table* – are **integrated** to form the **composite structure**, namely *on the table*.[2] Phonologically, their integration involves adjacency in the speech stream and a particular temporal ordering. It is only semantic integration that concerns us here.
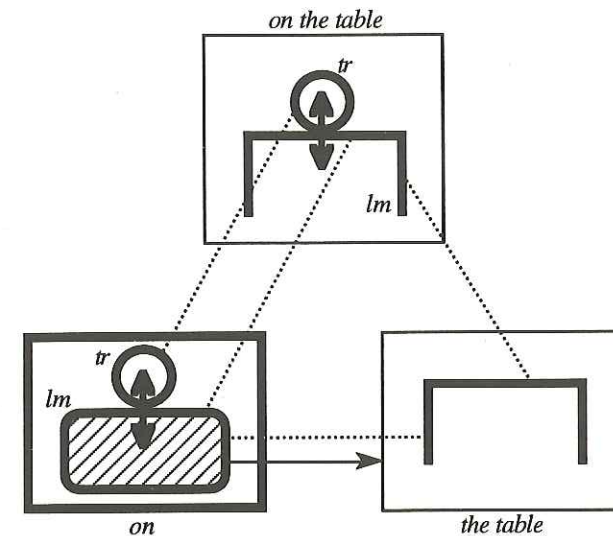

Figure 2

A construction is an assembly of symbolic structures linked by correspondences. As shown in Figure 2 by the horizontal dotted line, the pivotal correspondence in a prepositional-phrase construction equates the schematic landmark of the preposition with the profile of the noun phrase. Because it is generally more specific, the noun phrase is said to **elaborate** the preposition's landmark. The horizontal

arrow calls attention to this elaborative relationship, and hatching signals the landmark's status as an **elaboration site** (e-site for short). To the extent that an expression is compositional,[3] we can think of the composite structure as being derived by superimposing corresponding elements and merging their specifications. Moreover, the composite structure usually profiles the same entity as one of its component structures; in the present example, the prepositional phrase *on the table* designates the same locative relationship as the preposition *on* (and describes it in finer detail). The component whose profile is inherited at the composite structure level is called the **profile determinant** and enclosed with a heavy-line box. A **head** is the profile determinant at a given level of organization, and a **complement** is a component structure that *elaborates* a salient substructure of the head. The head in a prepositional phrase is thus the preposition, and the object noun phrase (which elaborates its landmark) is a complement.

A construction's composite structure can simultaneously function as a component structure in a higher-order construction. Thus the composite structure *on the table* from Figure 2 is shown in Figure 3 as one component of the more complex expression *the bowl on the table*. In this modifying construction, the pivotal correspondence holds between the profile of the noun and the schematic trajector of the prepositional phrase, which the noun elaborates. Here it is the noun that functions as the profile determinant (head), for like the noun the composite expression designates the bowl rather than the locative relation in which it participates. At this level of organization *on the table* is a **modifier**, defined as a component structure a salient substructure of which is *elaborated by* the head.
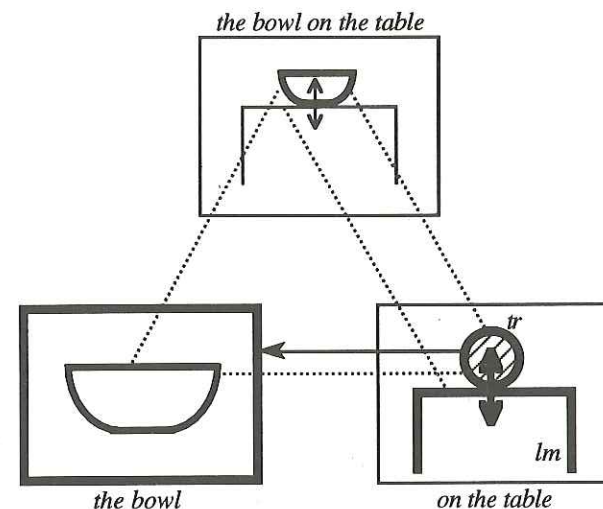
Figure 3

An alternative is for a prepositional phrase to be used predicatively, in which event it supplies the essential relational content of a clause. Predicative use in English requires the co-occurrence of *be*, as for an adjective, a predicate nominative, an infinitive, or a present or past participle:

(10) (a) *The bowl is on the table.*
     (b) *Their house is quite large.*
     (c) *My brother is a physicist.*
     (d) *We are to leave as soon as possible.*
     (e) *This lettuce is wilting.*
     (f) *This lettuce is completely wilted.*

Principles of cognitive grammar predict that *be* should have a meaning, though it may be quite abstract. I have in fact shown (1982; 1987c; 1991: ch.5) that significant generalizations emerge when *be* is attributed a particular kind of schematic semantic value. The characterization is part and parcel of a coherent analysis of the English auxiliary system in which every element has a range of clearly related senses and the meanings of complex expressions are regularly formed from the meanings of their parts.

In all the constructions exemplified in (10), the element that follows *be* profiles an atemporal relation.[4] The entire sentence in each case comprises a finite clause, which by definition profiles a process, i.e. a *temporal* relation in the sense that its evolution through time is foregrounded. Thus, if an atemporal relation is to be used predicatively in a finite clause (and not, say, as a noun modifier), it must somehow be rendered processual. *Be* fulfills this function in English (as does *have* in the perfect construction). It serves to *temporalize* an atemporal relation, deriving a composite structure of the form *be* + *X* that designates a process and hence is suitable to head a finite clause. Observe that a unified analysis is thereby achieved for 'copular' ('main verb') and 'auxiliary' uses of *be*.

Like the other auxiliary verbs of English, *be* profiles a highly schematic process (Langacker 1991: 5.3.4). Its meaning includes the *notion* of a process – a profiled relationship saliently followed in its evolution through time – but gives no detail about the specific nature of that relationship. English verbs (or verb uses) are either **perfective** or **imperfective**, depending on whether the designated process is conceived as being bounded and involves some change through time, or whether the profiled relation is construed as being constant through time without inherent bounding. In most of its uses, including those in (10), *be* profiles a schematic *imperfective* process. It thus embodies the abstract semantic commonality of imperfective verbs (*resemble, believe, have, know, like, exist*, etc.) and shares their basic aspectual properties. Like *resemble*, for instance, it occurs in the simple present tense but not the progressive:

(11) (a) *She {resembles/*is resembling} her mother.*
     (b) *The bowl {is/*is being} on the table.*

The basic sense of *be* is sketched at the lower left in Figure 4. The profiled relationship is characterized only schematically. The dotted correspondence lines do however specify that the component states (enclosed in boxes) are identical, i.e. that the profiled relationship (including its participants) is the same at each point in its evolution through time. Finally, the ellipses represent the absence of inherent bounding – the profiled relation has indefinite temporal extension in the sense that it is not specifically conceived in terms of its initiation or termination.
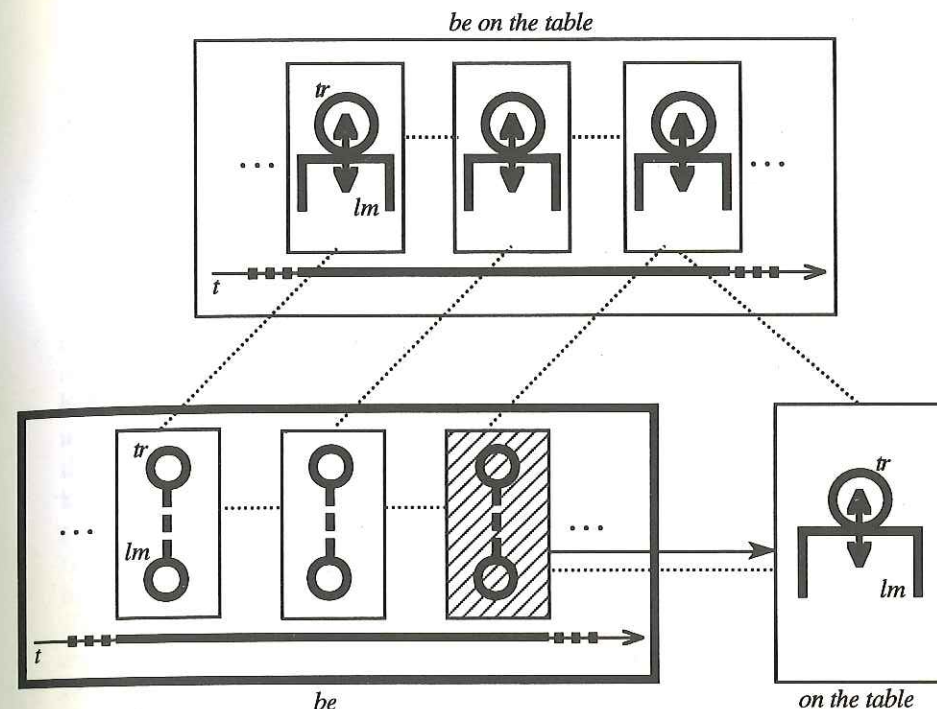
Figure 4

Figure 4 diagrams the integration of *be* and *on the table* to form the complex clausal head *be on the table*. As indicated by the horizontal correspondence line, their integration is simply a matter of equating the relation profiled by *on the table* with the one that *be* portrays as continuing unchanged through time.[5] *Be* is the head in this construction and thus determines the processual nature of the composite expression, whereas the prepositional phrase provides the essential content and specifies what particular relation is being followed in its temporal continuation. *On the table* is a complement because it elaborates a salient substructure of the head. To derive a full finite clause like (10)(a), the composite expression *be on the table* is combined with other elements at higher levels of grammatical organization: a specification of tense/modality, and a noun phrase

that elaborates its schematic trajector and is thus identified as the clausal subject.

Be is special in that its content is limited to the schematized conception of a relationship extending through time. As seen in (10), that relation is not necessarily even locative. There are of course many other verbs capable of taking locational expressions as complements. To the extent that these are true *complement* constructions, the verb itself makes salient albeit schematic reference to a locative relationship, which the complement serves to elaborate. Such verbs differ from *be* because the elaboration site is specifically locational, and more importantly, because they incorporate substantial conceptual content above and beyond the schematic e-site. For example, a posture verb like *sit* or *stand* profiles a bounded episode of the trajector assuming a particular spatial configuration, involving both the current shape of the body and its alignment with respect to the surroundings. Hence the verb inherently portrays its trajector as being in some location, which is often specified by a complement:

(12) (a) *She sat on the porch for an hour.*
(b) *He was standing under a tree.*

Verbs of placement likewise incorporate a locational e-site:

(13) *Sharon {set/placed/put} the bowl on the table.*

While these verbs imply that the object follows a spatial path, they focus on the endpoint of that path (Smith 1987: II.5). It is usually the resultant locational configuration – not the entire path – that functions as the e-site elaborated by the prepositional complement. Observe that the sentences in (13) become less natural if not unacceptable when *on* is replaced by the path preposition *onto*.

Figure 5 depicts one level of grammatical organization in sentences like (13). In particular, it shows the integration of *put the bowl* with *on the table* to form the intermediate-level composite structure *put the bowl on the table*. The component structure *put the bowl* is itself complex, having been derived at a lower level of organization through the combination of *put* with *the bowl*, which elaborates its landmark. *Put* profiles an event in which the trajector exerts a force (represented by the double arrow) such that the

landmark (in this case a bowl) moves along a spatial path resulting in its occupying a particular location.[6] In the representation of *put the bowl*, the large rectangles enclose component states of the profiled process, and within each state the small rectangle indicates the locative relationship which the bowl bears to some other (unspecified) object. Collectively, these locative relationships constitute the spatial path followed by the bowl.

However, *put* de-emphasizes the overall path in favor of the resultant locational relationship. It is this schematic relationship, a subpart of the final component state of *put the bowl*, that functions as e-site in this construction. Because *put the bowl* is the profile determinant (and thus the head) at this level of organization, *on the table* is a complement by virtue of elaborating this relational e-site. It will be noted that the landmark of *put the bowl* is equated with the trajector of *on the table*. There is no conflict here, since trajector and landmark status is always relative to a particular structure and a particular level of organization. It is quite common for the same conceived entity to figure in different structures or levels, and to have a different status in each. Note further that the trajector /landmark alignment of *put the bowl* prevails at the composite structure level. Since the choice of focal participants is an aspect of relational profiling, a relational head imposes its own alignment on the composite structure essentially as a matter of definition.
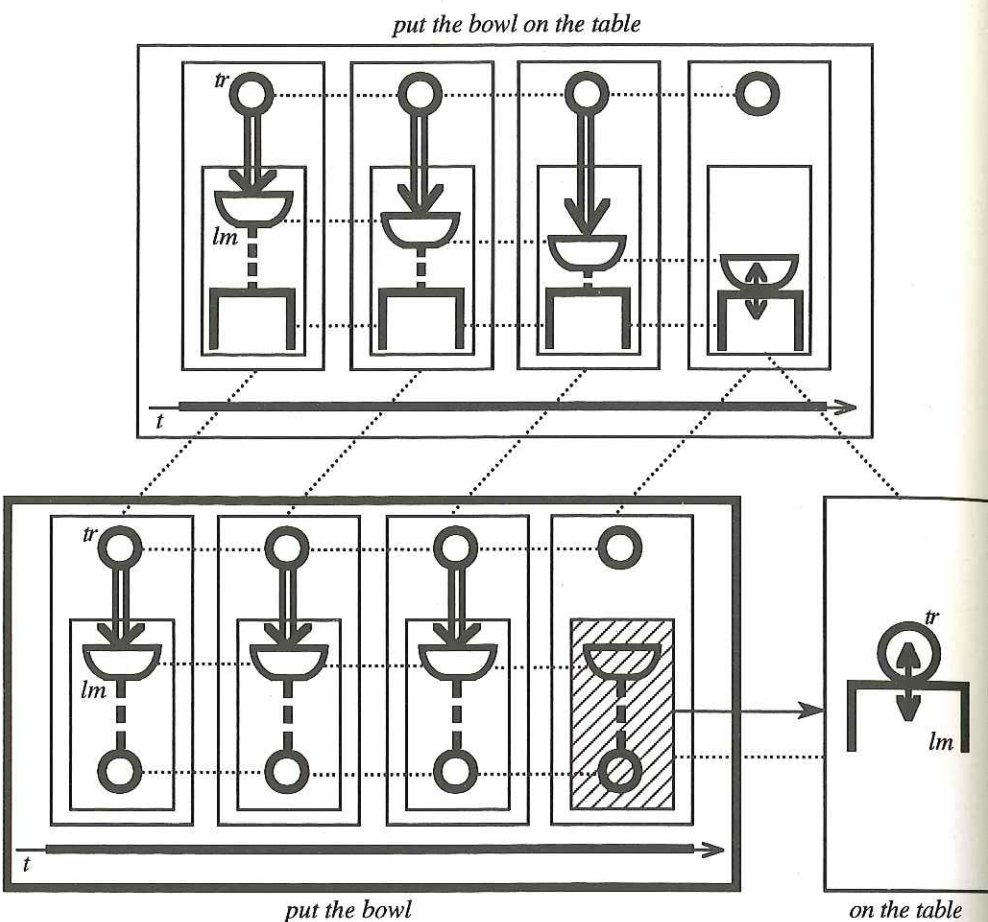
put the bowl on the table

Figure 5

put the bowl

on the table

Consider, finally, an example in which a prepositional phrase complement describes an entire spatial path, as in (14).

(14) *Brygida dropped a penny into the bowl.*

By their very nature, verbs of motion (or the causation of motion) embody the conception of an entity following a spatial path. This path is generally quite schematic, but in the case of *drop* it is at least

specified as being downward. It comprises a series of locative relationships involving the landmark, one for each component state. Collectively, these locational configurations function as an e-site, as shown by the hatching in Figure 6. *Into the bowl* profiles an atemporal relation that is *complex*, for it too comprises a series of locational configurations rather than a single configuration. This path-specifying prepositional phrase elaborates the relational e-site of *drop a penny*, the construction's head, to yield the composite structure *drop a penny into the bowl*.
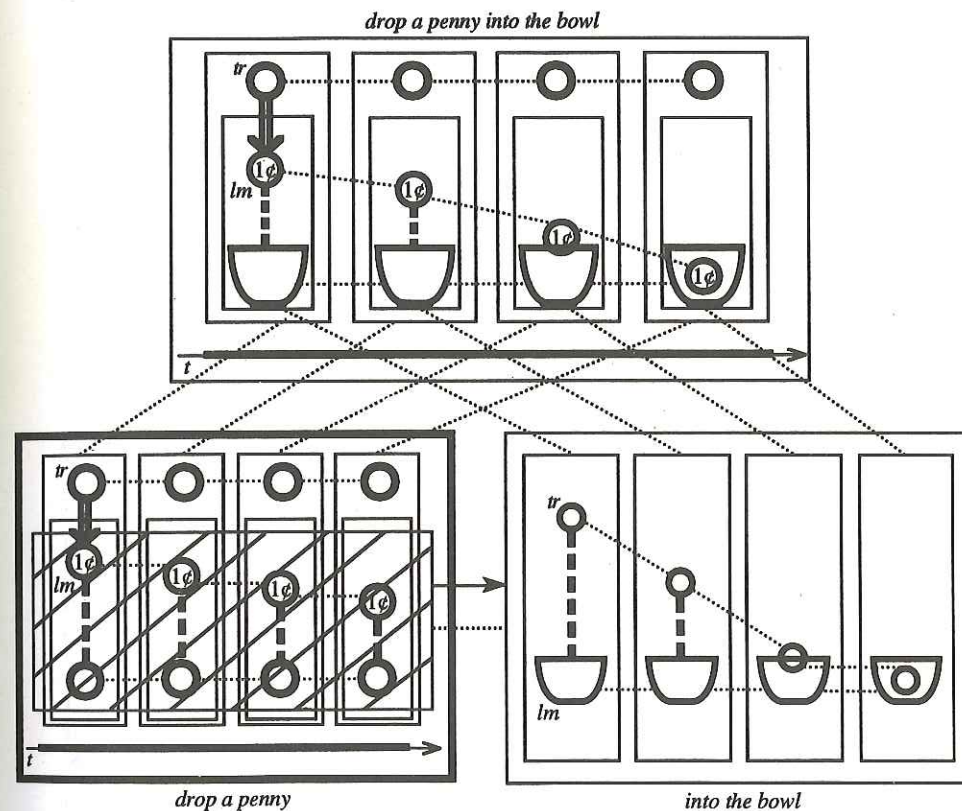
drop a penny into the bowl

drop a penny

into the bowl

Figure 6

4. Some Conceptual Problems

In linguistic investigation as in virtually every realm of experience, perfectly normal phenomena often appear mysterious until we learn to think about them in the right way. It seems to me that linguistic theory has proved particularly adept at creating mystery by furnishing inappropriate conceptual tools for the analysis of language. Be that as it may, I must at least confess to having been bewildered at various times by certain linguistic phenomena whose prevalence suggests that they are actually quite natural. Tracing the source of such bewilderment – uncovering the tacit assumptions which lead to the conflict of expectations with actual data – is potentially quite revelatory concerning both language itself and the conceptual systems we construct in the attempt to understand it.

A number of mysteries I experienced at one time or another are associated with the kinds of constructions exemplified by Mixtec sentences like (1) and (8), repeated here for convenience:

(1) *nindečé ịị saà šini žúnu*   'A bird flew over the tree'
    flew   one bird head tree

(8) *rùʔù nindii-ri nùù maría* 'I am standing in front of Maria.'
    I   stand-I   face Maria

One question is why such sentences should be intransitive.[7] Granted that *šini žúnu* 'head tree' and *nùù maría* 'face Maria' are properly analyzed as noun-noun compounds, themselves nominal in character, each sentence consists of a verb and two non-oblique noun phrases – the subject and another complement. Why is this second complement not a direct object? The answer requires a theoretical account of transitivity that goes beyond equating it with the mere occurrence of two direct complements in a single clause.

The other mysteries concern the absence of explicit markers for crucial semantic relationships. From my anglocentric perspective, it was hard to see how the combination of two elements like *nùù* 'face' and *maría* could mean 'Maria's face" since neither contributed the essential notion of possession. Indeed, it was hard to see how they could directly combine at all, since nouns are zero-place predicates and consequently do not take arguments. An analogous problem arises at the level of clause structure. How can a sentence like (1) or

(8) express the locative relationship between two entities when there is no relational element (like a preposition) that connects them by taking them both as arguments? The same question can be posed in diachronic terms, with respect to the common path of grammaticization whereby body-part nouns evolve into adpositions. Suppose a noun meaning 'head' develops into a preposition meaning 'over'. Presumably the source construction includes not just the two nouns that become the preposition and its object, but also relational markers of possession and location (e.g. [AT] HEAD [OF] N > OVER N). What then becomes of these relational elements? It would be implausible to suppose that they are invariably lost through phonetic erosion or reanalysis as part of the preposition (though each certainly happens in some cases).

These questions may just be a tribute to one linguist's naiveté (hopefully now to some degree ameliorated). They do however rest on certain default-case assumptions and common ways of conceiving linguistic phenomena whose ultimate validity cannot simply be taken for granted. It is of some theoretical interest to make them explicit and subject them to critical examination.

A major source of my conceptual difficulty was tacit acceptance of the **building-block metaphor**, which is unavoidable and useful up to a point, but highly misleading if taken literally or pushed too far. According to this metaphor, a morphological element has a specific meaning with definite limits. The meaning of a complex expression is obtained by combining the meanings of its parts – stacking the building blocks together – in conformity with regular compositional principles. The discrete blocks of meaning contributed by the various elements do not overlap, and every portion of the composite semantic value resides in one of those blocks. This metaphorically structured **idealized cognitive model** (Lakoff 1987) is of course recognizable in the classic conception of the morpheme and morphosyntactic analysis, and it works tolerably well so long as we confine ourselves to the simplified and sanitized kinds of find-the-morpheme problems we give to students in the first week of an introductory linguistics course.

A more elaborate version of the metaphor endows some of the blocks with holes or slots into which the ends of other blocks can be fitted. The slots provide a way of linking blocks together, so the slotted blocks are thought of as having 'combinatory potential'.[8] In particular, a block with two slots can be used to connect two other

blocks, which may themselves be slotless and thus unable to combine directly. This version of the metaphor entails a different conception of the composite semantic structure: since the blocks are bound together (not merely stacked), and touch one another only in the locus of the slots (not all along their surface), the complex structures built from them are more like networks or frameworks than solid walls. In their usual instantiation, these structures take the form of 'trees', hierarchical arrangements of 'predicates' and their 'arguments'.

Embracing this idealized conception of semantic compositionality makes one liable to be puzzled by expressions lacking explicit relational elements such as prepositions and possessive markers. If there is nothing to link the nouns together, how can they be understood as participating in locative and possessive relationships? One can certainly find ways to handle the problem (e.g. by positing zero elements). However, it simply evaporates with the adoption of a more appropriate view of meaning and linguistic semantics. When the same data is examined using some basic notions and specific constructs of cognitive semantics – all motivated on independent grounds – the conceptual difficulties never arise in the first place.

Beyond a certain point, the metaphorical identification of linguistic elements with semantic building blocks is inappropriate and misleading. *Pace* Wierzbicka (To appear), a lexical item's meaning is neither fixed and pre-determined nor sharply delimited from general knowledge of the entity it designates. An item is better thought of as providing access to multifaceted conceptual structures of indefinite expanse, which it flexibly evokes in a context-dependent manner (Haiman 1980; Moore and Carling 1982). The access afforded is to some extent shaped by convention – the conceptual structures associated with a particular lexical item vary in their degree of **centrality**, i.e. how saliently and reliably it tends to evoke them. If these factors are recognized, it seems reasonable to conclude that an item assumes a distinct semantic value on every occasion of its use.

Analogous comments hold for complex expressions formed by grammatical devices. Conventional patterns of semantic composition are essential to the structure of every language.[9] Usually, though, the way a composite expression is actually understood diverges from any compositional value regularly derivable from its parts, if only by virtue of being more specific. In assembling or

understanding a complex expression, the language user draws upon vast stores of background knowledge, as well as full apprehension of the physical, social, and linguistic context. These all contribute to the composite semantic structure. The composite meaning is an integrated conceptualization that is evoked, constrained, and to some degree approximated by the meanings of the component elements. They do not however supply the 'material' out of which it is 'constructed' (cf. Reddy 1979).

In assembling a complex expression, the speaker chooses symbolic elements whose individual and compositional values are judged sufficient, in the overall context, to evoke the desired conception in the addressee. The notions selected for explicit coding are shaped and rendered coherent by their role in this integrated conception. They often constitute mere fragments of the full conceptualization, singled out by virtue of being salient, readily symbolized, and able to give the addressee enough clues to reconstruct the speaker's intent. Moreover, the attention brought by explicit symbolization is unevenly distributed. If the full conception being evoked is thought of as an area to be 'covered' symbolically, the notions directly symbolized by overt elements tend to cluster in certain regions, leaving others covered only sketchily or not at all. The overtly symbolized notions also show extensive overlap (note the elaboration sites in Figures 2-6). Hence a complex expression bears little resemblance to a mosaic – it is decidedly not the case that all facets of the composite conception are coded by overt, non-overlapping elements.[10] It is better likened to an unfinished collage: different-sized fragments of material cover certain portions of the substrate in overlapping fashion, while other portions are bare.

When the inadequacies of the building-block metaphor are recognized, the idea of **constructional meaning** presents itself as perfectly natural. If – in the case of individual expressions – the composite semantic structure incorporates specifications not contributed by component structures, there is no reason why such discrepancies should not also occur for multiple expressions in accordance with a regular pattern. Grammatical patterns are learned by a process of **schematization** whereby the commonalities observable across a set of symbolically complex expressions are progressively reinforced and thus abstracted from the remainder. The **constructional schemas** that emerge in this manner are symbolic assemblies analogous to those in Figures 2-6, except that the

component and composite symbolic structures are to some extent schematic rather than specific. The composite structure can perfectly well contain elements the component structures lack, provided that this discrepancy is characteristic of the specific expressions from which the schema is extracted. The prevalence of semantic specifications only associated with the construction as a whole is expected and unproblematic in both cognitive grammar (Langacker 1987a: 12.1.1) and **construction grammar** (Fillmore 1988; Fillmore, Kay, and O'Connor 1988; Goldberg 1992).

A final aspect of cognitive semantics relevant to the problem at hand is the postulation of specific constructs for the precise description of semantic and grammatical structure. While various kinds of evidence can be offered in support of particular constructs, the most important is simply to show their systematic utility for the optimal characterization of diverse phenomena in different languages.[11] Some basic notions of cognitive grammar – especially pertaining to construal – have been strongly justified on such grounds (e.g. profiling and trajector/landmark alignment). Other constructs receiving similar support have a greater amount of inherent conceptual content. In particular, it is claimed that certain complex yet fundamental concepts – so frequent and salient in our everyday experience that they are reasonably called **conceptual archetypes** – naturally offer themselves as the prototypical values of basic grammatical notions. The concept *physical object*, for example, is prototypical for the class of nouns.

A number of conceptual archetypes, identifiable as facets of an idealized cognitive model that I call the **canonical event model** (ICM), provide the prototypical meanings of basic constructs pertaining to clause structure (Langacker 1990a: ch. 9; 1991: ch. 7; To appear-a; Croft 1991). This ICM makes reference to both a typical event and the usual way of viewing it. The event consists of an energetic interaction whereby a volitional agent induces a change of state in a passive patient by the direct application of physical force. The action is viewed in its entirety by an 'offstage' observer who does not participate in it. Manifesting this idealized model is a transitive clause like *Floyd broke the glass*, where basic grammatical notions assume their prototypical values. The verb profiles an *energetic interaction*. The subject and direct object respectively instantiate the archetypal semantic roles *agent* and *patient*. Their occurrence in the third person reflects the canonical position of the speaker and

addressee, who remain offstage and implicit as non-participant *observers*. The entire event, construed in this fashion, is prototypical for a transitive clause.

An additional facet of the canonical event model is the conceptual distinction between **participants** on the one hand and **settings/locations** on the other. We think of the world as being populated by discrete objects of limited size – *participants* – that move around within global, relatively stable spatial *settings*. If the term setting is understood as referring to the global surroundings, a *location* is any 'fragment' of the setting, such as the position of a single participant. Canonically, participants merely *occupy* a setting or a location, whereas they *interact* with one another. Even when it remains covert, the distinction between participants and settings /locations proves to have extensive grammatical significance (Langacker 1986; 1987b; Rice 1987). Participant status is part of the agent and patient archetypes and is usual for clausal subjects and objects. Moreover, since transitivity centers on the notion of energetic interaction, a clause can only be transitive to the extent that its subject and object are construed as participants rather than settings or locations. It is therefore possible that a clause which appears to be transitive in terms of its overt form is actually non-transitive because its subject or object receives a locational construal.[12] Consider the examples in (15):

(15) (a) *My lifetime has seen some extraordinary events.*
    (b) *This manuscript contains many errors.*

On the basis of their form (with non-oblique noun phrases in pre- and post-verbal position) these sentences ought to be transitive. However, by the usual test of passivizability, they do not behave as transitives:

(16) (a) **Some extraordinary events have been seen by my lifetime.*
    (b) **Many errors are contained by this manuscript.*

I would argue that they are non-transitive because their subjects are construed as *settings* rather than participants. Sentence (15)(a) exemplifies a special setting-subject construction involving verbs like *see* and *witness*. In (15)(b), the subject's construal as a setting is inherent to the verb *contain*.[13]

5. Mixtec Locative Constructions

One of the mysteries alluded to in the previous section has now effectively been resolved. Despite the presence of two non-oblique noun phrases, sentences like (1) and (8) are intransitive because one of those noun phrases designates a *location* rather than a *participant*. That noun-noun compounds such as *šini žúnu* (head tree) 'over the tree' and *nùù maría* (face Maria) 'in front of Maria' are construed as naming locations seems highly plausible in view of their functional and translational equivalence to locative prepositional phrases.

The other problems, pertaining to the absence of explicit linking elements, were artifacts of the building-block metaphor and fail to arise when the same expressions are described from the standpoint of cognitive grammar. We can best see this by working through a specific example step by step. The factors to be considered are all found in (7):

(7) *ndukoo ha?a žúnu*   'He is sitting at the foot of the tree.'
         sit   foot   tree

Let us start with the noun-noun compound. Its head is the first noun, *ha?a*, which in its basic sense designates a part of the body. In (7), however, it assumes a meaning derived from the basic sense by regular patterns of metaphor and metonymy, as shown in Figure 7. Via metaphor (FOOT ---> FOOT') it comes to designate an entity which resembles the human foot in being the lower portion of an object with significant vertical extension. Via metonymy (FOOT' ---> FOOT"), it comes to designate instead the region in space contiguous to that part of the object.[14] Observe the notational convention of using a rectangle (rather than a closed curve) for the profiled region, to indicate its construal as a *location*. Whereas a body part or the analogous part of an object is susceptible to being construed as either a location or a participant, a spatial region per se is presumably locational under normal circumstances. Observe as well the inclusion of a dashed-line circle in the profiled region. The very notion of a location evokes to some degree the conception of an entity which *occupies* that location. The dashed-line circle represents this actual or potential occupant.
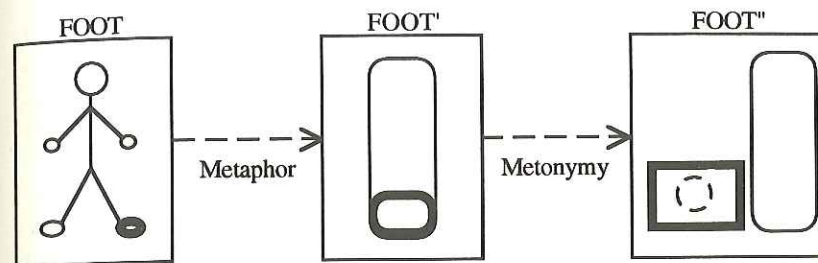
Figure 7

While the compound *ha?a žúnu* can designate either the bottom part of a tree or the contiguous spatial region, in expressions like (7) it assumes the latter value. Its assembly thus involves the semantic integration of FOOT" and TREE, as diagrammed in Figure 8. The construction is quite straightforward. It hinges on a correspondence between the profile of TREE and the unprofiled, vertically extended object evoked by FOOT". Since the latter makes only schematic reference to this object, TREE serves to elaborate its specifications. FOOT" is also the construction's head, because the composite structure inherits its profile: the compound as a whole does not designate the tree itself, but rather a spatial region at its base.
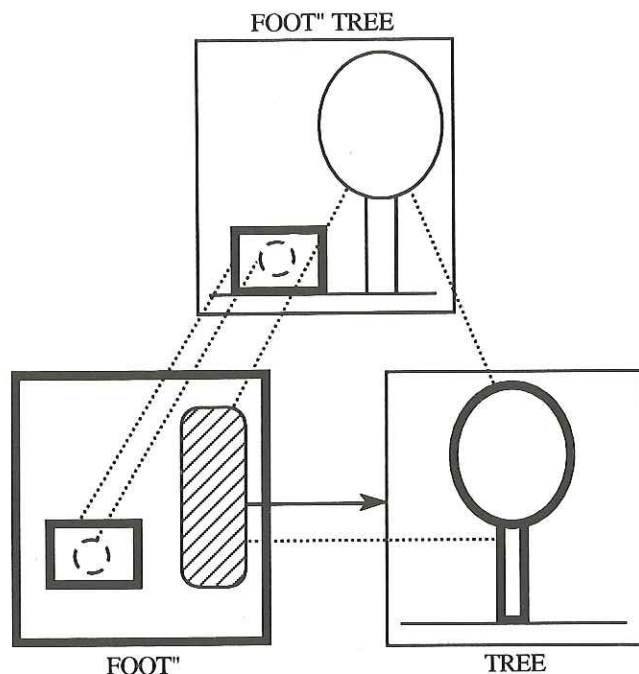
Figure 8

In this construction, the two component structures are nouns. Each profiles a kind of *thing*: a spatial region, and a physical object.[15] There is no explicit relational element which links them by taking them both as arguments. Yet the construction is easily described, using the same basic constructs the theory deploys for the description of virtually every construction – notions such as *profiling, profile determinance, correspondence,* and *elaboration.* Important here are two fundamental aspects of cognitive semantics, namely the *profile/base* distinction and *conceptual overlap.* The first makes it clear how a nominal expression is capable of serving an essentially relational function. Even though *haʔa* profiles a thing, it evokes a relationship as a central feature of the conceptual base with respect to which the profile is characterized. Whether it designates a body part, the analogous part of some other object, or an associated region in space, the profiled entity is conceived and identified through the relation it

bears to another, unprofiled thing having significant vertical extension. This relationship is inherited as part of the composite structure's meaning – it does not have to be profiled by an element at any level to be included in the composite semantic value. The second factor, conceptual overlap, is reflected in the correspondence between the unprofiled thing evoked by *haʔa* and the profile of *žúnu* 'tree'. TREE elaborates a schematic entity inherent in FOOT", there is no need for any other morphological element to establish a connection between them. The requisite link is given by these elements themselves and the correspondence imposed by the construction.

The last step we need to consider is the integration of *ndukoo* 'sit' with the compound *haʔa žúnu* (foot tree) 'foot of the tree'. As shown in Figure 9, one of the two component structures is the composite structure from Figure 8, which profiles a region in space. The other component structure, SIT, designates a (presumably imperfective) process in which a certain relationship continues through time unchanged. It was noted previously that such a relation has two facets: postural and locational. The postural specifications of SIT involve both body configuration (crouched, as opposed to fully extended) and force-dynamics (the rump as the primary locus of support). In Figure 9, they are represented abstractly by the vertical double-headed arrow internal to the trajector. With respect to location, SIT specifies a particular orientation (alignment of the trunk more or less along the vertical axis), as well as the absence of motion, and thus makes salient the conception of the trajector being in a certain place. Its location, depicted as a rectangle, may well be a focused element with landmark status.
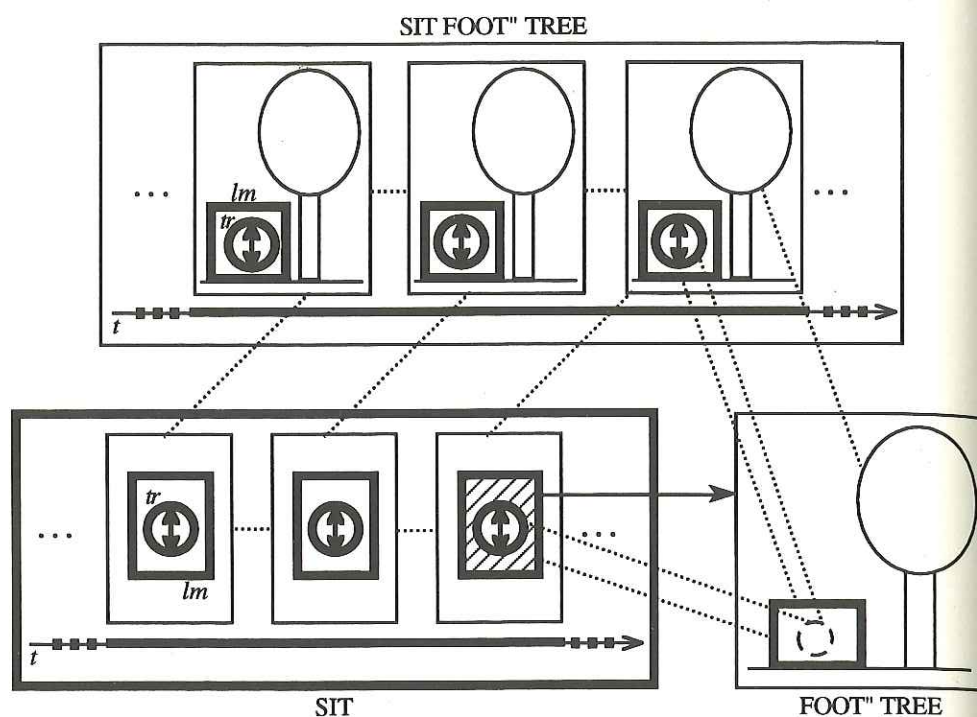
SIT FOOT" TREE

SIT   FOOT" TREE

Figure 9

Hence SIT saliently evokes a schematic location, while FOOT" profiles a location characterized with greater specificity. Their integration is just a matter of equating these two locations, as well as their occupants (the trajector of SIT, and the potential occupant of the foot-of-the-tree region). Because SIT is the head in this construction, the composite structure profiles a process in which the trajector, for an indefinite span of time, maintains a certain posture in a fixed location beneath a tree. If the sentence had an overt subject, it would elaborate this schematic trajector.

Once again, the absence of an overt linking element is unproblematic. The conception of a locative relationship does not have to be introduced by a separate relational element (such as a preposition), being inherent in the meaning of each component structure: it is one facet of SIT's relational profile, and is present

(though unprofiled) in the case of FOOT" TREE. Hence the verbal semantics itself contributes the notion of the trajector being in a certain location, which the nominal compound – through conceptual overlap – renders specific. The compound is a complement because it elaborates a salient substructure of the verbal head. It is not however a direct object, for its referent is a location rather than a participant.

From the glosses supplied by Brugman and Macaulay (1986), namely 'be located', 'be standing', 'be sitting', 'be lying', 'be in', 'be on', and 'be in (hidden from view)', we can reasonably suppose that the Mixtec verbs of location all profile the extension through time of a locative relationship, which they specify in different ways to a limited degree. The most schematic, 'be located', is still more specific than English *be* (Figure 4), since the profiled relation is specifically locational, whereas *be* is used with any kind of atemporal relation (as in (10)).[16] Of course, locational compounds are not restricted to sentences containing just these verbs. They occur, for example, with verbs of motion:

(1) *nindečé j̦i̦ saà šini žúnu* 'A bird flew over the tree'
     flew   one bird head tree

A verb such as 'fly' incorporates the conception of the mover following a spatial path, whereby it successively occupies a series of locations. Its integration with the locative compound requires only that one or more of these locations be put in correspondence with the location the compound designates.

These compounds occur with other kinds of verbs as well:

(17) *nik̦ažáa ini   ndúča* 'Someone drowned in the water.'
     drowned stomach water

(18) *sáʔa-rí ndučaʔá* nuù *molcajete* 'I'm going to make salsa
                                               in the molcajete.'
     make-I salsa   face molcajete

The notion of spatial location is not particularly salient with these verbs, but neither is it entirely absent – physical events and their participants are always located in some place. While integration

depends on conceptual overlap, there is no absolute requirement that the corresponding entities have to be prominent. These constructions are thus analogous to Figure 9, involving a correspondence between the location evoked by the verb and the one profiled by the compound, except that the former is relatively non-salient within the verbal semantics.[17]

6. From Nouns to Adpositions

Earlier I raised the conceptual problem – one that I remember wrestling with in earlier years – of what happens to relational markers of possession and location when body-part nouns evolve into adpositions. If the grammaticization involves a change such as AT HEAD OF N > OVER N, and the adposition is the morphological descendant of the body-part noun (HEAD > OVER), what happens to the elements AT and OF along the way? It should now be evident that the question rests on an incorrect presupposition. Contrary to the expectations induced by the building-block metaphor, such elements are not necessarily part of the source structure in the first place. The source may in some cases be a construction analogous to the ones just described for Mixtec, so that the actual change is simply HEAD N > OVER N.

Suppose, then, that the body-part nouns of Mixtec should continue along their path of grammaticization and eventually evolve into true prepositions. This would not necessarily entail any change in the overt form of the compounds or the sentences containing them. It would however involve a change in meaning (e.g. HEAD > OVER) and a concomitant change in grammatical class (N > P). In the terminology of cognitive grammar, the element shifts from one that profiles a *thing* to one that profiles an *atemporal relation*. The specific nature of this change holds a certain amount of theoretical interest, as independently motivated constructs of the theory allow it to be described with some precision.[18]

One construct we have not yet discussed is the notion **search domain**, first proposed by Hawkins (1984). A search domain is defined as the region to which a locative element confines its trajector, i.e. the set of trajector positions that would satisfy its specifications. The grounds for positing this construct start with the basic observation that a locative expression usually does not pin down

the trajector's location with full precision, but merely places it within a certain region. That region is not the expression's landmark (e.g. the entity designated by a prepositional object), but rather some area characterized with reference to it. By way of example, the search domains of *above* and *beside* are very roughly indicated (by shading) in Figure 10.
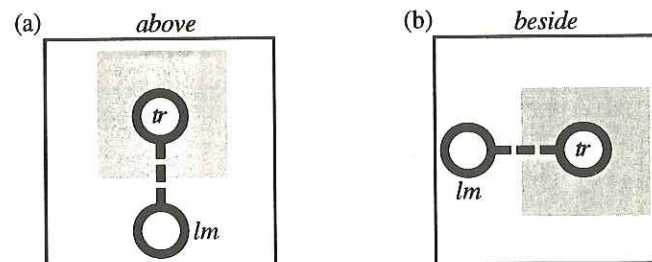

Figure 10

Reference to this construct is essential for the explicit description of numerous constructions in different languages (Langacker 1993). To take just one example, we need it to describe sentences like those in (19), which are fully acceptable for many speakers of English:

(19) (a) *Under the bed is all dusty.*
     (b) *Near the fire is quite a bit warmer.*

A prepositional phrase like *under the bed* or *near the fire* normally profiles a locative relationship. However, the property of being dusty or warm can hardly be ascribed to a spatial relation per se. I therefore analyze the prepositional phrases in (19) as undergoing a semantic extension, wherein the profile shifts from the relationship to an associated entity whose characterization as dusty or warm is non-anomalous, namely a region in space.[19] Because they profile regions (which are *things*), the phrases in question are actually *nouns* (as defined in cognitive grammar) and can therefore function as subjects. For us the essential point is that the region each phrase designates is the *search domain* implicit in its basic relational

meaning. The semantic extension serves to reify this latent region and render it salient as the profiled entity.

This pattern of extension is sketched in Figure 11. From a prepositional phrase, it derives a nominal expression that names a location characterized with reference to a thing (specified by the prepositional object). Because the resulting noun is locational, it invites the conception of the profiled region being occupied by some other entity, as indicated by the dashed-line circle.[20]
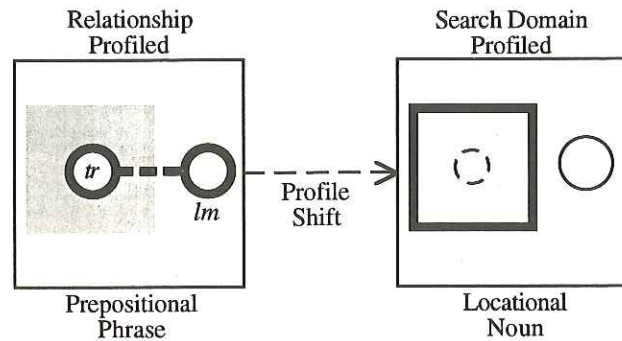

Figure 11

The grammaticization of a body-part noun into a preposition is essentially the inverse of this extension. The first step in this process, the initial extension shown in Figure 12, is the same kind of metonymy shown previously in Figure 7 (FOOT' > FOOT''): a noun that profiles a body part (or a body-part analog) is instead construed as designating a contiguous region in space. The noun is thus locational, which suggests the possibility of something occupying the profiled region. Observe that a locational noun's semantic characterization incorporates several entities that qualify as *things* by the technical definition: (i) the profiled region; (ii) its potential occupant; and (iii) the reference object with respect to which the profiled region (and hence its occupant) is situated.[21]
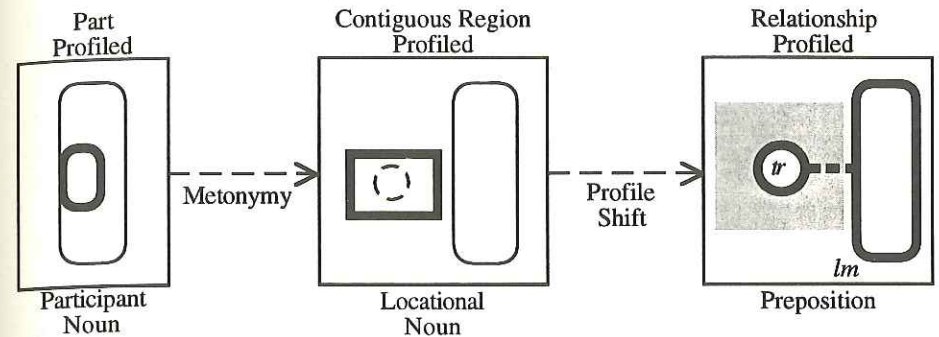
Figure 12

Note further that a preposition, even though it profiles a relationship, also invokes three entities that count as things: (i) its search domain; (ii) its trajector; and (iii) its landmark. Thus a locational noun and a preposition incorporate comparable elements arranged in a comparable configuration. In each case element (i) is a spatial region, whereas elements (ii) and (iii) are object-like participants. In each case element (ii) occupies region (i). Moreover, region (i) is in each case characterized with reference to element (iii). A locational noun and a preposition may therefore subsume the same conceptual content. The change from nominal to prepositional status, the second extension shown in Figure 12, may simply be a matter of adjusting the relative prominence of certain elements (an aspect of construal). In particular, the profile shifts from the spatial *region* to the spatial *relationship*. Region (i) undergoes a diminution in prominence but remains as the preposition's search domain, implicit and non-salient. Conversely, elements (ii) and (iii) rise in prominence to become the focal participants in the profiled relationship (its trajector and landmark).

7. Conclusion

The grammaticization of locational nouns into adpositions brings us back to the original theme of diversity-out-of-unity. On the one hand, nouns and prepositions represent distinct classes with very different grammatical properties. At the same time, however, their

relationship via grammaticization suggests that locational nouns, at least, must be quite similar to adpositions, a suggestion borne out by the proposed analysis. We have seen, in fact, that their conceptual content may be quite comparable – what distinguishes them is the construal imposed on that content, specifically in regard to the prominence accorded various entities. The rather striking instance of grammatical diversity we set out to examine proves, in the last analysis, to be relatively superficial. The description proposed does not contradict the possible claim of underlying conceptual unity.

I would like to point out, in conclusion, that the same inventory of basic phenomena and descriptive constructs have been invoked for the characterization of both English and Mixtec locative constructions. For instance, both languages make liberal use of body-part metaphors and metonymy based on spatial contiguity. Both languages have verbs of motion, posture, and location, characterized at different levels of schematicity. Each has constructions for describing spatial paths and locations, and each affords some basis for positing a conceptual distinction between settings/locations and participants. Moreover, the same fundamental constructs of cognitive grammar prove sufficient for the description of locative constructions in the two languages: profiling, trajector/landmark alignment, correspondence, elaboration, profile determinance, etc.

Despite this extensive commonality, there is ample room for linguistic diversity. The same conceptual content is susceptible to being construed, symbolized, and lexically packaged in alternate ways. Languages vary in the kinds of notions they select for explicit coding, as well as how commonly and systematically they employ particular devices. A limited set of basic constructs allow an open-ended variety of symbolic assemblies to be formed, including (as we have seen) alternate compositional means of arriving at the same composite conception. Hence their largely common basis does not prevent languages from developing rich and richly divergent inventories of symbolic resources essential to the cultural heritage of their speakers.

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Notes

1. Among these factors are size, novelty, regularity, productivity, specificity, and the kinds of meanings expressed. There is no reason whatever to believe that natural distinctions made with respect to one parameter will invariably delimit the same set of elements as those made with respect to any other.

2. Here and elsewhere, the semantic contribution of articles will be ignored to avoid irrelevant complications.

3. Cognitive grammar posits only *partial* compositionality (discussed in section 4).

4. Even a predicate nominative is analyzed as having a relational profile (see Langacker 1991: 2.2.4).

5. The diagram shows *on the table* as elaborating a particular component state of *be*, but the choice is arbitrary, since these states are all identical.

6. Recall that the trajector and the landmark are respectively characterized as the relational participants accorded primary and secondary focal prominence – the terms do not imply that the trajector necessarily moves, or that the landmark does not.

7. Brugman and Macaulay (1986) describe the verbs as being 'formally intransitive'. While they do not cite the morphological basis for this characterization, it is surely valid. I know of specific morphological indications of intransitivity for comparable expressions in other languages.

8. An alternative is to speak of 'valence' by analogy with chemical bonding.

9. These patterns constitute the *semantic pole* of constructional schemas, i.e. schematized symbolic assemblies serving as templates for the construction of symbolically complex expressions. Since grammar reduces to assemblies of symbolic structures (both specific and schematic), it is not merely *correlated* with semantic structures and compositional patterns, but actually *incorporates* them as one of its two poles.

10. The mosaic metaphor is a two-dimensional version of the building-block metaphor.

11. This is basically the same method Wierzbicka uses to justify her semantic primitives. For examples of its application with the (rather different) constructs of cognitive grammar, see Langacker 1993 .

12. In cognitive grammar, subjects and objects are schematically characterized as nominal expressions that respectively elaborate the trajector and the landmark of the process profiled at the clausal level of organization. A trajector and landmark are in turn characterized as the elements accorded primary and secondary focal prominence in a profiled relationship. In the case of a process, the most agent-like and patient-like participants usually

manage to attract this prominence. It can however be conferred on other elements, even settings and locations, resulting in marked constructions suitable for special discourse purposes.

13. Since a setting is an abstract container, it seems quite natural that *contain* should characterize its trajector as a setting. Observe that when *contain* receives a force-dynamic interpretation (Talmy 1988a), so that *interaction* is involved, the setting/container becomes a kind of participant. This results in transitivity: *The dam is containing the floodwaters; The floodwaters are being contained by the dam.*

14. Since these compounds represent the normal way of labeling parts of objects and expressing locative relationships in the language, FOOT' and FOOT" are undoubtedly established senses of *haʔa*, alongside FOOT. We are dealing, then, with polysemy: the structures in Figure 7 are part of a network comprising the related conventional meanings of the lexeme. The details of how these notions apply to various kinds of objects presumably involve a mixture of conventionality and creativity.

15. The term *thing* is used in its abstract technical sense, which does however approximate one conventional value of the lexeme in everyday English. Note the following: *A region in space may not be everything, but at least it's something, it's not nothing.*

16. Since *be* regularly occurs in construction with a locational complement, it presumably has a conventionally established variant in which a locative relation in particular is extended through time. This specialized variant may be quite comparable to the most schematic locational verb of Mixtec.

17. By definition, this makes the compound less of a complement and more adjunct-like. Recall that a complement is a component structure which elaborates a salient substructure of the head (salience being a matter of degree).

18. This characterization slightly elaborates the one presented by Rubba (In press), who documents several synchronically observable stages in the evolution of nouns to prepositions in modern Aramaic.

19. A shift in profile represents a common type of semantic extension. These examples involve a productive pattern of extension that applies to complex novel expressions. Such patterns are independently attested and are readily described in cognitive grammar.

20. Figures 11 and 12 are intended as generalized representations. While these diagrams necessarily show elements in specific positions with respect to one another, they should not be interpreted as referring to any particular spatial relationship or body-part analog.

21. To simplify matters, I leave aside the possibility of the region's potential occupant, and ultimately the preposition's trajector, being not a thing but another relationship. The choice determines whether prepositions and prepositional phrases function adjectivally or adverbially.

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