Active Zones
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Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society (1984), pp. 172-188

ACTIVE ZONES

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This paper investigates a certain phenomenon, illustrated in (1), pertaining to the compatibility of a relational predication with its arguments.

(1)(a) David blinked.
(b) She heard the piano.
(c) I'm in the phone book.

All are perfectly normal expressions, yet they exhibit an apparent peculiarity when we think about what they actually seem to say. The subject of (1)(a) names a person, but the activity of blinking is not something carried out by a whole person--only the eyelid really does anything. In (1)(b), we encounter the seeming anomaly of a person hearing a physical object, when the only things we can in fact hear, quite obviously, are sounds. If (1)(c) is taken literally, moreover, we can only conclude that the speaker is either very small or quite cramped.

Examples like these have often been noted in one connection or another, but I am unaware of any comprehensive and unified treatment. Their implications are quite substantial, and go right to the heart of critical grammatical issues. I will claim, for instance, that the sentences in (2) illustrate the same basic phenomenon as those in (1).

(2)(a) Wombats are tough to catch.
(b) Tom is likely to succeed.
(c) I believe Donovan to be an honorable man.

The sentences in (2) are commonly analyzed as manifesting the syntactic movement (or relation-changing) rules of Object-to-Subject Raising, Subject-to-Subject Raising, and Subject-to-Object Raising, respectively. I will suggest, on the contrary, that a reasonable account of the normal connection between relational predications and their nominal arguments, required even for single-clause expressions, obviates the need for special syntactic rules of this sort.

I. BASIC ASSUMPTIONS

I will examine the problem from the standpoint of the framework of cognitive grammar, also commonly referred to as space grammar (cf. Langacker 1981a, 1981b, 1982, 1983; Casad and Langacker in press; Lindner 1982). This framework does not posit derivations from abstract underlying structures--it is claimed instead that grammar is symbolic in nature, with aspects of the overt form of expressions serving to symbolize their structuring of conceptual content. All grammatical units are claimed to be

bipolar, consisting of a semantic unit at one pole symbolized by a phonological unit at the other pole. Moreover, grammar--both morphology and syntax--is seen as merging with lexicon to form a continuum of symbolic units.

More directly important are certain claims concerning meaning and semantic structure. Most basically, I take the position that meaning is to be equated with conceptualization, and that semantic structure is simply conceptualization shaped to the specifications of linguistic convention. A linguistic predication is thus a conception that functions as the semantic pole of an expression, be it a single morpheme or a composite expression of any degree of complexity. Following Haiman (1980), the putative distinction between semantics and pragmatics (or between linguistic and extra-linguistic knowledge) is claimed to be artifactual. Instead I assume that linguistic semantics is encyclopedic in nature: all linguistic predications are characterized relative to cognitive domains, and any knowledge system or conceptual complex--regardless of its size and scope--is capable of serving as a domain for this purpose. For example, the conception of a right triangle serves as the cognitive domain for the characterization of HYPOTENUSE (i.e. the semantic pole of hypotenuse), the conception of the human arm as the domain for ELBOW, and knowledge of the rules and strategies of baseball as the domain for SACRIFICE BUNT. It is difficult to conceive of a meaningful description of these notions that would not presuppose these knowledge structures in an essential way.

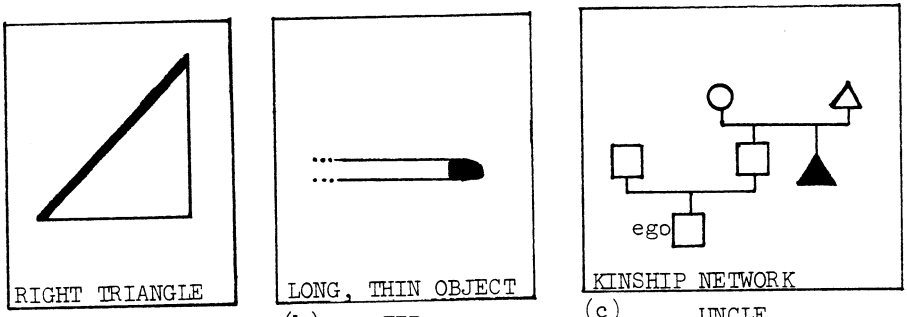
However there is more to the meaning of an expression than just a cognitive domain: a given expression structures the conceptual content of its domain in a particular fashion, for example by construing it at a certain level of precision and specificity, by viewing it from a certain perspective, or by rendering certain substructures more prominent than others. I will say that the lexical and grammatical units in an expression impose a particular image on the conceptual content of the relevant domains; the term image does not refer here to visual or sensory imagery in the usual sense, but simply to alternate construals or structurings of semantic content. For example, the sentences in (3) impose contrasting images on what may be exactly the same conceived situation:

(3)(a) The lumberjack guzzled his whisky.
(b) The liquid was consumed.

One difference in the two images is the far greater specificity of (3)(a). A second difference pertains to figure/ground alignment, reflected in voice and the choice of subject.

One particular facet of such imagery is of central importance to us here, namely what I call the profile/base distinction. The base for a linguistic predication is its domain; the profile for a predication is a substructure of the base that is accorded special prominence as the substructure which the expression designates. Some examples are given in Figure 1, where the profiled

substructure is indicated in boldface: the conception of a right triangle is the base for the characterization of the predication HYPOTENUSE, whose profile is a particular side of this conceived entity; similarly, the conception of a long, thin object is the base for TIP, and that of a kinship configuration is the primary (but not the sole) knowledge system required for the characterization of UNCLE. It is crucial to observe that the meaning of a linguistic expression is not given by either its base or its profile alone--instead it resides precisely in the relation between the two. Without a profile, a conception makes no designation; without the base, the designated entity either does not exist or cannot be properly identified. It is also important to note that two or more predications can have essentially the same base and still differ semantically by virtue of their choice of profile within this base. In 1(c), for instance, different choices of profile would yield such alternate predications as GRANDMOTHER, GRANDFATHER, PARENT, and also (with appropriate gender adjustments) NIECE and NEPHEW. Note that the entire base figures in the meaning of a predication, even though only a substructure of this base is profiled (designated) by the expression.



(a) HYPOTENUSE (b) TIP (c) UNCLE

Figure 1

Predicates can be categorized with respect to the nature of their profile. I would maintain that a nominal predication designates a thing, defined very roughly as a bounded region in some domain; hypotenuse is thus a noun because it designates a bounded region within the conception of a right triangle, uncle because it profiles a node (one type of bounded region) within a conceived kinship configuration, and so on. (Physical objects, as bounded regions in space, are things by this definition, but the definition makes no direct reference to them.) A relational predication is one that profiles the interconnections between two or more conceived entities, where an entity can be either a thing or another relation. Within the class of relational predications, a basic distinction can be made between stative relations, which designate a single configuration, and processes, which profile a continuous series of such configurations distributed through conceived time and scanned sequentially. Stative relations

correspond to a number of grammatical classes that include prepositions, adjectives, and simple adverbs. Processes are coextensive with the class of verbs.

Though they are hardly adequate, for expository purposes I will adopt the abbreviatory notations in Figure 2 for the fundamental classes. A thing, since it profiles a bounded region in some domain, is conveniently indicated by a circle. The profile of a stative relation is more complex, as it designates not only two entities--indicated by the rectangles--but also, crucially, the interconnections between these entities. These participating entities can be things, stative relations, or processes. They need not be distinct, and they need not be separately expressed in a sentence to be counted as part of the semantic structure of a relational predication. Finally, since a process involves the evolution of a conceived situation through time, the abbreviatory notation includes an arrow to suggest its temporal axis. The subject of a process is always a thing.

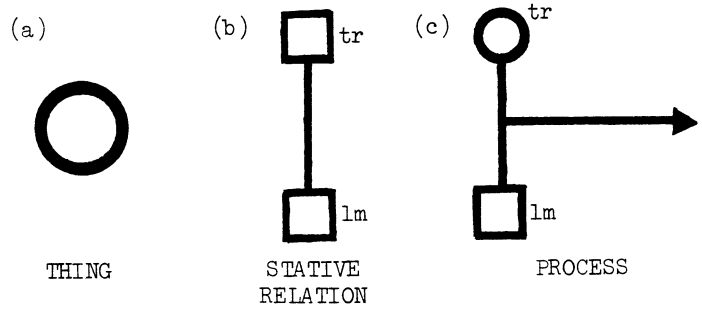


Figure 2

An additional point concerns the asymmetry between relational participants which underlies the traditional subject/object distinction. The notions I employ, trajector (tr) and landmark (lm), are more general--subjects and objects are special cases of trajectors and landmarks, respectively. A trajector is defined as the figure within a relational profile. A landmark can be any prominent substructure; the most salient (aside from the trajector/figure) will be referred to as the primary landmark (this can be equated with a direct object, when present). All relational predications are claimed to involve some type of trajector/landmark asymmetry as part of their internal structure, regardless of whether the participants are spelled out explicitly by other expressions. Two examples are sketched in Figure 3. The basic locative sense of in is given in 3(a). IN predicates a relationship of inclusion between two things; the landmark, equated with the container, functions as a point of reference for locating the trajector. In 3(b) is represented the adjectival sense of yellow illustrated by expressions like yellow flash. The landmark is a region in the cognitive domain of color space, delimited primarily with respect to the hue dimension of this domain. The

trajector is a light sensation of some kind (indicated adhocly with squiggly lines); YELLOW specifies the coincidence of this sensation with some portion of the landmark region. Figures 3(a) and (b) are quasi-pictorial diagrams, and the nature of the interconnections between the trajector and landmark are given directly by the diagrammatic configuration; it is these interconnections that are the pivotal elements of the relational profile.

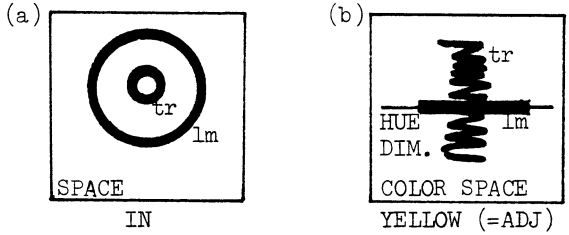


Figure 3

One final point concerns the prevalence of lexical polysemy. It is hardly controversial that a common lexical item typically displays an extensive array of interrelated meanings, some of which are felt to be more "basic" than others. In the present framework, every conventionally sanctioned meaning of a lexical item is treated as a distinct predication. A polysemous expression therefore has for its semantic pole, not a single predication, but rather an array of alternate predications representing the range of conventionally established values it can assume. These predications can be thought of as nodes in a network, some of which bear relationships of semantic specialization or semantic extension to others. They can also differ greatly in cognitive salience, some being more easily elicited than others.

In view of the above, it should not be surprising to find that one way in which the meanings of a lexical item can differ is by the imposition of alternate profiles on the same base. Consider, for example, the contrast between yellow as an adjective (e.g. yellow flash) and as a noun (Yellow is her favorite color). The former designates a relation, as diagrammed above in Figure 3(b). What about the nominal variant? As a noun, it profiles a bounded region in some domain. I equate this domain with color space, and the bounded region with the same region of color space that functions as the relational landmark in the adjectival predication. By removing the trajector from 3(b), and retaining as the profile the same bounded region along the hue dimension that is identified in 3(b) as the landmark, one obtains a predication that constitutes the meaning of yellow when it is employed as a noun.

II. THE PHENOMENON

Let us take the sentences in (4) as our point of departure. In each instance it can be argued that the central relational predication--APPROACH, BEYOND, or NEAR--profiles an interconnection

in which its trajector and landmark participate as integral, undifferentiated wholes. As the spacecraft approaches Uranus, for example, every part of it becomes progressively closer to every part of the planet, and no particular subpart of either one has special status in this regard.

(4)(a) The spacecraft is now approaching Uranus.
(b) Goleta is beyond Santa Barbara.
(c) Your dog is near my cat.
(5)(a) Your dog bit my cat.
(b) Your dog bit my cat on the tail with its sharp teeth.
(c) ?Your dog bit my cat with its teeth.

When we examine (5)(a), a rather different picture emerges. Here it is evident that the relational predication BITE designates an interaction between its trajector and landmark that directly involves only selected aspects of these entities. For instance, the teeth of the dog are pivotal to the act of biting, but the contribution of its tail and kidneys to this process is at best negligible. With respect to the landmark, BITE itself does not specify which particular part of the cat is privileged to participate directly, but BITE strongly suggests that only restricted portions are affected.

Those portions of a trajector or landmark that participate directly in a given relation will be referred to as its active zone with respect to the relation in question. For some relational predications, like those in (4), the active zone of the trajector and/or landmark is coincident with the whole. For others, like BITE, the active zone of the trajector and/or landmark is limited to a proper subpart of the whole. The active zone should not be thought of as a discrete or sharply bounded region within the overall entity--it is more accurate to think of it as the focal area of the relational interaction, the participation of a region becoming more tenuous the farther it lies from this focus. For example, the trajector's participation in the process designated by BITE is not strictly limited to its teeth: also involved are the jaws, the operative muscles, the nervous system, and so on. Pushing things to the extreme, one could argue that every part of the trajector is involved in the act of biting in one way or another, however marginal it might be, if only because all portions of the body are interconnected, so that no portion is totally unaffected by what happens to any other. I would not dispute this argument. The only point crucial here is that the participation of certain regions is obviously more direct and more central to the relational conception than that of others.

Linguistic form is often blind to these subtleties. Precisely the same expressions, namely your dog and my cat, are used to describe the trajector and primary landmark in sentences (4)(c) and (5)(a), even though these entities participate as integral wholes only in the former. On the assumption that the nouns dog and cat designate the entire animal (so that dog, for instance, would be an

inappropriate expression to describe a disembodied set of teeth), we can observe that (5)(a) manifests a notable discrepancy between what is profiled by the trajector and landmark of BITE and the active zones of these entities with respect to the process. This discrepancy sometimes has overt linguistic consequences; it is possible, for example, to spell out the active zones explicitly by means of periphrastic expressions, such as the prepositional-phrase complements in (5)(b). Generally, though, such periphrasis is optional, and one resorts to it only when this additional specification is informative. This is the case in (5)(b), since BITE is vague about the active zone of its landmark, and since the adjective sharp provides information about the active zone of the trajector that would not otherwise be available. However the prepositional-phrase complement in (5)(c) adds nothing to the content conveyed by the verb, so this sentence is needlessly redundant.

The existence of a substantial discrepancy between the entity profiled by an expression and its active zone with respect to a given relational predication is not at all unusual. In fact, a bit of reflection reveals that a discrepancy between profile and active zone represents the normal situation. It is in fact quite difficult to find convincing examples like those in (4), where all aspects of the designated entity participate equally in a relationship. In the overwhelming majority of instances the various facets of the profiled entity participate in a relationship to different degrees and in different ways. The examples in (6) afford some initial appreciation of the ubiquity of this phenomenon.

(6)(a) Roger blinked.
(b) Roger ate an apple.
(c) Roger heard a noise.
(d) Roger walked faster.
(e) Roger is digesting.
(f) Roger figured out the puzzle.
(g) Roger whistled.
(h) Roger peeled an orange.
(i) Roger licked the popsicle.
(j) Roger breathed hard.

Considering the trajector of the main verb, we find that only selected facets of the designated individual participate directly in the process, and that these facets differ from one expression to the next. Roger's eyelids are the primary participants in (a); in (b) his hands, mouth, teeth, tongue, and the upper parts of his alimentary canal are more directly involved than, say, his kneecaps; his ears and central nervous system are pivotal in (c); while the whole body moves in (d), the legs in particular are of prime importance; and so on. In those cases where the landmark is distinct from the trajector, there is comparable variation. Thus the puzzle in (f) participates wholistically in the verbal process, but presumably only part of the apple is eaten in (b) (most people do not consume the core), while in (h) and (i) only the outer surface of the landmark object is affected.

Some discrepancy between active zone and profile is thus the rule, not the exception. Our conception of grammatical organization must therefore be able to accommodate it as a normal

situation rather than a pathological one, preferably without special apparatus. In fact, the problem is even worse than I have so far indicated. For one thing, even for those predications which appear to relate the trajector and landmark as integral wholes there is often an active zone/profile discrepancy in specific instances. Consider IN, sketched in Figure 3(a). At least its trajector would seem to participate wholistically in the inclusion relationship with its landmark. Yet this is very commonly not the case:

(7)(a) Abernathy is in the bathtub.
(b) Susan has a cigarette in her mouth.
(c) He has an axe in his hand.

A normal construal of all three sentences situates only a portion of in's trajector within the confines of its landmark.

A second exacerbating factor is that the active zone is often not even a subpart of the entity designated by a nominal expression. Frequently it is something merely associated with the designated element in some characteristic fashion, as we saw above in (1)(b)-(c). In (1)(b), the subject does not hear the piano per se, as a physical object, but rather the sound emitted by the piano--canonically this would be the musical sound produced by playing the piano, but in context it could also be the crashing sound it emits when dropped from a helicopter. In (1)(c), of course, it is not the speaker as a physical object who occupies the phone book, but rather a symbolic representation of his name, address, and phone number. (8) provides some further examples.

(8)(a) I smell a cat.
(b) The ball is yellow.
(c) I need a red pen.
(d) This red pen is yellow.

I might say (8)(a) when opening the garage door in the morning; what I actually smell is the odor emitted by certain excretions of the cat. In (8)(b), it is not the ball as a physical object that is capable of interacting with color space (a range of possible color sensations)--rather it is a color sensation associated with the ball's outer surface. The phrase red pen is ambiguous, and its ambiguity hinges precisely on the choice of active zone for pen with respect to the color predication. On the one hand, the active zone may be the color sensation associated with the outer surface of the pen (parallel to (8)(b)); on the other hand, it may be the sensation associated with the marks left on the page when the pen is used as a writing implement. By taking the notion active zone into account, we can explain why (8)(d) is meaningful and non-contradictory. The active zone of the pen with respect to the predication RED is the color of the marks it makes, while for YELLOW it is the color of the pen's outer surface.

Obviously, the permitted discrepancy between profile and active zone greatly increases the flexibility of a linguistic system. If the two were always required to coincide precisely,

i.e. if the trajector and landmark of a relational predication had to be expressed with full accuracy and specificity, the result would be a vast proliferation of highly cumbersome locutions, a sample of which are offered in (9).

(9)(a) Roger's eyelids blinked.
(b) Roger's mind figured out the puzzle.
(c) Roger's lungs and oral tract whistled.
(d) Susan has the end of a cigarette in her mouth.
(e) He has a portion of the handle of an axe in his hand.
(f) The color sensation associated with the outer surface of this pen, the color sensation associated with the marks created by which is red, is yellow.

The tolerance of profile/active zone discrepancy is further quite natural in cognitive terms, for it permits the designation of linguistic expressions to focus on conceived entities that have substantial cognitive salience. The following principles can be seen at work in various examples: (i) a whole is generally more salient than its individual parts; (ii) discrete physical objects are generally more salient than abstract entities; and (iii) humans and (to a lesser extent) animals are generally more salient than inanimate objects (other things being equal).

III. ANALYSIS

The apparent difficulty posed by profile/active zone discrepancies is that what a sentence literally says conflicts with how it is actually understood, so that its compositional semantic value is either inappropriate or logically inconsistent. This is the type of situation for which generative theory has commonly posited logically consistent underlying structures, from which the surface form of an expression is derived by the application of transformational rules or some comparable device. For example, if it is granted that one can only hear sounds, not physical objects, the seeming anomaly of (1)(b) might be accommodated by taking (10)(a) as a deep structure and postulating an optional transformation that deletes the underscored portion of it.

(10)(a) She heard <u>the sound of</u> the piano.
(b) <u>The color sensation associated with the outer surface of</u> the ball is yellow.
(c) Roger<u>'s hands, mouth, teeth, tongue, and the upper parts of his alimentary canal</u> ate an apple.

Let us call this type of approach the <u>linguistic paraphrase analysis</u>: an expression derives from an underlying structure that--when manifested without deletions--provides a logically accurate paraphrase of its actual meaning.

The linguistic paraphrase analysis is offered only as a straw man, not as a serious analysis on my part or anyone else's. There

are obvious problems with it. While reasonable enough for cases like (10)(a), where a simple and obvious paraphrase readily suggests itself as a deep structure, its plausibility quickly evaporates when one tries to extend it to a representative array of instances: few linguists would be attracted by the deletions in (10)(b)-(c) for the derivation of simple sentences like The ball is yellow and Roger ate an apple. The choice of a particular paraphrase to serve as underlying structure is arbitrary, moreover, and any paraphrase that is chosen is itself likely to prove inaccurate in more subtle ways; (10)(c), for instance, does not indicate that the various body parts mentioned participate in the process to different degrees and in different ways. Furthermore, the linguistic paraphrase analysis treats as problematic--as something to be remedied by abstract constructs--something that in actuality represents the normal situation rather than anything exceptional. A more natural account would be one in which the phenomenon is not a problem at all.

Actually, I would argue that the perception of the apparent difficulty rests on certain tacit and ill-founded assumptions. On what basis does one conclude that (10)(a), for example, is more accurate or logically valid than (1)(b) She heard the piano as a characterization of the conceived situation? It is by virtue of the assumption--which I myself exploited in presenting the data--that hear has precisely the same meaning whether sound or piano occurs as its direct object; consequently the collocation of hear and piano should be anomalous, since a sense of hear which specifies that its direct object is a sound cannot combine felicitously with an object nominal designating a physical object. This line of thought prejudges the semantic value of the verb, however, treating it as non-polysemous and attributing certain specific properties to its single meaning. The validity of these assumptions is not self-evident. Instead of saying that hear has a single meaning, designating the interaction between the perceiver and a sound, one could perfectly well say that hear has two semantic variants: the first designates the interaction between a perceiver and a sound, while the second designates the interaction between a perceiver and a sound-emitting object (the emission of sound being the basis for this interaction). (10)(a) and (1)(b) then involve different predications, both symbolized by the phonological sequence hear, and in neither expression does the meaning of the direct object nominal conflict with the nature of the relational landmark implied by the verb. The linguistic paraphrase analysis avoids the necessity of postulating two separate predications associated with hear, but this is at best a Pyrrhic victory, as it engenders the need for highly abstract and highly problematic analyses like those in (10). Moreover, I take it as established that polysemy is the normal state of affairs for common lexical items. The truly heroic efforts that would be required to eradicate it in favor of abstract derivations in all instances would most certainly be radically misguided.

The analysis is rendered a bit more explicitly in Figure 4. The predication sketched in 4(a) corresponds to sentences like (10)(a), while that in 4(b) is illustrated by sentences like (1)(b). If the former is somehow more "basic" than the latter, as the argument for a transformational derivation of (1)(b) assumes, I would interpret this not as a matter of logical consistency, but rather as reflecting the greater entrenchment and cognitive salience of HEAR, from which HEAR' may well orginate as a semantic extension; all of this is perfectly consistent with the view of polysemy outlined at the end of section I and is consonant with the general character of lexical items. Both predications have the same base, and differ only in the profile they impose on this base. Common to both predications, in other words, is the knowledge system that involves the full array of relevant concepts: that of sounds, including their emission from physical objects (or other sources); that of perceptual experience, implying a perceiving individual; and the knowledge that such experience relies on certain auditory apparatus within the perceiving individual.

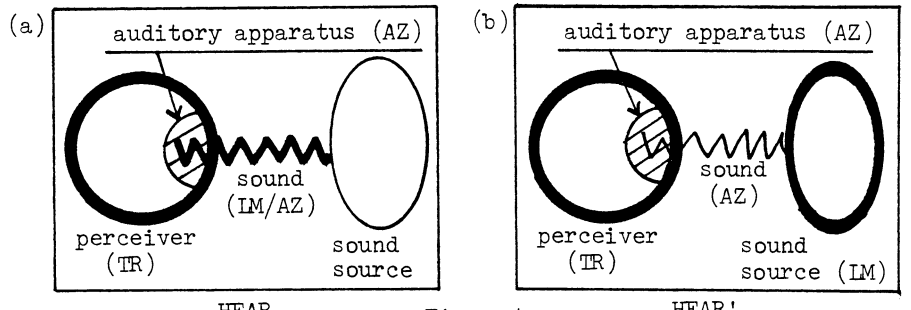


Figure 4

The contrast between the two predications--the two senses of hear--comes down to a matter of imagery, as this term was defined earlier. Specifically, the predications differ as to the substructures they single out for special prominence as the trajector (figure within the relational conception) and primary landmark (the most salient entity other than the figure). However, the relative prominence of substructures, though it is definitely an aspect of meaning and constitutes a semantic difference between the two predications, is independent of what one might call the "content" of the predications as defined by their common base. In both instances, the perceiver as an integral whole is profiled as the relational trajector, even though selected facets of this individual are known to function more directly in auditory experience than others. Furthermore, in both predications the sound is conceived as mediating the relationship between this trajector and the sound source, regardless of whether it is the sound in particular or its source that is profiled as the primary landmark. HEAR focuses on the direct interaction between the sound

and the perceiving individual, while HEAR' profiles instead the mediated interconnection between perceiver and the sound source, but both relationships are part of the meaning of both expressions, despite their differing salience. Observe that the two predications share a profile/active zone discrepancy with respect to their trajector. HEAR' also exhibits such a discrepancy with respect to its landmark, while for HEAR the profile and active zone of the landmark coincide.

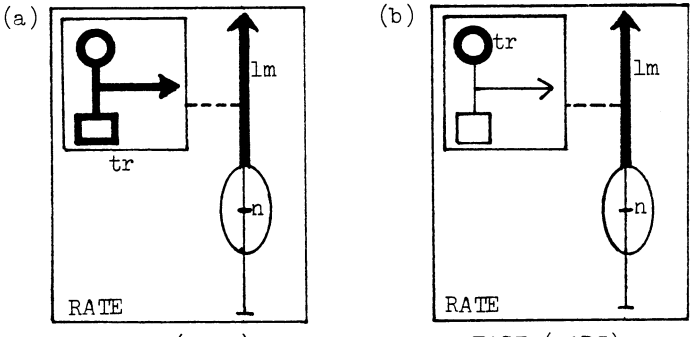
In short, the cognitive grammar framework accommodates the phenomenon with no special apparatus whatever. All of the constructs needed for this purpose are independently established features of the model, most notably its treatment of lexical polysemy and the profile/base conception of semantic structure. Profiling is a matter of the relative prominence of substructures within a domain, and to some extent this aspect of semantic organization can vary independently of how the various substructures are intrinsically structured and interconnected. The entities profiled by a predication can therefore deviate from those that participate most directly and critically in a relationship, without this affecting its "content" or its "logical properties".

IV. GRAMMATICAL IMPLICATIONS

Since the nature of a predication's profile determines its basic grammatical category, lexical polysemy of the sort just described can extend across grammatical classes. We have already seen this for color terms like *yellow*, which can designate either a bounded region in color space, in which case the expression is nominal, or else a relationship of coincidence between this region and a light sensation, in which case the expression is adjectival. There are actually multiple adjectival senses. They differ as to whether the light sensation is itself selected as the trajector (relational figure), as in Figure 3(b), or whether that honor is accorded to some other entity, typically a physical object whose outer surface is the source of this sensation. The contrast between the *yellow* of *yellow flash* and that of *yellow ball* is therefore not unlike the one between the two senses of *hear*.

Another example of polysemy across grammatical classes is provided by modifiers like *fast* that can be used as either adverbs or adjectives (e.g. *work fast* vs. *fast car*). The adverbial predication is sketched in Figure 5(a). Its domain is the conception of a rate scale, and the region on this scale that lies beyond the neighborhood of the norm (n) functions as the primary landmark. Processes can be situated at various points along this scale, and the trajector of the predication is one such process, specified as being situated within the landmark region. What about the adjectival *fast*? A rate scale is clearly relevant, but a physical object like a car cannot, per se, interact with this scale. The active zone of a physical object with respect to a rate scale must be some process in which this object participates. This is made explicit in Figure 5(b), which has exactly the same base as

5(a). The contrast lies solely in the profiling, and specifically in the choice of overall trajector: the trajector of the adjectival FAST is not the process that occupies the landmark region of the rate scale, but rather the trajector of that process. The process is nevertheless a crucial part of the meaning of the adjective, as it mediates the interconnection between the overall trajector and landmark.



FAST (=ADV) FAST (=ADJ)

Figure 5

We saw previously, in (5), that when the active zone of a predication diverges from its profile the former can be spelled out periphrastically if there is communicative motivation for so doing. This is true for the implicit process that functions as the active zone of the adjectival FAST. When the modified noun strongly implies a particular type of process, specifying this process periphrastically is superfluous, as seen in (11).

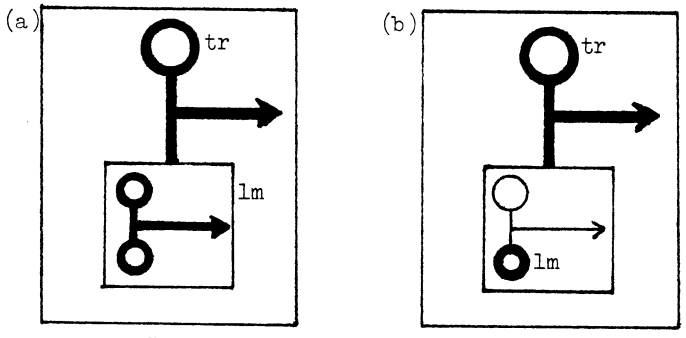
(11)(a) That barber is fast. (c) That car is fast.
(b) That runner is fast. (d) That surgeon is fast.
(12)(a) When it comes to sweeping out the shop, that barber is really fast.
(b) That surgeon is fast at solving a Rubik's Cube.

Periphrasis becomes necessary, however, when the process that functions as active zone is not the one derivationally or canonically associated with the modified noun, as in (12).

A very similar analysis readily accommodates the seemingly unrelated data cited in Newmeyer 1970. The following examples are representative:

(13)(a) He began eating dinner.
(b) He began dinner.
(14)(a) The orchestra started playing the next song.
(b) The orchestra started the next song.
(15)(a) The author finished writing a new book.
(b) The author finished a new book.

The problem is to account for the (b) sentences, where an aspectual verb like begin, start, or finish takes a simple direct object nominal instead of the verbal complement we would "logically" expect. Newmeyer proposes something akin to the linguistic paraphrase analysis, but I would simply say that these verbs manifest a pattern of lexical variation hinging on a permitted discrepancy between active zone and profile. The basic analysis is presented in Figure 6.



BEGIN BEGIN'

Figure 6

I have nothing of a detailed nature to say about the semantic structure of verbs like begin, so instead of trying to diagram this structure I have simply employed the abbreviatory notation for a process predication introduced in Figure 2(c). In a sentence like (13)(a), BEGIN profiles a process in which the trajector is a thing (spelled out by the subject nominal) and the primary landmark is another process. (Here and in what follows, I simplify matters in irrelevant respects by ignoring the semantic contribution of elements like -ing and to.) In a sentence like (13)(b), on the other hand, the related predication BEGIN' profiles a process in which both prominent participants are things: the trajector is the same, but the primary landmark is not the initiated process as a whole, but rather the landmark of that process. The initiated process remains as a pivotal facet of the base--it is the active zone of the landmark with respect to the inceptive process designated by this predication--but it need not be spelled out explicitly when its character is apparent from context or the other lexical items in the sentence.

I would emphasize that the analyses presented so far in this section require no special apparatus. They employ precisely the same constructs introduced earlier and needed to handle the active zone/profile discrepancies of simple sentences like those in (1). The only novel aspect of these latter analyses--one that is really nothing more than a special case of the general phenomenon--is the notion that the active zone of a thing with respect to a relationship may be a process in which that thing participates. This is necessary to account for the adjectival sense of fast, as

well as examples like (13)-(15). Neither of these is generally thought to be associated with the raising constructions of (2), but it may already be apparent that the present analysis establishes a connection. In fact, the analysis I propose for raising constructions should by now be quite obvious.

Let us focus on Object-to-Subject Raising. The standard analysis derives the sentences in (16) from the respective deep structures that also underlie those in (17).

(16)(a) Hondas are easy to fix.
(b) Landscapes are tough to paint.
(c) Monopoly is fun to play.
(17)(a) To fix Hondas is easy.
(b) To paint landscapes is tough.
(c) To play Monopoly is fun.

Main-clause predications like easy, tough, and fun are claimed to have precisely the same meaning in the constructions of (16) and (17), one that selects a clausal subject at the deep-structure level. Object-to-Subject Raising then accounts for the superficial divergence from this pattern in cases like (16).

There are two basic classes of arguments that are generally advanced to motivate this type of analysis. One class--involving "idiom chunks" (e.g. headway) and "dummy" elements like it and there--I will ignore here, except to note in passing that they depend on certain assumptions that I do not accept (cf. Langacker 1983). Instead I will concentrate on the second type of argument, which appeals to selectional restrictions and "logical" grammatical relations. In presenting the raising analysis to a class, I have often said something very much like the following: "What does (16)(a) mean? Logically, it is not Hondas that are easy, but rather the process of fixing them. The superficial form of the sentence obscures this relationship, but such relationships are captured explicitly at the deep structure level if sentences like (16) derive by transformation from underlying structures like (17)."

Important and persuasive as such arguments were in establishing the transformational model, I would claim in retrospect that they are fallacious. The raising rules exemplify the linguistic paraphrase analysis, and the argument from logical grammatical relations is subject to the same criticism advanced in section III with respect to the putative derivation of (1)(b) She heard the piano from (10)(a) She heard the sound of the piano: the argument prejudges the semantic value of the governing lexical item, assuming quite gratuitously that it has precisely the same meaning in both constructions, and that this meaning can be determined on some kind of (ill-defined) "logical" grounds.

Instead I suggest that tough, for instance, is polysemous, having the two semantic variants sketched in Figure 7 (among others). The base for both predications is a conceived scale of difficulty along which processes can be situated. The primary

landmark is the region of this scale that lies beyond the neighborhood of the norm. In the case of TOUGH, probably to be regarded as the more deeply entrenched variant (from which the other is extended), the trajector is a process that is located in this landmark region. All of these elements are present in the base of TOUGH', which differs only in its choice of overall trajector: the trajector of this predication is equated not with the entire process situated in the landmark region, but rather with the landmark of this process in particular. The full process is nevertheless crucial to the semantic value of TOUGH', for it constitutes the active zone of the overall trajector with respect to its interaction with the difficulty scale.

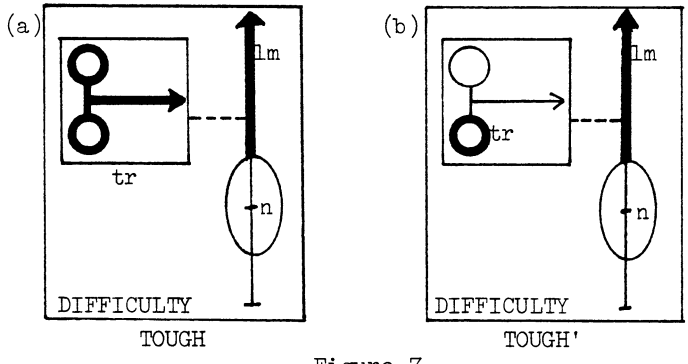


Figure 7

In some respects my lexical-variant analysis resembles the syntactic raising analysis. However the former straightforwardly accommodates certain types of data that cannot be handled in a purely syntactic account. I treat the to-clauses in (16) as periphrastic specifications of the trajector's active zone with respect to the scale of difficulty (or pleasure, etc.); parallel sentences lacking these clauses are thus not unexpected, but they are problematic in the raising analysis, since the missing clauses are the putative source of the subject nominal.

(18)(a) Landscapes are tough.
(b) Monopoly is fun.
(c) When it comes to fixing them, Hondas are easy.

(18)(a) would be perfectly natural in the context of a painting class, where the process functioning as the active zone is too obvious to require periphrastic specification; the operative process is similarly quite apparent even out of context in (18)(b). Moreover, the lexical variant analysis is consistent with alternate types of periphrasis (though a to-clause is standard). Sentences like (18)(c) are thus anticipated, but they are problematic for the standard raising analysis.

The analysis of Subject-to-Subject and Subject-to-Object Raising differs only in specifics. Slightly different senses are thus attributed to likely in (19)(a) and (b): a process serves as the overall trajector of LIKELY in (19)(a); the trajector of this process is specified instead as the overall trajector of LIKELY' in (19)(b), but the process remains in the base and functions as the active zone for the interaction of the overall trajector with the probability scale. The to-clause in (19)(b) elaborates the active zone periphrastically, but on occasion it can be omitted, as seen in (20).

(19)(a) For the dog to escape is likely.
(b) The dog is likely to escape.
(20)(a) A war is likely.
(b) Do you think anyone will come to the party?
Well, Tom is likely.
(21)(a) I would expect for the Clippers to lose again.
(b) I would expect the Clippers to lose again.
(c) When do you expect Tom?

In similar fashion, slightly different predications are associated with expect in (21)(a) and (b). A process functions as the overall landmark of EXPECT in (21)(a), but the trajector of this process is so designated by EXPECT' in (21)(b). The landmark process of (21)(a) is nevertheless an active zone in (21)(b), where it is elaborated periphrastically by the to-clause. While such elaboration is generally obligatory, sentences like (21)(c) show that it is optional with expect when the process is understood to involve nothing more than arrival on the scene.

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