

Athematic Metaphors

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This paper is an exercise in an “ecological”² approach to linguistic analysis which rejects the presupposition of monocausal explanations for, among other things, the maintenance and use of lexical items and fixed expressions. Rather, we believe that the “successful” items are maintained and used for numerous simultaneously applicable reasons. Natural selection involves many interactive forces; these may be individually simple in nature, but have only a contributory effect in any instance.

In this paper we give an account of one such contributory cause, by:

- 1) offering some remarks about the theory of metaphor and identifying some problematic cases for analysis;
- 2) presenting some partial results of our investigations of the semantics and morphology of English monosyllables;
- 3) utilizing these results to account for several types of so-called ‘metaphoric’ word usages in English.

The alert reader will have noted that we are not claiming to present (or even to have) a complete account of any of these things. This is because we are by no means finished with any of the investigations mentioned. This paper should be taken as a scouting report, rather than a detailed topographic map of the territory. We have found some interesting ways to look at phenomena and are attempting to apply them where they seem to be useful. We are doing the opposite of what Western linguists have done for years. Instead of investigating a “weird” language and finding things like Indo-European in it, our perspective is that of the mythical Algonquian linguist, investigating English and finding features which are perfectly recognizable, if often unknown to the native speakers.

It is perhaps a bit grandiose to speak about **the** theory of metaphor as if there were only one. Not only are there many theories, but there are even more understandings of what constitutes *metaphor* in each. Certainly metaphor is a concept with a compendious intellectual history; it appears that no man or woman of letters for the last 3000 years has been content to die without writing a definitive statement on metaphor, and a depressingly large number of these have survived to our

¹ We wish to acknowledge a great deal of assistance and general good counsel (which has not always been successful in deterring us from our errors); most especially to Fred Lupke and Jerry Sadock. Our families, friends, and colleagues also put up with altogether too many monosyllables, and we are grateful for their patience.

² For a similar-minded ecological study, cf. Zubin & Koepcke (1981), in this volume.

age.³ Naturally, these contradict each other at virtually every point, which makes it difficult to generalize about them.⁴ More recently, we have been presented with: *analogy* theories, *substitution* theories, *similarity* theories, *interaction* theories, *comparison* theories, *opposition* theories, and *tension* theories.⁵ If many of these descriptive names sound unclear in intention and repetitious in extension, it is because metaphor theories as a class tend to be unclear and repetitious, and ours is probably no exception.

We have no particular name for our theory, though it can be distinguished from many others by a belief that metaphor is primarily a mental/cognitive/semantic phenomenon which is evidenced in language, rather than being “purely” linguistic. We distinguish between the cognitive entities, like semantic fields and metaphor themes, and the linguistic ones, like metaphor instantiations, which are linguistic data of more or less the usual kinds cited as **examples** of some underlying semantic structure. We place ourselves in the research tradition exemplified most recently by Lakoff and Johnson (1980), by Michael J. Reddy (1979), and, more remotely, by Benjamin Lee Whorf (1956).

Lakoff and Johnson's (L&J's) *thematic metaphors* are basically mappings from one semantic field to another, such that some, if not all, of the elements in the first field [traditional name *tenor*; our name *subject*] may be used in contexts appropriate to elements of the second field [traditional name *vehicle*; our name: *object*]. For example:

(1) **Metaphor theme: TIME IS MONEY**

- Instantiations:** (a) I spent an *hour* in the library.
 (b) Make sure it's worth your *while*.
 (c) He's living on borrowed *time*.
 (d) I've invested three *years* in that project.

The italicized words in (1)a-d all reference the semantic field symbolized in the thematic equation by the word TIME, but they are used in a context suited to (and containing) words referencing the field symbolized by MONEY. The appearance in these sentences of a temporal duration expression is evidence of the underlying theme, TIME IS MONEY. Examples of themes and of instantiations can be multiplied ad lib, and are in L&J. See also Lawler (1980) for details.

³ For details, cf Shibles (1971)

⁴ This contradiction is inherent and inescapable. Metaphor, whatever else it is or does, certainly transgresses the Law of Contradiction. Attempts to provide purely logical analyses of metaphor inevitably founder on this reef. This is one of the reasons we are scouting the area on foot, rather than embarking an invincible Armada.

⁵ Cf. Sacks (1980), Ortony (1979), and Black (1962) for discussion of theory types and nomenclature.

Thematic metaphors are represented by equational sentences, as in (1)⁶. These contain generic NPs representing semantic fields – which may be roughly characterized as complex and highly structured memory networks accessed by the NP. These equational sentences resemble definitions in their structure, and indeed definitions can be considered special cases of metaphor themes, but definitions are somewhat less abstract, and have a different kind of pragmatics.

Finally, metaphor themes, like all statements, exist and have meaning only in the context of some question, actual or virtual. The presupposed question context for (1) is (2):

(2) What is time?

This is not so obvious as it may seem. There are other types of question which can elicit equational sentences of different referential types:

- (3) (a) What is an example of a car?
 (b) A VW is a car.
- (4) (a) What is a car?
 (b) #A VW is a car.
 (c) A car is a motor vehicle with 4 wheels typically accommodating 6 passengers
 (d) A car is a status symbol.
 (e) A car is a means of transportation.
 (f) A car is a necessity.
 (g) A car is a home.

Of the expressions in (3) and (4), only (4g) is a metaphor theme.

In addition to thematic metaphors (i.e. those which are represented by metaphor themes of the L&J type), there exist a number of processes which are of sufficient generality and in common enough use to warrant separate attention. Metonymy, for example, as in (5), is a device to generate local subsetting metaphors from the semantic fields of their referent by exploiting relevant perceptual characteristics.⁷

- (5)(a) England fielded 1000 horse and 10,000 foot.
 (b) He sent 500 head to the slaughterhouse.
 (c) Fred is parked in the visitor's lot.
 (d) Isaac Asimov takes up half my bookshelf.
 (e) Detroit doesn't like foreign competition.

⁶ Cf. Lawler (1981b) for details.

⁷ Cf. Borkin (1972a, 1972b) and Lawler (1972), which derive from Postal's (1973) argument types. Obviously, metonymy is a deeper subject than we are prepared to comment about in detail here. It is worth noting, however, that metonymic instantiations do not appear to be thematic, unless some very generalized theme, like A part is the whole, is invoked, but that would explain nothing.

As for why metonymy is used, it appears that an explicit reference to a salient topic is an effective cohesive device, and its value may often exceed that of redundancy.

Also, there is a general principle to the effect that things perceived the same way can be referenced the same way, at least for perceptual terms, so that we can speak of a *sting* as the sensation attending a bee attack, a small burn, or a spanking, despite the fact that they are produced in different fashion. We will find further use for this principle; it is one of the cornerstones of the experiential gestalt that allows thematic metaphors, and of athematic ones as well.

Finally, there is the class of word usages we will discuss here. These are often considered metaphoric, and dictionaries usually cite them so, but they do not fit the patterns we have so far elucidated. Some examples follow.

- (6)(a) That *rings* true.
- (b) The play *flopped*.
- (c) The jogger never *broke* stride.
- (d) Frieda, *blaze* the trail for us.
- (e) Something you said just *clicked* for me.
- (f) He arrived in the *nick* of time.

These are **not** thematic metaphors, since synonyms or related words cannot be substituted *salva virtute*, as shown in (7).

- (7)(a) *That buzzes/hisses/whines true.
- (b) *The play fell/sat down/dropped.
- (c) *The jogger never smashed/split/snapped stride.
- (d) *Frieda will glow/fire/burn the trail for us.
- (e) *Something you said just snapped/flipped/crashed for me.
[in the intended sense]
- (f) *He arrived in the snip/slash/notch of time.

In (6a), for example, the word *ring* is rather obviously being used to refer to a sound, and indeed the word *sound* can be substituted for *ring*, producing a sentence with a closely related signification.

- (8)(a) That has the sound of truth.
- (b) That has the appearance of truth.
- (c) That has the semblance of truth.

(It is an interesting question whether the expressions in (8) are metaphoric or not.) Now the word *ring*, in its sound sense, describes a particular type of sound, and it appears that (6a) somehow characterizes *truth*, a word with associations to sound (as in language sounds), as having a particular type of sound. The fact that *the ring of truth* is a fixed expression would seem to indicate that that characterization is felt to be apt by many if not all English users. Our task is to account for that characterization: what it is, where it comes from, and how the application of it to *truth* proceeds.

We begin by distinguishing between the semantics of a word and its prototype context. This distinction is perhaps most easily seen in a language other than English, at first.

For example, after some time working in Ojibwe, one of us elicited an item *mdwesjiged* in a text. From our general knowledge of Ojibwe, we knew that the stem of this word has the morphemes *madwe-* 'be/make a sound (at a distance)', *-sid-* 'cause to be in a location/state', and *-ige* 'unspecified object'. By the regular rules of Ojibwe semantics, this means, altogether, 'make a noise at a distance by moving things around'.

However, our native speaker insisted that this word only meant 'ring the church bells,' even though he admitted that the form inflected for definite object, *mdwesdood*, could be used by someone in one room commenting on noise emitting from another, as, for example, when one sits near the kitchen in a restaurant. It was only after some prodding that he allowed that, in fact, *mdwesjiged* could refer to other situations in which things were being moved around and were making noise, but were out of sight.

Now one might think, as we at first did, that this was simply a reaction to the situation in which this word was being discussed, but subsequent elicitation has shown that one of the "meanings" of *mdwesjiged* is 'ring the church bells,' although people who come from Protestant areas, where church bells are less prevalent, don't get this reading as strongly. Similarly, enormous numbers of Ojibwe words whose semantics are clear from their structure and which can be used in those meanings have important restrictions on their "meanings" in normal usage. Some examples follow:

(9)	Form	Semantics	"Meaning"
	(a) <i>zhisjiged</i>	put things in a certain place	set the table
	(b) <i>zhising</i>	be laying in a certain way	be written
	(c) <i>gshkitod</i>	be able	afford
	(d) <i>aanjpizod</i>	change s.t. tied	change a bandage
	(e) <i>dbaaknigaazod</i>	be judged	be in court
	(f) <i>mijgaazod</i>	be given s.t.	be on welfare

We call this added restriction that characterizes the "meaning", as opposed to the semantics, *inherent pragmatics*⁸ or *prototype context*. This is a property of the word itself, not just the situation it is used in, because these meanings are offered when the word is elicited out of context. As far as we can tell, this type of inherent pragmatics arises out of situational prototypes in the world of the speech community. Thus the prototype situation in which things are put in certain places is that of setting the table, the prototype situation in which one is judged (at least for Ojibwes), is when one is in court, and so on.

Furthermore, it is this direct relationship between the available semantics and the prototype situation which distinguishes this kind of case from the case of idioms. With idioms, either the semantics which one would expect from the sum of the meanings of the component morphemes is missing, as in the examples in (10), or the "meaning" is not derivable from the semantics as in (11).

(10)	Form	Semantics	"Meaning"
	(a) <i>giiwsed</i>	*walk around	hunt
	(b) <i>mzinhigan</i>	*s.t. to carve/write on/with	paper, book
	(c) <i>mzinhiged</i>	*carve/write	get credit
	(d) <i>namhaad</i>	*greet	pray
	(e) <i>zaaghigan</i>	*s.t. to get out with	lake
	(f) <i>waawaaskone</i>	*light	flower
	(g) <i>baashkzang</i>	*burst/break s.t. with heat	shoot s.t. (with a gun)

(11)	Form	Semantics	"Meaning"
	(a) <i>zaaghaad</i>	be stingy with s.t. (animate)	love s.o.
	(b) <i>waabgookookoo</i>	white owl	wedding cake
	(c) <i>mnidoons</i>	little spirit	flying insect
	(d) <i>baasod</i>	be dry	be thirsty

⁸ This is a use of *pragmatics* that is at variance with many of the other uses of the word (e.g., those which refer to speech acts, "indirectness", or politeness phenomena). We are not talking about those here. Cf. Lawler (1981a) for further discussion of the term(s).

Now having seen this distinction made in a language in which we have no vested interest, it becomes easier to see the same thing happening in English. What we normally take to be the “meaning” of a word is a combination of both the semantics and the prototype context. Consider the word *ring* (as a verb referring to sound). We give the semantics of this word as “BE/MAKE a sound with a non-abrupt onset and an extended envelope.” By our analysis, which we will develop at some length below, we have as the parts of this word,

- *r-* ‘non-abrupt onset (of sounds)’ (cf. *rumble, rattle, roar*, et al.
– opp. *kr-* as in *crack, creak* and *kl-* as in *click, clatter*, et al.)⁹

and

- *-ing* ‘BE/MAKE a sound with an extended envelope’ (cf. *ding, ping, sing*).

Now compare our semantics with the five major senses listed in the OED:

(12) *ring* v. i.

(a) semantics: ‘MAKE or BE a sound with a non-abrupt onset
and an extended envelope’

(b) OED senses:

- 1) To give out the clear or resonant sound characteristic of certain hard metals when struck with, or striking upon, something hard. Also of a trumpet, etc: *To sound loudly*.
- 2) Of bells: To give forth a clear metallic note under the impact of the hammer or clapper.
- 3) Of places: To resound, re-echo, with some sound or noise.
- 4) Of a sound: To be loud or resonant; to resound, re-echo. Also with *out*.
- 5) Of ears: To be affected by a sensation similar to that produced by the sound of bells etc. To tingle, hum, or be filled with sound.

At once one can see that the dictionary definitions are very largely if not totally pragmatic in content. The prototype situation in which a ringing sound occurs is one in which certain types of metal are struck. Of the other things mentioned, loudness, for example, is irrelevant except for the pragmatic fact that certain kinds of things only produce a ring when struck very hard or sounded very loud.

⁹ We have of course noted, but make no claims about, the fact that American English *r*, as a syllable onset, is itself acoustically non-abrupt, being a retroflexed glide. It does seem appropriate, though, especially in contrast to the abrupt onset of its opposites which start with obstruents.

We do not want to claim that pragmatics is not important in the proper definitions of words (e.g, what needs to be listed about the meaning of a word to correctly account for its distribution; or alternatively, what a non-native speaker would have to learn about a word to be able to use it properly). What we do want to claim is that when doing semantic analysis, one has to learn to distinguish semantics from pragmatics, something lexicographers have not yet learned how to do.

From the point of view of the question of metaphor, failure to distinguish pragmatics from semantics leads to claims that certain words are being used in extended/metaphoric senses when they are simply being used in line with their semantics, but in a way that does not match any of their prototype contexts.

In particular, the attribution to *truth* of the meaning 'a sound with a non-abrupt onset [it grows on you], and an extended envelope [it resounds and remains audible for a long time]' seems very apt indeed as a characterization of the audible perception of truth as couched in linguistic terms. If it is a metaphor (a question we will deal with below), it is not a thematic one, since there is no extensive metaphor **theme** informing it. It is an *athematic metaphor*.

This analysis, given the semantics we propose, is plausible and interesting, but there is still the question of where the semantics comes from. As it happens, there is evidence from an interesting quarter that this is an appropriate analysis of the meaning of *ring*. And the method of determining this has great potential for solving numerous other problems similar to the *ring* of *ring true*.

The semantics we posit for *ring* is derived from our investigation of English monosyllables with respect to their semantic and morphological properties.¹⁰ We analyze them as consisting of an *assonance* and a *rime* (following Bolinger 1950). The assonance consists of the initial consonant or consonant cluster, and the rime consists of the vowel nucleus and final consonant(s). A small paradigm is given in (13).

¹⁰ We use the word *monosyllable* in an extended sense which includes a number of two-syllable forms that seem to work in the same system. Basically, we include words normally taken to be monomorphemic whose second syllable is [əl], [ər], [i], or [ət]. Needless to say, we are not satisfied with the term, but see no better option at the moment. Ultimately we will argue that these are monosyllabic roots with the second syllable being a derivational morpheme in its own right.

(13)	Rimes			
	<i>-ump</i>	<i>-op</i>	<i>-ing</i>	<i>-ap</i>
Assonances	[3D solid]	[cess. of motion]	[directed force]	[surface]
<i>fl-</i> [2D extended]	—	<i>flop</i>	<i>fling</i>	<i>flap</i>
<i>st-</i> [1D rigid]	<i>stump</i>	<i>stop</i>	<i>sting</i>	—
<i>kl-</i> [together]	<i>clump</i>	[<i>clop</i>]	<i>cling</i>	<i>clap</i>

(The definitions of the partials in (13) are to be considered only notional abbreviations of more fully specified analyses, which we do not have the space to go into here.¹¹) Because only about 20% of all theoretically possible English monosyllables actually exist, such “paradigms” are hard to come by, but their rarity by no means negates the reality of such an analysis.

Previous proposals to account for similarities in sound-meaning correspondences (which are only slightly less numerous than proposals to account for metaphor) have all appealed to ad hoc theoretical notions like the *phon(a)estheme* of Firth (1930) and Bolinger (1950). We want to argue that the units which we analyze out of the monosyllable are simple morphemes, but the status of the construction is – like that of all derivational morphology – still a unitary entity, a special case of the fixed expression (Fillmore 1981), a linguistic gestalt in the sense of Lakoff (1978). But the way in which our analysis differs most radically from previous proposals for the analysis of monosyllables is that we claim that both the (internal) syntax of the monosyllabic construction and the semantic nature of the component morphemes is more limited and systematic than was previously thought.

¹¹ As an example of a more fully worked out definition, let us look at *-ing*. In the sense of ‘directed force’, this morpheme has 3 prototype semantic properties:

- 1) a directed force,
- 2) a net increase in the potential/kinetic energy of the system, and
- 3) more energy imparted than is normal/normative in such systems.

This allows us to generate charts of forms which contrast minimally with respect to each of the semantic properties, as in (37).

(37) Properties:	1 only	1 and 2	1, 2, and 3
	<i>turn</i>	<i>twist, spin</i>	<i>wring</i>
	<i>touch(?)</i>	<i>hold</i>	<i>cling</i>
	—	<i>throw</i>	<i>fling, sling, wing, zing</i>
	<i>pop (up)</i>	—	<i>spring (up)</i>
	<i>dangle</i>	—	<i>swing</i>

Syntactically, the monosyllabic construction is always in the form: **Modifier - Head**.¹² In other words, the assonance is always the modifier, and the rime is always the head. Semantically, the modifier is either a **classifier** (in the sense developed below), or an adjectival/adverbial modifier. For uniformity we will treat all heads as being predicates, but our real claim is that, at this level, no heads have properties of major syntactic class membership. These are determined (rather arbitrarily, in some cases) at the construction level; i.e. some monosyllables have the property of being verbs, some nouns, others adjectives or adverbs. Some examples are given in (14).

(14) (a) **-oop**: BE a curve, FOLLOW a curved PATH.

nouns: *loop, hoop*

verbs: *droop, swoop, stoop, scoop*

(b) **-ap**: BE a surface, BE ON/USE a surface.

nouns: *flap, strap, map*

verbs: *slap, clap, snap*

Of course there are further derivational principles which allow nouns to be used as verbs, without inflection, and vice versa, but at this stage we can only list some of the processes involved, without going into detail.

(15) **Verbs used as nouns:**

(a) absolute nominalization: 'The *N* that *V*s'

a change (of weather)

(b) absolute nominalization (transitive): .. 'The *N* that one *V*s'

a nibble (of food), a snip (of cloth)

(c) instrument nominalization: 'The *N* that is used to *V*'

hammer, whip, scoop

(d) locative nominalization: 'The place where one/things/X *V*s'

dump, sink, ford, waterfall

(e) action nominalization: 'The act/event/process of *V*ing'

dance, glance, pitch, punch, race, shave, tug

¹² To the best of our knowledge, the first suggestion of this syntax for monosyllables appears in Lupke (1977), in which he extends the Penthouse Principle of Ross (1973) to include this level.

(16) Nouns used as verbs:

- (a) instrumental: 'To *V* (an *X*) WITH an *N*'
nail, lock, knife, elbow
- (b) locative: 'To PUT (an *X*) IN an *N*'
bag, seat, ship (oars), pocket, stack, pile
- (c) privative: 'To REMOVE *N* FROM an *X*'
seed (a pepper), skin, scalp
[NB: these all seem to require inalienable *N* of *X*]
- (d) provisional: 'To PROVIDE/SUPPLY *X* WITH *N*'
seed (a lawn), tar (a road), roof (a house), stock (a store), bell (a cat)
- (e) shape:
 - (i) object: 'To FORM *X* INTO an *N*, to be FORMED INTO an *N*'
clump, knot, clot, ball (up), line (up)
 - (ii) path: 'To FOLLOW A PATH WITH THE SHAPE OF an *N*'
loop, curve, snake

We claim that there is a highly restricted class of relationships between the parts of the monosyllables which will enable us to give a testable account of the semantics of monosyllables.

In addition, the following assumptions (some from Bolinger 1950) are made:

- a) not all monosyllables are analyzable
(although we have found that more than 50% are),
- b) only two forms are necessary for the establishment of a morpheme,
- c) forms can contain 'cranberry' morphs;
i.e. only one half of a given form need be analyzable,
- d) homophony is freely allowed,
- e) etymology is irrelevant, and
- f) the set of relationships between a given assonance or rime
and its reference is small (on the order of Levi's (1979) predicate set).

Let us digress briefly at this point to exemplify what classifiers and classifier systems look like. For example, Klamath, a Penutian language of Oregon, has a very large set of prefixes on verbs which refer to properties of the nouns that these verbs are predicated of. The properties referred to are primarily those of shape, although properties of physical state and even number can be marked. Some examples of this system are given in (17).

(17)

		Klamath Verb Stems		
Classifiers		-ew- [put on flat surface, put on/in water]	-awl- [put on top]	-oy- [give]
<i>ʔa-</i>	[1D rigid]	<i>ʔewa</i>	<i>ʔawal</i>	<i>ʔoya</i>
<i>sle-</i>	[2D flexible]	<i>slewa</i>	<i>slawal</i>	<i>sleya</i>
<i>ne-</i>	[2D]	<i>newa</i>	<i>nawal</i>	<i>neya</i>
<i>la-</i>	[round]	<i>lewa</i>	<i>lawal</i>	<i>loya</i>
<i>ci-</i>	[liquid]	—	<i>ciwal</i>	<i>ciya</i>
<i>ʔi-</i>	[many objs]	<i>ʔiwa</i>	<i>ʔiwal</i>	—
<i>niq-</i>	[hand]	<i>niqwa</i>	<i>niqwal</i>	*
<i>sbo-</i>	[leg]	<i>sbowa</i>	—	*

[— = not reported * = impossible]

In some classifier systems body parts also play a significant role. In Asian languages classifier systems are typically used as modifiers of nouns, particularly when the noun is further modified by a number. Classifiers can also be used adverbially, as in the Ojibwe examples in (18).

(18) (a) *zhibiihang* 'write s.t. down'

ozhi + *bii* + *aham* + *g*
'make + liquid + w/instrument + 3sg'

(b) *weweabaabiignang* 'swing s.t. (on a rope)'

weweb + *aabiig* + *ina* + *g*
'swing + string + w/hand + 3sg'

(c) *gbaakhang* 'close s.t. up'

gib + *aakw* + *aham* + *g*
'close + solid + w/instrument + 3sg'

some languages also classify paths of motion; for example, the heart of the Ojibwe system for classifying paths is given in (19):

(19) *bim-* 'along, to a goal'

bmishkaad 'paddle along'

bibaam- 'around, not to a goal'

bbaamshkaad 'paddle around'

anim- 'away'

nimshkaad 'paddle away'

biid- 'toward'

biidshkaad 'paddle this way'

Adams and Conklin (1973), Denny (1976), and Allan (1977) have shown that the following features are the most significant in the semantics of classifier systems – beyond the ‘standard’ semantic features of nouns: human, animate, gender, concrete.

- (20) (a) dimensionality [1D, 2D, 3D] – salient dimensions, not literal
 (b) extendedness (or limitation)
 (c) flexibility/rigidity
 (d) angularity
 (e) physical state (solid, liquid, etc.)
 .. et al.

The core of our analysis of the classifier assonances of English is given in (21).

(21)	OBJECTS	Classifiers (assonances)	Heads (rimes)
	1D rigid	<i>st-</i>	<i>-ine</i>
	1D flexible	<i>str-</i>	
	2D	<i>fl-</i>	<i>-ap</i>
	2D extended	<i>sk-</i>	
	3D	<i>n-</i>	<i>-ump</i>

Some examples of the use of these classifiers are given in (22).

(22)	Classifiers	Heads
(a) 1D		
	(i) rigid	<i>stick, stem, sting</i> <i>spine, tine, pine</i>
	(ii) flexible	<i>string, strip, strap</i> <i>vine</i>
(b) 2D		
	(i) unmarked	<i>flake, floor, fleece</i> <i>slap, clap, flap</i>
	(ii) extended	<i>skin, sky, scum, scab</i>
(c) 3D		
	(i) convex	<i>knoll, nut, nugget</i> <i>bump, lump, hump</i>
	(ii) concave	<i>niche, notch, nick</i> <i>sump, slump</i>

This is a very standard sort of classifier system. Although there are also rimes which make use of the same general sorts of distinctions, the classifier assonances comprise a richer set of distinctions than the heads do. It is because of this difference that we claim classifier status only for the assonance. In addition to the noun classifiers in (21), there is also a set of classifiers for the shape of paths. These are given in (23), and exemplified in (24).

(23) PATHS	Classifiers	Heads
(a) along (source-to-goal)		
(i) unmarked	<i>tr</i>	<i>-ush</i>
(ii) non-extended	<i>p-</i>	
(b) curved	<i>sw-</i>	<i>-oop</i>
(c) back & forth	<i>w-</i>	<i>-itter/-utter</i>
(d) constricted	<i>thr-</i>	

(24)	Classifiers	Heads
(a) along (source-to-goal)		
(i) unmarked	<i>trip, traipse, trudge</i>	<i>push, rush, gush</i>
(ii) non-extended	<i>push, pull, poke, pop (up/out/etc.)</i>	
(b) curved	<i>swing, swerve, swoop</i>	<i>droop, loop, scoop</i>
(c) back & forth	<i>wag, wobble, weave</i>	<i>flitter, shutter</i>
(d) constricted	<i>thread, through, throat, throttle</i>	

Now it is worth noting that the parallel assonances and rimes from the shape and path sets above do not freely combine. Of the 9 possibilities only 9 exist:

- (25) (a) **stine, *strine, *scap, *(k)nump, *trush, *witter/wutter*
 (b) *flap, push, swoop*

Notice that in (b), the cases where the form **is** possible, there is an extra pragmatic accretion: a *flap* must be hinged, *swooping* must be directed downwards, and *pushing* must be forceful. This result follows naturally from our analysis of these forms as consisting of a modifier plus head. Except where pragmatics is involved, phrases in which the modifier and the head mean the same thing make no sense. On the other hand, there are cases in which forms exist embodying semantic conflicts: *strap* and *stump*. In both cases the apparent conflict is present in the class of entities to which these forms refer. *Straps* are one dimensional flexible objects, but they must also have a second dimension, even though it must be less than the other. Similarly, *stumps* are (or were) rigid objects with one predominant dimension, but are now objects with three dimensions of approximately the same salience. The semantic conflict between 1 and 3 dimensions is resolved by invoking a history.

A full list of classifier assonances as we now understand them is given in (26). (27) and (28) exemplify (but do not exhaust) the modifier assonances.

- (26) (a) *bl-* 'color' *blank, blanch, blush, blond, blue, black*
 (b) *dr-* 'liquid' *drop, drink, drain, dribble, drown, drool*
 (c) *fl-* 2D (see (22) above)
 (d) *gl-* 'reflected light' *gleam, glitter, glaze, glint, glare*
 (e) *n-* 3D (see (22) above)
 (f) *pl-* 1D thick *ply, plank, plate, pleat, plaque, plane, plush*
 (g) *sk-* 2D extended (see (22) above)
 (h) *sn-* 'nose' *snout, sneeze, snot, sniff, snort, snore, sneer, snarl, snob*
 (i) *sp-* 'cylinder' *spool, spike, spindle, spine*
 (j) *st-* 1D rigid (see (22) above)
 (k) *str-* 2D flexible (see (22) above)
- (27) **General modifiers**
- (a) *b-* 'rebounding' *bounce, bob, bobble, bound, bump, bop*
 (b) *fl-* 'inadequate' *flunk, flaw, flop, flat, flimsy, fluke*
 (c) *h-* 'large(r)' *hulk, heap, horde, host, hump, hoop, hedge*
 (d) *br-* 'discontinuous' *break, breach, breech, broad, broach, brink, brim*
 (e) *j-* 'sharp, sudden (of motions)' *jar, jolt, jerk, jounce, jiggle, jog, jump*
 (f) *kl-* 'together' *clamp, clasp, clench, clutch, close, clip, clam*
 (g) *kr-* 'bent, crooked' *crease, crimp, crank, cringe, crook, crutch*
 (h) *skw-* 'compressed' *squeeze, squash, squelch, squirt, squirm, squint*
 (i) *sn-* 'quick' *snatch, snap, snip*
 (j) *r-* 'around' *wring, wrench, wrestle, writhe, wrap, wrist*
- (28) **Sound modifiers**
- (a) *r-* 'non-abrupt onset' *ring, roar, rustle, rumble, rasp, rattle*
 (b) *y-* 'loud vocal tract noises' *yell, yack, yap, yammer, yowl*
 (c) *gr-* 'indistinct sound' *growl, groan, grunt, grumble, grate*
 (d) *bl-* 'loud sound (produced by air)' *blare, blast, blab, blat*
 (e) *kr-* 'sharp, high(er) pitch onset' *creak, crack, crow, cry, crash, croak*
 (f) *kl-* 'sharp, low(er) pitch onset' *clank, clack, clip, clop, clunk, clink, click*

Now let us take a more careful look at the internal semantax of the monosyllable. Our proposal that those monosyllables which have an analysis consist of a modifier followed by a head needs to be fleshed out. Basically, we conceive of there being two kinds of modifier-head relations: in constructions which are marked as nouns and in **some** constructions which are marked as verbs, the relationship between the modifier and the head is the ordinary sort of modification relationship. However, in other verbal constructions, the relationship of the modifier to the head is that the modifier modifies the **absolute** of the verb in its larger context. Thus when we take into account the adverbial use of classifiers (which stand in ordinary modifier relationship to the head of a verbal construction), we

have **two** types of nominal constructions and **three** types of verbal constructions, based on the nature of the assonance, and, in verbal constructions, its type of relationship to the rime. Examples of each type are given in (29) and (30).

(29) **Examples of nominal constructions**

(a) **adjectival assonance**

loop = *l-* + *-oop* *l-*: 'connected'
link, latch, lock
-oop: 'BE a curve, FOLLOW a curved PATH'
hoop, droop, swoop

hump = *h-* + *-ump* *h-*: 'large(r)'
huge, hulk, heap
-ump: '3D'
bump, lump, etc.

(b) **classifier assonance**

stack = *st-* + *-ack* *st-*: '1D rigid'
stick, stilt, etc.
-ack: 'BE storage/provision'
rack, pack, sack

flap = *fl-* + *-ap* *fl-*: '2D non-extended'
flutter, flip, flit
-ap: 'BE/USE a surface'
slap, clap, trap

(30) **Examples of verbal constructions**

(a) **adverbial assonance**

snatch = *sn-* + *-atch* *sn-*: 'quickly'
snap, snag, snip
-atch: 'COME TO hold'
catch, latch

twirl = *tw-* + *-irl* *tw-*: 'rotatory'
twist, twiddle
-[ərɪl]: 'rotate'
whirl, furl, knurl

(b) **classifier assonance (absolutive of verb)**

drizzle = *dr-* + *-izzle* *dr-*: 'liquid'
drink, drop, drain
-izzle: 'PRODUCE high range low amplitude
fizzle, sizzle white noise'

flop = *fl-* + *-op* *fl-*: '2D non-extended'
flutter, flip, flit
-op: 'MOVE out of control
 (pragmatically = down)

(c) **classifier assonance in adverbial use (locative, instrumental)**

<i>skip</i> (locative)	= sk- + -ip	sk- : 'ON 2D extended' <i>skim, scoop, skid</i>
		-ip : 'BE slightly off a surface' <i>trip, slip</i>
<i>sting</i> (instrumental)	= st- + -ing	st- : 'WITH 1D rigid' <i>stick, stilt, etc.</i>
		-ing : 'directed force' <i>wring, sling, swing</i>

Part of what gives teeth to our hypotheses about the semantics of monosyllables is the fact that we are limiting the class of semantic extensions which an assonance or rime can display to a small set (again like that of Levi (1979). At this point we want to mention briefly and suggestively exemplify the set of semantic extensions we are now using. Because of the tentative nature of this report, adjustments may be made without notice, but the general set is clear. It is outlined in (31), with examples in (32).

(31) (a) Rimes	Non-motion	Motion
	BE/BECOME...	BE THE SHAPE OF A...
	HAVE/CONTAIN...	FOLLOW A ...-SHAPED PATH
	CAUSE.../... CAUSE	
	USE.. .	
	BE IN/ON/AT...	
	BE FOR...	
	BE MADE OF...	

(b) **Assonances**

BE/BECOME/TAKE ON THE SHAPE OF ... [classified object]	
BE IN/ON/AT ...	(locative)
WITH ...	(instrumental)

(32) (a) Non-motion	-oat [water]	-ap [2D]
BE..	—	<i>flap, strap</i>
HAVE..	<i>moat</i>	—
BE IN..	<i>boat, stoat</i>	<i>tap, rap, snap</i>
USE..	—	<i>trap, lap</i>
.. CAUSE	<i>bloat, float</i>	—

(b) **Motion -oop** [curve]

SHAPE OF..	<i>hoop, loop, droop</i>
FOLLOW.. PATH	<i>swoop, scoop</i>

Now given our analysis of monosyllables, we have a **principled** way of determining whether or not a particular use of a form constitutes some sort of an exten-

- (35) (a) That *rings* true.
 (b) The play *flopped*.
 (c) The jogger never *broke* stride.
 (d) Frieda, *blaze* the trail for us.
 (e) Something you said just *clicked* for me.
 (f) He arrived in the *nick* of time.

The analysis of (35a) we have presented above. Of the rest, (35b) represents a use of *flop*₂₁, as shown in (33). That is, the “inadequate” *fl*₋₂ (an inadequate abbreviation of a negative evaluatory connotation), plus *-op*₁, which refers to abrupt cessation of motion. The use of this word in a context of a commercial dramatic offering is quite appropriate, even prosaic, as an indication of commercial failure. (35c) uses the *br*- ‘discontinuous’ modifier in (27d). We have no idea what (if any) signification the *-eak* rime has, but according to the principles, it need not have any. The definition we would give for *break* is: ‘interrupt the (spatial or temporal) continuity of an act or event’, which relates to the discontinuous sense of *br*- and applies nicely to (35c).

As for (35d), we have a sense of *blaze* which has no relation to fire, but uses the *bl*- ‘color’ assonance of (26a). The analysis of the *-aze* is not totally clear (again, we note that the rimes are much less likely to have an analysis than the assonances, if only for statistical reasons), but the use of the word *blaze* to signify a colored mark contrasting strongly with its context is perfectly consistent with the semantics of *bl*-. Interpreting (35e) in the conventional sense of a sudden mental recognition or understanding, we have an example of the *kl*- ‘together’ modifier assonance of (27f); the rime *-ick* seems to be a diminutive, having the sense of small object, as in *stick*, *wick*, and *tick* (nouns), and *flick* and *prick* (verbs). Thus the semantics of *click* are “MOVE/COME TO BE together (of small objects)”. Note that the sound referred to by *click* is the sound produced by just such an event. Some people apparently feel the click in (35e) to be the sound assonance, others a result of a conceptual gestalt coming into existence by virtue of the addition of a crucial small piece.

Finally, (35f) uses the convex-concave *n*- assonance of (21): *knoll*, *knob*, *nut*, *node*, *nugget* for ‘convex’, and *niche*, *notch*, *nook* for ‘concave’. The *-ick* rime is as in (35e) so that the semantics is: “(a very) small cavity”. Here it is the smallest cavity in time, conceived of physically by means of the metaphor theme, TIME IS SPACE. We see then that these athematic metaphors are very reasonable (though **not** prototypic) usages of the words, according to their semantics.

In conclusion, we want to discuss the implications of this report. We are, of course, aware that many features of our analysis are controversial; we feel that much of the potential controversy is misplaced, however, and have taken pains to constrain our method of analysis so as to produce testable hypotheses. In addition, there are a number of claims (and types of claims) which we explicitly do **not** make:

- 1) We do **not** claim that everyone in the speech community always uses these words in the ways we suggest. We **do** claim that these associative meanings are available as guides for interpretation (to supplement textual convergence) of words encountered by a speaker (particularly a child) for the first time. The fact that a language learner may supplant initial hypotheses with more sophisticated understandings as his competence increases in no way implies that his initial understandings (and the general strategies that produce them) thereby become inaccessible. We wish to suggest that the assonance-rime interpretation strategies are far more common (and far more productive) that they have generally been given credit for.
- 2) We do **not** claim that this analysis is a fair treatment of the history of these words. We **do** claim that etymology is a weak reed to lean on in semantics, particularly for English monosyllables. To our surprise, we found that more than half of the monosyllables are simply not accounted for etymologically. The confusing array of assonances has apparently been a constant for a millennium or more. Some representative citations from the OED: ¹⁴

black: 'a word of difficult history.'

blare: 'generally taken as an imitative word.'

blight: 'a word of unknown origin.'

blear: '...an epithet of the eye. This and the cognate verb are of uncertain origin.'

blench: 'a word or series of words of very obscure history.'

'The history of *blab* and *blabber*, and the question of their mutual relations, if any, is very obscure.'

This does not give the impression of any laws operating with "blind necessity" on a common stock of fixed sequences of phonemes.

¹⁴ We cite here an additional listing as proof that etymology is not totally lacking in imagination:

blirt 'north. dial. [prob. an onomatopoeic wd, nearly identical with *blurt*: with the *bl-*, cf. *blow*, *blast*, *blush*, etc; with the rest, cf. *spirt*, *squirt*, expressing the forcible emission of liquid.]' "To burst into tears, weep violently; disfigure with tears."

The word is not in our corpus, because neither of us had ever heard of it before.

We suggest that it is more reasonable to consider that no word has a history independent of its users, and that **any** individual's use of a word is a reflection of his developmental history and his communicational facility, and that both of these can be influenced by the type of analytic process we have detailed here.

Finally, we wish to address the question of whether the uses of monosyllables outside their *prototype context* actually constitutes *metaphor* in any useful sense of the term. We can define metaphor to include or exclude these forms, but little would be served by such an exercise.¹⁵

It is apparent from thematic metaphors that the mappings from subject to object fields crucially involve the extension of the prototype context for subject elements, and that the semantic analysis of such metaphorized elements is consistent in both fields. In the long run, then, the same cognitive processes are responsible for instantiations of thematic metaphors and for instances of athematic metaphor in the sense we discuss it here. Any theory which could account in a satisfying fashion (i.e. in terms of the fine structure of the cognitive processes concerned) could account for the other. Since no such theory yet exists (except in theory), the question is probably premature. However, it should be borne in mind when answering (36), which is the task of those who construct theories of metaphor:

(36) What is metaphor?

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¹⁵ Little, in fact, is served by definitions of metaphor of any sort. We treat *metaphor* as a theoretical prime, i.e. of the status of *sentence* or *grammatical* in generative grammatical theories.

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