

THE MEANINGS OF WORDS

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WHERE DO LANGUAGES EXPRESS WHAT?

Human languages present us with structured utterances involving phrases, words, and things smaller than words. They do this in ways that differ widely in detail but end up accomplishing pretty much the same jobs around the world. I would like to consider here the kinds of meanings that words have, and how these meanings are built up from more elementary meanings.

I will take as given that there are such things as words, in every language, and that most of the time we can be fairly confident about identifying them. I will NOT take as given that there is a sharp and universally recognized distinction between inflectional and derivational processes, components, elements, or whatnot. I hope that some of what I say will contribute to understanding this division or the problems that it presents, if it exists or doesn't exist. Sapir (1921) argued for the psychological reality of the word (in contrast to the more "theoretical" status of the sentence), adducing experience with native speakers of unwritten languages, who he claimed had little hesitation about separating words in their transcriptions. In a similar vein, Swadesh (1939) claimed all languages have "external syntax" while only some (like Nootka -- Nuu'chah'nulth) have "internal syntax." We can interpret this as the claim that all languages have words and a grammar for putting them together into complex phrases, but that only some languages have complex words, built out of smaller parts.

Swadesh (1939: p. 78) on Nootka: The expression "internal syntax," used in the title is based on the recognition of the fact that the combination of morphemes into a single word in a synthetic language has the same function as the juxtaposition of independent words in an analytic language. This function is the putting together of semantic units or "lexemes" into semantic complexes expressing communications or parts of communications. If this process of piecing together is of the same order whether the combination is a phonetic unit (a word) or a sequence of phonetically independent units, then we may apply the term syntax to the process in general, and designate the semantic [sic EB] theory of unit-word combination as internal syntax, that of the pluriverbal combination as external syntax. Since synthetic as well as analytic languages make some use of juxtaposition of words, all languages employ external syntax. Not all languages make use of internal syntax. [my emphasis: EB]

(See Greenberg's essay on the definition of the word for a summary of earlier thinking about words (in Greenberg, 1957) and di Sciullo and Williams (1987) for some more recent ideas about the question.)

My exhibits come mainly from languages that have been called "polysynthetic" and one of my subsidiary goals is to show that this term covers a lot of important different ways of being a language in which words may consist of quite a few smaller components. (I say "components" to leave room for operations that may not have easily isolable phonological substance.) Denny (1989) notes that there have been two senses of the term "polysynthetic." One of them is the one I have just used: having many morphemes or operations in a single word. The other sense (according to von Humboldt according to Robins according to Denny) is that a language is polysynthetic if words can stand as sentences. We'll consider this second sense below.

In older literature, for example Sapir, 1921, terms like polysynthesis are sometimes explained like this: a language is polysynthetic if its words are capable of packing many ideas into their meanings. Here are some expressions that encode "many ideas":

Haisla: k'elt- (monomorphemic root): reluctant to go out because of the weather (Lincoln & Rath, 1986)

Nootka: yaḥ- (monomorphemic root) to shout in a prescribed manner in the woods as a daily morning practice for a mother of twins for a year after their birth (Sapir and Swadesh, Nootka Texts)

English: bean (v.) to hit (a baseball batter) on the head with a pitched ball (intentionally?)

But these forms are not examples of polysynthesis. Clearly, what was meant was the first sense mentioned above: complex in form as well as in meaning.

Let me outline a few of my assumptions or prejudices about the general ways in which we should talk about language:

a) Categorical definitions of syntactic categories.

I intend "categorical" here in the sense of categorical grammar. I assume it is not necessary to go through a whole exposition of this general framework, which I am thinking about as a special set of choices within the general framework of "Extended Montague Grammar." Two points are worth underlining: one, I assume that functor categories carry within them a specification of the operation that is used to combine them with their arguments; two, I assume that expressions that are categorized basically as functors can figure as arguments for functors themselves. (Familiar examples: term phrases as arguments of verbs and prepositions, manner adverbials as arguments of verbs like behave, treat.)

b) Fregean projection principle: Functors require arguments, or must be specifically licensed.

CATEGORIES ABOVE AND BELOW THE WORD

The general question here is this: are the categories of word-formation and inflection just the same as those of the phrasal syntax? The semantic question will then be: are the kinds of meanings expressed by affixation or other word-formational operations just the same as those expressed by words and phrases in the phrasal syntax?

Recall the common idea about (some) polysynthetic languages: in such languages, words are just little (or not so little) sentences. Here are some representative expressions of this idea:

Sapir, 1921 [paper bd. ed.]: p. 32 ...the word may be anything from the expression of a single concept -- concrete or abstract or purely relational (as in of or by or and) -- to the expression of a complete thought (as in Latin dico "I say" or, with greater elaborateness of form, in a Nootka verb form denoting "I have been accustomed to eat twenty round objects [e.g. apples] while engaged in [doing so and so]"). In the latter case the word becomes identical with the sentence.

Whorf (1941): Nootka has no parts of speech; the simplest utterance is a sentence, treating of some event or event-complex. Long sentences are sentences of sentences (complex sentences), not just sentences of words. (p. 270 [p. 242] in Carroll, 1956]; cited in Jacobsen, 1979, p.89).

Andrews (1975: on Classical Nahuatl): the theoretical principle behind the organization of these lessons is that the sentence-word (i.e. a word that contains within itself all the nuclear constituents necessary to a "complete" sentence) is the basis of Nahuatl structure. This is so because the nuclear functions of subject and predicate are inescapably present both in verb words and in noun words. The sentence-word thus constitutes the norm for the unit of utterance in the language. (p. xii)

In Nahuatl, in contrast to English, a verb word always presents a complete sentence; it is a "sentence-word" and as such unavoidably contains the nuclear functions of subject and predicate. The words whose structure was presented in Lessons 2 and 3 [intransitive verb forms EB] are, then, complete sentences. (p.25)

A substantive word in Nahuatl, like a verb word, is a "sentence-word".... In either of the two states [absolutive or possessive EB], a noun word unavoidably contains the nuclear constituents of subject and predicate. (p. 147)

In the generative tradition from the beginning to the present there have been many proposals that embody in one form or other the claim that the internal structure of words mirrors the structures of the syntax proper, and not just in polysynthetic languages like

Nuu'chal'nuuth, Kw'akwala, or Yup'ik, but in "paurosynthetic" languages like English. [A small sample: early: transformational derivational theories of word-formation as in Lees, 1960; middle: analyses involving syntactic decompositions as in Postal's (1970) analysis of remind; more recently Baker, 1988, Hale and Keyser, 1993.]

I want to discuss here some questions that arise if you take such ideas seriously, as I think you should. I am going to try to frame my remarks in a way that is fairly theory-neutral. In general, I will be pointing out facts that militate against a simple identification of word-structures and phrase-structures. In line with my title and with the context of this conference, I will be concentrating on semantic aspects of language. (These remarks are drawn from ongoing work which is aimed at investigating formal and semantic aspects of polysynthesis.)

It seems to me that views of word-formation as syntax-driven would lead us to expect a positive answer to the question posed above: the categories and meanings of the word-internal grammar should be the same as those of the phrasal syntax.

As indicated above I am going to be taking a categorial view of categories. This means that if a functor category is classified as a/b, say, then it has got to be able to take ANY element of category b as an argument to yield an expression of category a. In comparison to X-bar systems, this means, for example, that intransitive and transitive verbs (etc.) belong to different categories (i.e. subcategorization is just categorization), items governing different cases must belong to different categories, items showing different cases must belong to different categories, and so on. Given this proviso we can answer the question raised above in the negative: in general, the categories of affixes are different from those of the syntax. There is some overlap, as we might expect, but the sets of categories for the two domains are incomparable. To demonstrate this claim would take more time and space than we have here. To make it seem probable, I will present some facts from a number of languages that seem to be good candidates for being at the high end of anyone's scale of polysynthesis.

EXHIBITS: WAKASHAN

Here's a briefest introduction to Wakashan. The languages themselves include:

Southern: Makah, Nuuchah'nulth (Nootka), Kyuquot, Nitinat, etc.
Northern: Kwakw'ala, Haisla, Henaksiala, Heiltsuk etc.

The general structure of all of them is: VSO, polysynthetic, suffixing only, no compounding. A controversial claim that has been repeatedly made is that there is no lexical distinction between Nouns and Verbs (the best assessment of this claim, with extensive general discussion and a detailed examination of Makah, is Jacobsen,

1979).

The general structure of words is this:

(Extended)Root + DerAf* + GrAf/Clitics*:

Roots are extended by various operations of reduplication, expansion, and so on, DerAf stands for derivational affixes, GrAf/Clitics for various grammatical affixes or clitics. There are more constraints on the combinatorics of derivation than is reflected in this formula, but they have never been fully spelled out.

I'll cite first the two closely related languages of Kitamaat Village, B.C. Haisla and Henaksiala. The name of the second provides a good first example:

ƛenaksialak'ala 'Kitlope language'
 ƛen(a) -[k]si -al(a) -[k]!al -a
 few - scattered - continuative[?] - language/sound - completive-a

Here are some more lexical items:

1. 'iksduq'ia (s.v. in LR) bald eagle
 'ik- -sdu -qi -a
 good - eye/appearance - head - completive-a
2. lhax'mec'uaqiala have a headache (-c'ua means 'inside')
3. ƛuc'eqia close hair cut (mallet head) (ƛuc' mallet)
4. 'um'aseqia (have a) big head

These examples all contain the lexical suffix -qi '(in/on) head' (with regular labialization after /u/ in Ex. (1)). There is a formal contrast between a word like the last example and a phrase like 'um'ac hixt'i 'big head' (this is 'um'as -s hixt'i) with a 'connective' (i.e. syntactic) -s. Note that there is no connection between the independent lexical item meaning 'head' and the suffix for 'head.'

The next examples also show a variety of forms made with the same suffixes:

5. -(e)ƛd ass, bottom, buttocks
 gelt'eƛd tall person [gelt- long]
 k''enc'eƛd (having) wrinkled bum LR
 q'emc'eƛd lazy person LR
6. -ƛina shoulder, arm
 'uƛ'ina' shoulder
 demƛina kick in shoulder
 lha'x'm'eƛinala have a pain in the shoulder
 (cf. Yup'ik exx. below)

Some notion of the extent of derivational versus other resources of the languages can be given by these rough numbers for Haisla: there are about 1400 roots and around five or six hundred

derivational suffixes (figures based on Lincoln and Rath, 1986).

Elsewhere (Bach, 1993) I have tried to show that word-formation in Wakashan largely expresses relations of optional modification ("adverbial" meanings). Hence: no "incorporation." To substantiate this claim would require going exhaustively through the inventory of derivational processes, which I obviously cannot do here. But I will try to give a representative sample. (We should really speak of stem-forming affixes and operations, but I will continue to ignore this refinement and talk of word-formation.)

SOME TYPES OF DERIVATIONAL SUFFIXES (HAISLA/HENAKSIALA)

ARGUMENT CATEGORIES:

Since in the version of categorial grammar followed here, modes of combination are encoded in functor categories, the basic categories of standard systems, e and t, could not be represented as affixes or other dependent operations. But given the option of type-lifting, there is an easy way to get affixes to fulfill the same role. Candidates for such affixes in Haisla would be the pronominal subject clitics (or grammatical affixes), such as $-(e)n/-nug^a$ 'I' (isg subject form), which could be specified as higher order functions of type $((e,t),t)$, that is, the type of generalized quantifiers, or $-utl$ 'you sg' (iisg object) of type $((e,(e,t)),(e,t))$, that is the type of "accusative" operators (functions from transitive verb meanings to intransitives, Keenan, 1987). Since neither of these kinds of elements function at the level of word-formation, in the sense of producing new lexical elements, I will not discuss them further here. (See below for other affixes that might seem to fit in here, such as the various "passive" affixes.)

As far as I know there are in Haisla no affixal counterparts for the other argument-only category (t).

The absence of "nominative" word-forming affixes or rules is exactly what we expect given the following assumptions:

i) Word-formation rules are rules for extending the membership of lexical word classes (Dowty, 1978, 1979).

ii) The category t (S, IP, CP etc.) has no lexical members.

For a nominative affix (on a view like Keenan's (1987) on semantic case) would have to be a function from intransitive verb meanings to sentence meanings (of type t) and according to (i) the output categories of word-formational rules are confined to lexical categories. Compare Kroeber's observation (1909[1910]:574, in Sapir, CW, V,1:544):

If noun subject and object were both incorporated, incorporation as a process would break down of itself. All elements of the sentence, or at least of the clause, would be

contained in the verb, and the syntactical word would be not only in scheme but in fact identical with the sentence.

As noted above, there has been considerable discussion as to whether there is a lexical distinction between Nouns and Verbs (and predicative Adjectives) in Wakashan (Boas, 1947; Swadesh, 1939; Jacobsen, 1979. From a categorial perspective, both these classes are usually analysed semantically as predicates (that is, of type (e,t)). Without prejudice to the outcome of this dispute, I will discuss what are (notionally) two (or three) sorts of items separately, but note some implications of the discussion from and for word formation processes. As far as function/argument structures go, it is quite possible that both types act syntactically as argument categories rather than functors. In any case, there are no affixes (or word-forming operations) that correspond directly to either type.

Observers coming to Wakashan from a background of European languages have been struck by the large number of lexical affixes that encode concepts that are expressed by separate words in their languages (see for example Boas's remarks on this point in Boas, 1947:236-237). There are two general points to be made here about Wakashan: First, although there are plenty of word-forming affixes and other operations that result in forms with verbal and nominal kinds of meanings, there are none that directly encode the meanings of common nouns or intransitive verbs. If these categories are treated as basic argument categories (as in the work of Michael Bennett (1984, 1986), then this fact is unremarkable. Second, as is the case with the 'head' examples above there is in general no synchronic relationship between affixes with particular concrete meanings and separate words that encode related meanings. Compare the following:

- | | | |
|----|---------------------------|-----------------|
| 7. | =ilh 'inside, in a house' | guk"- 'house' |
| | -qi 'on/in the head' | hi'xt'i 'head' |
| | -xs 'in canoe, vehicle' | gel'w'a 'canoe' |

Apparent exceptions occur with pairs like these:

- | | | |
|----|--------------------------|-------------------|
| 8. | -xina on/in the shoulder | 'ux"ina' shoulder |
|----|--------------------------|-------------------|

But the free form here is derived by attaching the suffix to an "empty" root, ✓'u- 'place, thing.'

ADJUNCTIVE FUNCTORS:

The examples just given illustrate a very large class of adjunctive specifiers of locations, directions, areas of the body, and the like. As the glosses are intended to indicate, these affixes generally add something like an adverbial or adjectival specification to the stem to which they are attached. A few more examples:

- | | | |
|----|------------------|------------------------------|
| 9. | -bet in(to) hole | gaxebetala come into hole or |
|----|------------------|------------------------------|

	opening LR
=zi on side of flat thing	qel'xezi eggs inside body (of salmon) in or on abdomen
-atus downriver	ga'atus get up early to go downriver LR
	laa'tus go downstream LR
=zu on flat thing	t'i'bezud step onto (something flat)

These glosses are somewhat misleading. The last example is used as a transitive verb which still requires an object. The suffix does not fill up an argument slot, as would be the case if it were like an incorporated object.

There are quite a few words which at first might seem to be formed by taking (for example) a body-part suffix as an argument of the stem to which it is attached:

10. 'gel'teɣd = long + buttocks, behind

But (as Sapir noted for similar examples in Yana, 1911:271 (CW:48) this word does not mean "long behind" but rather has a bahuvrihi type of meaning: 'having a long behind, tall' ("long-assed").

Another kind of example is given by the word for (playing) baseball:

11. yayacem'a' (yayassm'a' LR) < ✓yes- 'hit with club or stick'
+ -sem 'round thing' + -!a (with a-reduplication) 'try to V'

Here -sem is not standing in for an object but is again modificational, in fact it is used as a regular classifier for counting round solid objects. (The form reflects a regular phonological rule $s + s > c$.)

The locational and directional affixes cover a wide range of meanings from quite specific (on beach, in house, on canoe or boat, on surface of water) to quite general ones much like prepositional meanings in languages like English (into, onto, at, inside of, out of). Very often, a certain suffix will include "extended" as well as concrete meanings:

12. Concrete/abstract: -eksala in all directions, randomly, wrong, mis-

The examples given so far reflect the fact that modificational affixes can be attached to stems with a wide variety of meanings. In this respect, they resemble syntactic modifiers that are often crosscategorical (for example, prepositional phrases in English), but this fact would also be consistent with the idea that stems all belong to a single open class of "predicatives," as is claimed by the analyses of the language as having no lexical distinctions among

Nouns, Verbs, Adjectives.

EXOCENTRIC FUNCTORS:

Boas's classification of suffixes (1947) includes these headings: "Nominal Suffixes," "Verbs," and "Adjective and Adverbs." In view of the claim that there is no distinction among these kinds of stems (Boas, 1947:280), this might seem curious, but Boas makes clear (237) that the classification is intended just as a convenience "to give an impression of the range of ideas expressed by suffixes." In that spirit, I will give a few Haisla examples for each of Boas's categories:

NOMINAL:

13. -as tree, bush 'ui'q'as devil' club
 -bis particle, liquid cel'x̄bis hailstone
 =ac'i receptacle, lair hengila'c'i cooking pot
 vessel, round hollow object
 -!inix̄ agentive, class of person Hel'x̄'inix̄
 Blackfish, Killer Whale clan member

VERBAL:

14. -utl to catch X q'i'utl catch a lot
 -!a hunt for, gather X c'a'c'ik''a hunt for birds (√c'ik''-
 'bird') (with a-reduplication)
 -!ix̄d want to V k'a'l'īda want to sleep ** LR
 -[g]ila to make X, go to X Terrace-ila go to Terrace

ADJECTIVAL

15. -p'a tasting of, like 'i'xp'a sweet
 -p'ala smelling of y'a'x''pala stink, skunk
 -sdu appearing like, 'i'xsdu bright colored
 -colored

Many of the lexical affixes are (notionally) cross-categorial, both in the items with which they can occur and as to the resultant meanings of the derivatives. For example, the last one listed also means "eye" and can participate in forms like those mentioned above under body parts. The suffix -[g]ila listed under VERBAL above, also can be used to refer to something made to look like X, and so on.

Again, none of these affixes can be related to independent words, and for some there is no independent word. Among these derivational patterns we can include operations that don't actually have any segmental existence apart from their effect, such as the (total) reduplication of stems, giving a resultant meaning 'to eat [whatever the stem denotes]'.
 '.

I close this section with a brief mention of several other classes of affixes that I will not discuss here.

COUNTERS: used primarily on number words, but some are specialized uses of affixes with other uses.

MODAL, etc. These include a number of affixes that relate to focus, speaker attitude, evidentiality, etc.

TENSE and ASPECT: These include affixes that relate to temporal location (past, future), contour of the action (repetitive, gradual, momentaneous, etc.) but in a way that I view as derivational rather than inflectional.

VALENCE AFFECTING: causative, transitive, and so on including about five that Boas calls "passive" (see Levine, 1980, for persuasive arguments that these last affixes, which Levine calls "focus" affixes, are to be treated as word-formational -- "lexical" rather than syntactic).

In general, all of the derivational affixes of Northern Wakashan languages operate at the level of stem-formation. In X-Bar terms, this would mean that their input and output categories are of level \emptyset . It is possible that they are unspecified as to the N and V features. If this is correct that would have important consequences for the general theory of syntactic categories. It is uncontroversial that in the syntax there is a clear distinction between main predicators or verbs and nominal constituents, but this distinction could not be directly projected from the lexicon if the items in the lexicon were unspecified.

PORTMANTEAUS

Among the many controversies about basic clause structure in natural languages one logically possible question does not seem to occur: do the subject and the object of a transitive sentence together form a constituent? And among the possible meanings for lexical items we do not find items like "dog-cow" that might be added to a transitive verb "chase" to mean "dog chases cow." Yet portmanteau forms for combinations of subjects and objects are fairly common (for example in the Iroquoian and Eskimo languages). Categorially, we can think of the meanings of these forms as functions from transitive verb meanings to sentence meanings. Moreover, if we adopt the view of pronominal affixes or agreement markers as functors, then the forms are just garden variety compositions of functions.

Central Yup'ik offers a rich set of examples of such forms for Subject-Object (Relative - Absolutive) pairs, for three persons, three numbers, thus 63 combinations (9 times 9 minus the missing forms for "reflexive" combinations, which are expressed analytically). Moreover, the combinations are generally fused further with mode affixes so we have actually a further dimension resulting in chunks that correspond even less to possible lexical items (? "dog[subject]-cow[object]-declarative"). Here are a few forms from Central Yup'ik (cf. Jacobson, 1984):

16. Some Yup'ik transitive endings (indicative): tangrr- see
(cf. Jacobson, 1984)

ISG-IISG: tangrramken	ISG-IIDU: tangrramtek
ISG-IIPL: tangrramci	ISG-IIISG: tangrraqa
ISG-IIIDU: tangrragka	ISG-IIIPPL: tangrranka
IDU-IISG: tangrramegten	IDU-IIDU: tangrramegtek ...
IIDU-ISG: tangrrarpetegnga	IIDU-IDU: tangrrarpetegkuk ...
IIDU-IIIDU: tangrragtek	IIDU-IIIPPL: tangrratek
IIPPL-ISG: tangrrarpecia	IIPPL-IDU: tangrrarpecikuk ...
IIISG-ISG: tangrraanga	IIISG-IDU: tangrraakuk ...
IIIPPL-IIIPPL: tangrrait	

Often, as in Yup'ik, such forms resist full analysis into smaller components, and seem to display the crossplay of a number of conflicting and partial analyses and analogies.

There is a lesson here. We probably cannot say flat out that these affixes represent meanings that cannot be meanings of words in any language, since there are languages that have forms (usually in some sort of AUX function) that are very similar to the Yup'ik examples. So the relevant distinction is something like that underlying the distinction between affixes, clitics or perhaps "functional categories" (in the sense of some current GB type theories, cf. e.g. Speas, 1990) on the one hand, and other items: full words, nonfunctional words, argument categories. There is a lot more to be said and thought about here.

INSTRUMENTAL CAUSATIVES

The examples just considered from Yup'ik would not usually be thought of as participants in word-formational or derivational processes. More on the derivational side are the following sorts of items from Lakhota and related languages, which serve to derive from intransitive verbs causatives with a specification of instrument or manner. Here are some examples from Lakhota (from George Whirlwind Soldier, UMass class notes, 1987):

17. Lakhota "instrumental/manner" causatives:

slohan	crawl, slide
kaslohan	cause to crawl, slide by striking
naslohan	cause to crawl, slide with foot
woslohan	crawl, slide (cause with something)
pahomni	push around
nahomni	push around with foot
wohomni	push around with something
kashuzhe	push down by striking
nashuzhe	push over with foot
pashuzhe	push over with instrument
pashuzhe	push over, down, cause to fall (to pieces)
gmiya	roll around
kagmiya	roll (cause by striking)
nagmiya	roll (cause with foot) (cf. Boas & Deloria, 1941)

Chafe (1976) considered such formations as suggestive evidence for the remote relationship of Iroquoian, Siouan, and Caddoan. The general pattern of 'adding two pieces of meaning' seems to me, however, to be not that unusual. It is highly reminiscent of the bits and pieces that we come up with when we paraphrase the meanings of lexical items. The affixes or rules introducing them are examples of a common enough word-formatational process: addition of an argument place. What I claim is that the particular meanings ('cause to α by means of hand' and the like) are not meanings of the kind that are associated with lexical words in the phrasal or word-external syntax.

AFFIXES AND STEMS

It is interesting to ask about languages like Haisla or Yup'ik with rich systems of derivational processes, whether there are any principles of choice in determining whether a particular meaning will be encoded into an affix or into a root or stem. Questions of this sort have been posed by Carlson (1983) and Bybee (1985) (and not many others), but primarily about items more on the inflectional end. The best way to get some feel for the possibilities and to begin a systematic investigation is to peruse existing descriptions such as Boas (1947) on Kwakw'ala (with extensive lists of suffixes). The following examples give a smallest hint of the range of meanings for Yup'ik derivational affixes or postbases, all from Jacobson, 1984 (the special markings at the front end of the affixes encode various morphological or morphophonemic effects of affixation):

18. %alliqe- to suffer the lack of being V (from %ate-° and -liqe[2])
 - pinir- to be strong pinialliquq he is having a hard time because he is weak
 - puqig- to be intelligent puqialliquq he is suffering from the lack of intelligence
19. :(ng)ar(ar)te-[2] (also -car(ar)te-) to hit/get hit in or on one's N (body part)
 - ii eye iinga'rtuq it was hit right in the eye
 - iingartaa he hit it right in the eye
20. @5̄cetaaq (also @5̄cिताaq) and @5̄cetaar- (something used) to cause one to V (and with ..r-) to try to cause one to V (from @5+̄cete- [1] let, allow, permit, cause, compel to V and +aar- to V repeatedly)
 - tuqu- to die tuqucetaaq poison
 - qavar- to sleep qavarcetaaq sleeping pill
21. @5̄ciar(ar)- to wait patiently for object to V (with intransitive endings reflexive meaning)
 - kumlate-° to be cold kumlaciaraaraa he is patiently waiting for it to cool
22. @3:(u)cite-[3] to V in place of, instead of, or for (but not in the sense of 'for the sake of')
 - cali- to work calitaa he is working in her place
23. -culngu- to be indisposed with respect to one's N; to have trouble V-ing

- /č'apic-(č)il / canoe-make..
 (343) xul'i:l č'apic He made a nice canoe
 (344) mu·k'i:l xul č'apic He made four nice canoes

Compare the alternative expression, using the root ?u-, what Rose calls `a referential copy of the NP':

- (345) ?uk'i:l (xul) č'apic He made a (nice) canoe
 / ?u-(č)il / it-make nice canoe

The "incorporated" nominal must be nonparticular:

- (346) č'apic! He made a (*the) canoe
 (347) ?uk'i:l č'apici he made the canoe
 / ?u-(č)il č'apic-?i:/ it-make.. canoe-DEF

Implicit nominals:

- (348) xul'i:l He made a nice one
 (349) mu·k'i:l xul He made four nice ones
 (350) x'ihmaqsnafa:l He was teasing a woodpecker
 / x'ih*-ma-q-(c)snafa:l/ red-NOM-COMB-tease..
 (351) ?axc'aqsi:k He made two of them (watches)
 / ?ax-c'aq-si:k"/ two..vessel-finish

Note (p. 295:)

- *č'apic! č'apic etc. (can't repeat stem)
 *č'apic! xul etc. (can't use head for base and leave modifiers)

but:

- (352) ?i·hi:l xul č'apic He made a really nice canoe
 (353) xul'i:l tani č'apic He made a really nice canoe

The last pair is especially telling, since the adverbial elements meaning `really' differ syntactically in coming before (-(č)il) and after (tani) their argument and the affix is attached to the first element of the phrase accordingly.

With these examples from Kyuquot we move beyond the limits of word-internal semantics. This brief excursion into Southern Wakashan has illustrated one of the important dimensions of difference among polysynthetic languages: the extent to which derivational processes can involve phrasal syntax.

ENGLISH AS A WAKASHAN LANGUAGE

It is often fun and enlightening to look back at our more familiar languages from the point of view of less familiar ones. Here, I will make a few observations about English in that spirit.

English has compounds, Haisla and Yup'ik do not. I suggested above that many complex derivatives in Haisla are reminiscent of English compounds. So we can easily reproduce the semantic structure of the Haisla word for eagle by means of a compound like

whitehead or (more exactly still) brightcolorhead (where we have to understand brightcolor as already having the conventionalized meaning 'white'), and this would even be a common pattern for forming nouns for species of animals, birds, kinds of people, etc.: bluefin, redbreast, graybeard, paleface. What is different is that the Haisla word is built not by compounding (putting together two or more 'free' forms) but by affixing a bound morpheme. So we might ask: does Haisla have something that English doesn't? There is a tradition that seems to say Yes to this question, namely Haisla (Wakashan, other families like Salishan) has things called variously 'semantic' or 'lexical' suffixes. More on this below. But first, some English things that are somewhat but not exactly like these suffixes.

English (like many languages) shows special forms of morphemes that occur only in close combination inside words. Most of these are learned Latino-Graeco [!] morphemes, but there are some perfectly ordinary native ones as well.

29. -mən, -lənd, -səl as in postman, Finland, mainsail (only for sealubbers)

But the majority of these special combining forms occur in learned or 'foreign' items (like Graeco-): we have series like:

30. syntax, syntact-; syntactic, syntactico- (semantic) etc.

Somewhat closer are items that occur only as combining forms. We can coin a word like leucocephalic ('white-headed'), but there are no free forms like leuk(os) or cephal(os). Japanese also has lots of Sino-Japanese morphemes that occur as such only in combination:

31. den 'electricity'; niti 'day' (denwa, densha; nitiyoobi etc.) [gratia M. Takahashi]

Two things are different about these bound forms of English (and Japanese) as against the Haisla items: (1) in the former case the items seem more like roots or stems, whereas in Haisla there is no doubt about the assignment of the items to the class of suffixes (note that the English items can often occur as first members or later members of words); (2) the learned English (and Japanese) items seem to be marked off as participants in a special subsystem of the language (often signalled in linguistic discussions and analyses by features like Foreign, -Yamato, etc.) with special things to say about their combinatory potential and phonology. To approach the Haisla eagle word we would have to have some monstrosity like white-cephal or imagine that pate say could only occur as a suffix and make up a word like white-pate.

STILL and all:

English does have some genuine affixes with meanings that are quite comparable to the meanings of particular Haisla lexical suffixes. A

few examples:

32. -ade: orangeade, lemonade, limeade, grapefruitade ?

I would compare this suffix to items like Haisla -bes meaning 'liquid from or small particles of' (snow, milk, etc.), Kw -asdi 'dried meat of' etc. (Names for foods seem to excite the energies of Amerenglish wordsmiths: -burger, -furter, -wich etc.).

33. -(e)teria: cafeteria, washateria 'place or establishment for'

(33) is quite comparable to Ha and Kw suffixes like =as, =ilas 'place (etc.) for.'

34. -gate: Watergate, Whitewatergate, Irangate, skategate (= Tonyagate)

35. -er: not just agentive -er but also -er for tool names, person from, birdnames as in baker, thresher, thrasher, warbler, New Yorker

36. -oid: humanoid, android etc. (cf. Yup'ik (26) : "my boat-oid" ≠ "the thing that is like my boat")

37. -ee: payee, employee, etc.

Haisla and Kwakw'ala have a number of comparable suffixes: -nix", -lgis, -aḡsem (woman from), =ayu (instrument), =em (instrument) etc.

Finally, like Kyuquot, English has a "phrasal" derivational suffix:

37. -ish X-ish: somewhat X, somewhat like an X
greenish, boyish, Monday morning-ish

Note that some accounts of the Passive in English treat it as a phrasal operation (Bach, 1980; Keenan, 1980).

English seems to be poor or entirely lacking in 'adverbial' affixes like Haisla =is 'on beach' =ilh 'in house' but particles and prepositions in English seem to function in somewhat the same way, with idiomatic combinations acting as lexical derivatives.

FINAL THOUGHTS

Maybe languages differ more in the extent to which they elaborate certain possibilities than absolutely, hence "parameters" shouldn't be thought of in too global a way.

In this briefest look at a few polysynthetic languages we have seen a number of different ways of being polysynthetic:

choice of categorial relations expressed (adjuncts vs. arguments);

independence vs. interrelatedness of word-internal and word-external grammar;

use of word-internal modifications as derivational vs. inflectional.

In general, the expectation that the categories and meanings of word-internal constructions will follow closely those of the phrasal grammar is not fulfilled. Meanings of affixes are often not related to the meanings of their hosts as arguments to functions and often encode compositions of functions and other combinations of meanings that are not associated as such combinations with individual lexical items. Hence, in my opinion, the relative independence of the domains of word grammar and phrase grammar is supported.

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