Word-building Rules and Grammatical Categories in Lummi

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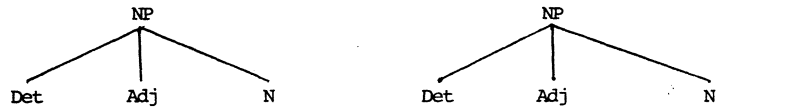
There are two kinds of grammatical evidence that can be used to argue for distinguishing the major grammatical categories in English, nouns, verbs, and adjectives. These kinds of evidence are derived from the syntactic and morphological components of English grammar. It is a condition on syntactic well-formedness in generative grammar that lexical insertion of words into syntactic structures be sensitive to grammatical categories such as noun, adjective, determiner and so forth. Given structures such as those in (1), the items that can fit into the node marked N are those that are labeled N as part of their lexical representation. Words with labeling other than N, if inserted in the tree, will create ill-formed strings. Classifying words as to their lexical categories is therefore necessary if lexical insertion is to properly apply.

(1)



the green plant *the green resuscitate

The other type of evidence that lexical categories are central to English grammar is the role that these categories play in word building rules of the type shown in (2).

(2) $[W]_x$ + Affix → $[W + Affix]_y$, where x may or may not equal y.

An example of this type of rule is the so-called -able rule discussed in Akmajian, Demers, and Harnish (1984). This rule is expressed in (3) in the format given in (2).

(3) $[W]_V$ + əbl → $[W + əbl]_A$

As noted in Linguistics, the -əbl suffix derives adjectives from verbs. Words such as fly, which can be used transitively in phrases such as fly an airplane, may be combined with the -əbl affix to form the adjective flyable, and can appear in expressions such as this plane is flyable. Words which are members of different lexical categories such as boy (noun) and red (adjective) do not permit the addition of -əbl (*boyable, *redable). Other examples are easy to find. The suffix -ness can be added to adjectives (redness) or even nouns (chairness) to form new nouns, but -ness cannot be added to verbs (*runness). A valid test for the distinction of lexical categories, then, is the specification of classes of words that can serve as input to morphological rules. For English, the classes of words that pattern together in lexical insertion also pattern together in word building rules. Word building rules thus offer an excellent probe for the definition of grammatical categories.

We have proposed in earlier work (Jelinek and Demers, 1982) that there is no syntactic evidence for the lexical categories noun vs. verb in Lummi, but rather, that there is a single open lexical class, the category predicate. Aside from the predicate, there are only small closed-list categories, largely particles and clitics. In other words, Lummi syntax does not require syntactic trees labeled with nodes such as Noun, Verb or Adjective. Other linguists working with Northwest languages have also come to the conclusion that a noun-verb distinction is absent, or that if it does exist, is fundamentally different

from the distinction found in European languages (Kinkade 1983, Kuipers 1968, Thompson and Thompson 1971, Davis and Saunders 1984, and Sapir 1946). Those arguing in favor of a noun-verb distinction have cited the existence of expressions, such as those in (4), that appear to be "noun phrases" and must therefore have nouns as their heads.

(4) cə mə̂n "the/a father"

ti?ə mə̂n "this father"

cə nə-mə̂n "my father"

We have argued elsewhere (op. cit.) that the expressions in (4) are not noun phrases, but are nominalized clauses. Compare the pairs of items in the two columns that appear in (5).

(5)	Predicate	Nominal Clause
	swəy̓?qə̓? "to be a man"	cə swəy̓?qə̓? "the one who is a man"
	x̌či-t "to know it"	cə x̌či-t "the one who knows it"
	?əy̓? "to be good"	cə ?əy̓? "the one who is good"

We have proposed that particles such as cə function like the logician's iota operator, an operator that creates a term from a predicate. Lummi sentences which appear to correspond to English sentences containing two nominal arguments are therefore to be understood differently.

(6)

len-n-əs	(,)	cə sq^{w}əmə́y̓?	(,)	cə sc̓ətx̣^{w}ən
1 2 3		4 5		6
He sees it,		the (one that is a) dog,		the (one that is a) bear

"The dog sees the bear."

1 = "see"
2 = transitivizer
3 = 3rd. per. ergative
4 = determiner
5 = "dog"
6 = "bear"

The nominal clauses cə sq^{w}əmə́y̓? and cə sc̓ətx̣^{w}ən are not in themselves arguments to the initial predicate -- they are adjoined non-finite clauses

which furnish additional information on the pronominal arguments in the main clause. The arguments for the predicate "see" are satisfied within the initial Predicate-Aux complex (see Jelinek & Demers 1983).

We will not review here the evidence that a noun-verb distinction plays no role in Lummi syntax; what we want to consider here is the second kind of potential evidence, derivational morphology. It appears that all languages have word building rules, rules that build new words from already existing words or roots by processes of compounding, affixation, and so forth. We have already shown above that English word building rules are sensitive to the lexical category of the words involved, at both the input and output.

Lummi does have word-building rules, and below we discuss several different types. We have examined these rules particularly with respect to whether they are sensitive to word classes, especially as to a possible noun-verb contrast. We conclude that there is no evidence that lexical categories are necessary in defining inputs to word building rules or in characterizing the outputs of such rules. The rules appear to apply blindly to members of the class predicate, if the semantic features of the predicate are compatible with the semantic features marked by the derivational rule. In particular, some derivational rules may be restricted to a very narrow semantic domain. We shall have more to say on this point below.

Simple predicates may undergo morphological processes that produce derived predicates. Both the input and output of these derivational rules are predicates. A derived predicate may appear in sentence-initial position, followed by the second position clitic sequence (AUX) that creates a finite (main) clause. Or a derived predicate may be preceded by a determiner that builds a subordinate adjoined clause. Examples of derived predicates include the following:

(7) Partial reduplication with infixation of -ə1-

Main clauses		Nominal clauses	
š-ə1-šc̓ə-t-sən	"I'm clubbing someone repeatedly"	cə q^{w}-ə1-q^{w}łəy	"wooden instruments"
šc̓ə-t-sən	"I club someone"	cə q^{w}łəy	"wood"
c̓-ə1-c̓sə-t-sən	"I'm hitting someone repeatedly"	cə sk^{w}-ə1-k^{w}esə	"islands"
c̓sə-t-sən	"I hit someone"	cə sk^{w}se?	"island"

Words that from the perspective of English grammar we would expect to be nouns or verbs are subject to the same word-building rule. In the examples in (7), the rule involves the copying of the initial consonant of the root (ignoring another derivational prefix, an initial s), and the infixation of the sequence -ə1- between the copied consonant and the root. There is also a matathesis process that occurs in the root portion of sk^{w}se? "island". It is clear from the translations that the general notion of plurality is conveyed by this derivational process. In the case of nominal clauses a plurality of elements is indicated, and in finite clauses, a plurality of action, either in the form of number of participants or in intensity of action is referred to. The important point is that there is no categorial distinction present that distinguishes words that can undergo this rule and those that cannot. The input for this rule is simply predicate, not a lexical category such as nouns or verbs. Other rules are:

(8) Partial (CV) Reduplication

Main clauses		Nominal clauses	
t ?ət?íləm	"They are singing"	cə t?ət?iləm	"the (ones who are) singing"
t?iləm	"He is singing"	cə t?iləm	"the (one who is) singing'
səsílə	"They are great grandparents"	cə səsílə	"the (ones who are) great grandparents"
silə	"He is a great grandparent"	cə silə	"the (one who is) a great grandparent"

(9) Full (CVC) Reduplication

Main clauses			
?əłíłən	"They are eating"	cə ?əłíłən	"the (ones who are) eating"
?iłən	"He is eating"	cə ?iłən	"the (one who is) eating"
səysəyəq	"They are digging the hell out of it"	cə səysəyəq	"the (ones who are) digging the hell out of it"
səyəq	"He is digging"	cə səyəq	"the (one who is) digging"
s-łən-łéni	"They are women"	sə s-łən-łéni	"the (ones who are) women"
słeni	"She is a woman"	sə słeni	"the (one who is) a woman"
?el-?elən	"They are houses"	cə ?el-?elən	"the (ones that are) houses"
?elən	"It is a house"	cə ?elən	"the (one that is) a house"

Both partial and fully reduplicated forms can indicate the notion of plurality; and the reader will note that predicates that refer to both "objects" and "actions" participate in this morphological process.

These two types of reduplication processes can also be associated with notions other than plurality. Compare:

(10) a. cə sq^{w}əq^{w}əmə́y "little dog"
cə sq^{w}əmə́y "dog"

b. p̓əp̓o?ɳ "swelling up right now"
p̓o?ɳ "swell up"

In (10a), reduplication marks the diminutive, whereas the word p̓əp̓o?ɳ "swelling up right now" is an aspectual form described as "actual", opposed to the non-actual p̓o?ɳ. Across languages, derivational processes may show idiosyncratic "semantic drift." The meaning difference between diminutive and actual vs. non-actual aspect is not consistently maintained between words that refer to entities vs. words that refer to events. This lack of a meaning difference

is dramatically demonstrated by examples from Puget Salish, a closely related Coast Salish language (Broselow 1983).

(11)

Main clauses	Nominal clauses
Xáhəb "Someone cries"	cə tálə "money"
Xáxahab "An infant cries"	cə tá?tal "a little money"

These examples show that the notion of diminutive can also appear with verb-like words. The reduplicated XaXahəb signifies that something small is crying. Even though there are some idiosyncratic meaning differences within reduplicated forms, all lexical predicates are subject to this word building rule.

(12) The diminuative suffix -o?əɬ

cə swi?qó?əɬ "boy"	cə swəy?qə "man"
sə sɬəncó?əɬ "girl"	sə sɬeni "woman"

A candidate for a word building rule that picks out nouns is, of course, the diminutive. However, the class of items which can take the -o?əɬ is so narrow that any morphological characterization is redundant once the semantic restrictions are specified. The suffix -o?əɬ is only found on a few words, and these all refer to humans. The other more productive means of forming diminutives is with the partial reduplication rule discussed earlier. This highly restricted occurrence is also found in other Salish languages. In Puget Salish, for example, the cognate suffix -əɬ is primarily used in naming women, in particular female family members (Hess 1970:51).

(13) the s- "nominalizer"

s-?iɬəŋ "it is food" or "it is (the) eating"	?iɬəŋ "Someone is eating"
s-čə:nəxʷ "it is salmon"	čə:nəxʷ "Someone is fishing"

Again, the so-called nominalizer s- has been claimed by some to be a morphological device for turning verbs into nouns. Kinkade (1984) has suggested

that the so-called s-nominalizer is actually a marker of a stative aspect. Lummi in fact uses ?əs- as a prefix to mark the stative aspect of some predicates. The important point, however, is that s- is not a nominalizer in the traditional sense, since words with the s- prefix are still predicates. It is only when they are preceded by determiners such as cə that they can function as adjoined nominal clauses, in our analysis.

(14)

?iɬəŋ "he is eating"	cə ?iɬəŋ "the (one who is) eating"
s-?iɬəŋ "It is (the) eating" or "It is food"	cə s'íɬəŋ "the eating, the food"

The examples given in (14) show that s- alone cannot serve as a nominalizer — it functions to turn a simple predicate into a derived one. And both simple and derived predicates appear in both main clauses and adjoined nominal expressions, which are formed by the preceding determiner.

(15) Instrumental -təŋ

čəy - təŋ	"It is a tool"	čəy	"he is working"
čeŋ' - təŋ	"It is a bailer"	čəŋ'-əɬ	Bail it!
səŋ' - təŋ	"It is a tumpline"	səŋ'-əɬ	"Carry it (on your shoulders)"
qʷo-təŋ	"It is a bucket"	qʷo?	"It is water"

The same points that were made about the prefix s- can be made about the suffix -təŋ: the rule changes one predicate type into another. It can be seen that the semantic features of the input predicate have a wide range; predicates that occur in -təŋ need not refer to an action. The predicate qʷo?, variously "to drink" or "water" plus -təŋ has the meaning "basket" "instrument used for water", not necessarily "instrument used for drinking".

The evidence from the word building component of Lummi points to the conclusion that neither the input nor the output utilizes morphological categorial marking. The morphological word building rules of Lummi have predicates as both their input and output, and it is the more narrow semantic properties of the lexical items that determine whether or not a form is eligible to undergo the word building rules.

Languages appear to differ, then, in the extent to which lexical categories can be part of the information required in stating word-building rules. English requires lexical categories, whereas Lummi does not. A closer look at English, however, shows that many word building rules rely heavily on narrow semantic features of the input forms. Consider the suffix -ize. This suffix is described as a verb building suffix that has adjectives as its input. This suffix can be added productively as is seen by the rather recent origin of the word finalize. Not all adjectives can freely take the -ize suffix. Consider for example the awkwardness (or even impossibility)of words such as *redize "to make red" *oldize "to make old". The point is that semantic compatibility clearly plays a role in word building processes. In fact, the -ing suffix which can be added freely to English verbs to form gerunds and participles, can also be added to nouns within a restricted semantic domain. It is used, for example, to form words such as flooring from floor, roofing from roof, carpeting from carpet, and so forth. The -ing added to nouns carries with it the notion of "material used for" and thus the nouns must be members of a particular narrow semantic field.

We see thus that even in a language where the input to word-building rules must be stated in terms of lexical categories, the semantic features of particular words may restrict the application of the rule or affect the

semantic contribution of the derivational change. We should not be surprised then to see such semantic factors affecting the distribution and result of the processes in Lummi grammar that change simple predicates into derived ones. Our conclusion, then, is that the lack of a noun-verb distinction in Lummi syntax is supported by the evidence from derivational morphology. We have seen no derivational rule in Lummi that requires that its input be stated in terms of a lexical category such as noun or verb. Similar points have been made by Kinkade for other Salish languages. These features of Lummi syntax reflect the typological importance of the Salish language family.

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