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STRUCTURE PRESERVATION AND MOHAWK INCHOATIVE VERBS*

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1. Introduction: Is morphology structure preserving?

If one's linguistic theory includes a distinction between the lexicon and syntax, then one faces an important question with respect to morphology: does the concatenation of morphemes take place in the lexicon, or in the syntax? Both choices have some inherent plausibility. On the one hand, the lexicon is some kind of list of the words of a language, and morphology can be thought of as a set of operations for expanding this list. This would lead to a lexicalist approach to morphology. On the other hand, the syntax is a productive and compositional system for forming complex and novel linguistic expressions, and an important subclass of morphology has a similar compositional and productive character. One may conjecture that the human language faculty includes only one recursive system, implying that this subpart of morphology is included in the syntax. This would lead to a syntactic approach to morphology.

As a proponent of the syntactic approach to (some) morphology, I will begin by trying to clarify the true empirical issue that distinguishes the two approaches. Then I will go on to analyze an example in some detail--specifically, the inchoative morpheme in Mohawk--to illustrate the kinds of issues that arise. Of course both the lexical and the syntactic approaches exist in several variants, and intermediate positions are also possible; however, I will not be able to discuss the subtle but important issues involved here.

1.1 The structure preservation prediction

What is the heart of the difference between a lexical approach and a syntactic approach? On the lexical approach, morphology exists to derive new lexical items. Because of this, the new forms generated should be subject to the same restrictions as basic lexical items. In other words, morphology will derive new tokens, but it will not in general derive whole new types of lexical items.¹ These newly formed lexical items then enter the syntax in the same way as basic lexical items, and the syntax is oblivious to the difference between the two.

On the syntactic approach, things come out rather differently. In particular, a morphologically complex word may be associated with two or more positions in a syntactic phrase structure, whereas a morphologically simple word can only be associated with one position. Hence, their syntactic behaviors will not necessarily be the same.

This empirical issue is raised in Chomsky (1970). His central argument is that derived nouns in English appear in exactly the same phrase structure configurations as morphologically simple nouns. This is explained, he claims, if derived nominals are simple nouns from the point of view of the syntax; it then follows that they will be inserted into exactly the same structural positions. This similarity would be an unexplained coincidence if nominalizations were derived from sentences by syntactic transformations which just happened to create structures identical to those formed by the principles of phrase structure. Thus, Chomsky writes (p. 54):

“The strongest and most interesting conclusion that follows from the lexicalist hypothesis is that *derived nominals should have the form of base sentences*, whereas gerundive nominals may in general have the form of transforms.”

Hence, Chomsky adopts the “lexicalist hypothesis” for English nominalizations.

In later work, it was suggested that the lexicalist hypothesis should be extended to all of morphology. Emonds (1976) observed that most important transformations are subject to a “structure preservation” requirement, such that the output of the transformation is a structure that could have been generated by the phrase structure rules. Bresnan (1978) argued that this “structure preservation” property follows trivially if the structures in question really were base generated, lending support to a very general lexicalist position. Below I quote two more recent expressions of this form of argument. One is from Grimshaw and Mester’s (1985) study of morphologically complex verbs in Labrador Inuttut Eskimo, which they claim to be identical to simple verbs from the point of view of the syntax. The other is from Di Sciullo and Williams’ (1987) analysis of noun incorporation in Mohawk.

“Our account offers a principled explanation for the fact that complex verbs have the same syntax as other verbs of the language. They appear in the same phrase structure configurations, display the same agreement and trigger the same case-marking effects.” (Grimshaw and Mester 1985, p.11)

“The atomicity thesis further predicts that the syntax of syntactic arguments will be independent of whether or not there is an incorporated noun on the verb.” (Di Sciullo and Williams 1987, p.65)

As a proponent of the syntactic approach, I agree with the logic of this argument. If morphology were always “structure preserving” in this sense, then it would probably be right to accept the lexicalist hypothesis. However, I do not believe that morphology is always “structure preserving”. I have nothing to say about Chomsky’s case of English derived nominals one way or the other. Nevertheless, there do seem to be a variety of instances where morphologically complex words do not behave exactly like comparable simple words. The best-known and clearest case is morphological causatives: these often behave like simple transitive (or ditransitive) verbs with respect to Case and word order, but not for processes of anaphora or question formation. (The literature on this topic is quite vast; see Baker (1988a) for some references.) Moreover, Woodbury and Sadock (1986) have challenged Grimshaw and Mester’s contention that complex verbs in Eskimo take exactly the same complements as simple verbs. Finally, Sadock (1985) and Baker (1988a, 1988b) have challenged the claim that verbs with incorporated nouns have the same syntax as simple verbs in all languages. Indeed, the evidence against structure preservation seems to be persuasive on each of these fronts.

1.2 New Ground: inchoative verbs

Rather than reopening one of these topics, I propose to extend the discussion to the area of morphologically complex inchoative verbs. This is important because even if it is acknowledged that some morphology is done in the syntax, one must still try to determine which morphemes this is the correct analysis for. Inchoative verbs were studied alongside causative verbs in Lakoff (1965), but they have been largely ignored in the current debate, with the notable exception of Borer (in progress).

The background to this issue is as follows. Mohawk verb stems divide into two classes. The first class contains eventive verbs, such as *-v'*- fall, *-hri'*- shatter, *-ahtu-* get-lost, and *-nawv-* melt. The second class contains stative verbs, with meanings that generally correspond to those of adjectives in English; examples include *owanv* be-big, *-a'tsu* be-dirty, *-nanawv* be-wet, *-rakv* be-white. These two classes of verbs have somewhat different properties, as will be seen below.

Mohawk also contains a productive inchoative suffix that is relevant to this domain. This suffix attaches to stative verbs like 'be big' to produce eventive meanings like 'become big'. The most common form of this suffix is [-'], although it has some other allomorphs, such as [-ha(')] and occasionally [-st].

Now we have a domain in which the "structure preservation" issue arises. If the inchoative morpheme *-'* is attached lexically, it should form new verbs in the eventive class. Such verbs would then behave like normal eventive verbs in all respects. If, however, the inchoative suffix is a separate element syntactically, then some of the properties of the stative verb root may still appear. The latter prediction is the correct one. Table One summarizes three properties which distinguish eventive verbs from stative verbs in Mohawk. The third column compares the properties of inchoatives. Notice that it is not identical to either of the previous two columns; rather it is a mixture of the two.

TABLE ONE	<u>eventive V</u>	<u>stative V</u>	<u>inchoative: V_{st} -'</u>
appears without aspect suffixes	NO	YES	NO
can be used as a bare nominal	NO	YES	NO
agrees with possessor of incorporated N	NO	YES	YES

This gives a general overview of the form of my argument. In what follows, I will go through each type of verb in some detail, with the goal of showing how a simple and elegant syntactic account can explain why inchoative verbs have the particular combination of properties that they do. In the course of the argument I will make two assumptions about noun incorporation in Mohawk: first, that it is a syntactic process; and second, that only nouns that are underlying direct objects of the verb may incorporate (see Baker 1988a, 1988b for discussion).

2. Properties of eventive verbs.

First, consider eventive verbs. (1) shows some simple examples of sentences including such verbs. (2) shows that these particular verbs allow their single argument to be incorporated. Thus, the arguments of these verbs must be direct objects underlyingly; they are "unaccusative verbs" in the sense of Perlmutter (1978).

- (1)
- a. Y-a-w-asv'-ne' ne athvno'.
trans-fact-NsS-fall-punc NE ball
The ball fell.
 - b. Owise' wa'-t-ka-hri'-ne'.
glass fact-dup-NsS-break-punc
The glass broke.

- c. Ka'sere' wa'-o-ke'tot-e'.
 car fact-NsO-appear-punc
 The car showed up, appeared.
- (2) a. Y-a-w-athvno-tsher-v'-ne'.
 trans-fact-NsS-ball-nom-fall-punc
 The ball fell.
- b. Wa'-t-ka-wis-a-hri'-ne'.
 fact-dup-NsS-glass-break-punc
 The glass broke.
- c. Onv wa'-o-'sere-ht-a-ke'tot-e'.
 now fact-NsO-car-nom-appear-punc
 The car showed.

(3) demonstrates the defining property of the eventive class: verb roots from this class must in general be followed by one of the aspectual suffixes found in Mohawk. (i) shows a habitual suffix; (ii) a punctual suffix with a future prefix; (iii) a punctual suffix with a past tense prefix. (iv) is a form with no aspect suffix at all. In fact, this form is possible, but has a very special interpretation: it is a kind of third person imperative. However, since it does not form a referential proposition, I put it aside.

- (3) (i) habitual aspect t-ye-ya't-v'-s
 (-s, -ha', -he') cis-FsS-body-fall-hab
 'She falls (often) .'
- (ii) future-punctual v-t-ye-ya't-v'-ne'
 (-', -e', -ne') fut-cis-FsS-body-fall-punc
 'She will fall.'
- (iii) factual-punctual t-a-ye-ya't-v'-ne'
 (-', -e', -ne') cis-fact-FsS-body-fall
 'She fell.'
- (iv) *bare #t-ye-ya't-v'(-n)
 cis-FsS-body-fall
 (OK only as "let her fall!")

Why must an aspectual suffix to attach to verbs of this class? Inspired by Higginbotham (1985), I assume that verbs like -v'- 'fall' have an argument structure which includes a special "event" position. This is shown in (4). Just as a nominal of some kind must appear in construction with 'fall' to express its theme argument, so an aspectual element must appear to bind the event argument. Otherwise, the lexical properties of the verb are not satisfied, and the construction is ruled out as incomplete.

- (4) -v'- "fall" <theme, event>

Next, consider the syntax. A salient property of Mohawk is that forms which are verbs morphologically often play the role of nouns in a sentence. The result is roughly that of an internally headed relative clause. Thus in (5a) the verbal meaning "The glass fell" is interpreted as "the glass that fell". However, there are some restrictions. Such forms are only fully natural when they follow the verb; (5b) shows that when the verbal form precedes the verb it is awkward or unacceptable. The (c) and (d) examples show another contrast of the same type. It is important to emphasize that ordinary nominals can precede or follow the verb in Mohawk with complete freedom.

- (5)
- a. Wa'-t-hra-hkw-e' ne t-a'-ka-wis-v'-ne'.
 fact-dup-MsS-pick up-punc NE cis-fact-NsS-glass-fall-punc
 He picked up the glass that fell.
- b. ?/*T-a'-ka-wis-v'-ne' wa'-t-hra-hkw-e'.
 cis-fact-NsS-glass-fall-punc fact-dup-MsS-pick up-punc
 He picked up the glass that fell.
- c. Sak wa-ha-tshvri' ne wa'-t-ka-na'ts-a-hri'-ne'.
 Sak fact-MsS-find-punc NE fact-dup-NsS-pot-break-punc
 Sak found a pot that broke.
- d. *Sak wa'-t-ka-na'ts-a-hri'-ne' wa-ha-tshvri'.
 Sak fact-dup-NsS-pot-break-punc fact-MsS-find-punc
 Sak found a pot that broke.

There are several possible ways of accounting for this phenomenon, and the details are not particularly important here. The simplest route is in terms of extraposition. It is well-known that tensed clauses in English and many other languages normally must be displaced into a clause peripheral position; this is also true in Mohawk. Thus even ordinary complement clauses do not participate in Mohawk's otherwise very free word order; rather they are generally limited to clause-final position. (5) can be seen as another instance of this same generalization.

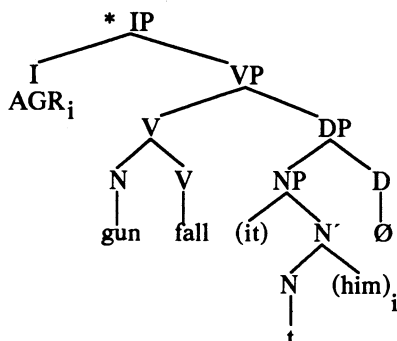
The third interesting property of eventive verbs in Mohawk is that when their argument is incorporated a possessor cannot be left behind. Some languages (e.g. Rembarnga, see McKay (1975)) have a "possessor-raising" effect in which a possessive NP left behind by noun incorporation is treated like an argument of the verb; it triggers object agreement on the verb, for example. (6) shows that this does not happen with eventive verbs in Mohawk:

- (6)
- a. *T-a-ho-hur-v'-ne' ne Sak.
 cis-fact-MsO-gun-fall-punc NE Sak
 Sak's gun fell.
- b. *Sak wa'-t-ho-wis-a-hri'-ne'.
 Sak fac-dup-MsO-glass-break-punc
 Sak's glass broke.
- c. *Wa'-ako-athvno-tsher-ahtu-'.
 fact-FsO-ball-nom-get.lost-punc
 Her ball got lost.

words, onomatopoeic animal names, etc.--also lack an agreement prefix. Thus, the structure of an ordinary nominal is given in (8c).

Now, consider the configuration which results when this structure is used as the complement of an eventive verb and noun incorporation takes place. The result will be (9), corresponding to sentence (6a):

(9)



Since the head noun has incorporated, the determiner is left stranded. Since the determiner is a bound form, it must be left null phonologically. Now the observation we wish to explain is the fact that the agreement associated with the verb (here represented under the Infl node) cannot be related to the stranded possessor inside NP. A plausible reason is the presence of the determiner node, which intervenes between the two. What we need is a principle like (10):

- (10) An agreeing head X cannot be coindexed with an NP Y if there is another (potentially) agreeing head Z such that Z c-commands Y but not X.

This condition is independently motivated by Borer's (1986, p. 403) study of subjects in Hebrew and the Romance languages. It means that D as a node that may bear agreement prevents the agreement in I from seeing inside its domain.⁴

3. Properties of stative verbs.

Consider now the class of stative verbs. Simple examples are given in (11). (12) shows that these verbs too can have their nominal argument incorporated. Thus, they like the eventive verbs in (1) count as "unaccusative verbs", selecting a theme/object NP as their only argument. In this respect there is no difference between the two classes.

- (11) a. Kowanv thikv okwire'.
NsS/big that tree
That tree is big.
- b. Yo-hniru ne anitskwara.
NsO-hard NE chair
The chair is hard

- c. Te-yo-a'tsu thikv ka-na'ts-u.
dup-NsO-dirty that pail
That pail is dirty
- (12) a. Ka-kwir-owanv thikv.
NsS-tree-big that
That tree is big.
- b. Yo-anitskwara-tsher-a-hniru.
NsO-chair-nom-hard
The chair is hard
- c. Te-yo-na'ts-a'tsu thikv.
dup-NsO-pail-dirty that
That pail is dirty.

There is an obvious difference between these verbs and the eventive verbs, however: the verbs in (11) and (12) do not end in an aspectual suffix. In spite of this, they are well-formed, and constitute propositions with well-defined truth values. The habitual affix *-s* may optionally attach to these verbs, but when it does it has a rather different interpretation. Thus, the habitual suffixes in (13) indicate that the nominal argument of the verb is plural:

- (13) a. Yo-anitskwara-tsher-a-hniru-s.
NsO-chair-nom-hard-hab
The chairs are hard.
- b. W-a'ther-owanv-s ki.
NsS-basket-big-hab this
These are big baskets

At first this seems surprising. However, upon reflection it becomes clear that the more standard use of the habitual in (3i) also has plural force: it refers to multiple events of falling. These facts can be accounted for if we assign to stative verbs an argument structure like that in (14). These verbs are like eventive verbs, except that they lack the special event argument:

- (14) *-hniru* 'hard' <theme>

Since these verbs have no event argument to be expressed, they do not need to appear in construction with an aspect suffix. Furthermore, when a habitual suffix is attached to such a verb, there is no event argument for it to quantify. In this situation, its plural force is attributed to the only argument the verb has: its theme argument. This gives forms like those in (13).

Next, recall that eventive verb forms can function as nouns, but only if they follow the verb whose argument they express. Stative verb forms are different in this respect: they can either precede or follow the main verb with relative freedom. This is shown in (15):

- (15) a. Ka-na'ts-a-rakv i-s-atst .
NsS-pot-white Ø-2sS-use
Use the white pot.
- b. Yo-anitskwara-tsher-a-hniru wa'-k-hninu-'.
NsO-chair-nom-hard fact-1sS-buy-punc
I bought a hard chair.
- c. Sak te-yo-na'ts-a'tsu wa-ha-tshvri-'.
Sak dup-NsS-pot-dirty fact-MsS-find-punc
Sak found a dirty pot.

This difference is expected. In general only tensed clauses are under an obligation to extrapose; tenseless phrases such as nominals and infinitives need not. Since stative verbs lack an event argument, they need not have tense/aspect morphology. Hence they need not extrapose either; rather they may appear in the same range of positions as ordinary NPs.

Finally, suppose that the argument of a stative verb is incorporated. In this case it is possible for a possessor of the incorporated noun to be left behind, with the possessor triggering object agreement on the main verb (cf. Michelson (1991, p.760, fn.5). Examples of this type are given in (16); they contrast directly with the eventive verb forms in (6).⁵

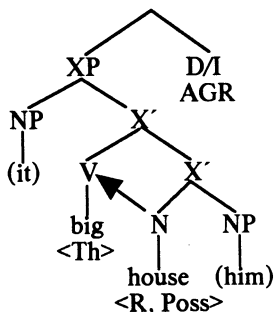
- (16) a. Thikv ro-a'ther-owanv.
that MsO-basket-big
That guy's basket is large.
- b. Ro-ris-er-akerahs.
MsO-sock-nom-stink
His socks smell.
- c. Te-ho-hur-a'tsu ne Sak.
dup-MsO-gun-dirty NE Sak
Sak's gun is dirty.

Why should this difference be? I suggest that stative verbs can appear in a completely different structure from the kind considered so far; specifically, the structure given in (17). Here the nominal is not the object of the verb. Rather, the verb and the noun are joint heads of the single phrase, marked XP. Since the NP "it" is contained in this joint maximal projection, it counts as an argument of both heads: it is the theme of 'big' and the referent of 'house'. Since the argument 'him' is in the lower X', it is an argument of the noun only: it receives the possessor role. This gives the correct interpretation for the sentence. The N then incorporates into the verb, and the jointly headed phrase can be used as either an NP or a VP in the syntax. The principles involved in this structure are those that Baker (1989) uses to account for serial verb constructions, but I will not discuss the parallelisms here.

The important thing about (17) for our purposes is the fact that the verb does not take a complete nominal projection as an argument. Hence, there is no determiner which dominates the noun but not the verb; if there is a determiner at all,

it is outside the projection of both. Thus, the verbal agreement can be related to the possessor NP in this structure without violating (10).

(17)



To complete this account, one must explain why eventive verbs cannot appear in a structure like (17). If they could, then we would expect them to allow “possessor raising” as well, contrary to fact. The reason is fairly simple. Recall that eventive verbs have an event position in their argument structure, which must be bound by aspectual morphology. However, there is no place for this aspectual morphology to appear in a structure like (17).⁶ Hence eventive verbs cannot be used in this way. Indeed, (18) presents a very similar contrast in English. Both verbs and adjectives can be used as predicate phrases, as in (18a). However only the adjective can be an NP-internal modifier, as in (18b). The reason is the same as in Mohawk: the verb has an event argument which cannot be satisfied when it is internal to the maximal projection of the noun.

- (18) a. The glass fell
The glass is dirty
b. *The fall glass
The dirty glass

4. Inchoative verbs.

Now at last we know enough about stative and eventive verbs to be able to understand inchoative verbs--verbs made up of a stative verb root and the suffix *-ne*. Simple examples of inchoative verbs are given in (19). (20) shows that these verbs can still incorporate their noun argument, unsurprisingly.

- (19) a. Thikv a'share' wa'-t-yo-a'tsu'-ne'.
that knife fact-dup-NsO-dirty-inch-punc
That knife got dirty.
b. Rao-ris wa-w-akera'-ne'.
MsP-socks fact-NsS-stink-inch-punc
His socks began to stink.
c. Kana'tsu wa'-ka-hutsi'-ne'.
pot fact-NsS-black-inch-punc
The pot turned black

- (20)
- a. Thikv wa'-t-yo-a'shar-a'tsu'-ne'.
that fact-dup-NsO-knife-dirty-inch-punc
That knife got dirty.
 - b. Wa'-ka-ris-er-akera'-ne'.
fact-NsS-sock-nom-stink-inch-punc
The socks began to stink.
 - c. Wa'-ka-na'ts-a-hutsi'-ne'.
fact-NsS-pot-black-inch-punc
The pot turned black.

Now we turn to the more distinctive properties of these verbs. (21) shows that inchoative verbs appear with the full range of tense/aspect affixes. Indeed, an aspect suffix is obligatory; if none appears, the verb can only be interpreted as a third-person imperative, as shown by (21d).

- (21)
- a. Tyotku te-yo-a'tsu-ht-a'-s
always dup-NsO-dirty-caus-inch-hab
It always gets dirty.
 - b. Wa'-t-yo-a'tsu'-ne'
fac-dup-NsO-dirty-inch-punc
It got dirty.
 - c. T-v-yo-a'tsu'-ne'
dup-fut-NsO-dirty-inch-punc
It will get dirty.
 - d. #Te-yo-a'tsu'-n
dup-NsO-dirty-inch
(Let it get dirty.)

(22) shows that inchoative verbs like eventive verbs lose the ability to act as NPs in preverbal position, although they may appear postverbally.

- (22)
- a. Sak wa-ha-tshvri' ne wa'-t-yo-na'ts-a'tsu'-ne'.
Sak fact-MsS-find-punc NE fact-dup-NsO-pot-dirty-inch-punc
Sak found a pot that got dirty.
 - b. *Sak wa'-t-yo-na'ts-a'tsu'-ne' wa-ha-tshvri'.
Sak fact-dup-NsO-pot-dirty-inch-punc fact-MsS-find-punc
Sak found a pot that got dirty.
 - c. V-se-k-kwatako' ne wa'-o-anitskwara-tsher-a-hnir-ha'.
fut-rep-1sS-fix-punc NE fact-NsO-chair-nom-hard-inch-punc
I will fix the chair that became hard.
 - d. ??Wa'-o-anitskwara-tsher-a-hnir-ha' v-se-k-kwatako'.
fact-NsO-chair-nom-hard-inch-punc fut-rep-1sS-fix-punc
I will fix the chair that became hard.

So far, the data are consistent with the lexicalist hypothesis: inchoative verbs are behaving exactly like simple eventive verbs. The crucial facts, however, involve the incorporation of possessed nouns. (23) shows that this is possible, and that the “possessor raising” effect is found, with object agreement on the verb indicating the features of the possessor. This is a property carried over from the stative verb root in a way that seems incompatible with the lexicalist analysis.

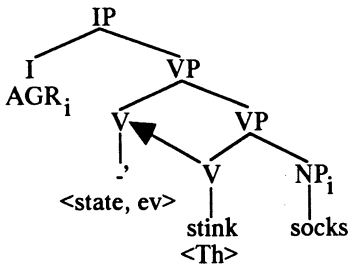
- (23)
- a. Wa-ho-anitskwara-tsher-a-hnir-ha-'.
fact-MsO-chair-nom-hard-inch-punc
His chair became hard.
 - b. Wa-ho-ris-er-akera-'-ne'.
fact-MsO-sock-nom-stink-inch-punc
His socks became smelly.
 - c. Uke-na'ts-a-hutsi-'-ne'.
fact/1sO-pot-black-inch-punc
My pot turned black

Consider now the syntactic alternative. In particular, suppose that we analyze the inchoative morpheme as an independent verb ‘become’ in the syntax, more or less along the lines of Lakoff (1965). This verb will take a “state” argument, expressed as a VP. It obviously takes an event argument as well. These properties are indicated in (24):

- (24) -' 'begin', V <state, event>

A simple inchoative example like (19b) will have the (simplified) syntactic structure in (25). The stative verb then combines with the inchoative morpheme by moving in the syntax. This instance of “incorporation” is fully compatible with the constraints on head movement discussed in Baker (1988a) and elsewhere.

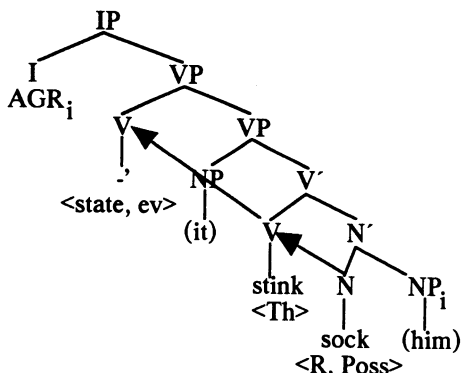
(25)



Now from the point of view of the syntax, we have not one verb but two: a higher eventive verb and a lower stative verb. Thus, syntactic processes which look at the structure in (25) from the outside will treat (25) like an ordinary eventive clause. On the other hand, syntactic processes which are internal to the lower VP should treat (25) as a stative construction. Thus we expect a mixture of properties--and indeed we find exactly the right mixture. Since the higher verb has an event

argument, aspect morphology will be obligatory, as in fact it is. Since the clause as a whole counts as tensed, it is required to extrapose rightward, as seen in (22). On the other hand, since the lower verb maintains its separate existence in the syntax and has no event argument of its own, it is free to enter into a double-headed construction with a noun root. This gives the structure in (26), which is a straightforward embedding of (17) under the inchoative verb:

(26)



Now the individual morphemes in this structure are combined by successive cyclic instances of incorporation. Thus, the N incorporates into the stative verb; this complex then combines with the inchoative verb, and finally with the aspect and agreement features associated with Infl. This sequence of events automatically derives the correct order of morphemes in the complex verb, as shown in (27):

(27) ...ho- ris-er - akera -' -ne'
 [agr- [[sock - stink] -inch] -aspect]

Moreover, since there is no possible agreement-bearing category between the verbal agreement located in Infl and the possessor NP, the two may be related, giving the effect of possessor-raising. This explains the grammaticality of the examples in (23). I trust that it also shows the explanatory virtues of the syntactic approach to morphology.⁷

In closing, it is instructive to compare this approach to morphology with the theory of generative semantics. While generative semantics was a source of inspiration for aspects of this approach, I do not think that it will have nearly as broad a scope as generative semantics did. To show why, consider again the verb *hri* 'to shatter'. Probably any reasonably fine-grained semantic decomposition of this verb would identify an inherent state predicate plus an inchoative operator; certainly this is true of achievement verbs in Dowty's (1979) system:

(28) *hri*': [become [shattered (x)]]

Thus, in terms of lexical semantics 'shatter' may be essentially identical to 'become stinky'. Nevertheless, it is simply not the case that 'shatter' can be divided morphologically into a stative root and an inchoative suffix in Mohawk. Correlated with this is the fact that the stative component of 'shatter' is not sufficient to permit

the possessor raising effect (cf. (6b)); this aspect of its meaning is invisible to the syntax. This suggests that morphological complexity often induces syntactic complexity, but semantic complexity by itself does not. Now I do not know where to draw all of the dividing lines in cases of opaque or idiosyncratic morphology; I believe that this is an empirical question to be decided by careful analysis of individual cases. However, in doing such analyses it is important to look for failures of structure preservation, rather than being guided purely by an a priori lexical semantic analysis.

Notes

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1. This assumption is not logically necessary. It is not incoherent to propose a theory in which morphology derives lexical entries with properties very different from those of basic lexical entries of the language. However, the restriction in question is a very natural way of giving the lexicalist hypothesis empirical content, and in practice it has been assumed (implicitly or explicitly) by most proponents of the lexicalist hypothesis as the quotations below demonstrate.

2. These facts are over-simplified somewhat in that I am abstracting away from the well-known "active" properties of the Mohawk agreement system.

3. Williams (1981) and Higginbotham (1985) argue that nouns have a theta role "R" for the referent in their argument structure; my innovation is simply to say that in Mohawk this can be assigned to an NP position like any other theta-role.

4. In (7), on the other hand, the masculine singular element is semantically an "affected object" argument of the benefactive verb. As such, it is directly under the verb phrase, and not within the domain of a determiner. Hence, it can be related to the verbal agreement node in Infl. In this way the contrast between (6a) and (7) is accounted for.

5. Crucially, stative verbs cannot have this type of animate object agreement if the noun is not incorporated. This proves that the masculine element in (16) is not some kind of "affected argument" of the verb itself, as it is in (7).

6. If an aspectual morpheme did appear in construction with the XP in (17), it could potentially bind an event argument associated with the V. However it would not bind any similar argument position in the N. Thus, we would have binding into only one head of a double-headed construction. This can be interpreted as a violation of a generalized coordinate structure constraint.

7. This argument is less strong if one believes that noun incorporation is a lexical process: then one can analyze (23) in terms of noun incorporation feeding inchoativization within the lexical component. The challenge for this view then would be to provide a principled explanation for the contrast between (6) and (16)

in purely lexical terms. While this may well be possible, I am not aware of any current theory that predicts these results.

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