

## COMPLEX VERB FORMATION IN ESKIMO\*

### 0. INTRODUCTION

Polysynthetic languages characteristically exhibit complex verb forms: single lexical items which correspond in meaning to entire clauses in languages like English. This paper presents an analysis of Labrador Inuttut (LI) derivational morphology in which passive, antipassive, and the complex verb formation rules themselves are all morphological operations. General principles of well-formedness and the interaction among lexical rules then explain the fundamental characteristics of the complex verb system: the internal structure and general syntactic behavior of complex verbs, restrictions on the application of complex verb formation, and the appearance of recursion within complex verbs.

We begin with a brief description of the grammatical system of LI. Then we give our analysis of complex verb formation and present the results which follow from our approach. Finally we argue that to obtain these results would require considerable stipulation in a non-lexical account.

### 1. GRAMMATICAL BACKGROUND

Our data are drawn largely from Smith's studies of Labrador Inuttut (Smith, 1977, 1978, 1980, 1982a, 1982b). LI is an Inuit Eskimo dialect which has an ergative case system (Comrie, 1973; Dixon, 1979; Plank, 1979; Levin, 1983). Both the subject of an intransitive verb and the direct object of a transitive verb receive absolutive case, and the subject of a transitive verb is marked with ergative case.<sup>1</sup> A transitive verb agrees in person and number with both its subject and its object, and an intransitive

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<sup>1</sup> Absolutive case has no overt marker. The realization of ergative case is governed by complex morphological and phonological rules which we will ignore. See Woodbury (1981) for a treatment of the phonology and morphology of the related Central Yup'ik language.



- (2) tiki- (S)  
y

The verb **taku-** 'to see' as in (1a) has the entry in (3):

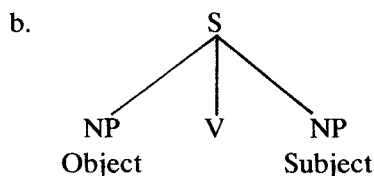
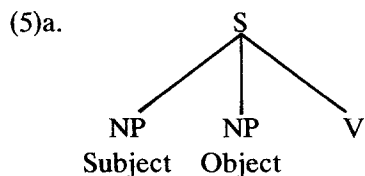
- (3) taku- (S, O)  
y z

y and z here stand for logical arguments selected by the verb. S (for Subject) and O (for Object) indicate the grammatical relations matched with each logical argument. From this point on we will give simplified lexical entries using just grammatical functions, except where the logical argument structure itself is essential to the discussion.

For a free word order language like LI we can posit the phrase structure rule in (4) which gives the possible constituents of S, without specifying their order (Gazdar and Pullum, 1981, p. 108; Falk, 1983).

- (4)  $S \rightarrow NP^*, V.$

Grammatical functions can be freely associated with the NPs made available by rule (4), generating annotated phrase structure trees like these:



Functional Structure (see in particular Kaplan and Bresnan (1982)) is the level at which subcategorization is checked.<sup>5</sup> Word order plays no role in subcategorization (Grimshaw, 1982b), so both (5a) and (5b) satisfy the subcategorization of **taku-** given in (3).

Systematic variation in local contextual properties of verbs is expressed by lexical rules, whose input and output are lexical entries. An important subclass of lexical rules alters the mapping between grammatical functions and logical arguments in lexical forms.

Example (1a) above exemplifies one grammatical context for LI transitive verbs, but they can systematically appear in a second environment, illustrated in (6).

<sup>5</sup> In cases of 'pro-drop', for example, an argument may be omitted in phrase structure, but it must be present in functional structure if subcategorization is to be satisfied. We will not analyze LI pro-drop here.

- (6) angutik anna- mik taku-juk  
*man-ABS woman-INST see- 3SG(SUBJ)*

The man sees a woman. (Smith, 1982a, p. 164)

Here the subject receives absolutive case marking, and the verb agrees only with the subject. These observations have led researchers to analyze such constructions as intransitive (see e.g., Woodbury, 1977, pp. 322–3; Sadock, 1980, pp. 305–6; Smith, 1982, p. 164; Kleinschmidt, 1851, p. 55) uses the term *halbtransitiv*). Following the traditional analyses, we hypothesize that cases like (6) are based on an intransitive lexical form as in (7). *OBL* stands for the grammatical relation *Oblique*.<sup>6</sup>

- (7) taku- (S, OBL).

The systematic mapping between the two lexical entries – the one in (3) and the one in (7) – is captured by positing a lexical rule which we will call, following other researchers (e.g., Silverstein, 1976; Postal, 1977; Woodbury, 1977; Smith, 1982a), *ANTIPASSIVE*. By *Antipassive*, the argument that is assigned direct object status in the basic lexical form is mapped onto an *Oblique* argument with instrumental case marking in the derived form. The *Antipassive* rule is given in (8).<sup>7</sup>

- (8)  $O \rightarrow OBL$   
*OBL Case* =<sub>c</sub> *instrumental*.

Some comments on (8) are in order here. (a) The constraint equation “*OBL case* =<sub>c</sub> *instrumental*” simply means that the case of the *Oblique* argument must be instrumental. (b) The rule also suffixes  $\emptyset$ , **-ji-** or **-tsi-** to

<sup>6</sup> We are using the term *Oblique* for a grammatical relation with these properties: it is distinct from Subject and Object, and it is exempt from the principle of functional uniqueness (see section 5). As a result, a single verb can be assigned more than one *OBL* argument. This is exemplified in (34) and (35) below.

<sup>7</sup> Over and above the grammatical consequences captured by (8), the *Antipassive* rule has certain semantic effects. It changes the referential properties of the *Object* argument of a transitive verb in a systematic way. According to the traditional analysis (see e.g., Sadock, 1980, p. 305), the *Object* argument of an active transitive verb form is interpreted as definite, whereas the *Oblique* argument of the corresponding antipassive verb form is interpreted as indefinite. The glosses to our examples (1a) and (6) are intended to express this contrast. Kalmar (1979) presents arguments to the effect that the relevant distinction is not one of ‘definite vs. indefinite’, but one of ‘given vs. new information’. He points out, for example, that a proper name can function as the *Oblique* argument of an antipassive verb form (Kalmar, 1979, p. 123). However, recent work on the semantics of definite and indefinite noun phrases (Heim, 1982) suggests that the two accounts are not incompatible, insofar as the proper semantic representation of definite and indefinite noun phrases involves discourse representations in which ‘givenness’ and ‘newness’ are formally expressed.

the verb as an antipassive marker, the choice being apparently idiosyncratic for LI (Smith, 1982a, p. 173) and at least partly idiosyncratic for other dialects (see for example Sadock (1980, p. 305) on Greenlandic).

Besides antipassive, LI also has a passive construction; (9) is a passive counterpart to the active sentence given in (1a).

- (9)     annak            anguti-mut   taku-jau-   juk  
           *woman-ABS man- DAT see- PASS-3SG(SUBJ)*  
           A woman is seen by the man.           (Smith, 1982a, p. 165)

Here again we see the characteristic properties of intransitive verbs: the subject noun phrase is absolutive, and the verb agrees only with the subject. The agent of the verb has dative case (in the LI dialect at least: in other Eskimo dialects, other case markings are found, see Kleinschmidt (1851, p. 84); Woodbury (1977, p. 324)).

The Passive rule can be stated as in (10), following Perlmutter and Postal (1977, pp. 406–7) and Bresnan (1982a, pp. 8–9).

- (10)    S → OBL  
           O → S  
           OBL CASE =<sub>c</sub> dative.

The constraint equation means that the case of the Oblique argument must be dative. The passive marker **-jau-/-tau-** is added to the verb as part of the Passive operation (Smith, 1982a, p. 165).<sup>8</sup>

From the transitive lexical form in (3), application of Passive yields the lexical form in (11).

- (11)    taku-jau-(OBL, S)  
           OBL CASE =<sub>c</sub> dative.

Note that, according to this analysis, both passive (e.g., (11)) and antipassive (e.g., (7)) verb forms are intransitive, which is why they display intransitive person and number agreement and trigger intransitive case-marking. The intransitivity of passives and antipassives is crucial to an understanding of their interaction with complex verb formation, which we turn to next.

<sup>8</sup> The Passive rule given in (10) is a simplified version which does not account for the fact that the agent in LI passive sentences can be omitted. It appears that Antipassive can also result in the omission of an argument (see Woodbury, 1977, p. 323). A treatment of optional agents can be found in Bresnan (1982a, pp. 8–10, 38–9). The morphological effects of passive are also more complex than we have indicated (Smith, 1982a, p. 164, n8).

## 2. COMPLEX VERB FORMATION

The example in (12) illustrates syntactic complementation in Greenlandic Eskimo.

- (12) Ipaksar- nit sukanirut-lutik  
*day before-ABS PL faster- INF: 4PL*

malug-aa  
*notice-IND: 3SG(SUBJ)/3SG(OBJ)*

He noticed that they were going faster than the day before.

(Woodbury, 1977, p. 314)

Eskimo languages also use derivational morphology in place of sentence embedding to create a complex verbal unit which behaves like the main verb of a simple sentence. This is illustrated by the examples in (13).<sup>9</sup>

- |   |  |
|---|--|
| <p>(13)a. tiki- <b>gasua-</b> juk<br/> <i>arrive-attempt-3SG(SUBJ)</i><br/>         He attempts to arrive.</p> <p>tiki- vuk<br/> <i>arrive-3SG(SUBJ)</i><br/>         He arrives.</p> | <p>c. atuatsi-<b>guma-</b>juk<br/> <i>read- want- 3SG(SUBJ)</i><br/>         He wants to read.</p> <p>atuatsi-juk<br/> <i>read- 3SG(SUBJ)</i><br/>         He reads.</p>         |
| <p>b. pi- <b>gia-</b> ttuk<br/> <i>do-begin-3SG(SUBJ)</i><br/>         He begins to do.</p> <p>pi- vuk<br/> <i>do-3SG(SUBJ)</i><br/>         He does.</p>                             | <p>d. tiki- <b>gunna-</b> tuk<br/> <i>arrive-be able-3SG(SUBJ)</i><br/>         He is able to arrive.</p> <p>tiki- vuk<br/> <i>arrive-3SG(SUBJ)</i><br/>         He arrives.</p> |

(Smith, 1978)

-**gasua-** 'attempt to', -**gia-** 'begin to', -**guma-** 'want to', and -**gunna-** 'be able to' are bound morphemes occurring only in this construction (often called "derivational postbases": see Woodbury (1981, p. 300f) on the history and use of this term in Eskimo Linguistics). It is generally agreed by

<sup>9</sup> There is some variation in the form of the final suffixes in these examples and others cited in this paper. The variation is due both to morphophonemic processes and to the encoding of further information such as the mood and tense of the verb. See Smith (1980, p. 281) for a list of the grammatical categories involved and Smith (1977) for a treatment of LI verb morphology.

Eskimo grammarians that these complex verbal forms constitute lexical units, word-like in most respects (Smith, 1982, p. 162). Sadock (1980, pp. 302–3) contains relevant discussion of Greenlandic Eskimo. He cites seven kinds of evidence for wordhood: free versus bound forms, sandhi rules, idiosyncratic phonology, order of elements, coordination, pauses and parentheticals, and error correction. The case marking and agreement patterns for these complex verbs are identical to the standard patterns exemplified earlier.<sup>10</sup>

- (14)a. angutik tiki- guma-vuk  
*man-ABS arrive-want- 3SG(SUBJ)*

The man wants to arrive.

- b. anguti-up annak  
*man- ERG woman-ABS*  
 taku-guma-vaa  
*see- want- 3SG(SUBJ)/3SG(OBJ)*

The man wants to see the woman. (Smith, 1982a, p. 168)

The complex verbs **tiki-guma-** ‘want to arrive’ and **taku-guma-** ‘want to see’ obviously allow the same grammatical arguments as their respective bases: **tiki-guma-** is intransitive while **taku-guma-** is transitive. But whereas **tiki-guma-** takes two logical arguments (a ‘wanter’ and an ‘arriver’), **tiki-** is monadic. Similarly, **taku-guma-** takes three logical arguments, although **taku-** takes just two. So we hypothesize a rule of COMPLEX VERB FORMATION which adds a semantic argument to the predicate argument structure of the base and binds the Subject argument of the base to the new argument. As a result of the binding operation, the original Subject argument cannot be grammatically expressed: we indicate this by assigning it the symbol  $\emptyset$  in the lexical form (see Bresnan, 1982, pp. 166–8; Grimshaw, 1982a, p. 106).

- (15)a. tiki- (S)  
 y

- b. tiki-guma- (S,  $\emptyset$ )  
 x y

<sup>10</sup> In (14b) we have corrected what appears to be a misprint in Smith’s (1982a) example, which contains **angutik-p** as a subject.

- (16)a. taku- (S, 0)  
           y z
- b. taku-guma- (S, Ø, 0)  
           x y z

We will refer to the rule which is responsible for this mapping as the **-guma-** rule. Our analysis posits a discrepancy between the syntactic and semantic properties of these verbs. Even though they are morphologically and semantically complex, they are syntactically simple, involving no grammatical embedding or control. In this last respect they contrast with their English counterparts (e.g., *want to see*) which do involve embedding and control. Pairs exhibiting a similar contrast can be found within English: *straighten* and *make straight* for example.<sup>11</sup>

The addition of other postbases has a more radical effect on the lexical form of the base. Examples of this class are **-kqu-** ‘order’, ‘want’, **-gi-** ‘consider’ and **-ti-** ‘cause’, which occur as illustrated in (17).

- (17)a. tiki- **kqu-** vauk  
           *arrive-order-3 SG(SUBJ)/3 SG(OBJ)*  
           He orders him to arrive.
- tiki- vuk  
           *arrive-3 SG(SUBJ)*  
           He arrives.
- b. akitu- **gi-** janga  
           *be expensive-consider-3 SG(SUBJ)/3 SG(OBJ)*  
           He found it too expensive.
- akitu- juk  
           *be expensive-3 SG(SUBJ)*  
           It is expensive.

<sup>11</sup> Productive word formation rules like the **-guma-** rule in LI, deriving grammatically simple, but semantically complex lexical items, are found in Indo-European languages as well. The so-called derivative or secondary conjugations of Sanskrit are a case in point. Desideratives, for example, are formed by reduplicating the verbal root, accenting the reduplication and suffixing **-sa** to the root: **pībāmi** ‘I drink’, desiderative **pīpāsāmi** ‘I wish to drink’; **jīvāmi** ‘I live’, **jījīvisāmi** ‘I desire to live’. Whitney (1896, §1026) remarks: “Such a conjugation is allowed to be formed from any simple root in the language, and also from any causative stem.”



- c. mikilli-            **ti-**    vauk  
*become smaller-make-3SG(SUBJ)/3SG(OBJ)*

He makes it smaller.

- mikilli-            vuk  
*become smaller-3SG(SUBJ)*

It becomes smaller.

(Smith, 1978)

As example (18) shows, case marking for these complex verbs follows the transitive pattern; note also the double agreement displayed by the verb forms of (17).

- (18) anguti-up    annak  
*man- ERG woman-ABS*  
 tiki-    kqu-    janga  
*arrive-want-3SG(SUBJ)/3SG(OBJ)*

The man wants the woman to arrive.

Like the **-guma-** rule, the **-kqu-** rule adds an argument to the predicate argument structure of the base. In this case, however, the former Subject argument is not bound to the new argument, instead it is realized as a Direct Object, as the case marking and number agreement indicate. So the argument bearing the Subject relation in the underived lexical entry bears the Object relation in the derived lexical form. Example (19) shows the effects of the rule on the base lexical form of **tiki-**.

- (19)    tiki- (S)  
           y  
  
       tiki-kqu- (S, 0)  
           x y

Thus again we are analyzing a form corresponding to an English complex sentence as grammatically simple. The argument addition involved in the **-kqu-** rule is like the argument addition involved in lexical causativization (e.g., *straight* versus *straighten*) in that it simply maps one lexical form onto another. Note that **-ti-**, the causative morpheme of LI which appears above in (17c), has exactly the same analysis as **-kqu-**.

As a first step in analyzing (13) and (17), we can formulate these rule schemas, continuing to use **-guma-** and **-kqu-** as examples.

- (20) The **-guma-** rule  
 $V(S, \dots) \rightarrow V\text{-guma-}(S, \emptyset, \dots)$   
 $y, \dots \quad \quad \quad \underline{x, y, \dots}$   
 where  $\underline{\quad}$  indicates binding.
- (21) The **-kqu-** rule  
 $V(S, \dots) \rightarrow V\text{-kqu-}(S, 0, \dots)$   
 $y, \dots \quad \quad \quad x, y, \dots$

It is obvious that a good deal of the information represented in these rules is in fact predictable. The added argument ( $x$ ) is in each case assigned the function Subject. Given this, and the functional uniqueness principle (see below), it follows that the Subject argument of the base ( $y$ ) cannot retain its relational status. We propose that in LI, and by hypothesis universally, there are two options for resolving this conflict. Option (a) is used in the **-guma-** rule, option (b) in the **-kqu-** rule.

- (a)  $y$  can be bound to  $x$ . As an automatic consequence of this binding,  $y$  can no longer be grammatically expressed and  $\emptyset$  is assigned to it. Assignment of  $\emptyset$  is thus not an independent operation but a side-effect of binding.<sup>12</sup>
- (b)  $y$  can be assigned a different grammatical function (GF) following some hierarchy of grammatical relations with Subject highest, Object next, and Indirect Object lower still. (This ranking stems from work in Relational Grammar (Perlmutter, 1983; Cole and Sadock, 1977).)

Options (a) and (b) will allow us to simplify our complex verb formation rules, as we will see below; of course, they will also disallow many logically possible complex verb formation processes, which could be expressed if the operations used in (20) and (21) were freely available for stating rules. For example, a rule which adds a Direct Object argument, while binding the Indirect Object (IO) argument to the Subject as in (22), could otherwise be formulated.

- (22)  $V(S, IO) \rightarrow V(0 S \emptyset)$   
 $y z \quad \quad \quad x, \underline{y, z}$

<sup>12</sup> This is a case of 'argument-binding' (binding of one argument to another) like lexical reflexivization (Grimshaw, 1982a, pp. 105–111). Binding by an operator, such as an existential quantifier, also results in the assignment of  $\emptyset$  to the bound argument (see Bresnan, 1982a, pp. 38–9).



word formation rules of LI and must accord with the word formation patterns of the language.<sup>15</sup>

III. Complex verb formation by the **-kqu-** rule should be possible only with intransitive verbs. Recall that the rule results in the creation of a transitive lexical form from an intransitive one. When the input to the rule is itself a transitive verb, the output will be a lexical form containing two direct objects, in violation of the functional uniqueness principle.<sup>16</sup> This is our explanation for the ungrammaticality of (26), which would be based on the ill-formed derived lexical form in (25).<sup>17</sup>

<sup>15</sup> Fortescue (1979, 1980) analyzes Greenlandic word structure. The rules in (i) are a simplified version of those given in Fortescue (1980, p. 261):

- (i)  $V \rightarrow V_b(+V_s) + \text{Infl}$   
 $V_b \rightarrow V_b(+V_e)(+V_{\text{neg}})(+V_{\text{mod}})$

$V_b$  stands for the 'verb base';  $V_s$  for 'a sentential verbal affix';  $V_{\text{mod}}$  for an affix of 'verbal modification' (p. 261).  $V_e$  is the class we are concerned with, and Fortescue includes in it morphemes of 'judging and saying', 'wishing and waiting', 'causation and request', 'striving and intending', and 'potentiality'.

<sup>16</sup> J. Sadock, A. Woodbury and an anonymous reviewer have informed us that in other Eskimo languages it is possible for **-kqu-** class morphemes to be added onto transitive verbs; (i) is an example from Greenlandic:

- (i) uvav-muk taman-na sana-rqu-vaa  
*me- AL SG this- ABS SG work-tell-IND:3SG-3SG*  
 inu- ak- a  
*man-ERG SG-POSS:3SG*  
 His man ordered me to work on this one. (Woodbury, 1977, p. 312)

Note that the resulting sentence does not contain a verb with two direct objects: instead the subject of the base is realized with allative case. This phenomenon is reminiscent of Japanese **ni** causativization (Kuno, 1973, pp. 341-5) and the French **faire** construction (Kayne, 1975, Ch. 3; Grimshaw, 1982a, pp. 120-3), and is of course perfectly consistent with the functional uniqueness principle. This construction, if found in LI, would require modification of our rule (24). L. Smith has indicated (p.c.) that at least some LI informants reject examples like (i), so we will not provide an analysis. Whatever the outcome here, the basic prediction of our analysis seems well-founded: complex verbs, like simple verbs, are governed by functional uniqueness.

<sup>17</sup> Smith also notes that (i) is ungrammatical:

- (i) \*anguti-up sugusi-up taku-kqu- vaa  
*man- ERG child- ERG see- want-3SG(SUBJ)/3SG(OBJ)*  
 annak  
*woman-ABS*  
 The man wants the child to see the woman. (Smith, 1982a, p. 174)

The illformedness of (i) follows, on our account, from a functional uniqueness violation: the lexical form for **taku-kqu-** here would have two subjects.



- (34) angutik taku-jau- kqu- ji- vuk  
*man-ABS see- PASS-want-APASS-3SG(SUBJ)*  
 anna- mik sugusim-mut.  
*woman-INST child- DAT*

The man wants the woman to be seen by the child.

(Smith, 1982a, p. 172)

- (35) angutik anna- mik taku- $\emptyset$ - kqu-  
*man-ABS woman-INST see- APASS-want-*  
 ji- juk siitsi- mik.  
*APASS-3SG(SUBJ) squirrel-INST*

The man wants the woman to see the squirrel.

(Smith, 1982a, p. 173)

- (36) angutik taku-jau- guma-juk anna- mut  
*man-ABS see- PASS-want- 3SG(SUBJ) woman-DAT*

The man wants to be seen by the woman.

(Smith, 1982a, p. 168)

In (34) the passive of **taku-** has undergone the **-kqu-** rule, in (35) the antipassive of **taku-** has undergone the same rule, and in (36) the passive of **taku-** has undergone the **-guma-** rule.<sup>18</sup> Note that because **taku-** does not take an overt marker of antipassivization (cf. (6) above), it is the instrumental case-marking on **siitsi** 'squirrel' which shows that **taku-** is in its antipassive form in (35).

V. Our analysis predicts that the **-kqu-** rule is possible with passive and antipassive verb forms. This is because the passive and antipassive rules intransitivize verbs.<sup>19</sup> While **-kqu-** complex verb formation with the active

<sup>18</sup> One reviewer has made the interesting suggestion that the lexical analysis proposed here would receive further support if derived verbs inherited idiosyncratic morphological properties (such as the choice of passive or antipassive markers) from their bases. The general question has not been investigated for LI, although we note that the **- $\emptyset$ -** and **-ji-** antipassive markers in (35) show that inheritance does not invariably occur.

<sup>19</sup> A. Woodbury has informed us that there is a transitivity morpheme in Eskimo languages (**+t(e)-** in Central Alaskan Yupik) which distinguishes basic intransitives from verbs which are intransitivized by passive or antipassive, occurring with basic intransitives only. In our analysis, this distinction cannot be made – we speculate that the reported restriction is in reality either morphological or semantic in character, having to do with permissible ordering of morphemes or with the argument structure of the base. If some account along these lines is viable, there is no motivation for a syntactic distinction between basic and derived intransitives.



VII. From our basic assumptions, then, it follows that the LI rules we are discussing should be able to reapply to their own output, provided of course that all the conditions for their application are met. This will give the appearance of 'cyclical' rule application. In (34) for example, the passive marker **-jau-** precedes **-kqu-** and the antipassive marker **-ji-** follows **-kqu-**. The verb form is derived by passivizing **taku-**, then applying Complex Verb Formation, and finally applying Antipassive to the entire verb. Similarly, example (35) shows double application of Antipassive, one preceding and one following Complex Verb Formation.

Complex Verb Formation itself can also apply several times in one word, thus we find examples like (38):

- (38)    *utit- ti- tau- kqu- vauk*  
           *return-cause-PASS-want-3SG(SUBJ)/3SG(OBJ)*  
           He wants it to be returned.                    (Smith, 1982a, p. 182)

Here **utit** 'return' has been causativized, and the result has been passivized and has undergone the **-kqu-** rule.<sup>22</sup>

In sum this proposal has desirable consequences in each of three areas. It explains why complex verbs are identical to other verbs in their grammatical behavior. It explains certain restrictions on the applicability of the rules involved as a consequence of the general principle of functional uniqueness. It makes correct predictions concerning rule interactions.

#### 4. CONCLUSION

In the preceding section we outlined some of the consequences of a lexical analysis of Eskimo complex verbs. We can contrast this picture with the predictions of a theory such as that espoused by Smith (1982a) in which complex verbs are formed by post-syntactic word formation. In a syntactic treatment, such verbs would be derived from a bisentential source by formation of a complex verb (by some kind of 'verb raising' process) with concomitant amalgamation of the two clauses.

This theory would lead us to expect clause union effects: both the

<sup>22</sup> Our analysis also predicts that the **-kqu-** rule could apply to the output of the **-guma-** rule. We have no examples of this.



derived verb form and the clause in which it appears would be grammatically special, being not simply the output of the normal word-formation and phrase structure rules of the language. The output of the Complex Verb Formation process should therefore show some evidence of a biclausal origin rather than being isomorphic to a simplex sentence. Similarly, complex verbal forms derived by verb raising should have quite different properties (both internally and externally) from other verbs of the language. For example, complex verbs might not be subject to the well-formedness conditions (e.g., functional uniqueness) which govern simple verb forms. So complex verbs might allow two objects, for example. None of the basic predictions of the syntactic theory is borne out by the evidence, as we saw in section 5. The syntactic theory is, of course, compatible with *accidental* resemblance between simplex verbs or clauses and the output of complex verb formation. However, a syntactic theory cannot explain the kind of principled resemblance that we find here, although it is of course always possible to stipulate that a clause headed by the output of Complex Verb Formation must have the properties of a simplex sentence.

The lexicalist proposal defended here supports several conclusions. Passive, Antipassive, and Complex Verb Formation are all rules of the same class, from which it follows that they can interact freely. They must be lexical rather than syntactic rules, and the operations which they perform (argument addition, argument binding, and grammatical function reassignment) must therefore themselves be lexical. Their output is subject to general principles of well-formedness of lexical entries. Given these assumptions, it is possible to give an illuminating analysis of Eskimo complex verbs which is compatible with the lexicalist hypothesis.

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