Multiple Verb Movement in \(\mp\) Hoan

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I argue that verbal compounds in \(\mp\) Hoan are derived from underlying structures similar to serial verb constructions. I show that the derivation crucially involves multiple verb movement, which is subject to the same kinds of locality constraints as other types of multiple movement. I show how the multiple verb movement analysis applies to a range of verbal compounds in \(\mp\) Hoan.

**Keywords:** syntax, serial verb constructions, verbal compounds, Minimal Link Condition, verb movement, Ewe, \(\mp\) Hoan

In this article I will give an analysis of verbal compounds in \(\mp\) Hoan, illustrated in the following example:

(1) Ma a- q\|hu |'o djo ki kx'u na. \hfill (\(\mp\) Hoan)
    
1SG PROG pour put.in water PART pot in
'I am pouring water into the pot.'

The order of the verbs in a verbal compound cannot be reversed.

(2) *Ma a- |'o q\|hu djo ki kx'u na. \hfill (\(\mp\) Hoan)
    
1SG PROG put.in pour water PART pot in

I argue that the construction in (1) involves verb movement, so that the structure \([\text{IP} \ldots V_1 V_2 \text{NP} \ldots]\) is derived from an underlying structure such as \([\text{IP} \ldots V_1 \text{NP} V_2 \ldots]\) by movement that adjoins both \(V_1\) and \(V_2\) to the light verb \(v\) (see Chomsky 1995, Collins 1997b). Evidence for the verb movement analysis is provided by the parallelism that is found between serial verb constructions and verbal compounds.\(^1\) The analysis accounts for the fact that the order of the verbs cannot be reversed.

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The research on \(\mp\) Hoan reported here was done in Botswana during the academic year 1996–1997 (CIES Fulbright Scholar Program) and during July and August of 1999 (National Science Foundation grant SBR-9808256). I would like to thank my main informants Titi Matshabanega, Leha Rasello, and Bistol for their help in that project.

\(^1\) See also Nishiyama 1998, Cummings 2001, and Gruber and Collins 1997:149, where verbal compounds are derived from underlying structures similar to serial verb constructions (on the basis of widely differing sets of assumptions).
The multiple verb movement analysis has numerous theoretical implications, which I will explore here. First, it has direct implications for the form of the serialization parameter. Second, it has implications for the locality conditions found on verb movement. In particular, I show that in multiple verb movement each instance of verb movement undergoes Local Move (see Chomsky 2000) and that the trace of verb movement is invisible for the Minimal Link Condition.

This article is structured as follows. In section 1 I define verbal compounds in Hoan. In section 2 I illustrate, on a descriptive level, the parallelism between verbal compounds and serial verb constructions. In section 3 I outline the theoretical assumptions about clause structure, serial verb constructions, and movement needed for my analysis. In section 4 I analyze verbal compounds as involving multiple verb movement. In sections 5–8 I discuss several classes of verbal compounds, showing how they fit into the analysis in section 4. In section 9 I briefly discuss a remnant movement alternative to the multiple verb movement analysis. Section 10 is the conclusion.

Most of the data in this article come from Hoan, although I draw numerous comparisons to Ju'hoan.

1 Diagnosing Verbal Compounds

Verbal compounds in Hoan are characterized by the following generalization due to Gruber (1975b:2) (see also Traill 1994:32 on !Xôô):

(3) In verbal compounds involving \( V_1 \) and \( V_2 \), \( V_1 \) and \( V_2 \) are adjacent and share one tense/aspect/voice marker.

This generalization is illustrated in the following Hoan examples:

(4) a. Ma a- q\|hu \( \) q\’o djo ki kx’u na.  
1SG PROG pour put.in water PART pot in  
’I am pouring water into the pot.’

b. *Ma a- q\|hu djo \( \) q\’o ki kx’u na.  
1SG PROG pour water put.in PART pot in

c. *Ma a- q\|hu a- q\’o djo ki kx’u na.  
1SG PROG pour PROG put.in water PART pot in

(5) a. Ma qhaen-sa a- q\|hu q\’o djo ki kx’u na.  
1SG good-ADV PROG pour put.in water PART pot in  
’I am pouring water into the pot well.’

b. *Ma a- q\|hu qhaen-sa q\’o djo ki kx’u na.  
1SG PROG pour good-ADV put.in water PART pot in

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2 Hoan is a moribund Khoisan language spoken in Botswana. Ju’hoan is a Khoisan language spoken in Namibia and Botswana. For other examples of sentences containing verbal compounds, see Gruber 1975a.
(6) a. Ma \ho’an a- q||hu l’o djo ki kx’u na.
   1SG NEG PROG pour put.in water PART pot in
   ‘I am not pouring water into the pot.’

   b. *Ma a- q||hu \ho’an l’o djo ki kx’u na.
   1SG PROG pour not put.in water PART pot in

(7) Djo a- ki- q||hu l’o ki kx’u na.
   water PROG PASS pour put.in PART pot in
   ‘Water is being poured into the pot.’

Sentence (4b) shows that the direct object cannot intervene between the two verbs of a verbal compound. Neither can a progressive marker (4c), an adverb (5b), or negation (6b). Sentence (7) shows that if the verbal compound is passivized, the passive prefix appears only once, before V1.

Similar facts can be demonstrated for Ju\’hoan as well.

(8) a. (Ju\’hoan) Mi m ku tcaq l’u -a g!u ko kom n!ang.
   1SG EMPH PROG pour put.in TRANS water PART cup in
   ‘I am pouring the water into the cup.’

   b. *Mi m ku tcaq ku l’u -a g!u ko kom n!ang.
   1SG EMPH PROG pour PROG put.in TRANS water PART cup in

2 Verbal Compounds and Serial Verb Constructions

In Collins 1993, 1997a:462, I define serial verb constructions (SVCs) as follows:

   (9) A serial verb construction is a succession of verbs and their complements (if any) with one subject and one tense value that are not separated by any overt marker of coordination or subordination.

   This definition covers verbal compounds as well. The main difference between verbal compounds and SVCs is word order. In verbal compounds the verbs are adjacent and precede their complements (in an SVO language). In SVCs the verbs are not necessarily adjacent. Examples of SVCs (mostly from Ewe) and verbal compounds (from \’Hoan) are given in (10)–(15).

(10) a. Ma a- q||hu l’o djo ki kx’u na.  \(\text{(+Hoan)}\)
   1SG PROG pour put.in water PART pot in
   ‘I am pouring water into the pot.’

   b. A kandi di wata but a di bata.  \(\text{(Saramaccan)}\)
   3SG tilt DET water put LOC DET bottle
   ‘He poured the water into the bottle.’ \(\text{(Veenstra 1996:94)}\)

   c. Me le tsi fo ële kopô me.  \(\text{(Ewe)}\)
   1SG PROG water pour LOC cup in
   ‘I am pouring water into the cup.’
(11) a. Ma tca ʼiae kankan ya. (Hoan)
1SG FUT grab raise it
‘I will lift it up.’ (see section 7)

b. M-a kɔ-i yi dzi. (Ewe)
1SG-FUT take-3SG go up
‘I will lift it up.’

(12) a. Ma ||oe na  ka ||hoam-||hoam tca. (Hoan)
1SG still AUX SUB jog come
‘while I was still coming jogging’ (see section 5)

b. Kofi zo va gbɔ nye. (Ewe)
Kofi walk come near me
‘Kofi walked to me.’

(13) a. Ma qo ki- tsaxo ’am |a’|e. (Hoan)
1SG FUT ki[PL] cook eat meat
‘I will cook and eat meat (repeatedly).’ (see section 6)

b. Wo ɗa fufu ɗu. (Ewe)
they cook fufu eat
‘They cooked fufu and ate it.’ (Collins 1997a)

(14) a. Ya i tc’eon |o’a tsi. (Hoan)
3SG PAST make absent 3PL
‘He finished making them.’ (see section 7.1)

b. Ama ɗu nu νɔ. (Ewe)
Ama eat thing finish
‘Ama has finished eating.’ (Ameka 1988)

(15) a. Gya’|m-|a’a a- tsaxo cu ’am gye ki |a’|e. (Hoan)
child-DIM.PL PROG cook give 1SG mother PART meat
‘The children are cooking meat for my mother.’ (see section 8)

b. Devi-wo ɗa nu ne Kofi. (Ewe)
child-PL cook thing for Kofi
‘The children cooked something for Kofi.’

The above examples require some comment. In (10)–(12) the second verb describes a direction. There is no SVC in Ewe that corresponds directly to the verbal compound in (10a), since Ewe uses a locative preposition in this case (10c). However, Saramaccan (10b) provides a good example of a matching SVC.

In (10a) and (11a) \( V_1 \) and \( V_2 \) in the verbal compound are transitive. In (12a–b) \( V_1 \) and \( V_2 \) are intransitive. As I will show in section 7, there is a restriction on the transitivity of \( V_2 \) in a verbal compound in Hoan.

In (13a) the event described by \( V_2 \) follows the event described by \( V_1 \). I will call combinations such as that found in (13a) consecutive verbal compounds. In this I will follow Baker and Stewart.
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(1999a, 2001), who call SVCs such as (13b) *consecutive SVCs*. The consecutive verbal compound necessarily involves the morpheme \( ki'_{[PL]} \), which I discuss in section 6.

In (14a) the verb \( jo'a \) ‘absent’ is being used to show that the event of making is completed. Similarly, in Ewe the verb \( v \) ‘finish’ is being used to show that the event of eating is completed (see Ameka 1988 for a detailed semantic analysis). I will return to examples such as (14a) at the end of section 7.

In (15a) \( V_2 \) is \( cu \) ‘give’. This type of verbal compound is used to indicate the benefactive argument. In Ewe the benefactive preposition \( ne \) ‘for’ shown in (15b) is phonologically similar to the verb \( na \) ‘give’. Jansen, Koopman, and Muysken (1978) show that in Sranan the benefactive preposition \( gi \) ‘for’ is homophonous with the verb \( gi \) ‘give’ and has some verbal properties (the ability to be clefted in a predicate cleft construction). I will return to the analysis of benefactive sentences like (15a) in section 8.

The general parallelism between verbal compounds and SVCs is unmistakable. First, the same range of meanings is expressed by both constructions (directional, consecutive, benefactive). Second, in most cases the same verbs that are used in a verbal compound can also be used to form an SVC (e.g., ‘cook’, ‘eat’). This parallelism strongly suggests that verbal compounds should be derived by verb movement from underlying structures that are similar to SVCs.

However, it is difficult to reconcile a verb movement analysis of verbal compounds with the following generalization:

(16) The order of verbs in a verbal compound is the same as the order of the verbs in a corresponding serial verb construction.

The generalization in (16) involves comparing languages with verbal compounds (such as \( + \) Hoan or Ju’hoan) to languages with SVCs (such as Ewe or Yoruba). A survey of the literature on verbal compounds reveals that (16) holds quite generally. Languages that conform to this generalization include \( + \) Hoan, Ju’hoan (Sebba 1995, Dickens 1992), Igbo (Déchaine 1993:242), Nama (Hagman 1977:69–70), !Xóõ (Traill 1994:31), Japanese (Kageyama 1989), Chinese (Nishiyama 1998), and Bangla (Dasgupta 1977). As far as I know, there are no exceptions to (16).³

To see why a verb movement analysis of verbal compounds is difficult to reconcile with (16), consider the following derivation. Suppose that in forming a verbal compound, the second verb \( V_2 \) adjoins to the first verb \( V_1 \). There are two possibilities for the order of adjunction. Either \( V_2 \) adjoins to \( V_1 \) to the left (17b) or it adjoins to \( V_1 \) to the right (17c).

(17) a. \( V_1 \quad V_2 \)
   b. \( V_2-V_1 \quad t_{v_2} \) (left adjunction)
   c. \( V_1-V_2 \quad t_{v_2} \) (right adjunction)

If the derivation in (17b) were possible, there should exist some language in which the order of

³ Bošković (1999) gives a multiple verb movement analysis of verb raising in Dutch and of double participle constructions in Serbo-Croatian. Neither language seems to conform to a principle similar to (16).
the verbs in a verbal compound is the opposite of that found in SVCs (10)–(15), contra (16). As far as I know, no such language exists.

The absence of the derivation in (17b) is even more surprising in Kayne’s (1994:38) antisymmetry theory. One consequence of Kayne’s theory is the following:

(18) Let X and Y be heads; if X adjoins to Y, then X precedes Y.

On Kayne’s theory, only derivation (17b) should be allowed. Baker and Stewart (1999b) also note this ordering problem (the absence of V₂-V₁ combinations) (see also Nishiyama 1998:214, fn. 29). They propose that (17b) can be ruled out by iconicity. In this article I will explore a very different analysis of the ordering of verbs in a verbal compound, which is consistent with (18). I will argue that V₁ and V₂ adjoin to the light verb v (of Chomsky 1995, Collins 1997b). I will argue that the order in which the verbs adjoin to v is determined by general locality conditions on movement. This is the analysis presented in section 4.

3 Preliminary Assumptions

In this section I will outline the syntactic assumptions of my analysis of multiple verb movement: namely, my assumptions about clause structure (section 3.1), SVCs (section 3.2), and the locality conditions on movement (section 3.3).

3.1 Assumptions about Clause Structure

In this article I adopt the assumptions about clause structure found in Chomsky 1995, and Collins 1997b, 2001b. In particular, I assume that the external argument is introduced by the light verb v (following Chomsky’s (1995) notation). Consider the following example from Hoan, with the structure shown in (20).

(19) Koloi g|on-a ʻamkoe ki gyeo na. (Hoan)
car hit-PERF person PART road in
‘A car hit a person in the road.’

Important evidence for verb movement in (20) comes from languages where verb movement to v does not occur, yielding the word order SOV XP (see Koizumi 1995:51). I assume that verb movement to v in (20) has two components. First, v subcategorizes for VP, which we can write as Subcat(v, V). Second, v is morphologically an affix, which needs to attach to a verb. The affixal property of v is satisfied when V moves and adjoins to v.

In (19) the morpheme ki that I gloss as ‘PART’ (particle) appears between postverbal constituents. I assume that this ki heads a functional projection FP, whose comparative syntax is discussed at length in Collins 2001b. I assume the verb raises over F and adjoins to the higher light verb v. There is no violation of the Minimal Link Condition (MLC) here, since F has no verbal feature

4 Note that Subcat(v, V) holds, even though ki intervenes between v and V. It is unclear whether this is a case of long-distance subcategorization, or a subcategorization relation formed by combining Subcat(v, ki) and Subcat(ki, V). See Collins 2001a for a general discussion of Subcat.
(20) \[ \begin{array}{c}
\text{vP} \\
\text{DP} \quad \text{v}' \\
\text{v} \quad \text{FP} \\
\text{‘hit’} \quad \text{v} \quad \text{DP}_i \quad \text{F'} \\
\text{‘person’} \quad \text{F} \quad \text{VP} \\
\text{ki} \quad \text{DP} \quad \text{V'} \\
\text{t}_i \quad \text{V} \quad \text{PP} \\
\text{t}_V \quad \text{‘road’} \quad \text{‘in’}
\end{array} \]

(see Chomsky 1995:307). In the remainder of this article I will often leave out the representation of FP, since it is not relevant for the issues discussed.

Furthermore, I assume that both transitive verbs (such as ‘pour’, ‘hit’) and unaccusative verbs (such as ‘go’, ‘leave’) head VPs that are dominated by vP (see Collins 1997b for supporting evidence). This implies that there are two types of light verb v: a transitive v (which introduces an external argument and assigns accusative Case) and an unaccusative v (which does not introduce an external argument and assigns no accusative Case).

3.2 Assumptions about Serial Verb Constructions

I adopt the analysis of SVCs developed in Collins 1993, 1997a. I make some modifications in light of work on SVCs by Baker and Stewart (1999a, 2001). Consider the following SVC:

(21) (Ewe) Me nya devi-e dzo.
1SG chase child-DEF leave
‘I chased the child away.’

In Collins 1993, 1997a, I argue that \( V_2 \) dzo ‘leave’ heads a VP that is the complement of \( V_1 \) nya ‘chase’ (see also Larson 1991 and Jansen, Koopman, and Muysken 1978:155). This structure is given in (22).
In this structure $V_2$ heads a VP that is the complement of $V_1$. The direct object of $V_1$ controls PRO. This control relation captures the phenomenon of argument sharing that is often discussed in the SVC literature (Baker 1989). Whether the controlled empty category is pro or PRO is unclear. If we assume, following Chomsky and Lasnik (1993), that PRO needs to be assigned null Case by an infinitival I, then the empty category would have to be pro instead of PRO in (22). Alternatively, it is possible that there is a functional projection sandwiched between $V_1$ and $V_2$ that could assign null Case to PRO. I leave this issue to further research.

In Collins 1997a I propose the following parameter for SVCs:

(23) Serialization parameter (Collins 1997a)
I (tense) can license multiple Vs.

This parameter accounts for widespread differences between Ewe and English. For example, in contrast to (21), sentences such as $I$ chased Kofi leave are impossible in English. Similarly, direct translations of the Ewe sentences in (b) of (11)–(14) are unacceptable in English.

In Collins 1997a I furthermore suggest that this parameter is one of a family of parameters that allow multiple licensing by a single head. Other parameters in this family yield languages with multiple nominative (Ura 2000), multiple accusative, multiple genitive, and multiple wh-questions (Bošković 1999).^6

^5 Carstens (2001) provides interesting evidence that there are vP projections sandwiched between $V_1$ and $V_2$.
^6 The parallelism between multiple nominative and SVCs is explored more systematically in Collins 1995.
Here I will assume a modified version of (23), given in (24) (see Baker and Stewart 1999a, 2001, and Veenstra 1996 for alternatives). I will refer to v as [+ multiple] if (24) holds.

(24) Serialization parameter

The light verb v can license multiple Vs.

English, French, and Swahili (and all Bantu languages) have a negative setting for (24). Ewe, Yoruba, Chinese, and Hoan all have a positive setting for (24). I am leaving the exact interpretation of the term license in (24) underspecified. For example, it could be that there is an actual feature-checking relation between v and V (I explore a similar idea in Collins 1995). Alternatively, it could be that v subcategorizes for a V (and that this subcategorization relation is enough to license V).7

Furthermore, I assume that in Hoan all Vs have the property that they must adjoin to v (no V can be left in situ). This last assumption is what distinguishes languages with verbal compounds from languages with SVCs (where some Vs can be left in situ).

The difference between English (with multiple wh-questions, where only one wh-phrase moves to [Spec, C]) and Bulgarian (with multiple wh-movement) is similar to the difference between Ewe (with SVCs, where only V1 moves to v) and Hoan (with verbal compounds). In Hoan all verbs undergo movement to v, just as in Bulgarian all wh-phrases undergo movement to the specifiers of C. In the next section I give my assumptions about multiple wh-movement in Bulgarian.

3.3 Assumptions about Locality Conditions on Movement

Rudin (1988:472) notes the following data from Bulgarian:

(25) a. Koj kogo vizda?
   who whom sees
   ‘Who sees whom?’

b. *Kogo koj vizda?
   whom who sees

The generalization is that the order of multiple fronted wh-words preserves the base c-command relations. Since the subject c-commands the object, the subject wh-word kof ‘who’ must precede the object wh-word kogo ‘whom’. Rudin proposes that this fact can be analyzed in terms of superiority.8

7 Chomsky (2001:10) assumes that v takes a nonverbal root as a complement. If so, then license in (24) cannot be interpreted either as feature checking or as subcategorization between v and V.

8 Bošković (1999:165) shows that the facts for Bulgarian are actually more complicated. Apparently, the highest wh-phrase moves first, but then the order of movement of the remaining wh-phrases does not matter. See also Grewendorf 2001:97, fn. 19. Since I have little evidence on verbal compounds involving three verbs, I will leave the issue for further research.
Richards (1997:chap. 3) shows that this generalization seems to hold of other types of movement as well, including scrambling and cliticization. I follow Richards (1997:114) in assuming that two locality conditions are relevant. The first is the Minimal Link Condition (MLC; see Chomsky 1995:296), given in (26). The second is Local Move (which is taken from the discussion in Chomsky 2000:136–137).

(26) **Minimal Link Condition**
\[ \alpha \text{ can raise to target } K \text{ only if there is no legitimate operation Move } \beta \text{ targeting } K, \text{ where } \beta \text{ is closer to } K. \]

(27) **Local Move**
Let X have a selectional feature F, and let Y satisfy F. Then Y must move to the closest possible position to X.

Now consider how these two locality conditions derive the order of *wh*-words in Bulgarian. Suppose that the underlying structure is as in (28a) (with *koj* ‘who’ c-commanding *kogo* ‘whom’ in the IP).

(28) a. \([CP C IP]\) (underlying structure)

    b. \([CP \ ‘who’ [C’ C IP]]\) (Minimal Link Condition)

    c. \([CP \ ‘who’ [C’ \ ‘whom’ [C’ C IP]]]\) (Local Move)

In step (28b) the MLC forces the subject *wh*-phrase to move to [Spec, CP] first, since it is closer to C than the object *wh*-phrase. In step (28c) Local Move forces ‘tucking in’ (Richards 1997), where the object *wh*-phrase moves to an inner specifier that is closer to C than the subject *wh*-phrase.

For any head X, I assume that the inner specifier of X is closer to X than the outer specifiers. Similarly, I assume that an element directly adjoined to X is closer to X than either specifier (inner or outer). Only elements undergoing head movement can be directly adjoined to X.

Note that the movement of the object *wh*-phrase in (28c) must skip the trace of the subject *wh*-phrase (in [Spec, IP]). Therefore, we have the following implication (see Chomsky 1995: 304):

(29) Traces are invisible (for the MLC).

As we will see in discussing multiple verb movement, these assumptions carry through with no further stipulations.

4 A Multiple Verb Movement Analysis of Verbal Compounds

Consider again the following sentence:

(30) Ma a- q||hu |’o djo ki kx’u na. (†Hoan)
    1SG PROG pour put.in water PART pot in
    ‘I am pouring water into the pot.’
As remarked earlier, one fact that needs to be explained is why the order of the verbs cannot be reversed.

(31) *Ma a- |'o q||hu djo ki kx’u na.  (Hoan)
    1SG PROG put.in pour water PART pot in

Putting together the analysis of SVCs in section 3.2 and the analysis of clause structure in section 3.1, we have the underlying structure (32) for (30).

I am assuming that v is [+multiple] and that all verbs must raise overtly and adjoin to v in Hoan. The question now arises, which verb—V₁ or V₂—raises to v first? Since V₁ is closer to v than V₂, the MLC (repeated here) dictates that V₁ (q||hu ‘pour’) raises and adjoins to v before V₂.

(33) Minimal Link Condition
    α can raise to target K only if there is no legitimate operation Move β targeting K, where β is closer to K.

In the examples at hand, K is v and α is V₁. The movement of V₁ is shown in (34).

The next step is for V₂ (‘o ‘put’) to raise and adjoin to v. I am assuming that the trace of V₁ does not block movement of V₂ (see (29) for an analogous assumption about wh-movement). There are two possibilities when V₂ adjoins to v; these are shown in (35).
The structure in (35a) represents the unacceptable word order in (31). The structure in (35b) represents the acceptable word order in (30). Local Move (27) entails that $V_2$ must adjoin to a position as close as possible to $v$. I claim that $V_2$ is closer to $v$ in (35b) than it is in (35a). In order to obtain this result, I define closeness in the following way: let $v$ be a light verb (a lexical item). Let $v^*$ be an adjunction structure formed by adjoining a head ($V_1$ or $V_2$) to $v$ (or to a previously formed $v^*$). Given this notion, (35a) will be represented as follows: $[[v^* V_2 [v^* V_1 v]]$].

Now I define the distance between a verb $V$ and $v$ as the number of $v^*$ segments intervening between $V$ and $v$. In (35a) the distance between $V_2$ and $v$ is one. In (35b) the distance between $V_2$ and $v$ is zero (since $V_2$ and $v$ are sisters). Therefore, when $V_2$ undergoes movement, the structure in (35b) is formed, illustrated in (36) (I henceforth leave out the $v^*$ notion for simplicity).

The multiple verb movement analysis also explains the generalization noted in (3). Since all the verbs are adjoined to $v$, it is unsurprising that they are adjacent and share one tense/aspect/voice marker.

The above explanation relies crucially on there being no adjunction of one verb to another. If such adjunction were allowed, we would expect the derivation shown in (37) (yielding the unacceptable word order in (31)).
I assume that (37b) is ruled out because movement in general takes place to a functional projection (e.g., to a specifier position). In particular, head movement generally adjoins a head (lexical or functional) to a functional head.

In conclusion, the following generalizations about verb movement are needed to derive the correct word order:

(38) a. Verbs always adjoin to the left.
    b. A verb cannot adjoin to another verb. Rather, a verb must adjoin to a functional head (such as v, T, or C).
    c. The trace of a verb does not block verb movement.
    d. A verb always adjoins as close as possible to v (Local Move).

There is one important difference between multiple verb movement (36) and multiple wh-movement (28). Whereas multiple verb movement involves multiple adjunction, multiple wh-
movement involves multiple specifiers. I attribute this to the fundamental difference between head movement (adjunction) and XP-movement (adjunction or substitution).

In sections 5–8 I will show how the multiple verb movement analysis applies in a number of specific cases of verbal compounds in Hoan.

5 V₁ Is Intransitive

Consider the following examples involving two intransitive verbs. In many of these examples V₁ specifies an activity or a manner of motion and V₂ specifies a direction.

(39) Ma ||oe na ka ||hoam-||hoam tca
    1SG still AUX SUB jog come
    ‘while I was still coming jogging’

(40) Oba ku n||om-n||om tsi.
    Oba AUX jog come
    ‘Oba is coming jogging.’

(41) ||a’a-si a- ||obo kyu.
    thing-DIM PROG jump rise
    ‘The thing is jumping up (as if by magic).’

(42) Mi m khu tsau.
    1SG EMPH jump rise
    ‘I jumped up.’

(43) Gya’msi a- ||obo ||’o ki lori na.
    child PROG jump exit PART car in
    ‘The child is jumping from the car.’

(44) Ma qo ki’nlo khoa ki Molepolole.
    1SG FUTr run.SG arrive PART Molepolole
    ‘I will run to Molepolole.’

I assume that V₂ heads a VP that is the complement of V₁. The underlying structure of (39) is given in (45).

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9 The word for ‘exit’ is ki≠’o. The ki deletes internal to the verbal compound, suggesting that some sort of morphological unit is formed. See Gruber 1975b for details.
The derivation of the example in (39) proceeds as follows:

(46) a. v 'jog' 'come' (underlying structure)
b. 'jog'-v t 'jog' 'come' (V₁ moves by the MLC)
c. 'jog'-'come'-v t 'jog' t 'come' (Local Move)

It is also possible for the intransitive verb to be followed by a transitive verb. In (47) and (48) V₁ describes a manner of motion and V₂ describes a direction.

(47) ‡ i-si a- kala ka | on ci q||'am.
    bird-DIM PROG fly go.to tree POSS top
    ‘The bird is flying to the top of the tree.’ (see Gruber 1975b:1)

(48) Tze-ma ku joaqin '!an-a iahn ||'hansi.
    bird-DIM PROG fly go.up.to-TRANS tree top
    ‘The bird is flying to the top of the tree.’

While it is possible for an intransitive V₁ to combine with an intransitive/transitive V₂, there are severe constraints on which combinations of verbs are permitted. For example, the following are unacceptable:

(49) *Ma a- ki'n!o kisile n!ui.
    1SG PROG run.SG imitate ostrich
    ‘I am running imitating an ostrich.’

¹⁰ Note that in Ju’hoan the two verbs in the compound precede the transitivity suffix -a, which occupies the light verb v (see Collins 2001b).
(50) *Ma a-n|obo ‘am |a’t’e. (Hoan)
    1SG PROG speak eat meat
    ‘I am eating meat while speaking.’

(51) *Ya a- |i n|obo. (Hoan)
    3SG PROG cry speak
    ‘He is crying and speaking.’

Evidently, the semantic relation of simultaneity that would be involved in these examples is not enough to license them. In the structural theory that I am developing V₂ would not be able to appear as the complement of V₁ in these verbal compounds. I will return to the issue of the semantic relationship between V₁ and V₂ in section 10.

6 V₁ Is Transitive and V₂ Is Transitive

The next group of examples includes those verbal compounds where both V₁ and V₂ are transitive. There are two possible combinations of a transitive verb followed by a transitive verb. In the first type of example V₁ specifies an activity or manner of motion and V₂ specifies a direction. This is the type of example that was discussed extensively in section 4 (see (30)), so I will simply illustrate it here.

(52) Ma a- q||hu |o djo ki kx’u na. (Hoan)
    1SG PROG pour put.in water PART pot in
    ‘I am pouring water into the pot.’

(53) Mi m tcaq |u-a g!u ko kom n!ang. (Ju’hano)
    1SG EMPH pour put.in-TRANS water PART cup in
    ‘I poured water into the cup.’

(54) Titi a- ||hai khy’a lefeelo ki Jefo. (Hoan)
    Titi PROG pull bring broom PART Jeff
    ‘Titi is pulling the broom to Jeff.’

(55) Ma a- ||hai !xao g!ai ki tcena na. (Hoan)
    1SG PROG pull remove snake PART hole in
    ‘I am pulling the snake from the hole.’

I assume that the following examples (where V₂ specifies a result, instead of a direction) can be given a similar analysis:

(56) Ma i q|aen ⊙oa tsi. (Hoan)
    1SG PROG beat kill.PL 3PL
    ‘I beat them dead.’

(57) Ma n+ a’am k’oa n!ui kho’en. (Hoan)
    1SG hit break ostrich egg
    ‘I smashed the ostrich egg.’
I assume that the following examples can be analyzed in the same way as (52)–(57), even though V₂ does not specify a direction or a result:

(58) Ma a-kigyeo kini Jefo. (Hoan)
1SG PROG call look.for Jeff
‘I am calling Jeff, looking for him.’

(59) Mi m koh ku !ao kxoa Oba. (Ju’hoan)
1SG EMPH PAST PROG call look.for Oba
‘I was calling Oba, looking for him.’

In the second type of verbal compound involving the combination of two transitive verbs, exemplified in (60) and (61), the event described by V₁ precedes the event described by V₂. I will call this type the consecutive verbal compound.

(60) a. Ma qo kı’- tsaxo ’am ||a’’e. (Hoan)
1SG FUT kı[PL] cook eat meat
‘I will cook and eat meat (repeatedly).’
b. *Ma qo tsaxo ’am ||a’’e.
1SG FUT cook eat meat
c. *Ma qo kı’- ’am ||a’’e.
1SG FUT kı[PL] eat meat
d. *Ma qo kı’- tsaxo ||a’’e.
1SG FUT kı[PL] cook meat

(61) Mi m a n|oa ’m !ha. (Ju’hoan)
1SG EMPH FUT cook eat meat
‘I will cook and eat meat (repeatedly).’

In the Hoan example in (60a), the transitive verb tsaxo ‘cook’ is followed by the transitive verb ’am ‘eat’. The sense of the example is that the cooking and the eating will happen repeatedly (cooking, then eating, then cooking, etc.). The Ju’hoan example in (61) also has the repetitive reading. This repetition is made very clear in the Hoan example, where the morpheme kı-[PL] (henceforth, kı[PL]) must appear preceding the verbal compound (see (60b)). Note that the examples in (60c–d) show that kı[PL] cannot normally precede a verb in isolation. Rather, the verb must bear some type of plural suffix (as described in Collins 1998).

In Collins 1998 I analyze the morpheme kı[PL] as an agreement morpheme, agreeing with a following pluralactional morpheme. Further examples of kı[PL] (not involving multiple verb movement) are given in (62) and (63).

(62) a. Jefo kı- q||’ao-tcu -a ‡’amkoe. (Hoan)
Jeff kı[PL] stab-REP PERF person
‘Jeff stabbed the person repeatedly.’
b. *Jefo kı- q||’ao -a ‡’amkoe.
Jeff kı[PL] stab PERF person
In examples (62a) and (63a) ki[PL] agrees with the pluractional morpheme -tcu that appears as a suffix on the verb. When the pluractional morpheme -tcu is absent, as in (62b) and (63b), ki[PL] is no longer possible.

Another example of a consecutive verbal compound is given in (64) (from the oral text ha ci njobo ‘hunting story’). Note that the repetitive character of the verbal compound is highlighted by the fact that it is uttered twice.

(64) Ma a- kí tcxa ‘am a- kí tcxa ‘am. (Hoan)
1SG PROG ki[PL] cut PROG ki[PL] cut
eat
‘I cut it up and eat it, cut it up and eat it.’

It is also possible to find consecutive verbal compounds involving intransitive verbs.

(65) a. Ya a- kí tsa e. (Hoan)
3SG PROG ki[PL] sleep wake.up
‘He is nodding off and waking up alternately.’

b. Ya a- (ki-) tsa.
3SG PROG ki[PL] sleep
‘He is sleeping.’

c. Ya a- (ki-) e.
3SG PROG ki[PL] wake.up
‘He is waking up.’

The fact that ki[PL] is obligatory in the consecutive verbal compound suggests that there is an added layer of structure, perhaps an AspP dominating vP, as shown in (66).

(66)
```
AgrP
  Agr
  ki[PL]
  Asp
  vP
```

In this structure Asp plays the role of the pluractional morpheme -tcu in (62a) and (63a). The presence of Asp explains the fact that consecutive verbal compounds have an obligatory repetitive reading. The agreement morpheme ki[PL] in verbal compounds like (60a) agrees with Asp (just as ki[PL] agrees with -tcu in (62a)). How can we explain the fact that this structure including Asp is necessary?
In order to explain the presence of Agr/Asp in (66), I first suggest that consecutive verbal compounds such as (60a) be derived from a structure similar to a consecutive SVC, illustrated in (67) (repeated from (13b)).

(67) a. wo ɗa fufu ɗu.
    they cook fufu eat
    ‘They cooked fufu and ate it.’ (Collins 1997a)
b. wo ɗa fufu, ɗu pro
    they cook fufu eat it

Note that in a consecutive SVC the object of V2 (here, ɗu ‘eat’) is understood to be the direct object of V1 (here, ɗa ‘cook’). This is referred to as direct object sharing. As in Collins 1993, 1997a, I analyze direct object sharing in terms of an empty category, pro.\(^{11}\)

One piece of evidence that consecutive verbal compounds are derived from a source similar to consecutive SVCs is that direct object sharing in SVCs and direct object sharing in verbal compounds seem to be subject to similar constraints. For example, it is impossible for the two verbs in an SVC or a compound to each have a different direct object (see Baker 1989, Collins 1997a, Baker and Stewart 1999a, 2001, for SVCs). This constraint is illustrated in (68) for SVCs.

(68) a. *M-a ɗu nu no tsi.
    1SG-FUT eat thing drink water
    ‘I will eat something and drink water.’
b. M-a ɗu nu a no tsi.
    1SG-FUT eat thing FUT drink water
    ‘I will eat something and drink water.’

Example (68a) is unacceptable because two transitive verbs have been combined in an SVC without direct object sharing. Example (68b) is not an SVC (as indicated by the repetition of the future marker), so there is no constraint enforcing direct object sharing.

Consecutive verbal compounds are also subject to a constraint on direct object sharing. As (69) shows, for example, in (1) it is impossible for a pronoun to follow the verbal compound that is coreferential with the object of V1.

(69) \(\text{(Hoan)}\) Ma a- q\|hu l’o djo, ki ya, ki kx’u na.
    1SG PROG pour put in water Part 3SG Part pot in
    ‘I am pouring water into the pot.’

Furthermore, if two verbs with two different objects are combined, no verbal compound is possible.

(70) a. Ma a- am ||a’e a- tcu djo.
    1SG PROG eat meat PROG drink water
    ‘I am eating meat and drinking water.’

\(^{11}\) The analysis of direct object sharing given in Collins 1997a in terms of predication does not work with the structure in (72). I do not have a satisfactory alternative at the moment.
b. *Ma a- kı́- ’am tcu ||a’'e ki djo.
   1SG PROG kı[PL] eat  drink meat PART water
   ‘I am eating meat and drinking water (repeatedly).’

Unlike in Ewe and many other languages with SVCs, in Hoan instrumental verbal compounds involving !u ‘take’ are impossible (see also Nishiyama 1998:211, fn. 1). This may also be accounted for by the constraint on direct object sharing.

(71) a. Ma a- !u g||ama a- tcxa ||a’'e.  
       1SG PROG take knife  PROG cut meat
       ‘I am taking the knife and cutting the meat.’

b. *Ma a- (kı́-) !u tcxa ||a’'e ki g||ama.  
   1SG PROG kı[PL] take cut meat PART knife

Following Baker and Stewart (1999a, 2001), Cummings (2001), and Déchaine (1993), I suggest that the structure of consecutive SVCs is different in general from that of other types of SVCs (e.g., directional, resultative, or benefactive). In directional SVCs (see (22)) V2 heads a VP that is the complement of V1. In consecutive SVCs there are two vPs, which are related by a silent conjunction (see Cummings 2001 for a similar analysis).

(72) ConjP[136] Conj[155] v1P Conj v2P

The presence of ConjP accounts for the consecutive interpretation and the different syntactic behavior of consecutive SVCs. Given this structure, it is clear why the AspP is needed in (66). Usually a verbal compound is formed by adjunction of two verbs to a single v. But in a consecutive verbal compound there are two vPs. Therefore, there needs to be a functional head (c-commanding both the first and the second vP) that both verbs can adjoin to.12 The derivation is shown in (73).

(73) a. Asp v ‘cook’ v ‘eat’
    b. Asp ‘cook’-v tcook’ ‘eat’-v t_eat’
    c. [‘cook’-v]-Asp tv tcook’ tv t_eat’
    d. [‘cook’-v]-[‘eat’-v]-Asp tv tcook’ tv t_eat’

A few notes on this derivation are in order. First, I am assuming that the Asp is [+multiple] and that all the light verbs v must adjoin to it. Second, I am assuming that neither v2 nor V2 can

12 Clearly, if it were possible to conjoin to VPs (rather than vPs), the above explanation would not be valid. The fact that vP-conjunction is involved may be related to the assumption that the empty object is pro, which needs accusative Case (assigned by v).
directly adjoin to \( v_1 \), because \( v_1 \) does not c-command either \( v_2 \) or \( V_2 \). Third, I am assuming that \( v_1 \) is closer to Asp than \( v_2 \) (for the purposes of the MLC), since \( v_1P \) c-commands \( v_2P \). Fourth, I am assuming that extraction of the verbs out of the conjuncts in (73) does not violate the Coordinate Structure Constraint. Although the reason for this is unclear, it may be related to the asymmetrical semantic relation between the VPs in a consecutive SVC or consecutive verbal compound (see Collins 1997a:fn. 9).

7 \( V_1 \) Is Transitive and \( V_2 \) Is Intransitive

The type of verbal compound where \( V_1 \) is transitive and \( V_2 \) is intransitive is extremely limited in \( + \)Hoan. Consider the following examples:

\[
\begin{align*}
(74) \text{a. Ma a- !ani kankan (*kyu) n oa.} & \quad (+ \text{Hoan}) \\
& 1SG PROG carry raise (*rise) stick \\
& \text{‘I am carrying the stick.’} \\
\text{b. Ma tca !’ae kankan (*kyu) ya.} & \quad (+ \text{Hoan}) \\
& 1SG FUT grab raise (*rise) 3SG \\
& \text{‘I will lift it up.’}
\end{align*}
\]

These examples show that it is impossible for the verb \( \text{kyu} \) ‘rise’ to appear as \( V_2 \) in a verbal compound in \( + \)Hoan when \( V_1 \) is transitive. Note that \( \text{kyu} \) ‘rise’ can appear as \( V_2 \) in a verbal compound when \( V_1 \) is intransitive (see (41)).

Recall that examples can be found in Ewe (see (11b)) where the verb \( \text{yi} \) ‘go’ takes the object of \( V_1 \) \( \text{kş} \) ‘take’ as its only argument. I will refer to this type of \( V_2 \) as an \textit{object-oriented intransitive}.

The examples in (74) also show that it is acceptable to form a verbal compound using the verb \( \text{kankan} \) ‘raise’ (the transitive version of \( \text{kyu} \) ‘rise’). This suggests that the presence of the transitive \( \text{kankan} \) ‘raise’ is blocking the intransitive \( \text{kyu} \) ‘rise’ in \( + \)Hoan.

Many other examples illustrate a similar point.

\[
\begin{align*}
(75) \text{a. Djo a- ’uco ki kx’u na.} & \quad (+ \text{Hoan}) \\
& \text{water PROG enter PART pot in} \\
& \text{‘The water is entering the pot.’} \\
\text{b. Ma a- q||hu \|’o (*!’uco) djo ki kx’u na.} & \quad (+ \text{Hoan}) \\
& \text{1SG PROG pour put.in (*enter) water PART pot in} \\
& \text{‘I am pouring water into the pot.’}
\end{align*}
\]

\[
\begin{align*}
(76) \text{a. G’ai i ki \|’o ki tcena na.} & \quad (+ \text{Hoan}) \\
& \text{snake PAST exit PART hole in} \\
& \text{‘The snake exited the hole.’}
\end{align*}
\]

\[\text{It is unclear whether this assumption is consistent with the fact that in Yoruba consecutive SVCs, either} \text{\( V_1 \) or} \text{\( V_2 \) can be clefted.}\]
b. Ma i ki!xao g!ai ki tcena na.
   1SG PAST remove snake PART hole in
   ‘I removed the snake from the hole.’

c. Ma ||hai !xao (*ki + ’o) g!ai ki tcena na.
   1SG pull remove (*exit) snake PART hole in
   ‘I pulled the snake from the hole.’

In (75b) the transitive ’o ‘put in’ must be used instead of the intransitive ’uco ‘enter’. In (76c) the transitive ki!xao ‘remove’ must be used instead of the intransitive ki≠ ’o ‘exit’ (note that the ki in ki!xao ‘remove’ is deleted in (76c); see footnote 9).

Given the above data, it appears that something like the following principle holds:

(77) Let V1-V2 be a verbal compound, where V1 is transitive and V2 is intransitive. V2 may be object oriented only if there is no transitive counterpart of V2 (e.g., ‘raise’ is the transitive counterpart of ‘rise’).

This principle is similar to the Transitivity Harmony of Dasgupta’s (1977:79) analysis of Bangla (see also Nishiyama 1998:191, 205, for discussion of a similar constraint in Japanese, and the absence of such a constraint in Chinese). In this article I will not attempt to compare Transitivity Harmony effects that exist in various languages.

Generalization (77) can be explained in the theory given in section 4. Recall that I assume that both transitive verbs and unaccusative verbs are dominated by vP. This is illustrated in (78) (for simple noncompound verbs).

(78) a. [vP DP [v ‘raise’-v VP]] (external argument)
   b. [vP ‘rise’-v VP] (no external argument)

In addition, I suggest that when a verb V is adjoined to a transitive v, its causative form is used if possible. Given these assumptions, generalization (77) is easy to derive. Consider the derivation of (74b).

(79) a. v  ‘grab’  ‘raise’
   b. ‘grab’-v t_grab’  ‘raise’
   c. ‘grab’-‘raise’-v t_grab’ t_raise’
   d. *‘grab’-‘rise’-v t_grab’ t_rise’

In (79) the verb v is transitive (it has an external argument and it assigns accusative Case). Therefore, kankan ‘raise’ needs to adjoin to v in Hoan as in (79c), rather than kyu ‘rise’ as in (79d).14

14 The above analysis recalls the notion of late insertion in Distributed Morphology (Halle and Marantz 1993:123), assuming that ‘raise’ and ‘rise’ have the same substantive features, but different contextual features (e.g., ‘raise’ must adjoin to a transitive v).
The above analysis predicts that if a verb does not have a transitive variant, it should be able to appear as V₂ in a verbal compound. Consider the following example from Hoan:

(80) a. Ma i q∥a [hon-hon beli-qa.  
1SG PAST pound ground.up sorghum  
‘I ground up the sorghum by pounding it.’

b. Bele-qa [ho’on i [hon-hon.  
sorghum not PAST ground.up  
‘The sorghum is not ground up well.’

c. *Ma i (ki)- [hon-hon beli-qa.  
1SG PAST cause ground.up sorghum  
‘I caused the sorghum to be ground up.’

Example (80a) shows that hon-hon ‘ground up’ can be used as V₂ with an object orientation in a verbal compound. Example (80b) illustrates the use of hon-hon as an intransitive verb outside of a verbal compound. Example (80c) shows that hon-hon cannot be used transitively (even with a causative prefix).

Verbal compounds where an intransitive V₂ is object oriented are very common in Ju’hoan (see Dickens 1992:58). One example is given in (81).

(81) a. Mi m gu tsau ka.  
1SG EMPH take rise 3SG  
‘I lifted it.’

b. *Mi m tsau ka.  
1SG EMPH rise 3SG

What this example shows is that the verb tsau ‘rise’ can be used as V₂ in a verbal compound, and it can be object oriented (cf. (74) in Hoan). The principle in (77) predicts that there should be no verb ‘raise’, which is the causative form of tsau ‘rise’ in Ju’hoan. Indeed, the entry for ‘raise’ in Dickens 1994:135 is gu tsau ‘take rise’.

In both Hoan and Ju’hoan there are examples where an intransitive V₂ in a verbal compound does not modify the object, but rather seems to modify the event. This is illustrated in (82a).

(82) a. Ya i ∅oa |o’a tsi.  
3SG PAST kill absent 3PL  
‘He killed them off.’

b. *Ya i (ki)-|o’a tsi.  
3SG PAST cause-absent 3PL

Example (82b) shows that the verb |o’a ‘absent’ cannot be used transitively. One analysis of this construction is that |o’a ‘absent’ is modifying the event argument. An alternative might be that |o’a ‘absent’ is modifying the object, so that the things that were killed are absent. Other examples show that this alternative is not correct.
(83) a. Ya i tc’eon o’a tsi.  
3SG PAST make absent 3PL  
‘He finished making them.’

b. Tsi o’a.  
3PL absent  
‘They are absent.’

Sentence (83a) could be said, for example, of a carpenter who has finished making some tables. It does not entail that the tables are absent. This seems like a clear case of $V_2$ modifying the event.

A similar construction exists in Ju’hoan, where the verb $toan$ ‘finish’ is used instead of ‘absent’ (see (14b) for a parallel use of the verb ‘finish’ in an SVC in Ewe). This is illustrated in (84).

(84) Ha m kuru toan tafere-si.  
3SG EMPH make finish table-PL  
‘He finished making the tables (e.g., that were ordered).’

The examples in (82)–(84) give strong evidence that the event argument should be represented in the syntax. If not, it is unclear how $V_2$ would be interpreted. Given this assumption, (83a) has the syntactic structure in (85).

![Diagram]

The question that arises in (85) is what controls PRO. One possibility is that $V_1$ itself controls PRO (with the interpretation that the event of making is finished). Another possibility is that
there is a null event argument of $V_1$ (not represented in (85)) that controls PRO. I have no data to decide between these two possibilities.\(^{15}\)

**8 Benefactives**

In both $\equiv$ Hoan and Jul$'$hoan, benefactive phrases (for both transitive and intransitive verbs) are added with the verb 'give' as $V_2$ in a verbal compound. This is illustrated in (86)--(87) for intransitive verbs.

(86) $\langle \equiv$ Hoan$\rangle$N!au-|a’a a- kyxai cu ’am kyxana.

*boy-DIM.PL PROG dance give 1SG uncle*

‘The boys are dancing for my uncle.’

(87) $\langle$Jul$'$hoan$\rangle$N|aqe m ku djxani |’an mi tçu.

*boys EMPH ASP dancing give 1SG uncle*

‘The boys are dancing for my uncle.’

The benefactive is illustrated in (88)--(89) for transitive verbs.

(88) $\langle \equiv$ Hoan$\rangle$Gya’|m-|a’a a- tsaxo cu ’am gye ki |’a’e.

*child-DIM.PL PROG cook give 1SG mother PART meat*

‘The children are cooking meat for my mother.’

(89) $\langle$Jul$'$hoan$\rangle$De’ebi|oa m ku n|oa |’an mi taqe ko !ha.

*children EMPH PROG cook give 1SG mother PART meat*

‘The children are cooking meat for my mother.’

The derivation of (86) is given in (90).

(90) a. $v$ ‘dance’ ‘give’

b. ‘dance’-$v$ t$_{dance}$ ‘give’

c. ‘dance’-‘give’-$v$ t$_{dance}$ t$_{give}$

The above analysis suggests that other instances of benefactive applicative morphemes might be analyzed as incorporated verbs (see Baker 1991 for such an analysis). In fact, in many languages the benefactive applicative affix is homophonous with a verb (see Baker 1996:431 for the relationship between applicative morphemes and the verb ‘give’).

Benefactive verbal compounds are different from other verbal compounds in one respect. Note that in (88) and (89) the benefactive argument precedes the theme argument, whereas in the Ewe construction in (15b) the benefactive follows the theme. In all other cases the order of

\(^{15}\) Other examples of $V_2$ that may act as event modifiers include $\equiv$nae ‘fail’ and cu ‘give’ (see section 8). An alternative would be to postulate that fo’a ‘absent’ takes a VP complement headed by $\equiv$oa ‘kill’ in (82). It is unclear how the word order ‘kill’-‘absent’ would be derived.
arguments following the verbal compound matches the order of arguments in an SVC. I will not analyze this difference here.\footnote{One possible analysis is in terms of the analysis of double object constructions in Collins 1997b. In that theory the first argument of a double object construction is introduced by an Appl head. Suppose that the ApplP must dominate V1P (the highest VP) of a verbal compound. Then it would follow that the benefactive argument would have to precede all other arguments.}

9 An Alternative

In this section I briefly discuss an alternative analysis of verbal compounds that would also capture the generalization in (16) (repeated in (91)).

(91) The order of verbs in a verbal compound is the same as the order of the verbs in a corresponding serial verb construction.

Consider once again the example in (1) (repeated in (92)).

(92) \[ \text{1SG PROG} \text{pour put.in water PART pot in} \]
\[ \text{‘I am pouring water into the pot.’} \]

An alternative analysis of the word order in (92) is that there is no verb movement at all.\footnote{See Cummings 2001 for a related analysis.} Rather, the complements undergo movement, leaving the verbs q∥hu ‘pour’ and o∥ˈtput in’ adjacent. This analysis is sketched in (93) (ignoring the particle ki).

(93) a. Underlying VP (see (32) for details)
\[ [\text{VP} \text{djo } q∥hu ]ˈo ] \text{water put.in pot in} \]
\[ [\text{VP} \text{djo } kxˈu na ] \text{tˈwaterˈ q∥hu ]ˈo } \text{tˈpot-inˈ} ] \]
\[ \text{water pot in pour put.in} \]

b. Movement of complements to specifiers of FP (see (20))
\[ [\text{FP} \text{djo } kxˈu na ] [\text{VP} \text{tˈwaterˈ q∥hu ]ˈo } \text{tˈpot-inˈ} ] \]
\[ \text{water pot in pour put.in} \]

While this remnant movement analysis is plausible, and it derives the right word order (see (16)), it faces the tasks of explaining why the verbs in a compound are adjacent (3), why the presence of ki[PL] in consecutive verbal compounds is obligatory (60), and why the transitivity restriction on V2 holds (77). In addition, the remnant movement analysis would have to explain the order of the complements in a compound, which follows straightforwardly from the multiple verb movement analysis (with the exception of benefactive compounds; see section 8). In other words, the question is why the movement of djo ‘water’ and kxˈu na ‘in the pot’ maintains the underlying order of the two constituents.
10 Conclusion

In this article I have presented an analysis of multiple verb movement. This analysis derives verbal compounds from underlying structures that are similar to serial verb constructions.

The analysis strongly suggests that the light verb v is subject to the same kind of [+ multiple] parameter found with other functional heads (e.g., C, I, Det). This assumption provides the most natural explanation for the existence of verbal compounds and SVCs.

Furthermore, my analysis of verbal compounds provides evidence that verb movement is subject to the same kinds of locality conditions found in other multiple movement structures. For example, I have provided important evidence for Local Move (yielding ‘‘tucking in’’) and for the invisibility of a verbal trace.

It may be of interest to see whether the analysis of multiple verb movement presented here extends to other types of multiple verb constructions (including causatives in Romance, verbal clusters in Dutch, and perhaps applicative affixes).

Finally, the analysis proposed here has consequences for the syntax-semantics interface. To see this, consider the schematic structure in (94) of an SVC and a verbal compound.

(94) vP
    /\DP
     /\v'
      /\v
       /\V1P
        /\DP
         /\V'
          /\V1
           /\V2P

Looking at the class of possible and impossible verbal compounds reveals that the possible semantic relations between V1 and V2 are very limited. Essentially, V2P can be a direction (see (32) and (45)), a result (see (56), (57), (80), and (85)), and a benefactive (see (86)). V2P cannot describe an event that is merely simultaneous with the event described by V1 (see (49)–(51)); nor can V2P describe an event that is merely consecutive to the event described by V1 (see section 6 on consecutive compounds).

References


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