Hungarian Complex Verbs and XP-Movement

Hilda Koopman and Anna Szabolcsi
Linguistics, UCLA – Department of Linguistics, New York University

1 Introduction

At first blush, the data we are concerned with represent three quite different constructions:

Foc/Neg sentences, 'English' order

(1) Nem fogom akarni kezdeni szétszéden a rádiót.
not will-1SG want-INF begin-INF apart-take-INF the radio-ACC
"I will not want to begin to take apart the radio."

Foc/Neg sentences, 'inverted' order (same meanings as in (1))

(2) Nem fogom akarni szétszéden kezdeni a rádiót.
not will-1SG want-INF apart-take-INF begin-INF the radio-ACC

(3) Nem fogom szétszéden kezdeni akarni a rádiót.
not will-1SG apart-take-INF begin-INF want-INF the radio-ACC

Neutral sentences, English order, particle 'climbing'

(4) Szét fogom akarni kezdeni szedni a rádiót.
apart will-1SG want-INF begin-INF take-INF the radio-ACC
"I will want to begin to take apart the radio."

We propose a highly uniform and mechanical analysis for the three constructions. The main characteristics are as follows:
(5) a. Verbal complex formation is triggered by a lexical property and is thus present in all three types.
b. All movement is overt (no weak features, covert movement, or Economy considerations are involved).
c. Verbal complexes are formed by XP-movement, rather than head movement.

2 Against head movement

Because the verbal particle as well as the larger units formed by inversion occur in preverbal position, É. Kiss (1987) subsumed their placement under (non-contrastive) focusing — hence XP-movement. On the other hand, the Germanic counterparts of the inverted orders are traditionally analyzed as head adjunctions, and Brody (1997), É. Kiss (1998) propose like-minded analyses for Hungarian. We submit that verbal complexes are formed by XP-movement. Since we differ from É. Kiss (1987) in not relating the phenomenon to focus, we show that the assumption of XP-movement is entirely independent.

Although the sequence of verbs in (I) is in the English order, the particle of the lowest infinitive must procliticize. Head movement is initially plausible for the formation of particle+verb units like szét-szed-ni “apart-take-INF”. They consist of bare head material, their meaning can be non-compositional, and they are input to derivational morphology. But particles are not unique in participating in verbal complexes; a much larger set of expressions, called verbal modifiers (VMs) in the Hungarian literature, do so. Importantly, many VMs are phrasal, e.g., directional PPs with a definite DP, or predicative XPs with a complex structure, as was noted by Horvath (1981, 1987) and Komlósy (1994), among others:

(6) Nem fogok akarni a városba költözni.
not will-1SG want-INF the city-into move-INF
“I will not want to move to the city.”

(7) Nem fogom akarni a legjobb barátomnak nevezni.
not will-1SG want-INF the best friend-DAT name-INF
“I will not want to call him my best friend.”

Even if szét is analyzed as a head adjoining to szedni, a parallel XP analysis is necessary for a városba + költözni and a legjobb barátomnak + nevezni.
HILDA KOOPMAN AND ANNA SZABOLCSI

We conclude that a head movement analysis is at best redundant. In Koopman & Szabolcsi (1998), we argue that allowing for such a redundancy is not merely inelegant but leads to incorrect predictions.

This conclusion contrasts with Brody’s (1997), who proposes that inverted sequences form morphological words: entities involving strictly local, head chain-type relations. His specific argument in favor of this analysis has to do with the focusing of individual infinitives in type (1). Szabolcsi (1996) observed that when the highest infinitive moves to the tensed focus position, it can be interpreted either emphatically or contrastively, whereas a lower infinitive can only be contrastive in focus. In (12), próbálni may originate in either of the two [t] positions:

12. próbálni fogok [t'] akarni [t'] hazamenni.  
   try-INF will-1SG want-INF home-go-INF
   (a)  i. “I will indeed try to want to go home.”  
        ii. “I will try (not to begin) to want to go home.”
   (b)  i.* “I will indeed want to try to go home.”  
        ii. “I will want to try (not to begin) to go home.”

Brody assumes that while contrastive focusing is syntactic XP-movement, emphatic focusing is not: the focus marked category is a lexical/morphological specifier of the F node, in his notation: “probál-ini-fog-ok-F”. This correctly predicts a locality difference between the two kinds of focusing.

We note that, whatever the account of (12a,b) might be, emphatic focusing cannot be a result of head adjunction in terms of Koopman (1994, 1995), at least. It is in fact not local enough: the emphatic particle is “indeed, lit. too”, which we assume heads its own projection, can intervene between the emphatic focus and the finite verb:

3 The XP analysis: large structures and remnant movement

How is the XP-movement analysis of inversion compatible with the fact that the inverting verb must leave its dependents behind, cf. (2) vs. (2')? A piece of climbing data is suggestive in this connection.

When the lowest infinitive has no particle or other VM, it behaves like a VM itself: it inverts and climbs. But crucially, although climbing is certainly XP-movement, the dependents of this infinitive must be left behind:

   play-INF will-1SG want-INF the dog-with  
   “I will want to play with the dog.”
   b. *[Játssani a kutyával] fogok akarni.  
   play-INF the dog-with will-1SG want-INF

The XP that climbs in (14a) is a remnant: all non-head material has been removed from it. The reason must be that those categories are licensed in designated positions outside the relevant XP.

But then the fact that inversion involves only head material is perfectly compatible with it being XP-movement: the head’s dependents are removed for licensing reasons, as in the case of climbing.

We identify the XP relevant both for climbing and inversion as WP, the outermost VP-shell (or the infinitival version thereof: InfP). The positions in which the verb’s dependents are licensed are labeled LP(dp) and LP(cp).

We assume the following sequence of projections, for Hungarian and, by and large, universally. (See Szabo 1996, 1997 for the operator projections; and Koopman & Szabolcsi 1998 for an analysis of Dutch along these lines.)
What drives inversion? At least two lexical requirements must be involved.

(16) VMs must raise to the [Spec, WP] of the selecting verb, forming *szétszed- "apart-take", etc.

(17) Certain infinitival complement taking verbs (the 'auxiliaries' in (19)) need a WP in their own [Spec, WP], forming *szétszedni "apart-take-INF begin", etc.

The superficial appearance is that in many examples, at least one of the two requirements is not satisfied overtly. Optionality or covert (feature) movement appears to be involved. We argue that appearances are deceptive:

(18) Both lexical requirements are satisfied by overt movement in all examples. The relevant movements look optional when another leftward movement makes them invisible.

The assumption of obligatory overt movements enables us to analyze the three sentence types (English, inverted, and climbing orders) as being derived by essentially the same processes, in a highly mechanical fashion.

A uniform analysis is all the more warranted as it turns out that the infinitival complement taking verbs that participate in inversion and climbing are basically identical. (A few verbs like *tanul "learn" participate in inversion but only allow climbing substandardly.) The class was identified on the basis of the climbing facts by Kálmán et al. (1989), who dubbed them 'auxiliaries'.

(19) 'Auxiliaries':

\[ \text{fog} "\text{will}", \text{lehet} "\text{may}", \text{szokott} "\text{tend}", \text{szokás} "\text{be customary}"\], \text{tetszik} "lit. please", \text{szabad} "be permitted", \text{szeretne} "would like", \text{ kell} "must", \text{ akar} "want", \text{talál} "happen to", \text{ bér} "be able", \text{ tud} "be able",

\[ \text{pouvoir/savoir}, \text{ kezd} "\text{begin}", \text{kíván} "wish", \text{ mer} "dare", \text{ őhajt} "desire", \text{ próbál} "try", \text{ szándékozik} "intend"]".

What is the source of the existence of various construction types, then?

One important source is the tension between the lexical requirement of the auxiliary (that it forms a complex with a WP), and a general structural requirement (that infinitival complements are CPs). The basic idea of the analysis is to exploit ways in which UG allows to resolve this kind of tension.

Another source is a difference between tensed clauses with and without Focus/Negation.

4 The gist of the derivations

In this section, we give a taste of the derivations. To be able to focus on the main ideas, we simplify the mechanics. See Koopman & Szabolcsi (1998) for full details.

4.1 Complexes involving non-auxiliaries

In all cases involving a VM, requirement (16) is satisfied overtly. Then the verb's dependents, if there are any, move to their licensing positions (we omit head positions from the tree diagrams):
When a non-auxiliary has no VM, VP itself moves to [Spec, WP], to activate WP with phonetic material (Koopman 1996). This immediately derives the fact that such VM-less verbs behave like VMs themselves, with respect to both inversion and climbing.

4.2 Complexes involving auxiliaries in Foc/Neg sentences

Next, requirement (17) needs to be satisfied. This can happen in either of two ways: the infinitival WP moves up on its own, or it pied pipes its own CP.

Inverted orders come about when WP escapes via CP from the infinitival and combines directly with the auxiliary.

Finally, the remnant CP that dominates nothing but a rádiót moves to LP(cp). This does not affect the relative order of the verbs:

The important property of this derivation is that WP (szétszedni) gets separated from the remainder of CP (a rádiót); therefore it will have the distribution of the WP containing the auxiliary (kezdeni), not of CP.

The distinctive characteristic of English orders (in Foc/Neg sentences) is that WP moves to a high position [Spec, CP] within its own clause, and pied pipes the whole clause to [Spec, WPaux].
Thus, WP satisfies the auxiliary in the same manner that whose in whose brother's friend checks a [wh]-feature:

(25)

CP, however, needs to move on to get licensed in LP(cp). This movement splits CP and the rest of WP_{aux} apart. Any further movement of WP_{aux} places kezdeni to the left of szét szedni a rádiót. The relative order of these two after CP-pied piping is inescapably English.

(26)

In the second cycle, the choice between inverted and English orders is free when the VM is a particle, but only the English order is possible if the VM is a predicative AP/NP or a locative/directional PP, see (27)-(28), or if the first, lowest cycle has an English order, see (29)-(30):

(27)  Nem fogok akarni a városba költözni. (=6)
      not will-1SG want-INF the city-into move-INF
      "I will not want to move to the city."

(28)  *Nem fogok a városba költözni akarni.
      not will-1SG city-into move-INF want-INF

(29)  Nem fogok akarni kezdeni úszni.
      not will-1SG want-INF begin-INF swim-INF
      "I will not want to begin to swim."

(30)  *Nem fogok kezdeni úszni akarni.
      not will-1SG begin-INF swim-INF want-INF

This means that both a városba költözni and kezdeni úszni force CP-pied piping.

To keep things manageable, in this paper we omit the discussion of PredP and LP(predp), projections that play a crucial role in forcing the pied piping of CP on the English order. The reader is referred to Koopman & Szabolcsi (1998) for full details.

4.3 Climbing in neutral sentences

As the contrast between (1) (2) (3) versus (4) shows, sentences with Focus or Negation exhibit rather different orders than sentences without these operators. We assume that the tensed clause of neutral sentences contains a new projection, NeutP. NeutP precedes AgrP*, in complementary distribution with FocP and NegP. We posit that it has the following property:

(31)  NeutP is licensed by a WP that contains overt material.

As it stands, (31) allows a WP of any size to move to [Spec, NeutP]. What we want, however, is that either a single VM or a single verb move there:

(4)  Szét fogom akarni kezdeni szedni a rádiót.
      apart will-1SG want-INF begin-INF take-INF the radio-ACC
      "I will want to begin to take apart the radio."
(13) Játszani fogok akarni a kutyával.

play-INF will-1SG want-INF the dog-with

"I will want to play with the dog."

This effect can be achieved by adding a simple stipulation:

(32) Within the domain of [NeutP, VP] cannot remain in situ.

We remain agnostic as to why NeutP has these properties. We note, however, that whether and when VP escapes from WP plays a crucial role in accounting for complex patterns of cross-linguistic and cross-dialectal variation in West-Germanic (see Koopman & Szabolcsi 1998).

Where does VP move? If the verb has no [VM, VP] moves to [Spec, WP] to activate WP anyway and is not in situ. Since VP is always a remnant, containing nothing but head material, this leaves us with a single verb to climb, as desired. This is case (33a). If [Spec, WP] is occupied by a VM, (28) forces WP to move out, and it eventually lands in [Spec, CP]. The WP that contains a VM and a trace of VP gets to climb, as in (33b):

(33) WPs that can license NeutP:

a. \[ WP \]

b. \[ WP \]

We noted that the same verbs ('auxiliaries') participate in inversion and climbing. This means that, apart from the differences strictly grounded in the Foc/Neg versus neutral distinction, the derivations must be the same. And they are. The licensing of the auxiliary by the WP of its CP complement takes place at each level, exactly as in Foc/Neg sentences. The WP that moves up does not need to 'know' whether it is located in a neutral or in a Foc/Neg sentence. There are just two differences between the two sentence types. One is that in neutral sentences, the WP that reaches the finite clause has a single element in its specifier (the lowest infinitival verb or the VM thereof). This is because VP is removed at each level, cf. (32). The other difference is that once WP reaches the finite clause in its standard way, it makes a further step to license NeutP, cf. (31).

The structure of NeutP so obtained is as in (34):

(34) NeutP

AgrP

WP

WP

t(fog)

WP

t(akarni)

WM

t(kezdeni)

PP

t(szedni)

What remains to be accounted for is why the infinitives line up in the English order. The VP that leaves WP in virtue of (32) lands in [Spec, CP]. Thus, the CP that moves from the complement position of Vaux to LP(cp) looks like this:

(35) CP

--------------r

[(szedni a rádiót)

In the next clause, kezdeni moves to [Spec, CP], thus the material that moves to the next LP(cp) is kezdeni a rádiót, and so on.

With these outlines in mind, we provide supporting evidence for the remnant WP analysis of VM-climbing. Previous analyses (E. Kiss 1987; Szabolcsi 1996; Brody 1997) invariably assumed that in sentences like (4), a simple PP moves to some A-bar position. E. Kiss (1998) observes that this makes the incorrect prediction that the VM can climb in the manner of across-the-board extraction:

(36) *[be1 [fogok ti menni és akarom ti vinni ezt]]

in will-1SG go-INF and want-1SG take-INF this-ACC

"I will go, and want to take this, inside."
The surprising ungrammaticality of ATB climbing leads É. Kiss (1998) to conclude that the particle does not move to a c-commanding A-bar position, instead, in the grammatical cases it head-adjoins to form a compound, within which it occurs too low to have been ATB extracted:

(37)

\[
\begin{array}{c}
\text{YP} \\
\text{VM} \\
\text{ZP} \\
\text{XP}
\end{array}
\]

The remnant WP analysis that we are proposing accounts for (36) automatically. Recall (34). The particle that occurs in NeutP is never a plain VM: it is a WP that contains minimally one VP-trace, the one inside which it was selected. If it comes from \( n \) clauses lower, it additionally contains the traces of \( n \) other VPs, but the number of VP-traces makes no difference:

(38)

\[
\begin{array}{c}
\text{WP} \\
\text{PP} \\
\text{t(menni)} \\
\text{be}
\end{array}
\]

Now observe that while the same antecedent can bind two gaps, the same gap cannot have two antecedents: \( t(menni) \) cannot also be interpreted as \( t(vinni) \), etc.

In general, the prediction is that remnants cannot be extracted across-the-board. This is confirmed by possessum-extraction data, assuming Szabolcsi’s (1994) analysis:

(39) [\( t\text{-}mijét \)] látta Marinak? \\
\hspace{1em}what-POSS-ACC saw-2SG Mari-DAT \\
\hspace{1em} “What [possession] did you see of Mary?”

4.4 Complexes all the way up

É. Kiss (1998) points out that the finite auxiliary always precedes its infinitival complement: inversion appears to stop before the tensed verb. (41) is not a possible segment of either neutral or Foc/Neg sentences (unless szétszedni kezdeni itself is contrastively focused):

(41) *szétszedni kezdeni fogom \\
\hspace{1em}apart-take-INF begin-INF will-1SG

Within the frames of the compounding analysis, cf. (37), É. Kiss assumes that this string is excluded because compounding is restricted to nominal domains. Infinitives are embedded in +N projections; but the finite verb is +V.

On our analysis, WP-to-WP (or CP-to-WP) serves to satisfy a lexical requirement of the auxiliary, whence it must take place regardless whether the auxiliary is finite. Strings like (41) do not arise in neutral sentences because, as was pointed out in 4.3, only the VM szét may end up in [Spec, NeutP] anyway. They do not arise in Foc/Neg sentences, either, because the finite verb moves to check its finite features. In the Foc/Neg context, (41) is excluded for the same reason (42a) is:

(42) a. *Nem szétszedtem. \\
\hspace{1em}not apart-took-1SG

b. Nem szedtem szet. \\
\hspace{1em}not took-1SG apart \\
\hspace{1em}“I didn’t take it apart.”

This does not require a special device in our theory: in all cases, VP moves to InfP or AgrP; see below.

5 Theory

Our analysis of complex verb formation is embedded in a theory that postulates large syntactic structures with a simple structural design: one feature per projection. Since relatively little lexical material is there to activate the large
structures, derivations involve more movement than meets the eye, among others, heavy pied piping and remnant movement. Furthermore, we assume that all movement is overt: there is no need for Procrastinate, nor for a strong versus weak feature difference. Many of these aspects of the theory are either inspired by or independently converge with Kayne's recent work (1994, 1997/98).

Section 2 argued that verbal complexes are formed by XP-movement, rather than head movement. The essence of the argument was that (i) many complexes contain uncontroversial XPs, and (ii) the others that might potentially be analyzed as involving heads are either parallel to these or have a second life as XPs. In other words, the argument worked on the assumption that both head movement and XP-movement are in principle available in UG, and showed that verbal complexes are best analyzed using solely XP-movement.

Nevertheless, this argument does bear on whether both head movement and XP-movement are in principle available. The assumption that verbal complexes are formed by head movement is one important motivation for making this option available in UG. If verbal complexes are best analyzed using XP-movement, the motivation for having head movement at all is weakened.

Another kind of direct motivation for head movement comes from how finite and infinitival verbs check their inflectional morphology. The standard assumption is that the V head left-joins to the inflectional heads, but Sportiche (UCLA lectures, 1996) and Hallman (1997) have explored the possibility that XP-movement does the work. This idea is not surprising: Case and agreement morphology on nouns are standardly thought to be checked for XPs in a spec-head configuration.

Koopman & Szabolcsi (1998) find that the analysis of the inflectional aspects of verbal complexes is fully compatible with having XP-movement only. Infinitival suffixation can as easily be done under XP-movement, VP-to-InfP, as under head movement, V-to-Inf:

\[ \text{(43)} \]

\[
\begin{array}{c}
\text{InfP} \\
\text{VP} \\
\text{-ni} \\
\text{ti}
\end{array}
\]

Likewise, tensed morphology on the main verb in Foc/Neg sentences and in neutral clauses with a real VM can be as easily checked under XP-movement, VP-to-AgrP, as under head movement, V-to-Agr. There is one case, in neutral clauses without a VM, where it must be checked under XP-movement. The reason is that the WP, which contains VP, needs to be pied piped to license NeutP:

\[ \text{(44)} \]

\[
\begin{array}{c}
\text{NeutP} \\
\text{AgrP} \\
\text{VP} \\
\text{...} \\
\text{Agr} \\
\text{LP(dp)} \\
\text{szöl} \\
\text{ok} \\
\text{Mari-nak} \\
\text{...}
\end{array}
\]

This suggests generalizing XP-movement to all cases of inflectional morphology, departing from the standard assumption that words translate into single syntactic heads. (We reject the assumption of the Minimalist Program that inflectional morphemes form a single word in the lexicon, because it fails to capture the Mirror Principle.)

If neither verbal complex formation (or other cases of 'incorporation'), nor inflectional morphology directly motivate the assumption of head movement, then it could be the case that there is no head movement in UG at all, or that head movement is so constrained as to rule out the head movement analyses for these cases.

\textbf{Notes}

1 We take it that the defining property of VMs is that they immediately precede the finite verb in neutral sentences, but when the neutral sentence is negated, they switch to postverbal position (see Szabolcsi 1980:79-80). Thus, (i)-(ii) show as azstalra to be a VM.

(i) \textit{Mari az asztalra tette a tárgyéret.}
   Mari the table-onto put the plates-ACC
   "Mari put the plates on the table."

(ii) \textit{Mari nem tette az asztalra a tárgyéret.}
   Mari not put the table-onto the plates-ACC
   "Mari didn't put the plates on the table."

The phrasal type (i) was first noted in Horvath (1981); in her terms, as azstalra is generated in, not moved to, the preverbal position.

If preverbal as azstalra were focused, it would retain its preverbal position under negation:
The explanation might be, the subset relation entails that valő-less nominalization cannot be used as a test of VM-hood.

As one reviewer points out, this explanation also covers the impossibility of interpreting (i) with be related to both conjuncts, because NeutP contains the be plus the trace of its own VP:

(i) *Be mentem a szobába és vittem a levelet.
   in went-I the room-into and took-I the letter-ACC
   "I went in the room and took the letter inside."

On the other hand, it does not extend to the FocNeg version of the same sentence but this is bad independently (the issue of ATB movement does not even arise):

(ii) *Nem mentem be a szobába és vittem a levelet.
    not went-I in the room-into and took-I the letter-ACC
    "I didn’t go in the room and take the letter inside."

References


-------- 1996. "Verb and Particle Movement in Hungarian". Manuscript, UCLA.


In the CURRENT ISSUES IN LINGUISTIC THEORY (CILT) series (edited by: E.F. Komod Koerner, University of Ottawa) the following volumes have been published thus far or are scheduled for publication:


A full list of titles published in this series is available from the publisher.