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Movement and Languages with Complex Morphology

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Abstract

This paper considers the relationship between syntactic movement and morphology in language. It is argued that some movement processes, rather than displacing the elements involved, have morphological replacement which are equivalent to displacement. From this we conclude that overt Movement is more abstract than has been thought. Similar examples involving mirativity are examined in Labrador Inuttut and Albanian, where in one language, replacement is used, while in the other, displacement is found.

Introduction

In this paper, I will argue that the following statement regarding morphology and syntax is true. Displacement and extra morphology are in complementary distribution with respect to movement.¹

By this it is meant that when structural movement is triggered, a language will displace an item or will substitute morphology in its stead. The two are equivalent and there is no need to both move in a linear fashion, i.e. utilize displacement, and to add morphology. A language can rearrange its pieces of words, as shown by the displacement of Y in (1a). Alternatively, a language can substitute a new piece of morphology, as shown by the replacement² of Y by W in (1b). They are equivalent from the point of view of satisfying a more abstract concept of Movement.

- (1) a. X - Y - Z vs. Y - X - Z [Displacement]
 b. X - Y - Z vs. X - W - Z [Replacement]

These two possibilities are exemplified by the English interrogative in (2) and the interrogative from Labrador Inuttut in (3).³

- (2) a) John **has** left.
 b) **Has** John left?
(3) a. nigi-**vutit** Labrador Inuttut
 eat-intr.part.3s.
 ‘You are eating’

¹This statement is restricted to movement of heads.

²This is not literally a replacement, as W will not actually be there. See below for more discussion on this point.

³Abbreviations used in examples in this paper are the following: intr.= intransitive; tr.= transitive; interr.= interrogative; part.= participial mood; indic.= indicative mood; loc.= locative; neg.= negative; pret= preterit; dir= direct.

- b. **nigi-ven**
eat-intr.interr.2s
'Are you eating?'

What does not seem to happen is both displacement and replacement, as in (4)

- (4) X-Y-Z vs. W-X-Z [Displacement and replacement]

Our question thus revolves around the relation between overt morphology and movement? In recent literature, the answer to this issue has taken a number of different approaches. These are shown in (5).

- (5) a. morphology triggers movement
b. morphology is complementary distribution to movement.
c. morphology and movement are completely unrelated.

The answer in (5c) is the least desirable but must be also considered. It is the least desirable because it means that a language with a lot of morphology is utilizing this system in a parallel fashion to any system of displacement. From a minimalist perspective (Chomsky 1995; 1998; 1999), this might be thought of as the least optimal of situations.

The answer in (5a) has been argued by a number of linguists, especially those working on inflectional paradigms.

Beginning with Roberts (1985) and Pollock (1989), a distinction was made between "rich" and impoverished agreement systems, where the former triggers Head Movement and the latter does not. This distinction, originating on the basis of overt morphological distinctions gradually became more abstract, becoming the distinction strong/weak AGR (Chomsky 1995), which is not tied to any morphological evidence in the language (i.e. a version of (5c)). At the same time, other linguists hewed to the overt morphological contrasts, developing analyses of strength based on distinctive morphology within and across paradigms (e.g. Rohrbacher 1994). Whether involving overt morphology or not, the leading idea behind all this work is that movement (or displacement) is initiated in some sense by morphology.

It is the contention of this paper that, in some instances, morphology is itself a type of movement, but one that is in complementary distribution to displacement, i.e. the view of (5b).⁴ Although more abstract, this operation is indeed movement because it can be shown that its effects are related to positions which are higher in the tree. Such movement does not involve displacement, and consequently there are no linear (or reordering) effects. Movement in this sense is not covert movement, because covert movement involves a) movement without any overt indication of movement and b) happens at LF. Both displacement and morphology are PF phenomena. Recent work has abandoned covert movement as a possible operation (Kayne 1998 and Chomsky 1999) and I assume this to be correct.

In summary, Movement is an abstract relation between structural positions in a tree, and displacement is only one PF manifestation of this relation. The other is

⁴See Belanger 2000, and Bejar 2000 who also reject the correlation of movement with morphology. Jonas 2000 explicitly argues against movement and richness of inflection for Germanic (Rohrbacher 1994).

different in the two examples in (7). Within the same language we might expect that evidence for movement of this sort might be based on an identical morphemes. Friedberg suggests that the negative morpheme in (7a) might in fact be cognate to another negative morpheme found in Cree, one which Reinholtz (1999) argues to be generated outside CP. While more evidence needs to be gathered on this particular example, it is clear that structural position cannot be easily established based on just the meaning of neighbouring morphemes. Instead, care must be taken to ascertain the position of each “signpost” morpheme. Under the view taken in this paper, the fact that the negative morphemes differ in these examples leads us to expect a difference in structural position of the negative morphemes themselves. If this turns out to be true, what remains to be explained is why the negative morpheme follows the verb in one position but precedes it in another. This must occur for some independent factor.

In summary, we have seen evidence that a strictly linear approach to movement is not without problems.⁶

2 Movement as Replacement: Paradigms in Labrador Inuttut

In this section, I will demonstrate that some of the verbal paradigms of Labrador Inuttut show evidence of movement, even though there is no displacement whatsoever among the morphemes. These paradigms will show use of strategy (2) above. This work is based on the descriptive findings of Smith (1977) and the analysis of Johns (1996) and related work.

Consider the paradigms for intransitive declarative clauses shown in (8).

(8) a. *Intransitive⁷ Indicative Mood*

	sing	dual	plur
1	vunga	vuguk	vugut
2	vutit	vutik	vusi
3	vuk	vok	vut

b. *Intransitive Participial Mood*

	sing	dual	plur
1	*	*	*
2	*	*	*
3	juk	jok	jut

⁶Related issues may be found in the syntax of questions, where some language “type” clauses as interrogative (see Cheng 1991).

⁷Intransitive here does not refer to the number of arguments but to whether or not there is single (intransitive) or double (transitive) agreement on the verb.

These paradigms illustrate number (singular, dual and plural) and person (first, second and third) across sets of affixes based on similarity of mood form. The set in (8a) is the indicative mood, characterized by initial /v/ while the set in (8b) is the participial mood, characterized by initial /j/. The indicative mood is found on main clause verbs only, and the participial mood is found on main clause verbs and relative clauses (see Johns 1992).

Note that these paradigms are presented, as is traditional, based on similarity of form. Thus all the indicative elements are placed together and all the participial elements are placed in another section together. The effect of this organization is to suggest that these elements function in some sense as a block (see Anderson 1992), so that wherever one member may appear, the other members could equally appear, given the appropriate person and number features. In fact, such arrangements are somewhat misleading. While the indicative mood is the only intransitive mood where first and second person verbs can be expressed, it is clear that in third person there is a choice, or alternation between the two moods. Based only on the observation of the paradigms in (8), it may come as a surprise that the unmarked choice for third person is not the more numerous indicative forms in a., but instead is the set of participial forms in the impoverished set in b. This can be seen in (9).

- (9) taku-juk
see-intr.part.3s.
'She/he sees/is seeing'

Use of the third person indicative mood is certainly possible, but somewhat marked and conveys a sense of surprise or immediacy, shown in (10).

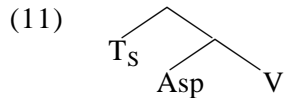
- (10) taku-vuk
see-intr.indic.3s.
'She/he sees!' *crucially*: element of surprise

From this perspective, the use of the third person indicative is actually compositionally more complex than the third person participial, since it must contain not only the normal properties of third person, but additionally whatever feature results in the surprise reading. As will be seen, this complexity correlates with structural complexity.

From a traditional perspective, the crisscross of markedness between paradigms, where first and second person are unmarked in the indicative and third person is unmarked in the participial, seems arbitrary and clumsy. Surely, it would be simpler to have one entire mood unmarked and the other marked. However, from a syntactic perspective, this same alternation between the moods demonstrates properties of both structure and movement.

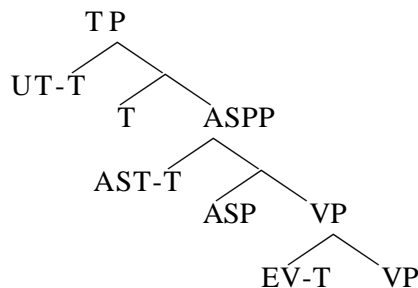
We will assume a structure along the lines of that shown in (11), where there are two syntactic projections, one for aspect ASP and the other for Tense T. The T category does not here refer to the full concept of tense, which, if it exists at all in

Inuktitut, is within the word⁸ and does not form part of the inflectional paradigms. Instead T designates moment of speech, a subpart of tense. For this reason it is labelled T_S.



T_S as the moment of speech, gives not only the time of speaking but the speech act participants, i.e. first and second person. Speech act participants have been distinguished from third person by a number of linguists (see Noyer 1997). More recently Davis (1998) argues that the φ-features of speech act participants universally are realized in a higher position than those of third person,⁹ which as argued by Benveniste (1966) and Ritter (1995), is not actually a person but number. In fact the structure proposed by Davis shown in (12) is very similar to the one in (11), where U stands for Utterance, AST for Assertion and EV for Event time (T).

(12) Davis (1998)



Davis proposes that 3 person features are associated with ASP and 1/2 features with T.

Returning to the morphology of Labrador Inuttut¹⁰ and the structure in (9), we see that movement of the verb to T_S will be spelled out as *v-* (or the indicative mood) and movement of the verb to Asp is spelled out morphologically as *j-* (or the participial mood). From this, it follows that all 1/2 person in the intransitive participial mood will be * in Labrador Inuttut since the verb has not reached a position high enough in the structure for these features to be checked. When the verb

⁸ So we see tense well inside the paradigmatic portion of the verb, as in i.

i. *sini-kKau-juk*
sleep-recent.past-intr.part.3s.
 'He/she slept'

⁹That 1/2 is higher than 3 is a feature of the language particular analysis in Johns (1993). See also Rice and Saxon(1993) for Athapaskan.

¹⁰It is important to realized that these facts are specific to this dialect and that other dialects show slightly different (but not contradictory) properties - see Johns (1996).

carries third person, economy dictates that movement only as far as ASP, i.e. the participial mood, should suffice. At this stage there is no need for further movement. Thus the paradigms shown above in (8) are explicitly representing how high up the tree the verb moves, and are doing so by marking height rather than displacing elements.

It remains to explain under an approach assuming some version of economy why 3 person indicative mood is ever allowed. If the 3 person features are checked at the ASP level, then there is no reason for the verb to move any higher. I have argued elsewhere (Johns 1996) that the surprise interpretation can only be found when the verb moves to T_S. Let us assume that in fact this movement is motivated by the need to check a feature at the level of S, or time of speech. Why should time of speech result in a surprise interpretation? The surprise interpretation is in fact the juxtaposition of non-speech act participants with the speech act environment, effectively giving a sense of the third person being right where the first and second person are. Thus a sense of vividness entails. While time of speech coincidence is optional and possibly marked for 3 person, it is obligatory for 1/2 person, since those participants are necessarily present for the speech act to occur. The surprise interpretation of the conjunction of indicative mood with third person might in this way be viewed as a P-feature Chomsky (1998; 1999), where the feature is peripheral to the system in some sense.

Head Movement of the verb through the aspectual head to the T_S position results in morphology which reflects the final position of the verb and not the intermediate positions. This suggests something like Late Insertion of Distributive Morphology (Halle and Marantz 1993), whereby phonological form is inserted only after syntactic operations take place. Were phonology to trace each movement, we might expect something like the unacceptable (13a), with both participial and indicative moods, instead of (13b), which only shows the indicative mood.

- (13) a. *taku-j(u)-vunga. 'I see'
b. taku-vunga 'I see'

Thus morphology of this sort is cumulative in that it does not show the derivational history through individual morphemes but shows only the final position, which must necessarily imply the history of the derivation.

We see that a structural account provides a simple explanation for the markedness of third person indicative over third person participial. Were one to only consider morphological forms, this markedness asymmetry would be somewhat surprising given the fact that the indicative mood in this dialect has a wider range of occurrence, i.e. a full paradigm, as compared to the participial mood.

We now turn to a more complex paradigm, that of transitive main clause verbs. We will see that again the same property - move a verb head only as much as needed - holds. For the sake of brevity, only singular agent paradigms are shown.

(14) **Labrador Transitive Declaratives** - (based on Smith 1977)

a. *Transitive Indicative*

		A G E N T		
		1s	2s	3s
P A T I E N T	1s		vamma	vânga
	2s	vagit		vâtit
	3s	vaga	vat	vauk
	1d		vattiguk	vâtiguk
	2d	vattik		vâtik
	3d	vâkka	vâkkik	vâgik
	1pl		vattigut	vâtigut
	2pl	vatsi		vâsi
	3pl	vakka	vatit	vait

b. *Transitive Participial*

		A G E N T		
		1s	2s	3s
P A T I E N T	1s		*	*
	2s	*		*
	3s	jaga	jait	janga
	1d		*	*
	2d	*		*
	3d	jâkka	jâkkik	jâgik
	1pl		*	*
	2pl	*		*
	3pl	jakka	jatit	jangit

In (14a) we see the indicative transitive paradigm. The shaded areas indicate

impossible forms in all dialects of Inuktitut.¹¹ In (14b) on the other hand, in addition to the lines, there are asterixes indicating ungrammatical forms. From (14a) we can see that these forms are not ruled out by deeper properties of the language, but are the result of impossible combinations of the participial mood and certain persons in this particular dialect. Once again we find that the use of participial mood paradigm, although less robust overall in terms of features, is in each instance less marked than its indicative counterpart. The latter always has the surprise or unexpected meaning alluded to above.

There are two crucial properties to observe here. First the markedness asymmetry exists only where both mood forms exist with the same phi-features. The second property to note is that this excess of mood forms always involves third person patients. This is especially clear in (14b), where we see that all the * forms involve either first or second person patients.

If we were to reconfigure our paradigms based on semantic markedness, with all the semantically unmarked forms grouped together, we would get the paradigms shown in (15).¹²

(15) **Labrador Transitive Declaratives - “real” paradigms**

a. *Transitive Mood: Unmarked*

		A G E N T		
		1s	2s	3s
P	1s		vamma	vânga
A	2s	vagit		vâtît
T	3s	jaga	jait	janga
I	1d		vattiguk	vâtiguk
E	2d	vattik		vâtik
N	3d	jâkka	jâkkik	jâgik
T	1pl		vattigut	vâtigut
	2pl	vatsi		vâsi
	3pl	jakka	jatit	jangit

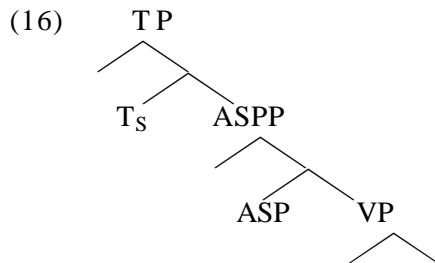
¹¹Inuktitut, like many ergative languages, does not permit reflexive double agreement (see Woolford 1999).

¹²In fact, for language teaching purposes, the charts in (13) are more useful.

b. *Transitive Mood: Marked*

		A G E N T		
		1s	2s	3s
P	1s		*	*
A	2s	*		*
T	3s	vaga	vat	vauk
I	1d		*	*
E	2d	*		*
N	3d	vâkka	vâkkik	vâgik
T	1pl		*	*
	2pl	*		*
	3pl	vakka	vatit	vait

Recall that all of the marked endings involve third person patients. That third person is a factor is familiar from our discussion of the intransitive paradigms above, where we saw that marked forms had a third person verb moving higher than seems syntactically necessary. The same phenomenon is behind the distribution of forms and markedness in the transitive paradigm. The derivational structure of these forms is shown in (16), a revised structure based on the analysis of Johns (1992).



The agent argument is merged in SPEC ASPP and all person features are possible here. However phi-features on the verb of the patient are checked in the higher position T_S .¹³ Only 1/2 patient features need to be checked in this position, however; as above, verbs with third person patient, not having higher level features, or perhaps not involving any features at all, are not required to move to the higher position. As a result, only verbs with 1/2 patients obligatorily move to T_S , so that only these verbs will require the indicative mood (and are ungrammatical with participial mood).

¹³See also Bittner and Hale (1996) for arguments that the patient in Inuktitut is structurally higher than the agent argument.

No marked semantics results from the appearance of indicative mood in these instances, since movement is triggered by the grammatical nature of the person features involved. Where 3 person patient features are on the verb, moving as far the ASP node suffices, and so the participial mood will be found. This provides us with the unmarked paradigm in (13a), where the participial and the indicative moods alternate throughout the paradigm, based solely on the person features of the patient.

What of the marked paradigm (15b)? This set involves third person patients with indicative mood, or higher level, morphology. The generalization is thus that only third person patient verb forms can appear in either participial or indicative mood, and that when they are in the indicative, they are marked. The markedness follows from the analysis since third person has no person features to resolve in the higher position. Once again we find that the apparent optionality of movement to the higher position is correlated with a marked semantics, as shown in (17).

- (17) a. taku-jaga
see-tr.part.1s./3s.
'I see him/her'
b. taku-vaga
see-tr.indic.1s./3s.
'I see him/her!'
[possible context: said after waiting for him/her]

In this section, we have seen that Labrador Inuttut verbal morphology exhibits a fine-grained interplay between structure and movement, and that in all cases movement is manifested through insertion of one morpheme rather than another in a linear series. In fact this is reminiscent of traditional notion of paradigm, where replacement is the operative characteristic. Languages without such morphological forms must necessarily indicate movement in some other fashion, i.e. through displacement. It is this alternative expression of structural movement to which we turn now.

3 Movement as Displacement: The Admirative Mood in Albanian

In the previous section we saw an instance where movement to a higher position was not triggered by feature checking of features of an argument but instead by the need to check a P-feature or less central feature. The feature in question was the surprise reading that is occasionally found in certain uses of the indicative mood in Labrador Inuttut. In this section we will examine a similar semantic property in Albanian.

The admirative or mirative mood is found in a number of languages (Albanian, Georgian, Turkish, etc) and is associated with surprise (see DeLancey 1997). Camaj (1984, 162), describing the admirative mood in Albanian states that it "exhibits formal and functional relations with the Indicative...but differs...in that the Admirative contains, aside from the observation of concrete action, the feeling on the part of the speaker of surprise or wonder."

Similar to the analysis presented above for the marked indicative forms in Inuttut, the admirative mood seems to be built upon movement of the verb to a higher position.

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