

University of Massachusetts Amherst

From the Selected Works of Emmon W. Bach

1970

Is Amharic an SOV Language?

Emmon W Bach



Available at: https://works.bepress.com/emmon_bach/19/

Is Amharic an SOV Language ?*

by EMMON BACH

1. Several years ago Joseph Greenberg (1963) set down a number of observations about the distribution of various grammatical features in a sample of diverse languages. Basic to his discussion was a division of languages into three order types: languages like English or Swahili in which the 'dominant order' of main sentence elements is Subject-Verb-Object (Type II), languages like Turkish or Japanese in which the dominant order is Subject-Object-Verb, (Type III), and languages like Maasai or Ilocano in which the order is Verb-Subject-Object (Type I).¹ Greenberg was able to show a high correlation between this basic subcategorization and a number of other properties such as the order of modifiers and nouns, affixes and bases, and the like. So far these observations remain merely that, facts crying out for a theory. Greenberg did not attempt to explain, for instance, *why* SOV languages typically suffix grammatical elements like case-markers.

A new variable is introduced in a linguistic theory which draws a distinction between 'surface' and 'deep' structure. Greenberg's statements refer to surface order, the actual sequence found in pronounceable sentences of a language. Transformational theory (as formulated, for instance, in Chomsky 1965) posits a set of more abstract structures in which the order of elements is related to surface order only indirectly, since various transformations can have the effect of rearranging these elements.² It is evident that in seeking an explanation for facts like those discussed by Greenberg in such a linguistic theory we need to consider the possibility that deep orders and surface orders might differ quite radically. We might even hope to make understandable, if not explain, some anomalous facts that show up in Greenberg's lists. It is apparent that the arguments for one or another arrangement of elements in the deep structures of a language might be quite indirect.³

2. If one approaches Amharic with Greenberg's paper in hand, one is struck by the number of times it seems to stand on the minority side with respect to generalizations like those given by Greenberg. The dominant surface order is clearly SOV. With certain exceptions to be noted in a moment, the verb form occurs at the end of its sentence or clause. Moreover, separate auxiliary verbs are placed after the inner or main verb, as we expect in an SOV language (Greenberg 1963: Universal 16). On the other hand, if we compare Amharic with Japanese (the Type III language with which I am most familiar), we find a number of striking dif-

* The research reported on here was supported in part by NSF Grant GS 2468, in part by the University Research Institute of the University of Texas at Austin. [I wish to express thanks to my Amharic informant, Miss Messeret Taddesse, and to P. Stanley Peters, Jr., and Marvin Bender for comments and suggestions about many of the details of this paper].

1 It would seem to be useful to distinguish a fourth type of so called 'free-word order' languages.

2 I shall not discuss here the question whether the deep structures posited by Chomsky are distinct from semantic representations, a question that has recently received a great deal of rather inconclusive discussion.

3 It is assumed without discussion here that the deep structures or semantic representations do include a specification of an abstract 'left-to-right' ordering, although this assumption has been called into question, e.g. in Staal, 1968. For a general treatment of the question see Bach, forthcoming. It should be noted that the main thesis of this paper, if correct, constitutes a direct counter-example to the hypothesis of 'invariant ordering' put forward in Sanders, forthcoming.

ferences. Although there are a number of postposed elements denoting spatial relations, like *wist* 'inside', *lay* 'top' etc., the more general relational elements of this sort are all prepositional: *bə* 'by' 'at', *kə* 'from, ablative relation', *yə* 'possessive' etc., *i* 'at' etc., *lə* 'dative' (compare Greenberg's Universal 4)⁴ Although Amharic is thus predominantly prepositional, the 'genitive-expression' always precedes the governing noun (against the tendency—'almost always'—reported by Greenberg, Universal 2, for the opposite order in prepositional languages). In comparison, the order is standard-marker-adjective, although the language is prepositional (Universal 22). Despite a quite elaborate system of agreement in gender, number, and person between subject and verb, and sometimes object and verb, there is no gender agreement between the adjective and the noun (Universal 31). If we count the affixed bound object form as a pronoun we have a counterinstance to Universal 25, which claims that if the pronominal object follows the verb, so does the nominal object. Of eleven Type III languages in Greenberg's sample of thirty, all but one (Burushaski) are exclusively suffixing. All six Type I languages have both suffixes and prefixes. The only exclusively suffixing languages that are not Type III are Finnish and Songhai. Amharic has both prefixes and suffixes.

In addition to the 'anomalies' just noted, which all relate to Greenberg's observations, I have noticed a number of other peculiarities. In Japanese and Turkish, titles and honorific forms of address follow the name (*Tanaka-san*, *Ibrahim-effendi*), in Amharic they invariably precede it: *Ato Kəbbadə* 'Mr. K.' The relative construction usually precedes the modified noun (as in Japanese), but alternative orders are possible in Amharic, particularly if the modified noun is indefinite. Alternative questions (*Do you want tea or coffee?*) occur as in English with the second verb missing, again contrary to the pattern of Japanese (*tea want or coffee want?* or *tea or coffee want?*). There are a number of constructions in which exceptions to the verb-end order are frequent or even preferred. One is the common pattern corresponding to an English cleft sentence: *the one cooking supper was the wife*, either in that order or with noun phrases interchanged: *the wife was the one cooking supper*. Another is the suppletive question: *yət nəw hotelu* 'where is the hotel.' Finally, I know of a number of languages which have agreement between the *object* and the verb by means of affixes on the verb (Bantu languages, Georgian, Maasai, Amharic). Amharic is the only one of order Type III. I know of a number of languages of order Type III (Japanese, Korean, Turkish, Persian, Hindi, Mongolian, Amharic). Again Amharic is the only one with such agreement.

The main thesis of this study is that the deep order of Amharic sentences is not SOV but SVO (or VSO).⁵ I shall present first the application of an argument formulated by John R. Ross in a paper at the 10th International Congress of Linguists (Ross 1967c) to Amharic, then some independent evidence for the conclusion drawn. For most of the facts noted above I have no explanation, but I shall suggest that the explanation for those facts may be found in part in this hypothesis about the deep order of Amharic. Thus, we shall see how general principles of linguistic theory may throw light on the analysis of a particular language, while this analysis itself may serve as a test and confirmation for the general hypotheses invoked.

4 In Appendix II, Greenberg lists only five examples, including Amharic, of Type III languages with prepositions, as against 55 languages or language groups with SOV order and postpositions.

5 My arguments will support the view that the relevant structures have the verb in the first position at the point when a number of rules apply. I have found no evidence bearing on the question whether this order itself is a deep or intermediate order. The data presented by Ross to be considered directly relates to Type II and Type III languages; no 'gapping' facts for VSO languages are given by him.

3. Ross (1967c) notes that a rule or process⁶ which he calls 'Gapping' seems to operate in a way that is directly correlated with the order of the verb relative to other elements in the verb-phrase. Gapping is the rule which in English allows the deletion of all but the first occurrence of an identical verb in coordinate structures, as in these sentences:

1. I ordered fish, and Martha, shrimp
2. I came by car, and my brother, by taxi

By Ross's hypothesis, Gapping works to the right (forward) in coordinated sentences with verb-phrase structures $[V\ NP]_{VP}$, to the left in structures $[NP\ V]_{VP}$. Ross claimed that only the following patterns were possible for arbitrary languages⁷:

- A. SVO SO (English)
- B. SO SOV (Japanese)
- C. SVO SO, SO SOV, SOV SO (Russian, German)
- D. SO SOV, SOV SO (Hindi)

For our purposes it is necessary only to concentrate on types B and D. On the assumption that Gapping is a rule that can be applied at any point in a derivation Ross proposed that the difference between languages like Japanese that could have only order B and those like Hindi that could have both the orders of D was to be accounted for by the hypothesis that the deep order of Hindi is SVO and that Hindi has a rule which puts the verb at the end of its clause. Thus Gapping could take place after the application of the verb-shift rule, in which case we will have SO SOV, but if it takes place before the application of that rule, we will have SOV SO.

Amharic is of the D rather than the B type. Thus if Ross is right, the deep order of Amharic sentences must be different from the surface order. Here are some examples of Gapping in Amharic:

3. ine bəməkina mətṭahu, wəndimme gin bəbabur mətṭa
'I by-car came, my-brother however by-train came'
- 3a. ine bəməkina, wəndimme gin bəbabur mətṭa (SO SOV)
- 3b. ine bəməkina mətṭahu, wəndimme gin bəbabur (SOV SO)
4. səwiyyəw bəkətəməw wiṣṭ allə, setiyyowa gin bagirbət wiṣṭ alləč
'the man in town (interior) is, the woman however in the country is'
- 4a. səwiyyəw bəkətəməw wiṣṭ, setiyyowa gin bagirbət wiṣṭ alləč
- 4b. səwiyyəw bəkətəməw wiṣṭ allə, setiyyowa gin bagirbət wiṣṭ
5. səwiyyəw bunna azzəzə, setiyyowa gin šai azzəzəč
'the man coffee ordered, the woman however tea ordered'
- 5a. səwiyyəw bunna setiyyowa gin šai azzəzəč
- 5b. səwiyyəw bunna azzəzə, setiyyowa gin šai

From these examples we must conclude either that Amharic is not a deep SOV language or that it is false that deep SOV languages can only gap from right to left. If we draw the latter conclusion, then Ross's argument breaks down and we must seek another explanation for the facts he has presented, assumed here to be correct.⁸ Thus it is important to look for possible independent evidence about the deep order of Amharic sentences.

⁶ Gapping is, strictly speaking, not a transformation, since it necessitates the use of a schema abbreviating an infinite set of rules.

⁷ The label 'O' must be taken in a very loose sense to include not only direct objects of the verb but also various complements, adverbials etc.

⁸ Investigation of a number of languages suggests that the facts given by Ross are incomplete. Thus, there are apparently languages in which no form of gapping occurs (Thai, Chinese) and at least one has been reported with the pattern SOV SO only.

4. Let us consider first some facts about 'possessive' or 'genitive' constructions (as in most languages a wide variety of relationships and syntactic sources merge in the reduced forms under consideration). There are two surface constructions that express this relationship. On the one hand there is a 'preposition' or prefixed bound form *yə*; on the other, a series of possessive suffixes that can be attached to the possessed noun (varying according to gender, number, person). It is the first type which is of interest here:

6. *yəne bet* 'my house' (*yə*+ine + bet)
7. *yəsəwiiyəw bet* 'the man's house'
8. *yəḵonjowa setiyyo lij* 'the beautiful woman's child'

Such constructions are presumably derived by reducing relative clauses with 'have' constructions (and no doubt other types of relative clauses). The 'have' construction in Amharic takes the following form

NP₁ NP₂ all- Af₂- Af₁

'Possessor' 'Possessed' 'be'-'subject agreement' 'object agreement' (The relative order of NP's is quite free, and I do not know what the proper underlying order for such constructions is. In relative clauses, with the shared NP deleted, it is impossible to tell what the underlying order was.) Thus we have

9. (ine) *bet alləñ* 'I have a house' (—ə = 3sm, —ñ = 1s)
10. *ato kəbbədə bet alləw* 'Mr. Kebbede has a house'

Relative clauses in Amharic are formed in general by using the same element *yə* prefixed to the verb form in the relative clause:

11. *betun ayyəhut* '(I) saw the house' (—u 'def.', —n 'def. accusative')
12. *bəkətəməw wistə betu allə* 'the house is in town' *betu bəkətəməw wistə allə*
13. *yayyehut bet bəkətəməw wistə allə* 'the house that I saw is in town' (—t object marker = —w in next example)
14. *bəkətəməw wistə yalləwin bet ayyəhut* 'I saw the house that is in town' (*yalləwin* = *yə* + *all* + *ə* + *w* + *n*)

I assume that the *yə* of the possessive forms, and the *yə* of the relative verb forms are identical and not just fortuitously homophonous for the following reason. If a preposition (*bə*, *kə*, *i*, *lə*, *wədə* etc.) comes to stand before *yə* in either usage, then *yə* is replaced by that preposition. (Because of the rules for vowel elision, it can happen that the presence of the preposition *i* is manifested only by the absence of *yə*. Thus *ayyəhut* can be an independent verb form or the result of *yə*— replacement and subsequent elision of *i*.) Compare the following:

15. *yəyohannis bet* 'John's house'
16. *bəyohannis bet wistə* 'inside John's house'
17. (ine) *yayyehut bet* 'the house that I saw'
18. (ine) *kayyehut bet wistə* 'from the house that I saw'

We know that this rule is not purely phonological because of the fact that *yə*-replacement does not take place if we have a preposition occurring before a word that happens to begin with *yə*: *bəyəkatiṭ wistə* 'in the month of Yekatiṭ'.

Now we are in a position to state the first argument for positing an underlying order different from the surface order. There are two parts to the argument: the first is that we are able to give a better explanation of the form of possessive constructions under the hypothesis that the relative clause has a verb-first order and the second is that we can explain the identity of the *yə* of possessives and the *yə* of the relative form of the verb in this way. Let us refer to the hypothesis that the verb stands first in relative clauses (and in general in underlying or intermediate structures) as Hypothesis I, the hypothesis that the underlying order is the same as

surface order as Hypothesis III (Roman numerals are mnemonic for position of the verb or order type as in Greenberg.)

Assume that a noun phrase with a relative clause has the form

$y\bar{a}$ [_S V X NP Y] NP or [_S ye V X NP Y] NP

with the two NP's meeting a condition of identity and $y\bar{a}$ functioning as a kind of relative particle. To account for possessive constructions we need a rule of Copula deletion, a rule attaching $y\bar{a}$ to the next element to the right—call it $y\bar{a}$ -attachment, and of course Verb-shift, a rule putting the verb form at the end of its sentence (clause), applying in that order. Thus for Example 6 *yāne bet* we have the (partial) derivation:

... $y\bar{a}$ all—	ine bet	bet ...	
... $y\bar{a}$ all—	ine	bet ...	(deletion of identical NP)
... $y\bar{a}$	ine	bet ...	Copula deletion
... $y\bar{a}$ + ine		bet	$y\bar{a}$ -attachment
			Verb shift (does not apply)

(For simplicity I omit affixes on verb forms in schematic examples, very likely they will not be spelled out at this point, anyway.) Regular vowel elision rules will give Example 6. Suppose that for some reason Copula-deletion does not apply, for instance if we have a perfective form of the verb (=nəbbər). Then $y\bar{a}$ -attachment will affix the particle to the verb and we will have examples like this:

19. ...ato kəbbədā yənəbbərəw bet... 'the house that Mr. K. had'

A number of alternatives are available under Hypothesis III. Suppose first that the form of a relative clause is just like the one given above, except that the verb stands in its surface order at the end of the clause. Then, no matter how Copula deletion (which is of course still necessary) is ordered we will be forced to give two rules for $y\bar{a}$ -attachment, one affixing it to a verb at the end of the clause, if there is one, otherwise to the first element in a noun phrase (note that $y\bar{a}$ is attached to adjectives, titles etc. as in examples like (8) or *yato kəbbədā bet* 'Mr. K's house'). What we miss in this analysis is the generalization that $y\bar{a}$ is attached to the next lexical element, no matter what it is, and since we have to have two rules, we fail to explain the identity of the two elements in the two rules. Of course, we have to pay for this analysis by adding a Verb-shift rule. To the extent that the arguments given below converge on the conclusion that there should be a Verb-shift rule we can claim independent evidence for the hypothesis that such a rule is necessary to explain the Gapping facts noted above. As far as I can determine, other alternatives under Hypothesis III (different positioning of $y\bar{a}$ — etc.) suffer from the same defect that the behavior of $y\bar{a}$ as a clitic, albeit at an abstract level of analysis, must be accounted for in several unconnected rules.

5. For our second argument, let us recall the necessity of a rule of $y\bar{a}$ -replacement to account for the fact that a preposition is attached to a following element that begins with $y\bar{a}$ at a more abstract level. This occurs both with the possessive $y\bar{a}$ and the ye affix on Verbs. Under Hypothesis I we need only assume that this rule applies after $y\bar{a}$ -attachment and before Verb-shift in order to get examples like 16 and 18. The preposition will then be shifted along with the verb. Consider the alternatives under Hypothesis III. Once again it would be necessary to split the rule into two cases, one for immediately adjacent instances of $y\bar{a}$, the other for $y\bar{a}$ which is attached to the verb at the end of a sentence. But there is a much stronger argument against that alternative.

Suppose that there is a sentence in which a noun phrase contains a relative clause inside a relative clause, that the outer relative clause is reduced by Copula deletion, and further that the whole noun phrase stands in a prepositional phrase, after NP deletion schematically:

Prep [_{NP}yə [_Sall [_{NP} yə [_S Verb ...] NP]] NP]

That is, a phrase that would translate 'in the house of the man that I saw' or 'in the man that I saw's house'. In Amharic we have

20... (ine) bayyəhut səwiyye bet wist ...
literally '(I) in-saw man house'. If the top relative clause is not reduced we will have

21... (ine) yayyəhut səwiyye balləw bet wist...
with the preposition *bə*, as expected, attached to *all*. Stated informally, the preposition must replace the *yə* on the last verb form in the relative clause, without regard to the relationship of that verb to the head of the noun phrase directly connected to the preposition. But if the verb is positioned at the end of the clause at the point in a derivation where *yə*-replacement applies, it is impossible to state this rule as a transformation (in Chomsky's sense), since it is necessary to use logical quantification in the part of the structural description corresponding to the phrase 'the last verb form in the relative clause':

... [_S X Verb Y] NP ...where there is no Verb in Y

Thus, not only does Hypothesis III force us again to miss a generalization about *yə*-replacement by requiring two rules, but one of these rules can only be stated by breaking the constraints on linguistic theory that have been postulated in the past.

Let us look at the last argument from a different point of view. We are considering two analyses of Amharic and asking about the way in which a certain puzzling fact about relative clauses is to be explained under the two analyses. Under one analysis it is necessary to weaken the general theory in order to state the rule at all, on the other it is not. Thus *if* the general theory is correct, we must choose Hypothesis I over Hypothesis III (of course, only as between the two alternatives we are considering, including the whole set of specific assumptions about these rules, the details of underlying structures, etc.). But we have no a priori guarantee that the theory is correct. In other words, we have to ask whether or not the general theory *should* be modified. And then we are thrown back to asking about independent reasons for choosing Hypothesis I. If we find them, then our theory can in some small measure chalk up a success in explanatory power. But we already have such independent evidence: the arguments about *yə*-attachment already given, the fact that we would likewise miss generalizations about *yə*-replacement under Hypothesis III, and Ross's Gapping argument itself.

There is, however, another kind of argument for the rules we have posited so far. I believe most linguists would agree that examples like 21, are rather strange. We can try to describe the situation by stating a strange rule (and, as we have seen, one that is illegitimate within present theory). Under Hypothesis I, however, these facts fall out by the application of rules that seem quite 'natural' and can be paralleled by rules in other languages. Many languages have rules of clitic attachment and such rules involve the attachment of the clitic to adjacent items, not to arbitrarily far removed and deeply embedded items. Some languages show a different order of verbs and other elements in various kinds of constructions and hence require the postulation of verb movement rules. Thus, in German we must either assume that the verb is positioned as in English and have a rule moving it to final position in subordinate sentences or assume it is given initially in end position and shift it to the second position.⁹ In other words, we can argue that Hypothesis I is to be preferred because Hypothesis III requires the use of less 'natural' rules than does Hypothesis I. The trouble is that we have no theoretical basis for such an argument

9 The second of these alternatives was defended in Bach 1962, Bierwisch 1963. Ross (1967c) points out that his Gapping hypotheses require the first alternative.

at present. Eventually, I believe we must develop such ideas of naturalness in syntax. For the moment we can appeal only to our intuitions as linguists.¹⁰

Two details about our explanations of phrases like Example 20 need to be discussed (repeated here together with the schematic analysis of the underlying form)

Prep [_{NP} *yə* [_S all [_{NP} *yə* [_S Verb ...] NP]] NP]

20. ...ine bayyəhut səwiyye bet wiş...

Notice that after deletion of *all*, such phrases will have two instances of *yə*. Thus it would seem to be necessary to add a special rule to delete one of them. But I know of no reason not to suppose that *yə* is a preposition, like *kə*, *bə*, *lə*, *i* etc., so that the rule of *yə*-replacement will apply with *yə* itself replacing *yə*. There is independent evidence that we need to allow such a rule to apply to sequences of *yə*'s. Suppose we have a string of noun phrases each standing in the 'genitive' relationship to the next. Then every *yə* but the first is deleted (Armbruster 1908: 180-181), Cohen 1936: 78-79).

22. *yəşumu lij bet* 'the chief's child's house'

Furthermore, if there is an intervening adjective modifying a noun phrase consisting of a genitival expression, then the replacement rule will not operate. Armbruster cites, for instance, (my transliteration):

23. *yətillik şum bet* 'the house of a big chief'

24. *tillik yəşum bet* 'large chief's house' (i.e. chief's house which is large)

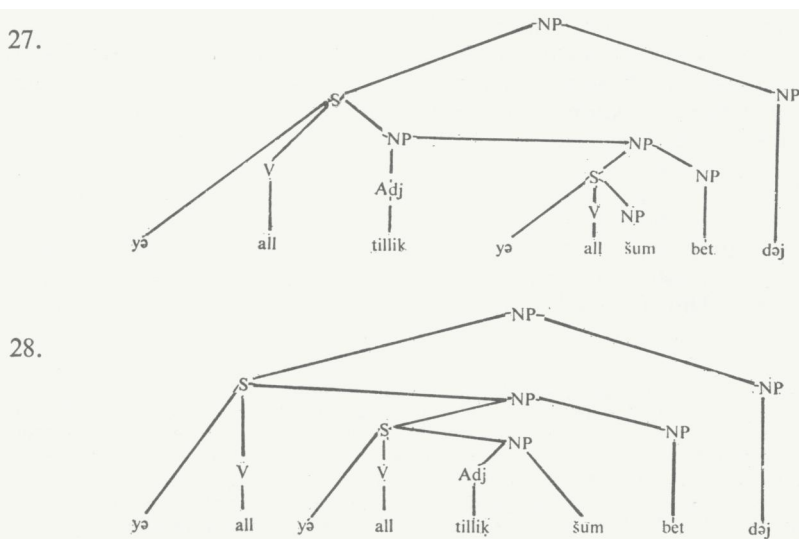
If a phrase like (24) is itself a modifier of a noun, we will have

25. *yətillik yəşum bet dəj* 'the door of a large chief's house'

while with phrases of type (23) the second *yə* will be deleted:

26. *yətillik şum bet dəj* 'the door of the house of a big chief'

These two phrases have the approximate underlying structures (27) and (28) respectively



10 Recent work by Peters and Ritchie (1969 and the works referred to there) has shown that many substantive constraints must be added to the theory of transformational grammar before a number of central issues, such as the existence of a universal base, can even be raised as empirical questions.

(The exact analysis of the adjectival modifiers of nouns is not at issue here. If they are derived from relative clauses it is necessary to ensure that the particle *ye* is deleted when the reduction of such clauses takes place.) Now if our *ye*-replacement rule has roughly the form

29.	X	Prep	yə	Y
	1	2	3	4
	1	Ø	2	4

with *ye* itself analysed as a preposition (or some such equivalent term) it will apply on the second cycle (after *all*-deletion) to (28) but not to (27), giving the correct results.

The second problem in our explanation arises when we ask about the place of Verb-shift in the sequence of rules. In order for our explanation to work it is necessary to assume that Verb-shift is not a rule that applies cyclically in the usual way. If it did apply cyclically, *yayyəhut* in Example 20 would have moved to the end of its clause and we would be left with all the difficulties of Hypothesis III when we reached the cycle in which *yə*-replacement would operate. Thus, we must either give up the advantages gained by positing an underlying order distinct from the surface order, or admit the possibility that the notion of cyclic ordering is wrong or incomplete. I shall make here the latter choice, since fairly convincing arguments have been given for the assumption that some transformations—'last-cyclic' rules—must be constrained to apply only after the last cycle of derivation is reached (see, for instance, Ross 1967a). I have been unable to find any independent reasons for the assumption that Verb-shift is last-cyclic, nor any arguments against it. It does seem likely that some justification might be found, however, since rules like Verb-shift in many languages seem to act differently in dependent and independent sentences. Thus, in German verbs occur at the end of the sentence in dependent clauses; in English only nonembedded questions have inversion, and so on. It seems as if we might ultimately explain these differences on the basis of last-cyclic versus ordinary cyclic rules.¹¹

6. Everything that has been said up to now supports Hypothesis I, but it would equally support another hypothesis in which we set up underlying structures which are exact mirror images of those we have posited, that is, we assume a verb-end order, but place the relative clause after the noun phrase that it modifies, and let *yə* and prepositions follow¹²

30. NP X V *yə* Prep

In this way we avoid the necessity of a Verb-shift rule, but we are forced to give a rule for preposing prepositions. In favor of this analysis is the fact that sentences do occur in which the relative clause follows its noun phrase, especially with indefinite noun phrases.¹³ Thus it would be necessary in any case to have a rule repositi-

11 Joseph Emonds, in as yet unpublished work, has put forward a thesis that the output of transformations is controlled by the possible structures given by the base rules, that is that no transformation can create a structure that does not find a counterpart in a deep structure. This thesis is claimed by him to hold for all but a well defined class of rules, namely those which apply to the 'highest' sentence. Notice that the class of exceptional rules posited by Emonds is not co-extensive with the class of last-cyclic rules, which may, as in our example apply to embedded sentences, but only on the last cycle. It would be interesting to see whether his exceptional rules are not in fact the last-cyclic rules.

12 This possibility was suggested to me by Paul Stanley Peters, Jr.

13 Leslau (1945) claims that this order is not possible in Amharic, but my informant was quite consistent in admitting the possibility. I do not know to what extent this was a matter of idiolect, perhaps the phrases in question were rather appositional 'afterthoughts'.

tioning the relative clause. I am inclined to think that it is correct to assume that relative clauses begin their life in Amharic in this position (but with *yə* preposed to the clause) and we shall consider the evidence for this in a moment. But what arguments can be given against structures of the form (30)? There are two. First consider the rules for affixing *yə* to a verb or to the first element in a possessing noun phrase. Even though we can order *all*-deletion before *yə*-attachment, it is impossible to state *yə*-attachment as a single rule, since in one instance we need to move it around a verb, in the second around a noun phrase. There are corresponding difficulties with *yə*-replacement. The second argument is that under Hypothesis I we have a 'natural' explanation for the fact that *yə*- is a prefix, whereas under the other hypothesis it is simply an accident.

7. We have seen that the assumption of a difference between deep and surface order provides an explanation for some rather striking facts about Amharic syntax. Let us next note a fact about the relative position of prepositional affixes in simple and compound verb forms. In sentences with a prepositional phrase inside a relative clause the verb has affixed to it a reflex of a preposition of the form *-lla-* or *-bba-*. The fact that these forms are suffixed to verbs supports the hypothesis that the verb stands ahead of the prepositional phrase in underlying forms. As we have seen, a preposition from the outer sentence is prefixed to the verb form in a relative clause:

31. *issu kənorəbbət bet (wist) wəttičče hedku*
'I walked out of the house in which he lived'

Here the preposition *kə-* comes from the outer sentence:

32. *kəbetu (wist) wəttičče hedku*
'I walked out of the house'

While the inner sentence has the form

33. *bəbetu (wist) norə*
'he lived in the house'

However, if the relative clause has a compound verb form then the outer preposition is prefixed to the auxiliary form and we have a reversal of inner and outer prepositions:

34. *issu yinorəbbət kənəbbərəw bet (wist) wəttičče hedku*
'I walked out of the house in which he was living'

In order to understand this fact, we need to ask about the underlying structure of sentences with auxiliary forms. Ross (1967b) has argued convincingly for the interpretation of auxiliary elements in English and German as verbs with sentential subjects. If we make such an assumption for Amharic, we will have structures of the following sort:

35. $\text{Prep} \begin{pmatrix} +\text{Aux} \\ +\text{V} \end{pmatrix} \quad [_{\text{NP}} \quad [_{\text{S}} \text{V} \quad \text{X}]]$

Since the auxiliary is a verb it will be subject to Verb-shift but it will be the auxiliary rather than the main verbal element that will carry along the outer preposition to the end of the relative clause. There is independent motivation for such an analysis in the following facts. Amharic verbs exhibit agreement with the subject, and optionally with a definite object. In simple verb forms the affixes occur in that order as suffixes:

36. *fəlləghuṣ 'I wanted you (f.)'*

where *-hu* is the first person singular subject suffix, *-ṣ* the feminine second singular object suffix. But in compound verb forms such as the imperfective the object suffix precedes the auxiliary *all* which bears the subject suffix:

38. ifəlliḡišalləhu 'I want you (f.)'

In both situations we have affixes occurring in the order 1...2 in simple verbs, but in the order 2...1 in compound verbs. The assumption of a second level of embedding can account for the difference, but only the assumption of underlying verb-first order with subsequent verb shift explains why the outer preposition is prefixed to the verb (or auxiliary) but the inner one suffixed.

8. There are several further facts about Amharic which might support our hypothesis, but without a more detailed theory of Amharic syntax the argumentation must remain rather speculative.

We noted above that our hypothesis provides a rather neat explanation for the distribution of prepositions: they are attached to a noun phrase in constructions from which a verb has been deleted, but are prefixed to the final verb in the subordinate clause. We find the same general distribution for a number of conjunctions like *ində*, *iyyə*, etc. (Cohen 1936: 298-306). Thus *ində* 'like, as' is prefixed to a noun phrase in sentences like (39), but to the verb in sentences like (40):

39. yohannis indabbatu gəzza 'John ruled like his father'

40. y. abbatu indegezza gəzza 'J. ruled like his father ruled'

But in order for facts like these to constitute independent evidence for our hypothesis it would be necessary to show that the attachment of such conjunctions resulted from a different rule than the rule affixing ordinary prepositions. Since a number of prepositions are used as conjunctions, it is not at all evident that a separate rule is involved.

It will have been noted from some of the examples above that definiteness in nouns is marked by a suffix *-u* (occurring after vowels as *-w*). If the noun is modified by one or more adjectives, however, the first adjective receives the suffix and the noun is marked. If there is a full relative clause then the noun is unmarked and there is a suffix on the verb (regardless of the definiteness of the phrase as a whole):

41. lijū 'the child'

42. tillikū ḡonjo lij 'the big beautiful child'

43. tillikinna ḡonjo yəhonəw lij 'the/a child who is big and beautiful'

When a definite noun phrase is the direct object of a verb it takes a suffixed *-n* and this suffix is attached to whichever of the three elements mentioned above carries the definite suffix. Thus, the objective forms of the three phrases above take the following shape:

44. lijun

45. tillikun ḡonjo lij

46. tillikinna ḡonjo yəhonəwin lij

A plausible explanation for this state of affairs can be given under Hypothesis I. Suppose that there is an underlying definite article and that a noun phrase with a relative clause has this shape:

47. Def N yə S

Repositioning the relative clause (with its verb in the head position) we simply attach the definite article as a suffix to the next lexical item. If there is a verb, then the definite article will have as reflex the definite object marker on the verb. If the verb has been deleted in an adjectival construction, the article will be attached to the first adjective. If there is no relative clause, then it will be suffixed to the noun itself. There are a few arguments for the additional assumptions made above. For

the presence of the definite article as the first element of a noun phrase we can cite the fact that the explicit indefinite form (the word 'one') as well as various kinds of quantifiers occur in that position. Nothing hinges on the position of the relative clause after its head noun, of course. But as mentioned above, it is necessary either to position the clause there and move it in front of the noun, or to have an optional rule moving it in the opposite direction. My arguments for the former choice are again rather speculative. If the analysis of relative clauses as consisting of *yə* followed by the clause is accepted we still need to ask why *yə* stands in that position. To answer that question, in turn, we need to ask what *yə* actually is. We have seen that it acts derivatively like a preposition. I conjecture that *yə* is actually a relative pronoun and that its position in the clause results from a relative pronoun movement rule. In general, relative pronouns are attracted to the front of a clause when the clause follows the nominal head. Is there any independent evidence that *yə* actually undergoes movement? There is some reason to suspect that this is correct in the fact that it is impossible to form a relative clause from a noun phrase which is itself in a relative clause. The following is ungrammatical.

48. *yibala yənəbbərəwin asa yayyēhut lij tamwal

‘*the child that I saw the fish that (he) ate is sick’

Ross (1967a) proposed that the ungrammaticality of examples like the English gloss for (48) was to be explained by a general principle restricting movements of elements across variables out of sentences embedded in noun phrases with lexical nouns as heads (the ‘complex noun phrase constraint’), in particular, out of relative clauses. The ungrammaticality of (48) in Amharic can be explained on the basis of the complex noun phrase constraint only if some actual movement occurs. (Note that this argument also militates against a hypothesis that we have not considered, namely that *yə* is simply attached to verb forms by the relative clause rule.)

9. All the facts we have considered, including the facts about Gapping from which we began, point toward the conclusion that the characteristic SOV order of Amharic sentences is a feature of surface rather than deep syntax. There is, of course, an obvious historical reason for this state of affairs. Comparative Semitic evidence alone would lead us to conclude that the Ethiopic Semitic languages have undergone a syntactic change and that originally the verb was positioned at the head of the sentence. Thus we can assume that (presumably under the influence of the Cushitic languages, see Leslau 1945) the Verb-shift rule was added to the grammar of Amharic at some point in the past. But we still need to ask why the change was the addition of a transformation, rather than a change in the base rules. One explanation might be that the influencing or substrate Cushitic languages had a transformational rule of the same sort, and that we have to do with a simple case of rule borrowing. I do not know if there is any evidence for such a rule in Cushitic. A second possibility is that syntactic change must proceed first of all by the addition of rules. Since it is meaningless to speak of adding new base rules, the only possible change would be the addition of a transformation. But this ‘explanation’ is really only the elevation of the particular hypothesis to the status of a general principle and amounts to little more than question-begging. The question is: why did a certain change take the form of the addition of a transformation rather than a change in the base rules? We cannot answer this question by saying, in effect, ‘because that is the only change that could have taken place.’ But there are two alternative explanations that might be offered for the fact that Amharic changed by the addition of a transformation. Given the assumption that a language is going to change so that its surface structures appear more like the surface structures of some other language, it seems reasonable to expect that the minimal alteration of the grammar that would have the desired effect would take place. The addition of a late rule (in fact, as

we have argued, a last-cyclic rule) will entail many fewer changes in the grammar than would a radical change of deep structures, since the latter change would require many changes in the form of particular transformational rules. However, this line of reasoning depends on the assumption that the form of transformations is separately determined for each, that is, that there could not be global changes of the form of rules that would follow from changes in deep structures. A second explanation might be that the rules of the base are, in fact, universal, and hence that a change in base rules is in principle impossible. Aside from the difficulties associated with such hypotheses in current linguistic theory (see the studies mentioned in footnote 10), if we make this assumption here we will have to give up Ross's explanation of the difference between languages like Amharic and languages like Japanese, since the difference can no longer be attributed to a difference in deep order. The one thing that we can say with reasonable assurance is that we are just beginning to scratch the surface in asking questions of the sort raised here.

References

- Armbruster, C.H. 1908. *Initia Amharica*. Cambridge.
- Bach, Emmon. 1962. 'The order of elements in a transformational grammar of German.' *Language* 38.263—269.
- Bach, Emmon. Forthcoming. 'Abstract order in base structures'.
- Bierwisch, Manfred. 1963. *Grammatik des deutschen Verbs*. Berlin. (= *Studia grammatica* II)
- Chomsky, Noam. 1965. *Aspects of the theory of syntax*. Cambridge, Mass.
- Cohen, Marcel. 1936. *Traité de langue amharique*. Paris.
- Greenberg, Joseph H. 1963. 'Some universals of grammar with particular reference to the order of meaningful elements.' In Joseph H. Greenberg, ed., *Universals of Language*. Cambridge, Mass. (I have used the revised edition, 1966.)
- Leslau, Wolf. 1945. 'The Cushitic influence on the Semitic languages of Ethiopia. A problem of Substratum.' *Word* 1. 59—82.
- Peters, P. Stanley and Robert W. Ritchie. 1967. 'A note on the universal base hypothesis.' *Journal of Linguistics* 5. 150—152.
- Ross, John R. 1967a. Constraints on variables in syntax. M.I.T. doctoral dissertation.
- Ross John R. 1967b. 'Auxiliaries as main verbs.'
- Ross John R. 1967c. 'Gapping and the order of constituents.' Paper presented at the 10th International Congress of Linguists.
- Sanders, Gerald. Forthcoming. 'Invariant Order.'
- Staal, J.F. 1967. *Word order in Sanskrit and universal grammar*. Dordrecht.