

THE SYNTAX AND SEMANTICS OF THE MORPHEME *ni*
IN KIVUNJO (CHAGA)*

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This paper discusses the distribution of the morpheme *ni-* a pre-subject marker element, in KiVunjo. It is claimed that this morpheme predictably appears in syntactic/semantic constructions involving the speaker's assertion of a proposition, and is absent in non-assertions, or when an assertion cannot be made. This morpheme's similarity to the copula, *ni*, is also discussed, and syntactic arguments are given to establish a derivational relationship between the two.

1. INTRODUCTION

In KiVunjo, a dialect of KiChaga spoken in northern Tanzania, the morpheme *ni-* (phonetically \bar{n}) appears in certain syntactic/semantic contexts, but not in others, as an element immediately preceding certain verbal subject prefixes. This paper is an attempt to provide a syntactic and semantic characterization of the contexts in which this *ni* occurs and in which it alternates with \emptyset . I hope to show that the distribution of this element is *not* idiosyncratic and arbitrary and that the alternation is an instance of a rule-governed phenomenon. The distribution will be shown to depend on such semantic features as the presence or absence of assertion, certainty, and presupposition, as these are found in the semantic representations of sentences. In a later discussion, I will propose an abstract analysis which relates this pre-verbal *ni* to the phonologically similar copula, also *ni*, and discuss the evidence in favor of such an analysis.

1.1. Morphology and abbreviations. KiVunjo is a Bantu language and

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has the following features relevant to this discussion: the presence of subject markers (SM's), tense markers (T), negative markers (NEG), and object markers (OM's) which precede the verb root; and the usual system of class markers (CM's) or prefixes preceding the nominal root. Additional notational abbreviations are Q for question, WH for WH questioned elements. When subject markers are listed for person, the usual "1 sg" for "first person singular" will appear, etc. Subjects agree with verbs in class and/or person marking.

2. Alternations of Pre-Verbal ni and Ø

2.1. Introduction and examples. The pre-verbal morpheme ni (henceforth pv ni) is referred to as a "stabiliser" in the discussion by Nurse and Phillipson [1977] in Old Moshi, another dialect of KiChaga. As in Old Moshi, the pv ni appears segmentally as \bar{n} before vowel-initial verb prefixes in KiVunjo; other verbal prefixes show optional lengthening of the initial consonant and deletion of \bar{n} . The suprasegmental effects of the morpheme seem to parallel those found in Nurse and Phillipson's study, and so are not dealt with in this work. However, it is not the case that pv ni appears before all vowel-initial verb prefixes. In fact, only second and third person singular subject prefixes u and a respectively appear with pv ni. Compare sentences with these prefixes to forms involving the vowel-initial subject prefixes for classes 3 and 9, u and i respectively:

- (1) a. Ndesamburo n-- a- le-soma ki- tapu
 pv ni SM 3sg- T- read CM7- book
 'Ndesamburo read a book'
- b. (iyoo) n- u- le-soma ki- tapu
 (you) pv ni- SM 2sg- T- read CM7- book
 'you read a book'
- c. m- foo u- le- Faa
 CM3- river SM C3--- T-- -smell bad
 'the river smelled bad'
- d. n- jofu i- le- Faa
 CM9 elephant SMC9 T smell bad
 'the elephant smelled bad'

Thus, although the 2nd person singular subject prefix u and the class 3 subject prefix u are segmentally and suprasegmentally similar, only the former is preceded by pv ni. The subject prefixes for classes 3 and 9 never surface with pv ni. The remainder of this paper will therefore treat the cases in which pv ni appears and in which it alternates with Ø; this happens only when 2nd and 3rd singular prefixes are involved.¹

¹There are certain tenses for which the findings of this paper do

2.2. Assertion contrasts. Compare now the neutral affirmative examples of (1a-b) with the following negative sentences:

- (2) a. Ndesamburo a- le-soma ki- tapu pfo
SM 3sg T read CM7 book NEG

'Ndesamburo did not read a book'

- b. (iyoo) u- le-soma ki- tapu pfo
(you) SM 2sg T read CM7 book NEG

'you did not read a book'

The above sentences do not appear with *pv ni*, and would be ungrammatical for the intended reading were they to do so, even though the subject prefixes are the 2nd and 3rd singular markers. We might tentatively propose then that in affirmative sentences, *pv ni* is present, but in negative sentences it is not.

In the neutral yes/no questions in (3a-b), we find again that no *pv ni* appears:

- (3) a. Ndesamburo a- le- soma ki- tapu
SM 3sg T read CM7 book

'did Ndesamburo read a book?'

- b. (iyoo) u- le- soma ki- tapu
(you) SM 2sg T read CM7 book

'did you read a book'

Sentences with *pv ni* in these examples would be ungrammatical for the intended reading.

If we consider our examples so far, we may claim that the appearance of *pv ni* is determined by the semantic parameter of so-called "assertion vs. non-assertion". Simple affirmative sentences are "assertions", while negatives and questions are "non-assertions", a familiar if not explicit distinction noted by modern traditional grammarians (cf. Quirk, Greenbaum, et al. [1972]). According to this, *pv ni* appears in assertive contexts whereas \emptyset occurs in non-assertive contexts.

not apply. In such cases, the *pv ni* either fails to appear, or fails to alternate with \emptyset , at least along syntactic or semantic lines. I am concluding then that the appearance of *pv ni* in those examples is not related to the analysis presented in this paper, and may be due to other factors including memorization of non-rule governed phenomena. I am also not including discussion of *ni*, the negative word, nor of *ni* the locative marker. Pre-verbal *ni* and copular *ni* are heard as beginning with a retroflexed *n*, which I have not indicated for typographical convenience.

2.3. Related semantic parameters. The situation is not so simple as that described above. For example, the sentences in (4a-d) are all questions and therefore "non-assertive", but as we see, some contain *pv ni* and others do not.

(4) a. Ndesamburo n- a- le- ona ki- tapu wai? lyee.
pv 3sg SM T see CM7 book Q

'Ndesamburo saw the book, didn't he?' 'yes'
["You mean it? He saw the book?"]

b. Ndesamburo a- le- iFa na numba pfoee? Ote.
SM 3sg T enter in house Q

'Ndesamburo didn't enter the house, did he?' 'no'

c. Ndesamburo n- a- enda mcho? lyee.
pv ni SM 3sg go Adverb/Q

'Ndesamburo has gone, hasn't he?' 'yes'

d. m- ana n- a- keru mesa- ni wai?
CML child pv ni SMCL(3sg) be table Locative Q

"So, as we were saying, the child is on the table, right? (Well...)"

It seems that when the force of the yes/no question--by which we mean the speaker's and hearer's expectations as to the truth of the proposition and/or the response to the question--is affirmative, the *pv ni* appears. When an expectation of negation exists, no *pv ni* appears. Thus, the words for 'yes' and 'no' appear after sentences (4a-c); these are the natural and expected responses to such questions. Sentence (4d) is an additional case in which the speaker has been previously interrupted, and then decides to return to his narrative. As a lead-in type question, it invites the hearer to listen and is not a "non-assertion".

A similar and perhaps related alternation between *pv ni* and \emptyset in subordinate clauses seems to correspond to degrees of certainty expressed by the speaker concerning the truth of the proposition of that clause. Consider sentences (5a-d):

(5) a. ni wasi n- u- le- waawa m- du
is clear pv ni SM 2sg T kill CML person

'it is (abundantly) clear that you killed a person'

b. ni wasi u- le- waawa m- du
is clear SM 2sg T kill CML person

'it is (less certainly) clear that you killed a person'

c. kupfa n- u- le- iwa nguo tsi
reason pv ni SM 2sg T steal clothes those

n- o-² chi- kap- o
pv ni SM2 sg T beat PSV

'because you stole those clothes, you will be beaten'

d. kupfa u- le- iwa nguo tsi n- o- chi-kap- o
reason SM2 sg T steal clothes those pv ni SM 2sg T beat PSV

'because you stole those clothes you will be beaten'

Sentences (5a) and (5c) contain *pv ni* in the subordinate clause, whereas sentences (5b) and (5d) have \emptyset before the subject prefix *u*. These morpho-syntactic differences correspond to a somewhat subtle semantic contrast between the speaker's belief in a greater or lesser degree of certainty concerning the validity of the proposition. Thus, sentence (5a) is appropriate when the speaker wishes to declare that "it is clear that you certainly killed a person"; sentence (5b) does not carry such a degree of certainty and is appropriate as a less accusatory statement. In fact, with a slight difference in intonation, (5b) can be uttered as a question, which is, of course, a further weakening in the degree of certainty being expressed. The same or similar results obtain for sentences (5c-d), both fully grammatical but with slightly different shades of meaning. If the speaker is certain that the addressee stole the clothes, he utters (5c), the form with *pv ni*. On the other hand, if a speaker is more reluctant and less sure of his facts, he might utter (5d), betraying his uncertainty about the facts, without *pv ni*. Thus, the appearance of *pv ni* correlates with a greater degree of certainty or a greater intensity as to the firmness of belief in the proposition held by the speaker; the absence of *pv ni* correlates with less certainty and firmness.

2.4. Summary: assertion, force, and certainty. To summarize, then, the morpho-syntactic alternation involving *pv ni* and \emptyset is matched by a semantic alternation between the parameters of "assertion/non-assertion", "positive/negative force" of yes/no questions, and "greater/lesser certainty" concerning the validity of propositions in subordinate clauses. In each case involving these semantic parameters, the appearance of *pv ni* corresponds to the more affirmative, assertive pole of the semantic scale, whereas the absence of *pv ni* is found on the less affirmative, non-assertive pole. In a complete syntactic/semantic characterization of the language, these parameters would be related to the *pv ni*/ \emptyset alternation, but it is not my intention to provide such a treatment. One could envision the process of mapping semantic features onto the morpho-syntax of the language by providing rules which relate semantic representations marked, say, [+ASSERTION], to surface structures with *pv ni*. Semantic representations marked as [-ASSERTION] do not

²I am not certain of the underlying representation of this form, and whether or not it should be ultimately derived from /ni---na---u.../, i.e. pre-verbal *ni* followed by *na*, an hypothesized future marker, which coalesces with a *u* to produce *o*. These details do not affect the point of the discussion.

trigger the rule producing *pv ni*, etc. It would remain then to relate the additional semantic parameters of "positive/negative force" and "greater/lesser certainty" to the overall morpho-syntactic pattern, but this seems reasonable and attainable. We shall return to these points later.

3. Presuppositions, Relative Clauses, and Non-alternating *pv ni* and \emptyset

There are some additional data which provide further evidence for the above proposals, and which also provide the basis for an interesting more abstract analysis relating *pv ni* to copular *ni*. These data concern relativization, and it is to this that we turn in the following sections.

3.1. Relativization. Relative clause formation in KiVunjo is straightforward: the head NP is followed by a relative marker (which is identical to a demonstrative element).³

- (6) a. wa- soro w- o wa- i- cha wa- le-kora ky-elya
 CM2 man CM2 REL SMC2 T come SMC2 T cook CM7 food
 'the men who are coming cooked food'
- b. n- a- le- ona ki- te ki- lya ngi- le- ki- kapa⁴
 pv ni SM3 sg T see CM7 dog CM7 REL SM 1sg T OM CM7 beat
 'he saw the dog which I beat'

Of particular interest to this discussion are the examples in which embedded relative clauses involve 2nd and 3rd singular subjects. Consider the following:

- (7) a. m- soro u- lya a- i- cha n- a- le- kora ky- elya
 CM1 man CM1 REL SM3 sg(C1) T come pv ni SM3 sg T cook CM7 food
 'the man who is coming cooked food'
- b. ngi- le- ona ki- te ki- lya Ndesamburo a- le-kapa
 SM 1 sg T see CM7 dog CM7 REL N. SM 3sg T beat
 'I saw the dog which Ndesamburo beat'

³The exact status of this element is not certain. It is undeniably found as a demonstrative element, but whether it is a demonstrative in this case or is in fact a relative marker is far from clear. Preliminary findings concerning multiply-embedded relative clauses suggest that it is probably functioning as a relative marker, but this is being investigated.

⁴The presence of the object marker in this example does not affect the point concerning *pv ni*, but it is another area which is not well understood and is being investigated.

(7) c. ngi- le- ona ky- elya ki- lya u- le- kora
 SM 1sg T see CM7 food CM7 REL SM2 sg T cook

'I saw the food which you cooked'

What is crucial in these examples is that *pv ni* is not present in these affirmative examples of embedded restrictive relative clauses. The *pv ni* before the verb of the relative clause would render the sentences ungrammatical. The following negative embedded relative clauses also do not and must not appear with *pv ni* on the verb:

(8) a. m- soro u- lya a- la- le- cha n- a- le-kora
 CM1 man CM1 REL SM 3sg(C1) NEG T come *pv ni* SM 3sg T cook
 ky- elya
 CM7 food

'the man who did not come cooked food'

b. ngi- le- ona ky- elya ki- lya u- la- le- kora
 SM 1sg T see CM7 food CM7 REL SM 2sg NEG T cook

'I saw the food which you did not cook'

Thus, no relative clauses appear with *pv ni*. These data then falsify a putative hypothesis in which we maintain that all "affirmative" clauses trigger the appearance of *pv ni*, while non-affirmative clauses do not. Nor can the relevant parameter be "main vs. subordinate clause" (at least in the traditional meanings of these terms), since, as we have seen, complement clauses may have *pv ni* or \emptyset (cf. examples 5a-d), but relative clauses have only \emptyset .

3.2. Presupposition. The data above turn out to be less of a problem than one might at first believe. If we consider the semantic nature of restrictive relative clauses vis-à-vis the relevant semantic features of "assertion", etc., we will note that restrictive relative clauses differ from all earlier examples in that they lack the possibility of an assertion contrast. This is because they presuppose the validity of their propositions. We might expect then that in a context in which no assertion contrast is possible, i.e. when presuppositional content precludes the possibility of an assertion as in restrictive relative clauses, the alternation between *pv ni* and \emptyset is not to be found. In other words, where the parameter of assertion has no applicability, the alternation which distinguishes between elements within that parameter disappears correspondingly. This accounts for the data and ties in with our earlier analysis.

This absence of an assertive contrast is not found in non-restrictive relative clauses. There are no presuppositions in such clauses, and so the assertion/non-assertion contrast may be exploited. Interestingly in KiVunjo, we find that to construct a non-restrictive relative clause is impossible and that the language resorts to using two "independent" sentences. Cf. the following examples:

- (9) a. *Mwalimu Nyerere, u- lya (n-) a- le-olocha Pugu, ni rais
 CML REL (pv ni) SM3 sg T teach is president
 'Mwalimu Nyerere, who taught at Pugu, is the president'

With or without *pv ni*, this sentence is ungrammatical. Instead, speakers find the following appropriate:

- (9) b. Mwalimu Nyerere n- a- le- olosha Pugu. Ni rais.
 pv ni SM 3sg T teach is president
 'Mwalimu Nyerere taught at Pugu. He is the president.'

Thus, in KiVunjo, relativization is only restrictive and thus prevents a contrast between assertion and non-assertion.⁵ Therefore, no contrast between *pv ni* and \emptyset is found.

4. WH-Questions, Copular *ni*, and *pv ni*

4.1. WH-questions. We shall next discuss WH-type questions (henceforth WH-Q). Consider the examples in (10a-d) below:

- (10) a. ni nacho/wi a- le- soma ki- tapu
 is WH / WH SM 3sg T read CM7 book
 '(it's) who (that) read a book?'
- b. ni kiki u- le- soma
 is WH SM 2sg T read
 '(it's) what did you read?'
- c. ni nacho/wi a- la- le- soma ki- tapu
 is WH /WH SM 3sg NEG T read CM7 book
 'it's) who (that) did not read a book?'
- d. ni kiki u- la- le- soma
 is WH SM 2sg NEG T read
 '(it's) what didn't you read?'

As can be seen, the structure of these WH-Q's resembles a clefted-question in English. In KiVunjo WH-Q's, the similarity to restrictive relative clauses should also be obvious: the head NP--in this case the WH-Q element--is followed by the relative clause. Notice that in all examples *pv ni* is not present in the embedded verb. But of course this is exactly in keeping with our previous findings, since WH-Q's, like restrictive relative clauses, do not involve the parameter of an assertion

⁵The language does not seem to mark factive complements any differently from non-factives, although the former should provide an additional case in which propositions are presupposed. I have no explanation for this.

contrast. Instead, the propositions within WH-Q's are presupposed. In the absence of a semantic assertion contrast in the proposition, we would expect that the corresponding morpho-syntactic contrast between *pv ni* and \emptyset would also be missing. It is no accident, then, that the WH-Q's should be structurally similar to restrictive relative clauses and also that they are lacking in the *pv ni*/ \emptyset alternation.

4.2. WH-Q Type B, copular *ni* and *pv ni*. There is a second type of WH-Q construction in KiVunjo which we shall examine presently, but before we do, I would like to present the outlines of an hypothesis which will have important consequences for the analysis of *pv ni*. This concerns a possible relation between *pv ni* and the copular element, also *ni*.

In their pioneering study, Nurse and Phillipson [1977] first hinted at a relation of this sort, stating, p. 55, "There is much to be said as to whether this stabiliser [our *pv ni*--G.M.D.] ... is the same as the copula *ni*." They were not concerned with this problem, and so did not go on to develop it, but the similarity of the two elements is both striking and suggestive. I would like to keep this idea in mind as we examine further data, after which I shall attempt to justify and exploit that proposal to present us with a more general account of much of the data herein.

Let us now examine some data involving a second type of WH-Q construction:

- (11) a. n- u- le- ona kiki
 pv ni SM 2sg T see WH
 'you saw what?' / 'what did you see?'
- b. Ndesamburo n- a- le- soma kiki
 N. *pv ni* SM 3sg T read WH
 'Ndesamburo read what?' / 'what did Ndesamburo read?'
- c. n- u- la- le- ona kiki
 pv ni SM 2sg NEG T see WH
 'you didn't see what?' / 'what didn't you see?'
- d. Ndesamburo n- a- la- le- soma kiki
 N. *pv ni* SM 3sg NEG T read WH
 'Ndesamburo didn't read what?' / 'what didn't Ndesamburo read?'

(The omission of WH-questioned subjects in the above data is no accident. We shall return to this point later.)

These examples are quite clearly not what we would have expected, given the previous data and analysis involving *pv ni*. Since WH-Q's

do not involve the semantic parameter of assertion (the propositions are presupposed), we would expect the absence of *pv ni* in these examples. Furthermore, *pv ni* appears in negative examples of this type of WH-Q; this too is completely unexpected and is not paralleled elsewhere.

The way in which I shall attempt to reconcile these apparently anomalous findings to the previous data and analysis will be to claim that the unexpected *pv ni* in the above WH-Q's is derived from the copular *ni*. In other words, the presence of *pv ni* in these examples is not an exception to the regular pattern involving the semantic features of "assertion" and, crucially, presupposition, but instead is related to an entirely different source, the copular *ni*.

Before beginning to justify the above claim, one additional fact needs to be pointed out. In the above type of WH-Q, *pv ni* is present in all examples (affirmative, negative, etc.), which means that the contrast between *pv ni* and \emptyset is neutralized in this context. As we have noted, WH-Q's presuppose their propositions; we therefore have again a case in which the parameters of assertion, certainty, etc. are not applicable. In effect, then, we expect that there will be no corresponding morpho-syntactic alternation between *pv ni* and \emptyset , because the semantic parameters which we have claimed trigger that alternation are not relevant in the WH-Q context. In short, the absence of a *pv ni*/ \emptyset alternation in these WH-Q's is expected, and conforms to our earlier analysis; the presence of *pv ni* --and not \emptyset --is what needs to be accounted for. That will be the thrust of the analysis relating copular *ni* to *pv ni*, to be discussed below.

Recall now that we have examined two types of WH-Q in KiVunjo (cf. examples (10a-d) and (11a-d)). Let us refer to examples (10a-d) as Type A WH-Q's, and examples (11a-d) as Type B WH-Q's. It seems reasonable to suppose that the two types of WH-Q should be related to each other: they perform the same (or highly similar) function, exploit the same morphological and syntactic elements, etc. Allowing for as yet undiscovered degrees of difference in emphasis between the two types, it seems reasonable to propose that the two types should be derivationally related.⁶ We might then examine just what the derivational relation could be between the two types.

With respect to this, recall that in the discussion of Type B WH-Q's, I mentioned parenthetically that there were not any examples of WH-Q of subject NP's given. In contrast, the Type A WH-Q's involved examples in which both subject and object NP's were questioned. In fact, further data would show that NP's of all grammatical relations may be questioned in the Type A WH-Q construction. But in contrast, the Type B WH-Q construction does not allow subject NP's to be questioned:

⁶These differences do not parallel those discussed by Bokamba [1975].

(11) e. *nacho/wi (n-) a- le- soma ki- tapu
 WH /WH (pv ni) SM 3sg T read CM7 book

'who read a book?'

(The presence or absence of pv ni does not affect the ungrammaticality of the sentence; hence the use of parentheses surrounding that element.)

We find that it is possible to resort to a pseudo-cleft WH-Q construction for NP's which are subjects and non-subjects alike:

(12) a. m- du u- lya a- le- soma ki- tapu ni nacho/ wi
 CM1 person CM1 REL SM 3 sg T read CM7 book is WH /WH

'the person (one) who read the book is who?'

b. ki- ndo ki- lya Ndesamburo a- le- soma ni kiki
 CM7 thing CM7 REL SM 3sg T read is WH

'the thing which Ndesamburo read is what?'

The point is that the processes of WH-Q involving Type A WH-Q's (examples (10a-d)) and the above pseudo-cleft WH-Q's apply freely to WH-NP's of all grammatical relations, whereas the Type B WH-Q construction is restricted to apply to non-subject WH-NP's. I do not at this time have an explanation for this somewhat puzzling fact, but it does suggest something relevant to our discussion. It is fairly common in linguistic analysis to assume that elements or constructions with limited distribution are less likely to be essentially similar to the more basic structures. Rather, such elements or constructions are usually analyzed as being derived by rule while the elements or constructions with greater distribution are considered more basic.

If we were to follow the above lines of reasoning concerning the three types of WH-Q constructions in KiVunjo, we would conclude that the Type A and pseudo-cleft WH-Q constructions are in some sense more basic than the Type B WH-Q construction. This is because the latter shows a more limited distribution in not applying to subject WH NP's. Given the relatedness between the various types of WH-Q constructions, we might even claim that Type B WH-Q's are derivationally related to structures which perhaps at some level are fairly similar to the Type A or pseudo-cleft WH-Q constructions.

Now, if this proposal--that Type A and pseudo-cleft WH-Q constructions are derivationally related to Type B WH-Q constructions--can be maintained, we may at the same time relate copular ni to pv ni. If the above constructions were to be related, copular ni, which is found in both Type A WH-Q's and pseudo-cleft WH-Q's, could be related to the pv ni found in Type B WH-Q's. We shall now turn to some points in favor of these hypotheses.

We have already seen that Type A and pseudo-cleft WH-Q constructions are more general than the more restricted Type B WH-Q constructions. This in turn would correctly imply that *pv ni* in WH-Q's is also a more restricted element; it appears only in Type B WH-Q's. If the source of the restricted Type B WH-Q construction is something akin to the more general Type A and pseudo-cleft WH-Q constructions, then the source of the anomalous and restricted *pv ni* in Type B WH-Q constructions could come from something present in Type A or pseudo-cleft WH-Q constructions. As a source for *pv ni*, what could be more convenient than the phonologically similar copular *ni*, present in the more general Type A and pseudo-cleft WH-Q's?

A second related point is that *pv ni* and copular *ni* are in complementary distribution with each other in these WH-Q constructions. This is typically the classic kind of argument in favor of treating such elements as being derivationally related to each other.

A third consideration in favor of this analysis hinges on the fact that there is no alternation between *pv ni* and \emptyset in Type B WH-Q's. This we have seen is expected, since WH-Q's involve presupposition, and block the possibility of an assertion/non-assertion contrast, to which the *pv ni*/ \emptyset alternation is tied. As we noted earlier, the question is: why should the lack of the *pv ni*/ \emptyset alternation in Type B WH-Q's result in the (non-alternating) appearance of *pv ni*? Recall that in other cases involving presupposition, the resulting lack of contrast between *pv ni* and \emptyset was resolved by the appearance of \emptyset throughout.

If we relate Type A and/or pseudo-cleft WH-Q's to Type B WH-Q's, and through that relate copular *ni* to *pv ni*, then the constant, non-alternating appearance of *pv ni* in Type B WH-Q's can be accounted for. As is clear from the examples of Type A and pseudo-cleft WH-Q constructions, copular *ni* is always present, and does not alternate with \emptyset , regardless of whether the WH element is within an affirmative or negative clause. If copular *ni* does not alternate with \emptyset , and if *pv ni* were to be derived from copular *ni* in these WH-Q's, then it would follow that *pv ni* would also fail to alternate with \emptyset in these construction. These considerations then support a hypothesis in which *pv ni* and copular *ni* are derivationally related.

A fourth argument from some fairly complicated relativization data further supports the claim for a relationship between *pv ni* and copular *ni*. This argument centers on their similar behavior in relativization. We have already discussed and accounted for the absence of *pv ni* in the embedded verb of a relative clause. However, this element is obligatorily absent only from the highest verb of the relative clause; more deeply embedded verbs within the relative clause may in fact contain *pv ni*:

- (12) c. ngi- le- ona m- soro ch- o u- le- amini kyee
 SM/sg T see CM1 man CM1 REL SM 3sg T believe that
 n- a- le- kapa ki- te
 pv ni SM3 sg T beat CM7 dog

'I saw the man whom you believed that killed the dog'

Although such an example seems to violate Ross's complex NP constraint, the sentence in KiVunjo is fully grammatical. For our purposes, it is enough to point out that *pv ni* must not appear on the highest verb of the relative clause, but may or may not appear in lower clauses.

We shall see that there is apparently a similar constraint concerning copular *ni*. In sentence (12d) below, we relativize into a sentential complement of which the highest verb is copular *ni*, and the sentence is ungrammatical (recall that a verb lower in the relative clause may or may not contain *pv ni*):

- (12) d. *ngi- le- ona m- soro ch- o ni loi (n)-
 SM 1sg T see CM1 man CM1 REL copular true (pv ni)
 u- le- (m)- kapa
 SM 2sg T (OMC1) beat

'I saw the man whom it's true you beat him'

But if copular *ni* is not the highest verb of the embedded relative clause, the sentence is grammatical:

- (12) e. ngi- le- ona m- du ch- o ki- keer- i ni
 SM 1sg T see CM1 man CM1 REL SMC7 is T (is copular)
 loi (n)- u- le- (m)- kapa
 true (pv ni) SM 2sg T (OMC1) beat

'I saw the man whom it's "the case" it's true you beat'

The KiVunjo verb *keer-* is a verb 'to be' which behaves much like the Spanish *estar*.

In fact, in simpler cases involving copular *ni*, it is still impossible to relativize into a clause with *ni* as the highest verb. To fully appreciate this, consider the three verbs 'to be' in KiVunjo: copular *ni*, and *i* and *keeri*, as in the following:

- (12) f. m- soro ch- u ni m- swahili
 CM1 man CM1 demonstrative copular ni CM1 swahili

'this man is a Swahili(person)'

- g. m- soro ch- u n- a- i m- swahili
 CM1 man CM1 DEM pv ni SMC1 be CM1 swahili
 -keeri

'this man is like a Swahili, behaves like a Swahili'

Besides the meaning differences between the various forms of 'to be' in (12f-g), the *ni* copula may not appear with a locative complement, whereas *i* and *keeri* may do so. But, to return to the point concerning relativization, consider (12h) below, an attempt to embed the copular *ni* clause:

- (12) h. *m- soro u- lya ni m- swahili n- a- le- enda
 CMI man CMI REL is CMI swahili pv ni SMCI T go
 'the man who is a Swahili went'

To get the sense of (12h) above, we must embed *i* or *keeri* ;

- (12) j. m- soro u- lya a- i m- swahili ni- a- le- enda
 CMI man CMI REL SMCI be CMI swahili pv ni SMCI T go
 'the man who is a Swahili went' or
 'the man who is like a Swahili went'

The evidence is clear then that *ni* may not be the highest verb of the relative clause; as we have just seen, *i* is used instead, even though there is resultant ambiguity. We have seen then that the highest clause of a relative construction may not contain either copular *ni* or *pv ni* . If these elements are deeply related, we expect such similarities in behavior; otherwise, we are left with unexplainable and "accidental" disparate facts.

4.3. Summary. To summarize much of the preceding discussion, we are now able to make the following points:

(1) The alternation of *pv ni* and \emptyset is related to the assignment of plus or minus features respectively to the semantic parameters of "assertion", "force", and "certainty"; sentences marked positively for such features appear with *pv ni* ; otherwise, \emptyset appears.

(2) In semantic constructions containing presupposed propositions, the contrast between the above parameters is neutralized. Consequently, the morpho-syntactic alternation between *pv ni* and \emptyset is also neutralized. Thus, in (restrictive) relative clauses, *pv ni* is absent and \emptyset appears throughout. Similarly, in all types of WH-Q's, the *pv ni*/ \emptyset alternation is neutralized in that (a) in Type A and pseudo-cleft WH-Q's, the alternation is similar to restrictive relative clauses (no *pv ni* appears); (b) in Type B WH-Q's, *pv ni* is present throughout.

(3) To account for the non-alternating presence of *pv ni* in Type B WH-Q's, it was suggested that this element be derived from copular *ni* , which appears in Type A and pseudo-cleft WH-Q's and also does not alternate with \emptyset in those forms. To support this contention, it was proposed that the more restricted Type B WH-Q be derived from structures more similar to the more general Type A or pseudo-cleft

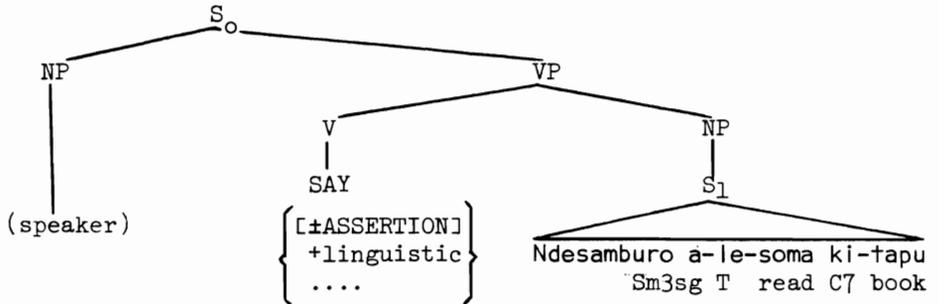
(a-le-soma), attaching itself as *pv ni* to produce superficial *n-a-le-soma*. The WH-element is moved to the right, giving us the final surface form for sentence (14).

It turns out that there is evidence supporting the rightward movement of WH-NP elements, since it is necessary to derive pseudo-cleft WH-Q's like examples (12a-b).

The remaining problem then is to produce evidence in favor of the rule which would move the copular *ni* from its position as an upper verb to the pre-verbal position before the lower verb *a-le-soma*.

Recall the earliest examples of this paper, in which *pv ni* and \emptyset alternated in assertion/non-assertion sentences. One way to characterize this might be by means of a "higher verb" analysis as in Ross [1967] in which, at a fairly deep representation of meaning, we have a structure like the following (omitting complications):

(15)



If the higher verb (of saying) is marked positively for the feature of [ASSERTION], then that verb is spelled as *ni*; if the representation is marked negatively for [ASSERTION], no *ni* appears. We then need a rule which will attach the upper verb *ni* to a position before the lower verb, *a-le-soma*, to produce superficial *n-a-le-soma*, a structure with *pv ni*. But this is exactly the same sort of rule which would be required under the analysis in which copular *ni* and *pv ni* are to be related. From structure (13) to structure (14), we need a rule lowering *ni*, the copula, to become a *pv ni*; similarly, from a structure like (15), we derive superficial sentences like (1-5) by lowering the upper verb "assertive" *ni*, to appear as the *pv ni* where appropriate. In other words, the same or a highly similar process would move a "higher" verb *ni* to a position before the lower verb as *pv ni*.⁷

⁷One might speculate even further that the copular *ni* and the *pv ni* derived from the assertion/non-assertion parameter are even more deeply related than has been suggested here, perhaps that they are reflexes

This then strengthens the case for a relationship between *pv ni* and copular *ni*, which in turn treats the *pv ni* in Type B WH-Q's as derived from copular *ni* and therefore not as an exception to the analysis with the "assertion" contrast.

6. Conclusion

We have seen then that the semantic alternations between sentences marked as "assertive" vs. "non-assertive", etc. are matched by morpho-syntactic alternations between *pv ni* and \emptyset . When presuppositional content overrode the assertion/non-assertion contrast, *pv ni* and \emptyset did not alternate. In Type B WH-Q's, copular *ni* has been considered the source of an otherwise anomalous *pv ni*. Various distributional facts were adduced to justify that proposal. Finally, it was shown that if a "performative" type analysis were to be adopted for the "assertive" *pv ni*, a rule which relates a higher verb *ni* to *pv ni* would be necessary. This rule could then be used to relate the higher copular *ni* of the Type A WH-Q to the *pv ni* in Type B WH-Q's. Thus, a unified and consistent analysis of *pv ni*, and its role in the syntactic and semantic structures of the language, can be maintained.

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of a single very abstract element /TO BE/. Finding evidence in favor of this is even more difficult than justifying the relatively less abstract and more modest proposal espoused here. I think it is very likely that an historical relationship between the elements existed, and there is some slightly similar evidence from another Bantu language, Kikuria, pointing the same way. The whole area needs intensive investigation.

