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 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 φ. 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 \( n_i \) and \( 0 \)

2.1. Introduction and examples. The pre-verbal morpheme \( n_i \) (henceforth \( pv \ n_i \)) 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 \( pv \ n_i \) appears segmentally as \( \tilde{n} \) before vowel-initial verb prefixes in KiVunjo; other verbal prefixes show optional lengthening of the initial consonant and deletion of \( \tilde{n} \). 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 \( pv \ n_i \) appears before all vowel-initial verb prefixes. In fact, only second and third person singular subject prefixes \( u \) and \( a \) respectively appear with \( pv \ n_i \). 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
\[ pv \ n_i \ SM 3sg- T- read CM7- book \]
"Ndesamburo read a book"

b. (iyoo) n- u- le-soma ki- tapu
(you) \[ pv \ n_i \ SM 2sg- T- read CM7- book \]
"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
\[ CM9 elephant SM C9 T smell bad \]
"the elephant smelled bad"

Thus, although the 2nd person singular subject prefix \( u \) and the class 3 subject prefix \( w \) are segmentally and suprasegmentally similar, only the former is preceded by \( pv \ n_i \). The subject prefixes for classes 3 and 9 never surface with \( pv \ n_i \). The remainder of this paper will therefore treat the cases in which \( pv \ n_i \) appears and in which it alternates with \( 0 \); 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 Ø occurs in non-assertive contexts.

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not apply. In such cases, the pv ni either fails to appear, or fails to alternate with Ø, 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.

   pv 3sg SM T see CM7 book Q
   'Ndesamburo saw the book, didn't he?' 'yes'
   ['You mean it? He saw the book?']

   SM 3sg T enter in house Q
   'Ndesamburo didn't enter the house, did he?' 'no'

c. Ndesamburo n- a- enda mcho?
   pv ni SM 3sg go Adverb/Q
   'Ndesamburo has gone, hasn't he?' 'yes'

d. m- ana n- a- keri mesa- ni wai?
   CM1 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 ø 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 CM1 person
   'it is (abundantly) clear that you killed a person'

b. ni wasi u- le- waawa m- du
   is clear SM 2sg T kill CM1 person
   'it is (less certainly) clear that you killed a person'

c. kupfa n- u- le- iwa ngu o tsi
   reason pv ni SM 2sg T steal clothes those
n- a-2 chi- kap- o
pv ni SM2 sg T beat FSV
'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 FSV
'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 ø 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 ø 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/ø 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

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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 Ø

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 KiVunjjo 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- Iya ngi- le- ki- kapa
   pv ni SM3 sg T see CM7 dog CM7 REL SM lsg 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
   CMl man CMl 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 l sg T see CM7 dog CM7 REL N. SM lsg 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.
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- so- o u- iy a- la- le- cha n- a- le- kora
CM1 man CM1 REL SM 3sg(CL) 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- ly a u- 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, complemet clauses may have pv ni or Ø (cf. examples 5a-d), but relative clauses have only Ø.

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 Ø 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 KiVunjjo, 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-olosha Pugu, ni rais CM1 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 alosha 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. Therefore, no contrast between pv ni and φ 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—in 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.

The 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 ø 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/ø 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 \( pv \text{n}i \) in these examples. Furthermore, \( pv \text{n}i \) 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 \( pv \text{n}i \) in the above WH-Q's is derived from the copular \( ni \). In other words, the presence of \( pv \text{n}i \) 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, \( pv \text{n}i \) is present in all examples (affirmative, negative, etc.), which means that the contrast between \( pv \text{n}i \) 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 \( pv \text{n}i \) 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 \( pv \text{n}i/\emptyset \) alternation in these WH-Q's is expected, and conforms to our earlier analysis; the presence of \( pv \text{n}i \) --and not \( \emptyset \)--is what needs to be accounted for. That will be the thrust of the analysis relating copular \( ni \) to \( pv \text{n}i \), 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:

\(^6\)These 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- ly 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- ly a Ndesamburo a- le- soma ni kiki
   CM7 thing CM7 REL SM 3 sg 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 Ø 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/Ø alternation is tied. As we noted earlier, the question is: why should the lack of the pv ni/Ø 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 Ø was resolved by the appearance of Ø 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 Ø, regardless of whether the WH element is within an affirmative or negative clause. If copular ni does not alternate with Ø, 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 Ø 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:

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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-onal m-soro ch-o ni loi (n)-
   SM/sg T see CMI man CMI 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/sg T see CMI man CMI REL 8MC7 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 and keer, as in the following:

(12) f. m-soro ch-u ni m-swahili
   CMI man CMI demonstrative copular ni CMI swahili
   'this man is a Swahili(person)'

(12) g. m-soro ch-u n- a- l m-swahili
   CMI man CMI DEM pv ni CMI swahili
   '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- sora u- iya 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- iya a- i m- swahili ni- a- le- enda
   CMI man CMI REL 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 Ø 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, Ø 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 Ø is also neutralized. Thus, in (restrictive) relative clauses, pv ni is absent and Ø appears throughout. Similarly, in all types of WH-Q's, the pv ni/Ø 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 Ø 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
WH-Q's, both of which contain copular \textit{ni}. Various distributional arguments were adduced to justify the claim that \textit{pv ni} and copular \textit{ni} were deeply related; such a relationship could then be exploited to account for the \textit{pv ni} in Type B WH-Q's. In the following section, we shall examine a specific proposal relating these elements.

5. Rules Relating \textit{ni} to \textit{pv ni}

In part of the preceding discussion, we have attempted to show that the presence of \textit{pv ni} in Type B WH-Q's can be accounted for by hypothesizing a derivational relation between the copular \textit{ni} and the \textit{pv ni}, the elements appearing in Type A (and pseudo-cleft) WH-Q's and Type B WH-Q's respectively. We might then ask just what are the details of this hypothesized derivational relationship between \textit{pv ni} and copular \textit{ni}. This section will be an attempt to provide the beginnings of an answer to that question. But since the proposed relationship is fairly abstract, clear surface evidence for the individual details of this proposed derivational relationship will be difficult to come by.

Consider what must be done. Claiming that copular \textit{ni} is related to \textit{pv ni} in WH-Q's has led us to claim that Type A WH-Q's and Type B WH-Q's are to be derivationally related. Thus, from an intermediate structure like (13), closely resembling the structure producing Type A WH-Q's, we might derive a structure like (14), which is close to the form of Type 3 WH-Q's:

(13)

\[
\begin{array}{c}
S \\
V \\
\text{ni} \\
\text{kiki} \\
\text{is} \\
\text{WH} \\
\text{Ndesamburo a-le-soma}
\end{array}
\]

(14)

\[
\begin{array}{c}
S \\
NP \\
\text{Ndesamburo} \\
\text{a-le-soma} \\
\text{kiki} \\
\text{np} \\
\text{ni} \\
V \\
\text{NP} \\
\text{Ndesamburo} \\
\text{a-le-soma} \\
\text{kiki} \\
\text{SM3sg T read}
\end{array}
\]

\text{ni kiki Ndesamburo a-le-soma} \Rightarrow \text{Ndesamburo n-a-le-soma kiki}

'what did Ndesamburo read?' \Rightarrow 'what did Ndesamburo read?'

5.1. Evidence. From the above, we must be able to justify the claim that the higher verb, copular \textit{ni}, somehow ends up on the lower verb
(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 ø 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):

\[ S \]

\[ \text{(speaker) \{ } \text{+linguistic} \{ } \text{±ASSERTION} \{ Ndesamburo a-le-soma ki-tapu Sm3sg T read C7 book } \]

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

7 One might speculate even further that thecopular 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 \( pv \) and copular \( ni \), which in turn treats the \( pv \) 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 morphosyntactic alternations between \( pv \) and \( \emptyset \). When presuppositional content overrode the assertion/non-assertion contrast, \( pv \) 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 \( pv \) would be necessary. This rule could then be used to relate the higher copular \( ni \) of the Type A WH-Q to the \( pv \) in Type B WH-Q's. Thus, a unified and consistent analysis of \( pv \), and its role in the syntactic and semantic structures of the language, can be maintained.

REFERENCES


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.
In this article, I discuss my analysis of conditional sentences in Haya. Haya belongs to a subset of Bantu languages in which tense distinctions are made consistently. Every grammatical sentence of Haya will be marked for tense, hence, I have called Haya a "tense-prominent" language. This contrasts with other African languages (including some other Bantu languages) in which aspectual distinctions are made in some sentences where no overt tense markers are present (aspect-prominence). I have shown that, for some languages, there seems to be a connection between the type of tense/aspect system that prevails and the syntactic distinctions made among unreal and real conditional sentences. Many interesting generalizations are made about the nature of unreality in language, which may have consequences for further studies in the area of syntax and semantics.

O. Conditionals Defined

Since the terminology used in studies on conditional sentences is so profuse, I will explain the way I use these terms in the following paper. Conditionals can be classed semantically into three categories:

1. **Simple Conditionals** state that a proposition results if another proposition holds. Simple conditionals typically allow the same range of tense distinctions that is found in simple declarative sentences.

   (1) If you go to the store, I will cook. (future simple)

   (2) If John agreed, Mary disagreed. (simple past)

   (3) If the sun shines, the birds sing. (simple present)

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