FOCUS AND THE SCOPE OF ASSERTION: SOME BANTU EVIDENCE

Talmy Givón
Department of Linguistics
University of California, Los Angeles

1. Introduction[1]

It is normally assumed, for the "neutral" sentence pattern of a language,[2] that the predicate phrase ("verb phrase") contains the new information or asserted portion, while the subject is the topic or pre-supposed portion with respect to which the assertion is being made. Even conceding this rather gross generalization to be true in some intuitive sense, there remains the problem of the scope of assertion when the verb phrase contains a complement or object in addition to the main verb itself. For a number of complement types, a verb phrase containing a complement is potentially ambiguous as to whether the entire verb phrase is asserted, i.e., in focus, or whether only the complement which follows the verb is in focus. For example, consider (1) below, which may be given as a felicitous answer to either the wider (VP scope) question (2), or to the narrower (COMP scope) question (3):

(1) He went into the bar.
(2) What did he do then?   (VP scope)
(3) Where did he go then?   (COMP scope)

The use of contrastive stress may remove this potential ambiguity of (1), but the discourse context for contrastive stress involves additional, stronger, more complex assumptions.[3]

---

[1]An earlier version of this paper was read at the 6th Conference on African Linguistics, Ohio State University, April 1975.

[2]The traditional assumption as to which clause-type is the "neutral" one in language has always singled out the main-active-declarative-affirmative clause. For discussion and justification, see Givón [1975d].

[3]See discussion in Givón [1975c].

The negation of sentences such as (1) retains the potential ambiguity of scope. Thus, it may be used to deny the wider (VP scope) assertion, as in (4) below, or the narrower (COMP scope) assertion, as in (5):

(4) a. Where's Joe?

    b. I think he went into the bar.

    c. No, he didn't go into the bar, he's sitting right there. (VP scope)

(5) a. Where did Joe go?

    b. I think he went into the bar.

    c. No, he didn't go into the bar, he went into the lobby. (COMP scope)

Again, contrastive stress on the complement tends to disambiguate the narrower scope negation, while stress on didn't will tend to suggest the wider (VP) scope.

Other types of complements tend to behave differently, and one could ultimately show that these differences stem from the pragmatics of what one considers to be normative action. Thus, with great many manner-adverb complements, the scope of the assertion is ambiguous in the affirmative, but unambiguously narrower in the negative. For example, (6a) below may be a felicitous answer to either the wider (VP scope) question (6b) or the narrower (COMP scope) question (6c):

(6) a. He ran as fast as he could.

    b. What did he do then? (VP scope)

    c. How did he run then? (COMP scope)

On the other hand, the negative corresponding to (6a) tends to have only the narrower (COMP) scope:

(7) He didn't run as fast as he could.

The difference between (6a) and (7) may be also characterized in terms of their implicational properties. Thus the narrower scope interpretation of (6a) implies the wider (VP) scope, but the narrow negation scope of (7) does not imply the wider (VP) scope of negation:

(8) He ran as fast as he could $\supset$ He ran

(9) He didn't run as fast as he could $\not\supset$ He didn't run

Further, not only does the implication in (9) fail, which is still consistent with the logic of (8), but in fact the stronger inference (10) seems to hold in this case, which is—from a strict logical point of view—a contradiction of (8).

(10) He didn't run as fast as he could. $\supset$
     He ran, though not as fast as he could.

This apparent logical contradiction may be summarized as:

(11) a. $p \supset q$
     b. $\sim(\sim p \supset \sim q)$
     c. $\sim p \supset q$

where (11b) is a correct inference from the premise (11a), but (11c) is not.

The pragmatic reason why this state of affairs is tolerated in language is fairly transparent. Negative assertions are used in human language in contexts where the corresponding affirmative has been mentioned, deemed likely, or where the speaker assumes that the hearer—erroneously—holds to a belief in the truth of that affirmative.[4] Why then the seemingly contradictory (11c)? Consider: If one wanted to assert that no action has taken place, i.e., 'John didn't run at all', then the sentence (7) is wasteful, since (12) below will suffice:

(12) John didn't run.

Thus, if the negative in (7) is to have any independent communicative value to differentiate itself from (12), it must then exclude the verb from the scope of negation, and thus negate only the complement.[5]

---

[4] See discussion in Givón [1975a], Garcia [1975].

[5] For this suggestion I am indebted to Bob Kirsner [personal communication].

Other complement types seem to impose the narrower (COMP) focus already in the affirmative. For example, consider:

(13) a. John ate the glass on purpose.

b. John ate his dinner on purpose.

Sentence (13a) is felicitous, but of the two questions in (14) below, it could be normally used as a felicitous answer only to the narrow (COMP) scope question (14c), but not to the wider (VP or OBJ) focus questions (14a,b):

(14) a. What did John do then? (VP focus)

b. What did John eat then? (OBJ focus)

c. How come he ate the glass? (PURPOSE focus)

In order to understand why this is so, consider the oddity of (13b). This sentence is highly redundant because: (i) eating one's dinner is a normal action one performs; (ii) actions normally performed by agents are performed on purpose. Thus (13b) is odd because it has no informative value, given that eating one's dinner is the normal case, and given convention (ii) above. On the other hand, (13a) has definite informative value, since the action of "eating glass" is counter-normative, and therefore the question arises whether a person did it on purpose or by accident. Finally, why is the assertion scope automatically narrowed to the purpose complement in (13a)? The answer to that again hinges on the pragmatics of normative vs. counter-normative action. Eating glass is a counter-normative action, which by itself makes it an information-bearing event, a fact which may be seen from the informative oddity of (15c) below as an answer to (15a), as contrasted with the informative felicitousness of (15b):

(15) a. What's new with John?

b. He ate glass yesterday.

(15) c. He ate his dinner yesterday.[6]

Thus, if one says that someone ate glass on purpose, a pragmatic infer-
ence attached to this is that it is not the "eating glass" per se that
is in assertive focus, but rather the fact that it was done on pur-
pose.

One could go on illustrating how with different complement types,
different verbs and different objects the pragmatics of normative ac-
tion control, to quite an extent, the scope of assertion-focus of
verb phrases in English. However, this is only a background to the
phenomena discussed in this paper. In a number of Bantu languages,
the scope contrasts discussed above receive overt morphological ex-
pression. An affix, most commonly associated with the tense-aspect-
modality prefixes on the verb, marks the scope of the assertion as to
whether the verb is included (VP scope) or excluded (COMP scope) from
the new information. This paper deals with the rule-governed behavior
of these focus morphemes, which so far have been identified in three
languages, Bemba, Rwanda-Rundi and Zulu. Of these three, the contrast
has the widest distribution in Bemba, and is best introduced perhaps
by citing some data from this langauge.

2. The Focus Aspect in Bemba

There are seven minimal pairs for this distinction in the Bemba
tense-aspect system, six of those in various past tense categories and
one in the habitual. I will first illustrate the distinction in the
terminated, distant (before yesterday) past. In this time division,
the morphological contrast is between the VP-scope morpheme -àlí-
and the COMP-scope morpheme -à-. When the verb phrase contains only
a verb, only the VP-scope particle may be used:

---

[6]This sentence becomes "informatively felicitous" when the speaker
and hearer share the knowledge that John normally (or for a time) was
not eating his dinner, i.e., when the norm/counter-norm relations are
reversed. Similarly (15b) will become redundant if John normally eats
glass.

(16) a. ba-àlí-boombele   'They worked'

    b. *ba-à-boombele

When a complement, nominal or adverbial, is present, one obtains the distinction of scope:[7]

(17) a. ba-àlí-boombele saana   'They <u>worked hard</u>' (VP scope)

    b. ba-à-boombele saana   'They worked <u>hard</u>' (COMP scope)

    c. ba-àlí-boombele mumushi   'They <u>worked in the village</u>' (VP scope)

    d. ba-à-boombele mumushi   'They worked <u>in the village</u>' (COMP scope)

    e. ba-àlí-boombele neefumu   'They <u>worked with the chief</u>' (VP scope)

    f. ba-à-boombele neemfumu   'They worked <u>with the chief</u>' (COMP scope)

    g. ba-àlí-liile umukate   'They <u>ate bread</u>' (VP scope)

    h. ba-à-liile umukate   'They ate <u>bread</u>' (COMP scope)

The sentences with the VP scope (17a,c,e,g) may be all used to answer the wider scope WH question 'What did they do then?'. The sentences with the COMP scope (17b,d,f,h) are used in contexts where the verb it-self is not new information, i.e., to answer the more specific WH questions such as, respectively, 'How did they work?', 'Where did they work?', 'With whom did they work?' and 'What did they eat?'. Cleft-focusing on the complement, which leaves the verb itself as part of the presupposition, obligatorily requires the COMP-focus on the verb:

(18) a. múúkate bà-à-liile   'It's <u>bread</u> that they ate' (COMP focus)

    b. *muukate ba-àlí-liile   (*VP focus)

Under the scope of negation, as one would predict from the pre-ceding discussion, only the COMP-focus particle may be used, thus map-ping in an overt morphological way the very same situation observed above for some English complement types. That is:

---

[7]The underlining indicates the scope of the assertion, i.e., new information.

(19) a. ta-ba **à**-boombele saana   'They didn't work hard.' (COMP focus)

    b. *ta-ba-<u>àlí</u>-boombele saana (*VP focus)

Things are a bit more complicated, however. When the verb phrase contains only a verb, and thus the focus of negated assertion is unambiguously upon that verb, the same restriction on the VP focus particle is observed:

(20) a. ta-ba-<u>à</u>-boombele   'They didn't work.' (COMP focus)

    b. *ta-ba-<u>àlí</u>-boombele   (*VP focus)

Does this represent an "analogical extention" or "grammaticalization" of the system, indicating the breakdown of the inherently semantic underlying regularity? It seems to me that one may interpret these data within the context of that underlying regularity. As I have shown elsewhere,[8] negative sentences are used in the context where the corresponding affirmative has been mentioned before or, alternatively, when the speaker assumes that the hearer tends to believe in the truth of the corresponding affirmative. While this is not, per se, a totally <u>presuppositional</u> context, it nevertheless involves a context where the verb, at the very least, could <u>not</u> be new information to the hearer. One may thus view the mapping system of Bemba as follows:

(21) Verb not new information = COMP focus

    Verb new information = VP focus

Under this kind of formulation, the restriction expressed in (20) above becomes compatible with the underlying semantic restriction discussed above.

    This alternative formulation also permits us to understand another set of restrictions on the VP-focus particle. In this case VP-scope particles are excluded from relative clauses, cleft and pseudo-cleft constructions, WH-questions, as well as other relative-related and

---

[8]Givón [1975a], but see also Garcia [1975].

mostly presuppositional[9] adverbial clauses such as "if", "when", "be-
cause", "in spite of", etc. Given the formulation in (21) above, it
is rather transparent why the VP-scope particle should be barred from
presuppositional clauses, since the verb there could not be new infor-
mation. And the restrictive relative clause is presuppositional, and
--whether semantically or syntactically--it underlies all the other
constructions mentioned above. I will therefore illustrate the re-
striction only in this underlying environment:[10]

(22) a. umuana a-àlí-boombele   'The child worked.' (VP focus)

  b. umuana u-à-boombele   'The child who worked.' (COMP
               focus)

  c. *umuana u-àlí-boombele   (*VP focus)

  d. umuana a-àlí-boombele saana   'The child worked hard.' (VP
                focus)

  e. umuana u-à-boombele saana   'The child who worked hard.'
                (COMP focus)

  f. *umuana u-àlí-boombele saana   (*VP focus)

There is a curious way in which the scope-narrowing observed above
in negation finds a parallel in relativization. Notice that while
(23a) below implies (23b), the individual designated by the relative
clause corresponding to (23a) is not the same as that designated by
the relative clause corresponding to (23b):

(23) a. The man came yesterday. $\supset$ b. The man came.

(24)   The man who came yesterday. $\neq$ The man who came.

On the face of it the claim in (24) above seems patently false,
since obviously if it is true of a man that "he came yesterday", it is

---

[9]Of these, "if" clauses are obviously not presuppositional. How-
ever, much like negatives and yes-no questions, they may largely involve
environments in which the probability of truth of a certain proposition
has been discussed or entertained. To that extent, then, the verb of
that proposition is not altogether new information.

[10]The same restriction operating in a cleft-focus construction is
illustrated in (18) above.

equally true of him that "he came". It seems to me, however, that the strategy of constructing unique descriptions via the use of restrictive relative clauses militates toward the inherent correctness of (24). When the verb "came" by itself is sufficient to differentiate "the man who came" from all those who didn't come, a time adverbial or other complements are not going to be used, since they are superfluous and in fact misleading in that they suggest that "other men came but at times other than yesterday". Thus, only under conditions where the verb by itself does not suffice to differentiate a unique individual, will further information be used in the relative clause. In other words, in a relative clause which contains complement phrases, those complements-- to the exclusion of the verb, occupy the focal position in performing the restrictive-designative function of the relative clause. Thus, for communicative reasons quite analoguous to those suggested above for negatives, relative clauses represent a similar "narrowing of focus" when a complement phrase is present.

3. **Focus and Topic in Rwanda**[11]

Within the Rwanda tense-aspect system there are four minimal pairs of the VP-focus vs. COMP-focus contrast, out of which I will illustrate the behavior of this phenomenon with the past-tense particles -à- (COMP focus) and -àrá- (VP focus). While this sub-system in Rwanda shares many of the features seen above in its Bemba equivalent, such as the restriction on VP-focus particles in negative and relative environments, it also exhibits a number of differences. When no complement is present, only the VP focus particle may be used, as in:

(25) a. Yohani y-àrá-koze   'John worked.' (VP focus)

    b. *Yohani y-à-koze   (*COMP focus)

On the other hand, it is hard to get the contrast, as one gets it in Bemba, when complements are present. Only with some manner adverbials can one get acceptable use of the VP-focus particle, otherwise the use

---

[11]For Rwanda data I am much indebted to Alexandre Kimenyi [personal communication], but see also Kimenyi [1973, 1975] and Sanchez-Mejía [1974].

of the COMP-focus aspect is obligatory. Thus compare:

(26) a. Yohani y-à-koze cyaane   'John worked hard.' (COMP focus)

     b. Yohani y-àrá-koze cyaane   'John worked hard.' (VP focus)

     c. Yohani y-à-koze vuuba   'John worked fast.' (COMP focus)

     d. *Yohani y-àrá-koze vuuba   (*VP focus)

It is not obvious in what "structural" way the adverbs "hard" and "fast"
differ from each other, but there very well may be some pragmatic strat-
egy involved here that is at the moment not obvious to me. When loca-
tive adverbs are present, again only the COMP-focus aspect may be used:

(27) a. Yohani y-à-koze mumusozi   'John worked in the village.'
                                      (COMP focus)

     b. *Yohani y-àrá-koze mumusozi   (*VP focus)

The same is also true with participial adverbs, as in:

(28) a. Yohani y-à-koze a-ririimba   'John worked singing.' (COMP
                                      focus)

     b. *Yohani y-àrá-koze a-ririimba   (*VP focus)

However, when the participial adverb pertains to the object rather than
the subject, at least in some instances the contrast may be obtained,
as in (29) below where the object is pronominalized:

(29) a. Yohani y-à-u-riiye u-shyuushye   'John ate it hot.' (COMP
                                             focus)

     b. Yohani y-àrá-u-riiye u-shyuushye   'John ate it hot.' (VP
                                             focus)

In cases such as (26a,b) and (29) where the contrast is made, it patterns
after what was suggested earlier for Bemba. That is, (26a) is a proper
answer to the COMP-scope WH question "How did John work?", while (26b)
is a proper answer to the VP-focus WH question "What did John do then?"
Similarly (29a) is a proper answer to "How did John eat it?", while
(29b) is a proper answer to "What did John do with it?" With these
two cases aside, it seems that Rwanda shows a strong preference for a
discourse strategy that is different from that of Bemba, a strategy
which may be summarized as:

(30) "If the verb phrase contains a complement, then only that comple-
ment is the new information advanced in this particular speech trans-
action , while the verb itself is not."

That this strategy is not applied across the board and excludes cer-
tain types of complements is probably significant, and the specifici-
ties of these exclusions remain to be assessed.[12] Let me now turn to
the interaction of this contrast with the phenomena of definiteness,
pronominalization and topicalization in Rwanda.

When an indefinite accusative object--mass or count--is present in
the VP, the general rule is followed by which only the COMP-focus par-
ticle may be used, as in:

(31) a. Yohani y-à-riiye iffi   'John ate fish/a fish.' (COMP
                                          focus)

     b. *Yohani y-àrá-riiye iffi.   (*VP focus)

When the object is definite, however, i.e., when it is <u>not</u> new informa-
tion, the VP focus is obligatory and the COMP focus is unacceptable:

(32) a. Yohani y-àrá-yi-riiye iffi   'John ate the fish.' (VP focus)

     b. *Yohani y-à-yi-riiye iffi   (*COMP focus)

Since definitization of objects is achieved most commonly via pronomin-
alization, as in (32), it is not altogether surprising to find the same
constraint operating when objects are anaphorically pronominalized, as
in:

(33) a. Yohani y-àrá-yi-riiye   'John **ate it**.' (**VP focus**)

     b. *Yohani y-à-yi-riiye   (*COMP focus)

This constraint, as a pragmatic strategy, is quite compatible with what
has been seen so far concerning this focus contrast. Since the object
is old information, obviously the new information--i.e., the focus--

---

[12]Most likely some pragmatic strategies, involving the probability
of what is likely to be considered as "unitary piece of message", as
against what is more likely to be broken into smaller natural message
units, are at the bottom of this distribution.

must be the verb itself, given that the subject is normally definite
and presupposed.[13]

Left-topicalization is a common discourse devise in Rwanda, used
roughly in the same contexts as in English, i.e., to <u>recall</u> a topic
that has been mentioned in previous discourse across a certain temporal
gap during which other topics occupied the center of the stage. It is
a construction limited to definite or generic NP's, a rather universal
constraint.[14] Not surprising, when an object NP is topic-shifted, the
same constraint on the focus situation prevails as when it is definit-
ized or pronominalized:

(34) a. iffi, Yohani y-àrá-yi-riiye   'The fish, John ate it.' (VP
                                           focus)

     b. *iffi, Yohani y-à-yi-riiye   (*COMP focus)

The left-topicalization device thus tags the object as old information,
and thus automatically leaves the verb alone as candidate for focus or
new information--hence the obligatory VP focus.

A different topic-related situation involves adverbial clauses and
their relation to the main clause. In general, one could show that the
position of an adverbial clause--before or after the main clause--is a
topic-related phenomenon. Let me exemplify this by the use of appro-
priate WH questions, which function to establish the topic-focus (or
old/new information) context for the message:

(35) Context: a. What did you dó yèsterday?
      Message: b. Yèsterday I wórked.
               c. *I wòrked yésterday.
               d. I wórked yèsterday.
      Context: e. Whén did you wòrk?
      Message: f. I worked yésterday.
               g. *Yèsterday I wórked.
               h. Yésterday I wòrked.

---

[13]For a discussion of subject properties as related to topic,
see Keenan [1975] and Givón [1975b].

[14]For some details of this strategy, see Givón [1975b, 1975c].

Thus, in an SVO language such as English or Rwanda, the sentence final
position is reserved most commonly for the constituent in focus, the
one carrying the focus (or "new information") stress of the sentence.
A reversal of this order is of course possible, as in (35d) and (35h)
above, but only if the focus stress is also shifted. With all this in
mind, it is not altogether surprising to see that the focus particles
of Rwanda are sensitive to the topic-focus position of the main clause
viz-a-viz the adverbial clause. Thus consider:

(36) a. Yohani a-∅-kora mu-gitoondo   'John works in the morning.'
                                               (COMP focus)

     b. *Yohani a-rá-kora mu-gitoondo   (*VP focus)

     c. mu-gitoondo Yohani a-rá-kora   'In the morning John works.'
                                               (VP focus)

     d. *mu-gitoondo Yohani a-∅-kora   (*COMP focus)

Syntactic position per se is not the only device for establishing
topicality relations. Both English and Rwanda have another device,
labeled "afterthought topic" in which the topic constituent is right-
dislocated. This device is to some extent similar in function to the
recall-topic ("left-dislocation") construction described above, but is
in some way a hedge or blend. It is used when the speaker first de-
cides to use mere anaphoric pronominalization, on the assumption that
the hearer can retrieve the topic. Then as an afterthought the speaker
adds the topic NP after a pause, as an insurance policy, "just in case."[15]
Now, when adverbial clauses are used as "afterthought topic" in Rwanda,
the same constraint applies as when they are used in the more character-
istic leftmost topic position, and the COMP-focus particle may not be
used. Thus:

(37) a. Yohani a-rá-kora, mu-gitoondo   'John works, in the morning.'
                                                (VP focus)

     b. *Yohani a-∅-kora, mu-gitoondo   (*COMP focus)

_____

[15]For some details on this discourse device, see Givón [1975b].

Topicalization of the subject constituent, either to left or right, ordinarily does not affect the focusing constraints discussed above, since they most characteristically pertain to the various members of the verb phrase, in which the new information in the sentence is most normally couched. Thus, for example, when the accusative object is indefinite, only the COMP-focus may be used, as seen in (31) above. And the same restriction holds when the subject is left or right topicalized:

(38) a. Yohani, y-à-riiye iffi   'John, he ate fish/a fish.'
                                            (COMP focus)

      b. *Yohani, y-àrá-riiye iffi   (*VP focus)

      c. y-à-riiye iffi, Yohani   'He ate fish/a fish, John.'
                                            (COMP focus)

      d. *y-àrá-riiye iffi, Yohani   (*VP focus)

Similarly, the COMP-focus particle is barred from constructions with a definite or pronominal object (viz (32) and (33) above) regardless of whether the subject is right or left topicalized:

(39) a. Yohani, y-àrá-yi-riiye   'John, he ate it.' (VP focus)

      b. *Yohani, y-à-yi-riiye   (*COMP focus)

      c. y-àrá-yi-riiye, Yohani   'He ate it, John.' (VP focus)

      d. *y-à-yi-riiye, Yohani   (*COMP focus)

On the face of it, there is really no transparent reason why the topicalization of subject NP's should influence the focusing situation within the verb phrase, since it still leaves the entire VP potentially as new information. However, there are a number of baffling examples in which the topicalization of the subject does make a difference. Consider first the sentences with the manner adverbial "hard"/"much" shown in (26a,b) above. When the subject NP is topicalized to the left, only the VP-focus aspect may be used, whereby the neutral pattern allows both focus possibilities:

(40) a. Yohani y-à-koze cyaane   'John worked hard.' (COMP focus)

      b. Yohani y-àrá-koze cyaane   'John worked hard.' (VP focus)

(40) c.   *Yohani, y-à-koze cyaane   (*COMP focus)

    d.   Yohani, y-àrá-koze cyaane   'John, he worked hard.' (VP focus)

The other examples of this type are a bit easier to understand, since the topicalized constituent includes--in the case where the restriction shows up--both the subject and a participial-adverb complement:

(41) a.   Yohani, n-à-mu-bonye akina   'John, I saw him playing.' (COMP focus)

    b.   Yohani, n-àrá-mu-bonye akina   'John, I saw him playing.' (VP focus)

In (41a) the new information focus includes only the adverb complement, while in (41b) it includes the verb. The same situation prevails when the subject noun occurs by itself to the right:

(42) a.   n-à-mu-bonye akina, Yohani   'I saw him playing, John.' (COMP focus)

    b.   n-àrá-mu-bonye akina, Yohani   'I saw him playing, John.' (VP focus)

Now, if both the subject and adverb complement are right-topicalized, i.e., the complement adverb is removed from the status of new information, only the VP-focus particle may be used:

(43) a.   n-àrá-mu-bonye, Yohani akina   'I saw him, John (,) playing.' (VP focus)

    b.   *n-à-mu-bonye, Yohani akina   (*COMP focus)

This case is thus not really baffling, since the right-topicalization of the subject alone does not produce any change, but only when it is also associated with the topicalization of the complement, leaving the verb alone in focus.

4.   Focus and Pronouns in Zulu[16]

In Zulu the VP-focus particle has a rather minimal distribution, confined only to one present tense. Unlike Bemba but very much like

---

[16] For more details of the data see Kunene [1975].

the emerging tendency in Rwanda, in Zulu the same verb phrase cannot
accommodate the focus contrast. Rather, when a complement is present,
only the COMP-focus form may appear, whereas when no complement is
present, the VP-focus particle is obligatory:

(44) a. u-dla isiinkwa   'He eats bread.' (COMP focus)

     b. *u-ya-dla isilnkwa   (*VP focus)

     c. *u-dla   (*COMP focus)

     d. u-ya-dla   'He eats.' (object unspecified)
                                     (VP focus)

Further, the VP-focus particle -ya- in Zulu is barred from negative
and relative-clause environments, much like in Bemba and Rwanda. Also,
pronominalization of the object, as in Rwanda, automatically narrows
the focus to the verb alone:

(45) a. u-ya-si-dla   'He eats it.' (the bread) (VP
                                     focus)

     b. *u-si-dla   (*COMP focus)

The very same restriction is observed when the object is coreferential
with the subject and is reflexivized:

(46) a. umfana u-ya-zi-shaaya   'The child hits himself.' (VP
                                     focus)

     b. *umfana u-zi-shaaya   (*COMP focus)

    We have seen then, that while many of the constraints are the same,
the situation in Zulu (completely) and in Rwanda (partially) represents
a subtle departure from that of Bemba and English. In the latter, one
may get a semantic contrast between VP scope of the assertion (VP focus)
and the more limited COMP scope (COMP focus) whenever a complement is
present. This communicative strategy allows--in non-contrastive con-
text--the message to consist of one additional piece of new informa-
tion, the complement, or alternatively two pieces--the complement and
the verb. In Zulu (and to some extent in Rwanda), when a complement
is present the scope of new information can only include that comple-
ment, and may not include the verb. Thus Zulu seems to have evolved
the alternative, more restricted strategy outlined in (30) above, the

one allowing only one piece of new information per verb phrase ("pro-position"). Since the only time the VP-focus particle appears is when the verb <u>alone</u> is new information, obviously the mapping situation in Zulu is at variance with the one given in (21) for Bemba. The differ-ence may be characterized as:

(47)   BEMBA   ZULU

   COMP-focus = verb not new   COMP-focus = verb not new
             information   information

   VP-focus = verb <u>included</u> in   VP-focus = <u>only</u> the verb is
             new information   new information

Assuming for the moment that the less restrictive strategy, the one used in Bemba and reflected at the semantic level—at least as a possi-bility—in English, is the older one, can the change to the Zulu strat-egy be explained as a natural change? It seems to me that it can, and that what has occurred is a highly natural inferential extension by which the <u>uni-directional</u> conditional is re-interpreted as <u>bi-condi-tional</u>. The initial (Bemba) situation, viz. (47), may be characterized as:

(48) [the verb is old information] $\supset$ [<u>no</u> VP-scope particle is present]

The normal inference from this, via <u>modus tolens</u>, will be:

(49) [VP-scope particle is present] $\supset$ [the verb is <u>not</u> old information]

However, if speakers interpret the rule in (48) as a biconditional, then they are entitled to infer:

(50) [<u>no</u> VP-scope particle present] $\equiv$ [the verb is <u>old</u> information]

And from that by one step of extracting the negative:

(51) [VP-scope particle present] $\equiv$ [verb is <u>new</u> information]

This type of hypothesized extension represents an extremely common sort of so-called "logical **fallacy**", **by which an inclusion** relation **as in the** Bemba case of (47) may become an exclusion relation, as in the Zulu case.

5. Discussion

Most of what I have shown above is reasonably predictable from rather general facts about the universal pragmatic properties of negatives, relatives, topic-constructions, definites and pronouns. More intriguing and less obvious is the emerging suggestion that there exists a strategy of information processing in language such that the amount of new information per a certain unit of message-transaction is restricted in a fashion--say "one unit per proposition." The difficulties of elucidating this strategy are considerable, since so far no one has defined either the "bit" unit of new information or the "proposition" unit of message-transaction. Nevertheless, it seems to me that a number of facts can be sketched out which may have a bearing on this possibility. To begin with, there are facts that concern upper-limit constraints on the "normal" number of arguments associated with verbs. I have commented elsewhere [Givón, 1972] on the seeming tendency for languages to have verb classes which are sub-categorized with respect to two object arguments but never more. Even verbs which potentially could be sub-catagorized with reference to three nominal object arguments, such as "transfer verbs" as in:

(52) x moved y from z to q

or exchange verbs such as:

(53) x bought y from z for q^{17}

seem to take the third argument only optionally, but are never obligatorily sub-categorized with respect to three object arguments.

The next fact concerns verbs which take two object nominal arguments, where most commonly the non-accusative one is a dative or locative. As is well known,[18] subject arguments tend to be definite. But while accusative objects show, on average text counts, about fifty per cent indefinites, dative objects tend to be on the average ninety to

---

[17]Where q stands for the exchange price, not the benefactive.

[18]But the skeptic may consult Keenan [1975] or Givón [1975b].

ninety-five per cent definite, and locative objects around eighty per cent definite.[19] In other words, in verb phrases, which carry the assertion or new information in sentences, in addition to the verb having the normal possibility of representing new information, only one more argument or bit of new information is normally added--and this one is indefinite only in fifty per cent of the cases. Taking the "sentence", however awkwardly defined, as the message-transaction unit, and verbs, nouns or adverbs as bits of information, the freqeuncy considerations outlined above already suggest, by themselves, that in text counts of English, a language which at the "competence" level conforms to the less-restrictive strategy of Bemba rather than the more restrictive strategy of Zulu, the ratio of bits **per** proposition is already smaller than two.

Another set of facts come from Kirsner [1973], where he observed that a direct correlation exists between the definiteness of subjects of active sentences and the frequency of occurrence of one or two object NP's, so that sentences with definite subjects tend to have more object arguments than sentences with indefinite subjects. In other words, when the subject is not new information, the proposition may more frequently allow other possible bits of new information, i.e., object NP's. Further, Kirsner [1975] has shown a similar correlation in passives: when the subjects of passives are definite, the frequency of an overtly-mentioned underlying agent is higher, while when the subject is indefinite, i.e., itself new information, the frequency of overtly mentioned agent arguments is lower. This strongly suggests the presence of some sort of upper-bound phenomenon constraining the number of arguments--or potential bits of information, and this upper-bounds constraint seems to depend on the status of the least dispensable argument of the proposition, its subject, i.e., whether it is itself new or old information.

The last set of facts concerns a well known universal of WH

---

[19]For the actual text counts, see Givón [1975d]. The counts represent the "base line" of main, affirmative, active, declarative clauses.

questions, i.e., the fact that, in general,[20] they tend to only query one argument at a time, such as subject, accusative, dative, locative, time, manner, etc., while the rest of the proposition which underlies both the question and the elicited answer is presupposed. This is a strong reflection of the strategy of "one bit of new information per proposition", since in fact this strategy in the query, if successful, virtually insures that the very same communicative strategy will also be maintained in the reply. While query strategies are not necessarily the only type of discourse strategy used in communication, it is nevertheless a rather important one, representing situations where the speaker deliberately attempts to restrict the scope of new information to one-bit-at-a-time. I see no reason to assume that this is not another reflection of a rather universal communicative strategy, in which the bulk of the communicative transaction consists of presupposed material, i.e., old information used to insure commonality of background/context/world-view between the speaker and the hearer, and only a small chunk consists of the actual message, new information.

_____

[20]Two most common exceptions of "double WH" are (i) discourse misunderstanding and request for repetition, as in 'Who saw whom yesterday?', and (ii) respective, pair-wise lists, such as 'Who loves whom?' intended to elicit answers such as 'John loves Sheila and Bill loves Suzanne.'

REFERENCES

Garcia, E. 1975. "Other than ambiguity," Lehmann College, CUNY. MS.

Givón, T. 1972. Studies in ChiBemba and Bantu Grammar, Studies in African Linguistics, Supplement no. 3.

Givón, T. 1975a. "Negation in language: function, pragmatics, ontology," UCLA. MS.

Givón, T. 1975b. "Topic, pronoun and grammatical agreement," in C. Li (ed.), Subject and Topic. New York: Academic Press (to appear).

Givón, T. 1975c. "Universal grammar, lexical structure and translatability," in M. Geunthner-Reutter and F. Reutter (eds.), Anthology on the Theory of Translation. Cambridge: Cambridge University Press (to appear).

Givón, T. 1975d. "Toward a discourse definition of syntax," UCLA. MS.

Keenan, E. 1975. "Toward a universal definition of 'subject of', in C. Li (ed.), Subject and Topic. New York: Academic Press (to appear).

Kimenyi, A. 1973. Tense-Aspect Modality Systems in English and Kinya-Rwanda. MA thesis, UCLA.

Kirsner, R. 1973. "Natural focus and agentive interpretation: on the semantics of the Dutch expletive er," Stanford Occasional Papers in Linguistics, no. 3: 101-114.

Kunene, Sr. E. 1975. "Zulu pronouns and the structure of discourse," Studies in African Linguistics 6.2: 151-170.

Sanchez-Mejía, M. 1974. "Tense-aspect in KinyaRwanda, " UCLA. MS.