

ON THE NOTION « INCHOATIVE VERB » IN KINYARWANDA

by Robert D. BOTNE

INTRODUCTION

The verbs described in this article constitute a significant, but inadequately explored, group of Kinyarwanda verbs. They have been described variously by different linguists as "statives" (van OVERSCHELDE 1968, OVERDULVE 1975), as "non-progressive (versus progressive) statives" (KIMENYI 1973), and as a commixture of lexically "stative" and "non-stative" verbs (COUPEZ 1980). Each of these different descriptions characterizes the verbs in question as being in some way "stative"; yet such a characterization captures only a small part of the nature of these verbs and, moreover, is not true of the entire group. Furthermore, they fail in general to provide any explanation for the differences in linguistic behavior between these verbs and other verbs in the language. In the analysis that follows I propose a semantic/syntactic framework for characterizing these differences.

In general this set of verbs serves to express a change of condition or location of the subject; many of them characterize the change, or transition, from one state to another¹. Consequently, I will refer

(1) These definitions are based on DILLON (1977 : 126).

to them throughout the analysis as "inchoative verbs". Included in this set of inchoative verbs are verbs such as the following :

kú-rwáàrà ²	"to be (come) sick"
kw-licàrà	"to be (come) seated"
gú-túùrà	"to reside/live"
kù-ràgìrà	"to tend (animals)"
gú-téèkà	"to prepare food/cook"
kù-mènyèèrà	"to be (come) accustomed to"
kù-bábàrà	"to suffer morally/spiritually"
gù-tààhà	"to return home"
gù-còòcèrà	"to be dressed in rags"

These verbs, as one can readily see, do not form a intuitively coherent semantic class. Nevertheless, the analysis developed here will demonstrate that they share common temporal characteristics, characteristics which determine the nature of the semantic interpretation they receive in particular syntactic contexts.

The approach taken in the present analysis of inchoative verbs is based on the claim that events, as denoted by certain verbs, can be linguistically analyzed as a series of temporal phases (see FREED 1980), and that a satisfactory analysis of verbal behavior can be realized only if this underlying temporal structure is taken into consideration. Such an approach allows us to make specific claims about the nature of inchoative verbs in Kinyarwanda and helps to explain their syntactic and semantic differences with respect to other categories of verbs in the language.

The discussion of inchoative verbs will focus on their behavior as linguistic representations of real-world events and the temporal relationships among these events. Accordingly, a large part of the discus-

(2) Vowel length will be noted throughout by doubling of the appropriate vowel symbol.

The representation of verbal structures is neither phonemic nor phonetic. The problem of representation of morphological structures is a common which is rarely resolved satisfactorily. I have opted here for a notation which corresponds closely to the written form of the language (nearly phonemic as well) so that other reference sources can be easily compared. I have tried as much as possible to indicate relevant morphological structure without destroying the sense of the surface form. Consequently in some verbal constructions certain morphemes have not been explicitly indicated (nul morphemes, for example), while others have been represented as they would appear after phonological rules have applied (thus, /a/ 3ps subj. becomes [y] before a following vowel). I hope that this representation will allow the reader to grasp the relevant aspects of the problem without becoming unnecessarily bogged down in complex detail.

sion will be concerned with the linguistic interaction of tense and aspect with the verbs naming these events. Before proceeding with the proposed analysis of inchoative verbs, it is both necessary and expedient to examine briefly the theoretical assumptions upon which the analyses of tense, aspect and the temporal structures of events are to be based.

ABBREVIATIONS

The following abbreviations will be used in the article :

O = onset	R1 = primary reference point (moment of speaking)
N = nucleus	R2 = secondary reference point
C = coda	CA = point of completive aspect
E = event	
<i>ipfv</i> = imperfective	<i>obj</i> + number = object infix + class
<i>pfv</i> = perfective	<i>loc</i> = locative infix
<i>cmpl</i> = completive	<i>nul com</i> = no external complement
<i>rm</i> = remote	<i>seggp</i> = segmental present/near future
<i>nr</i> = near	<i>seggpst</i> = segmental past (near or remote)
<i>nrn</i> = non-remote	<i>ant</i> = anterior
	<i>pos</i> = posterior
	<i>pst</i> = past
	<i>fut</i> = future

THE TEMPORAL STRUCTURE OF EVENTS

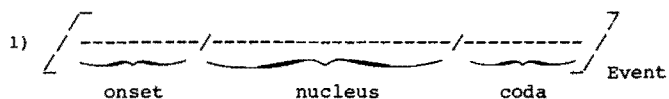
One way in which the events named by verbs may be differentiated is with respect to their internal temporal structures. Such an approach is set forth in FREED (1980) in which she proposes that certain events may be characterized (in English) as a series of temporal segments. She proposes three potential phases of an event : an "onset" phase, a "nuclear" phase, and a "coda" phase. The nuclear phase, or simply *nucleus*, of an event is, according to FREED, that time segment during which the characteristic activity of the event can be said to be in progress.

This means that :

"for any sentence naming an event, the occurrence of that event (or rather the sentence), is true at the time of the nucleus. For example, 'I am leaving' is true at the time of the nucleus of the event called 'leaving'" (FREED, 1980 : 34).

Those events which can be characterized as containing a temporal phase corresponding to a nucleus may be further characterized according

to whether or not they also contain temporal segments corresponding to an onset phase and/or a coda phase. The *onset* phase, as described by FREED, is that time period immediately preceding, and differing in character from, the initial phase of the nucleus, in essence a preparatory stage for the nuclear activity of the event. The *coda* phase, like the onset phase, is a time segment during which the character of the event differs from that of the nuclear phase. FREED considers this phase to be that time interval immediately following the nucleus of the event and which brings the event to a definite end. We can visualize the relationships of these two phases with respect to the nucleus as the schematic representation in (1) illustrates.



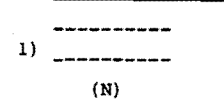
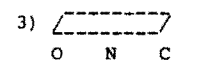
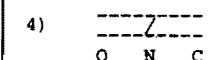
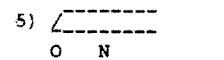

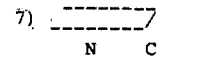
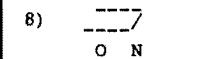
As an example of the onset phase FREED suggests that period during which an individual feels himself falling asleep. If he is suddenly startled, or returns to a state of wakefulness for whatever reason, he may be said to have experienced the onset of the event 'sleep', but did not in fact experience the characteristic activity 'sleeping', which (for English) can be considered to be the nucleus of the event.

FREED illustrates the notion of coda phase with the sentence 'Tom and Lynn ended their conversation with an argument'. In this case the "argument" represents the final phase of the event, differing in nature from the rest of the event and bringing it to a definite close. This interpretation becomes more evident if we consider the sentence 'Tom and Lynn ended their conversation', in which there is no indication of the completion of the event.

FREED's analysis is concerned with the characterization of verbs in English. It is also possible to characterize verbs in Kinyarwanda in terms of internal temporal structures relative to the events they name. However, the nature of the analysis for Kinyarwanda appears to differ in significant ways from that described by FREED for English. The most significant difference is to be found in the conception of the "nuclear phase" of events. FREED considers only durative temporal intervals as possible nuclear phases. In Kinyarwanda we find evidence of the need to consider *points* as possible nuclear phases. Arguments favoring such a punctual analysis will be given in the discussion of inchoative verbs to follow.

A second difference with respect to FREED's analysis is found in the relationships of the onset and coda phases to the nucleus of the event. An event characterized as having a durative nucleus in Kinyarwanda will have, if it can be said to comprise more than one phase, a punctual onset and/or coda. If, however, the event is characterized as having a punctual nucleus, then the onset and/or coda phase will be durative. Such an analysis suggests eight possible temporal structures for events in Kinyarwanda. These potential structures are schematically represented and categorized in Table 1.

TABLE 1 - Potential Internal Structures of Events in Kinyarwanda

Durative N		Punctual N		
1) 	(N)	2) /	(N)	
3) 	O N C	4) 	O N C	} Inchoative events
5) 	O N	6) 	N C	
7) 	N C	8) 	O N	

The analysis presented in this article is concerned primarily with events having the structures outlined in (4), (6) and (8) of Table 1³. These structures correspond to three types of inchoative events in Kinyarwanda. These events (and the verbs that name them) will be designated "transitional", "resultative" and "achievement" inchoatives, respectively. Differences in the nature of these events will be considered in the discussion of inchoative verbs themselves.

It is with respect to these internal temporal structures of events, as illustrated in Table 1, that the linguistic notions of tense and (at least one type of) aspect are interpreted. Having considered, albeit

(3) Examples of verbs in the order categories are: (1) -kúund- "like", -bón- "realize"; (2) -kúbit- "hit"; (3) -kám- "milk", -sòm- "read"; (5) -rír- "cry", -gúmy- "continue"; (7) -gú- "fall".

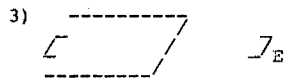
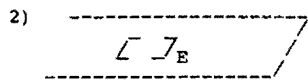
only briefly, the basic temporal structures of events, we can turn now to the relationship of grammatical aspect to the verbs naming these events.

ASPECT IN KINYARWANDA

For any language it is possible to consider several types of aspect. Of primary concern to us here is what can be characterized as "delimiting" aspect (see BOTNE, 1981). This category of aspect expresses essentially a correlation between a delimited temporal phase and a narrated event. This correlation may be perceived in either of two ways: 1) as an event or events occurring within the delimited temporal phase, or 2) as a delimited phase within the temporal structure of the event itself. If we consider as an example an abstract time interval "bounded" on its right (upper/future) end, schematically represented as



we may conceive of an event E as either encompassed within this interval (as in 2), or as encompassing the time interval (which in effect brings to the foreground a particular phase of the event, as in 3).



By his choice of appropriate delimiting aspect (within the possibilities offered by his language), a speaker may delineate only a particular phase of an event, or he may place the event within a particular temporal context. Several examples from Kinyarwanda will serve to clarify these notions.

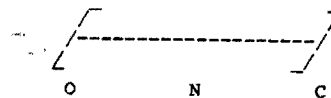
In Kinyarwanda it is necessary to consider three categories of delimiting aspect. These will be referred to here as *perfective*⁴, *imper-*

(4) See COUPEZ (1980) for a different usage of "perfective".

fective, and *completive*. Each of these aspects characterizes the nucleus of the narrated event in a different way. Consider first the perfective aspect. The perfective denotes a bounded interval that typically characterizes the nucleus of an event as a *complete* whole with no indication of its internal complexity (see COMRIE 1976). It is morphologically marked by the terminal suffix -a. Hence, we find sentences such as those illustrated in (4).

- 4) a. *nimugorooba à-rà-kàm-à inka hanyuma ...*
 in evening 3ps-segp-milk-pfv cow(s)
 "this evening she will milk the cow(s) and then ..."
- b. *námúbwilyè gúkàmà inka (aliko) ntì-y-à-bl-kòr-à*
lps-1m ant-3ps obj-tell-impl to-milk cow(s) but neg-3ps-ant-obj 8-do-pf
 "I told her to milk the cow(s), but she didn't do it"

In effet, the narrated event -kàm- is presented as a *complete whole* with no particular emphasis on its internal complexity nor on its beginning or end. I say narrated *event* because, as we seen, a durative nucleus in Kinyarwanda events will have punctual onset and coda phases which will be coterminous with the boundaries of the delimited temporal interval. This relationship of event -kàm- to bounded interval can be visualized as follows (where the large brackets indicate the boundaries of the delimited temporal phase encompassing the event):

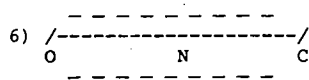


The imperfective aspect, in contrast to the perfective, denotes an unbounded interval of undetermined duration. This aspect is morphologically marked by the terminal suffix -aga, and may characterize the event in one of two ways.

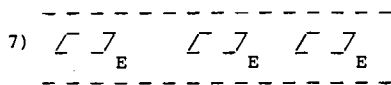
- 5) *tw-áá-kàm-àgà inka*
lpp-1m ant-milk-impfv cow(s)
 i. "we were milking the cow(s)"
 ii. "we used to milk the cow(s)"

The two interpretations observed in (5) are possible based on the distinction outlined previously and illustrated in (2) and (3) above. In (5i), the temporal interval is interpreted as encompassed within the event itself, thereby characterizing the nucleus of the event as of undetermined duration; it provides no indication of the beginning or

end of the event. In this respect, the imperfective functions to bring the activity of the nucleus of the event into the foreground. This relationship between unbounded interval and event may be schematized as illustrated in (6).



In (5ii), on the other hand, the event(s) is (are) interpreted as occurring within the delimited temporal interval; that is, focus is on the time interval during which the event or events were manifested. This relationship is illustrated in (7).



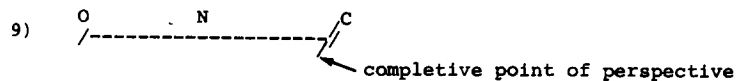
Thus, the imperfective aspect in Kinyarwanda may function either to focus on the internal structure of a single instantiation of an event, or to focus on the temporal interval itself during which several instantiations of the event were manifested.

Of interest for the analysis of inchoative verbs is the fact that imperfective aspect is incompatible with "single instantiation" interpretations of events characterized by punctual nuclear phases. Consequently, verbs that name events having punctual nuclear phases will not have the first reading above (i.e. duration of a single instantiation of an event), but only the second (i.e. multiple instantiations of the event within a delimited temporal interval). This incompatibility of the imperfective with punctual nucleus events presents us with one test for differentiating events having durative nuclear phases from those having punctual ones.

Both the perfective and imperfective aspects may be considered *dynamic* in nature, suggesting a perspective of "movement" or "activity" through the time of the event, to use COMRIE's (1976) characterization. The third aspect in Kinyarwanda, the completive, is unlike the first two in that it may be considered *static* in nature; that is, it signals a point at which the nucleus of the event may be said to have been completed, but does not indicate any particular activity at that point. This aspect is morphologically marked by a discontinuous morpheme (see BOTNE 1980) which is phonologically unstable, but is generally realized phonetically as [-Ce].

- 8) a. à-kàm-yè Inka
3ps-milk-*compl* cow(s)
"she has just milked the cow(s)"
- b. y-à-kàm-yè Inka
3ps-nr *ant*-milk-*compl*
"she milked the cow(s) (earlier in the day)"

The nature of the completive aspect may be schematically visualized as in (9).



The significant feature of the completive aspect is that it indicates completion of the nuclear (or characteristic) phase of the event, NOT necessarily completion of the event itself.

As we will see in the analysis of inchoative verbs, the semantic and temporal interpretation of a particular verbal expression depends upon the nature of the temporal structure of the event and the aspectual character attributed to it. It is this narrated aspectual character of events that is of primary concern in the grammatical relationship of tense.

TENSE IN KINYARWANDA

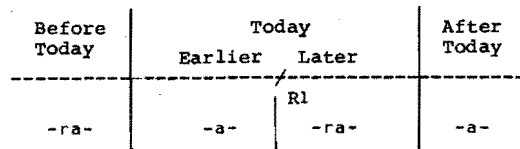
We have considered so far the relationship of temporal intervals (or, perhaps more appropriately, phases) and events; in considering tense we are concerned with the relative order of events in time, not with the relationship of events to time. In essence, tense is a grammatical relation which expresses the relationship between that aspect of an event that has been foregrounded and some distinct "event of reference". That event which serves as the primary point of reference is invariably the speech event itself; in specific contexts other events may be interpreted as secondary points of reference.

Kinyarwanda manifests two types of tense system which relate that aspect of the event in the foregrounding to the speech event. These systems have been described in BOTNE (1982), and will be briefly outlined here for reference.

The first system is segmental in nature, that is, it is a system in which temporal segments are morphologically marked. In Kinyarwanda

we find four such temporal segments, marked either by the verbal prefix *-ra-* or by *-a-*. Figure 1 illustrates the relationship of these segments to the speech event, which will be considered to be the primary reference point (R1)⁵.

FIGURE 1 - Tense : Segmental System⁶



Several examples will serve to illustrate the usage of these morphemes. In order to express the idea that an event will take place later on the day of speaking, it is necessary to affix *-ra-* to the verb radical, as in (10).

- 10) n-rà-yí-kór-à⁷
lps-segp-obj 9-work-pfv

"I am going to work on it (the car) (now or later in the day)"

The same event narrated as having occurred earlier in the day requires the morpheme *-a-* rather than *-ra-*, as in (11).

- 11) n-à-à-yí-kó-zè
lps-nr ant-segpt-obj 9-work-impl

"I worked on it (the car) (earlier in the day)"

For those events of which the nucleus is narrated as anterior to the moment of speaking, the use of *-ra-* or *-a-* occurs only when there is no external complement to the verbal expression, i.e. when the verbal construction represents the final element of the syntagme⁸. Thus, the construction in (11) loses the segmental morpheme *-a-* when a complement

(5) See BULL (1960) for a similar discussion of segmental tense.

(6) This chart is only an approximation. It has been simplified to illustrate the principal idea. For the complete chart, which includes the relationship of tones to these morphemes, see BOTNE (1982 : 26).

(7) Note that for ease in following the examples some morphemes have not been included, and others (such as tone) have been combined. Underlyingly, for example, this construction would be :

/n + ø + ý + ø + ra + yi + ø + kór + a/

(8) These morphemes are present with certain manner adverbs such as cyaane "very, hard", koko "truly", neeza "good, well", naabi "bad, poorly, etc.

is added, either an object or a locative (temporal), as in (12) and (13).

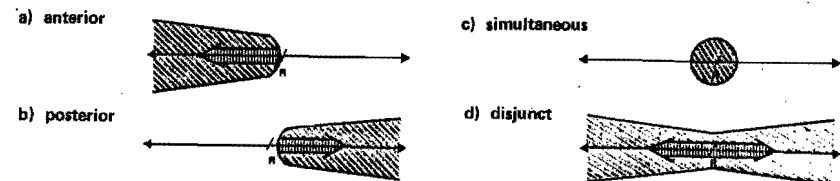
- 12) n-à-yí-kò-zè mu gitoondo
lps-nr ant-obj 9-work-impl in morning
"I worked on it (the car) this morning"

- 13) n-à-kò-zè imodoka
lps-nr ant-work-impl car
"I worked on the car (earlier in the day)"

The segmental temporal system that we have just considered functions in conjunction with a more complex "vector" temporal system. The vector system in Kinyarwanda comprises three sub-systems, each of which marks one domain semantically in opposition to all of the other domains⁹. Consequently, we find a morphological opposition in which the semantically marked morpheme will have a unique temporal interpretation, while the semantically unmarked morpheme will have three potential interpretations corresponding to the three unmarked temporal domains.

An illustrative example of the type of opposition that I have described above can be found in English. English manifests a vector temporal system opposing "anterior" and "non-anterior". The semantically marked domain - anterior - has a unique interpretation : anterior to the point of reference. It is morphologically marked by the suffix *-ed*. This domain is in semantic opposition to the unmarked domains which are grou-

(9) There are four domains that can be considered in a vector system : anterior, posterior, simultaneous, disjunct. These are illustrated below as the shaded part of each diagram.

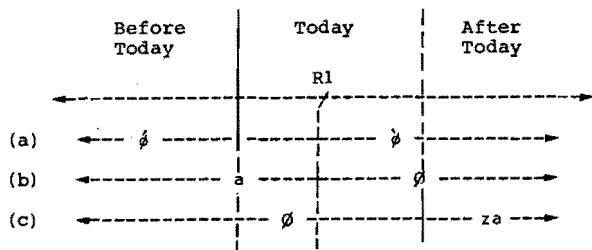


ped together as "non-anterior" (morphologically \emptyset). Thus, the verb form 'come' is semantically unmarked in English and has three potential interpretations by virtue of its opposition to the marked form 'came'.

- 14) Here they come now. (simultaneous with speech event)
- 15) They come next week. (posterior to speech event)
- 16) Whenever they come to California, they visit us. (disjunct with respect to speech event)

The vector system in Kinyarwanda is far more complex than that illustrated for English because it comprises three sub-systems, each of which is marked in the verbal construction. These three sub-systems are represented schematically in Figure 2 as remote anterior/non-remote anterior (a), anterior/non-anterior (b), and remote posterior/non-remote posterior (c).

FIGURE 2 - Tense : Vector System



In order to indicate that the narrated event is temporally situated in the near past with respect to the speech event, the verbal construction must include three vector morphemes: the $\text{-}\emptyset\text{-}$ (low tone) from (a), the -a- from (b), and the $\text{-}\emptyset\text{-}$ from (c) (in addition to the segmental morpheme, of course). Remote past with respect to the speech event would be indicated by the morpheme $\text{-}\emptyset\text{-}$ (high tone) from (a) rather than the low tone. Thus, we find the following contrasting structures.

- 17) yákózè imodoka ejo
"he worked on the car yesterday"
- 18) yàkòzè imodoka mu gitoondo
"he worked on the car this morning"

The interpretation of any particular verbal expression then is determined by the complex interaction of tense systems, aspectual character and the temporal structure of the event named by the verb. I will demonstrate in the following analysis how inchoative verbs in particular are interpreted according to this interaction.

THE NATURE OF INCHOATIVE VERBS

I. Syntactically, inchoative verbs may occur in the same types of constructions as other verbs in Kinyarwanda. However, in many instances, the temporal interpretations of these constructions are decidedly different from those for the non-inchoatives (stative or non-stative). In the preceding discussion I alluded to the "punctual" nature of the nuclear phase of events named by inchoative verbs as the principal reason for these differences. Two arguments can be presented in favor of this "punctual" analysis, both of which concern aspectual distinctions.

Consider, first, interpretations of the imperfective construction (verbal suffix -aga). With non-inchoative verbs such as -kam- "milk" (non-stative) and -bon- "realize" (stative) we find two possible interpretations.

- 19) y-á-kám-àgà inka
3ps-3m ant-milk-ipfv
i. "she used to milk the cow(s)"
ii. "she was milking the cow(s)"
- 20) y-á-bón-àgà ko nyogokuru
3ps-3m ant-realize-ipfv that grandmother
y-á-vúg-àgà ukuri
3ps-3m ant-speak-ipfv truth
i. "he used to accept that his grandmother was telling the truth"
ii. "he was realizing (at that time) that his grandmother was telling the truth"

The first reading in each set of interpretations (19i and 20i) indicates that the event was repeated (or continuous) throughout some time interval in the past. The second reading characterizes a single instantiation of the event as on-going, or continuous, with no perspective on the beginning or the end. In effect, the imperfective aspect functions here to bring to the foreground the internal structure of the nuclear phase of the event. The underlying notion of continuousness indicates that this phase is durative in these examples. That the imperfective must always characterize a situation as durative becomes even clearer if we consider a punctual verb such as -kúbìt- "hit".

- 21) y-á-rá-mú-kúbìt-àgà
3ps-3m ant-seg pst-3ps obj-hit-ipfv
i. "she used to hit him"
ii. "she was hitting him"

The first reading (21i) is analogous to that found in examples (19-20), that is, 'hitting' is a repetitive action carried out over an

indefinite interval of time in the past. In the second reading we find an iterative interpretation; the event is perceived as a series of punctual actions. A single instantiation of the event 'hit'; as a series - multiple instantiations - of sub-events, 'hit' takes on the characteristics of a durative event and thereby becomes compatible with imperfective aspect.

Inchoative verbs also occur in the imperfective construction. However, they do not exhibit the potential ambiguity in interpretation that we find in the non-inchoative verbs. The only interpretation possible is that indicating a repetitive action in the past. The second interpretation, that of an on-going event, can only be rendered by a totally different syntactic construction.

- 22) a. $\gamma\text{-}\acute{a}\text{-r}\acute{w}\acute{a}\acute{a}\text{-}\acute{a}\acute{g}\acute{a}$ inkorora
 $\acute{3}\text{ps-}\text{rm ant-be}$ (come) sick-*ipfv* cough
 i. "he used to get coughs"
 ii.*"he was getting a cough"
 iii.*"he was coughing"
- b. $\gamma\text{-}\acute{a}\text{-r}\acute{f}$ $\acute{a}\text{-r}\acute{w}\acute{a}\acute{a}\text{-}\acute{y}\acute{e}$ inkorora
 $\acute{3}\text{ps-}\text{rm ant-'be'}$ $\acute{3}\text{ps-be}$ (come) sick-*cmpl* cough
 "he was coughing"
- 23) a. $\gamma\text{-}\acute{a}\text{-r}\acute{a}\acute{g}\acute{l}\text{-}\acute{a}\acute{g}\acute{a}$ ihene n' intaama
 $\acute{3}\text{ps-}\text{rm ant-tend-}\text{ipfv}$ goats and sheep
 i. "he used to tend the goats and sheep"
 ii.*"he was tending the goats and sheep"
- b. $\gamma\text{-}\acute{a}\text{-r}\acute{f}$ $\acute{a}\text{-r}\acute{a}\acute{g}\acute{l}\text{-}\acute{y}\acute{e}$ ihene n' intaama
 $\acute{3}\text{ps-}\text{rm ant- 'be'}$ $\acute{3}\text{ps-tend-}\text{cmpl}$ - goats and sheep
 "he was tending the goats and sheep"

Since these verbs can only have the repetitive reading with imperfective aspect, we are led to conclude that the nuclear phase of the events named by these verbs is punctual.

The second argument supporting the punctual analysis of inchoative verbs is more complex than the first in that it involves the interaction of the tense system with aspectual characteristics. Notice in the following examples (24-25) that the verbal construction with -ra- (segmental temporal morpheme) and -a (perfective aspect) has two potential interpretations when the verb radical is non-inchoative.

- 24) $\acute{a}\text{-r}\acute{a}\text{-k}\acute{a}\text{m-}\acute{a}$ inka
 $\acute{3}\text{ps-segp-milk-}\text{pfv}$
 i. "she is milking the cow (at present)"
 ii. "she is going to milk the cow (later in the day)"

- 25) $\acute{a}\text{-r}\acute{a}\text{-m}\acute{w}\text{-}\acute{e}\acute{e}\text{m}\acute{e}\text{r-}\acute{a}$
 $\acute{3}\text{ps-segp-}\acute{3}\text{ps obj-believe-}\text{pfv}$
 i. "he believes her (at present)"
 ii. "he will come to believe her (later in the day)"

However, with inchoative verbs we find only the "later in the day" interpretation in this construction.

- 26) $\acute{a}\text{-r}\acute{a}\text{-s}\acute{l}\acute{l}\text{nz}\acute{l}\text{r-}\acute{a}$
 $\acute{3}\text{ps-segp-sleep-}\text{pfv}$
 i. "he is going to sleep (later in the day)"
 ii. "he is falling asleep (at present)"
 iii.*"he is sleeping (at present)"
- 27) $\acute{a}\text{-r}\acute{a}\text{-r}\acute{a}\acute{g}\acute{l}\text{-}\acute{a}$ intaama
 $\acute{3}\text{ps-segp-tend-}\text{pfv}$ sheep
 i. "he is going to tend the sheep (later in the day)"
 ii.*"he is tending the sheep (at present)"

In order to express the notion that the event is taking place, i.e. is on-going, at the moment of speaking, it is necessary to employ the completive aspect (phonetically [-Ce] with the inchoative radical. Thus, the events in (26) and (27) would be expressed as follows in order to have a "present" interpretation.

- 26') $\acute{a}\text{-r}\acute{a}\text{-s}\acute{l}\acute{l}\text{nz}\acute{l}\text{ri-}\acute{y}\acute{e}$
 $\acute{3}\text{ps-segp-sleep-}\text{cmpl}$
 "he is sleeping (at present)"
- 27') $\acute{a}\text{-r}\acute{a}\acute{g}\acute{l}\text{-}\acute{y}\acute{e}$ intaama
 $\acute{3}\text{ps-tend-}\text{cmpl}$
 "he is tending the sheep (at present)"

We also find verbs that denote non-inchoative events occurring in this construction with the completive aspect. However, the meaning is not that the event is on-going at present, but that it has just occurred (and is no longer in progress).

- 28) $\acute{a}\text{-r}\acute{a}\text{-z}\acute{f}\text{-k}\acute{a}\text{m-}\acute{y}\acute{e}$
 $\acute{3}\text{ps-segp-obj IO-milk-}\text{cmpl}$
 "she has just milked them (cows)"

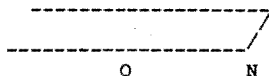
From these data we must conclude that the completive aspect indicates completion of the nuclear phase of the event, and not necessarily completion of the event itself. If this were not the case, then the sentences in (26') and (27') could not have the continuous present meaning that they have. Assuming semantic consistency in the meaning of the completive aspect, we are again led to conclude that inchoative verbs name events having punctual nuclear phases. Such an analysis

provides an appropriate explanation for the observed differences in the behavior of the inchoative verbs. In examples (26') and (27') the completive aspect indicates that the nuclear phase has been completed. The event itself, though, has not been completed; the temporal perspective of the speaker is from a point within the coda phase of the event, hence the interpretation of the event as on-going at the moment of speaking.

This analysis of inchoative verbs as denoting events with punctual nuclear phases and durative onset and/or coda phases allows us to characterize them in terms of the phases of their internal structure. The nucleus of these events is that intrinsic point of change from one state (or process) to another state¹⁰. The coda phase is that characteristic state that results from this change. Consequently, inchoative verbs, as DILLON (1977 : 126) points out, entail "result after time T" and "result not immediately before time T", where "time T" must be the punctual nuclear phase of the event.

II. The discussion to present has been concerned with formulating the distinction between verbs that name events having durative nuclear phases and verbs that name events having punctual nuclear phases. We can further differentiate verbs of the punctual variety by considering the nature of the temporal structure as a whole. Inchoative verbs are those verbs that name events having not only a punctual nuclear phase, but also an onset and/or coda phase¹¹. We can separate these verbs into three classes - achievement, transitional, resultative - according to the presence or absence of an onset and/or coda phase.

If the verb names an event of the type that has an internal structure that comprises an onset phase and a (punctual) nucleus,



we will consider the verb to belong in the achievement class (cf. VENDLER

(10) Achievement verbs must be considered somewhat differently. We can consider the nucleus to represent that intrinsic point at which the characteristic activity of the event can be said to have occurred and completed the event.

(11) There are punctual verbs such as -kùblt- "hit", which are not inchoative. These verbs do not have onset or coda phases, differentiating them from inchoatives, which do.

1967). Achievement verbs can be differentiated from both transitional and resultative verbs by (at least) two syntactic/semantic features. First, although they are similar to other inchoatives in constructions having -ra- (segmental temporal morpheme) and -a (perfective) in that they can only have the meaning "later in the day" (as in 29 below), they do not have "on-going present" meaning when the completive aspect replaces the perfective (as in 30). Rather, they have the same meaning as found with non-inchoative verbs : "has just V-ed".

29) à-rà-hà-gèr-à
 3ps-segp-Loc obj-arrive-pfv
 "he will arrive there (later in the day)"

30) à-rà-hà-gè-zè
 3ps-segp-Loc obj-arrive-cmpl
 "he has just arrived there"

Achievement verbs differ from non-inchoative punctual verbs such as -kubit- "hit" in that they may occur in constructions compatible with the durative adverbial expression mu + time expression ("V in T-time").

31) y-à-gè-zè iwe mu minota icumi
 3ps-nr ant-arrive-cmpl home in minutes ten
 "he arrived home in ten minutes (earlier in the day)"

32) *y-à-mù-kùbl-sè mu minota icumi
 3ps-nr ant-3ps obj-hit-cmpl
 "he hit him in ten minutes"

A second characteristic feature of achievement verbs that distinguishes them from transitional and resultative inchoatives is their ungrammaticality in constructions compatible with the durative adverbial 'V + time expression' ("V for T-time) which answers the question Igihe kiingana iki ? ("for how long ?"). This difference is illustrated by the examples in (33-35) with the verbs -gèr- "arrive" (achievement), -sìnzìr- "sleep" (transitional), and -tégèrèz- "wait for" (resultative).

33) *y-à-gè-zè iwe minota icumi
 3ps-nr ant-arrive-cmpl home minutes ten
 "he arrived home for ten minutes"

34) y-à-sìnzìrì-yè masaaha abili
 3ps-nr ant-sleep-cmpl hours two
 "he slept for two hours"

35) y-à-mù-tégèrè-jè masaaha abili
 3ps-nr ant-3ps obj-wait for-cmpl hours two
 "he waited for him for two hours"

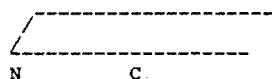
We can characterize achievement inchoatives as compatible with adverbials expressing duration of "coming to be" and incompatible with adverbials expressing duration of "result". This situation is just the reverse for resultative inchoatives. The example in (36) indicates the ungrammaticality of *-tégèrèz-* with the duration adverbial *mu* + time expression.

- 36) *y-à-mù-tégèrè-jè mu masaaha abili
 3ps-nr ant-3ps obj-wait for-*cmpl* in hours two
 "he waited for him in two hours"

The resultative inchoatives may be further distinguished by their ungrammaticality in the construction *-ri mu ku-V*¹² in which both achievement and transitional inchoatives may occur.

- 37) *à-rì mù kú-mú-tégèrèz-à
 3ps- 'be' in to-3ps obj-wait for-*pfv*
 "he is about to wait for him"
- 38) à-rì mù gù-sìnzìr-à
 "he is falling asleep"
- 39) tù-rì mù kù-gèr-à iwanyu
 "we are about to arrive home"

We can see from these data that resultative inchoatives are incompatible with syntactic constructions that express a notion of "coming to be". We can, therefore, conclude from this observation that resultative inchoatives do not contain an onset phase as part of their internal temporal structure. This structure will comprise only two phases, a punctual nucleus and a durative coda phase.



The third class of verb - transitional verbs - is compatible both with syntactic constructions expressing duration of "coming to be" and duration of "result", as the examples in (40-43) illustrate.

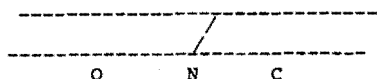
(12) This construction varies from one dialect to another in Kinyarwanda, some dialects not having any equivalent form. Comparable forms are: *-ri ho -V-* and *-ri mu ku-V*, for example.

- 40) iki giti cy-é-é-zè mu myaka ibili
 this tree it-3m ant-bear fruit-*cmpl* in years two
 "this tree bore fruit in two years"
- 41) Iki giti cyéézè imyaka ibili
 "this tree bore fruit for two years"
- 42) y-à-tàè-tchè ibijumba mu masaaha abili
 3ps-nr ant-cook-*cmpl* sweet potatoes in hours two
 "she cooked the sweet potatoes in two hours"
- 43) yàtèètchè ibijumba masaaha abili
 "she cooked the sweet potatoes for two hours"
- These transitional inchoatives may also be characterized by their compatibility with the aspectualizer *-tàngìr-* "start, begin". Achievement verbs can never co-occur with *-tàngìr-*; resultative verbs may co-occur with *-tàngìr-* when the indicated tense relation is other than "present".
- 44) à-tàngì-yè kú-rwàar-à inkorora
 3ps-begin-*cmpl* to-be (come) sick-*pfv* cough
 "he has started to get a cough"
- 45) *à-tàngì-yè kù-gèr-à
 "he has started to arrive"
- 46)a. *à-tàngì-yè gú-tégèrèz-à inshuti ye
 "he has started to wait for his friend"
- b. y-à-tàngì-yè kú-mú-tégèrèz-à i saa moya
 "he started waiting for him at seven o'clock"

These data can be explained if we recognize that *-tàngìr-* in Kinyarwanda is an achievement inchoative which "refers" to the onset and initial phase of the nucleus of the event named by its complement verb. Since resultatives have no corresponding onset phase, their nuclear phase (interpreted as concurrent with the nuclear phase of *-tàngìr-*) can only be specified as occurring at a specific point in the past or the future with respect to the moment of speaking. This interaction of aspectualizer and event structure will be described in more detail in the next section.

Transitional verbs are compatible with *-tàngìr-* because they comprise all three temporal phases - onset, nucleus, and coda. Their

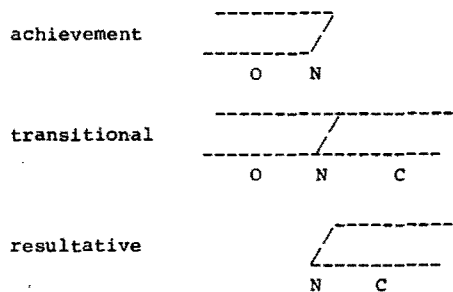
internal temporal structure can be represented as schematized below.



We have seen in the preceding discussion of inchoative verbs that there are significant linguistic differences among them which permit us to classify them into three distinct classes : achievement, transitional, and resultative. These syntactic/semantic differences are summarized in the following table. The linguistic constructions considered in the analysis represent only a few of the linguistic tests that could be used for classifying these verbs. These constructions have been selected because they are representative of the types of syntactic elements that provide tests for inchoative structures.

TABLE 2 - Structural Classification of Inchoative Verbs

	-táàngìr-	V + mu + T	V + T	-rí mu ku-V
achievement	NO	YES	NO	YES
transitional	YES	YES	YES	YES
resultative	NO (pres)/ YES (npres)	NO	YES	NO



THE INTERACTION OF TENSE, ASPECT AND INCHOATIVE VERBS

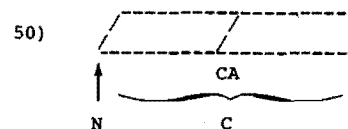
I. In the introductory discussion of tense and aspect I stated that the temporal interpretation accorded any particular verbal expres-

sion is determined by the interrelationship of tense, aspect and the internal temporal structure of the event named by the verb. In this section I will describe how temporal interpretations are accorded verbal constructions in which the principal verb is inchoative. This discussion should clarify and illustrate the preceding analysis of the structure of inchoatives.

We can begin the discussion by considering inchoative verbs in the syntactic construction which includes "present tense" morphemes in conjunction with completive aspect. In sentences (47-49) we find examples of each of the inchoative categories, achievement, transitional, and resultative, respectively.

- 47) à-tàà-shyè nonaha (achievement)
"he has just returned home now"
- 48) lgiti kf-r-éà-zè (transitional)
"the tree is bearing fruit (at present)"
- 49) bà-rà-zì-ràgì-yè (resultative)
"they are tending them (cows)"

Recall that aspect brings to the foreground a particular phase (or part of a phase) of the event named by the verb; tense relates this foregrounded phase to the moment of speaking. In (49) completive aspect indicates that the speaker's perspective on the narrated event is from a point after the nucleus (which has been completed) situated within the coda. This relationship is shown in (50) where CA indicates the point specified by the completive aspect.



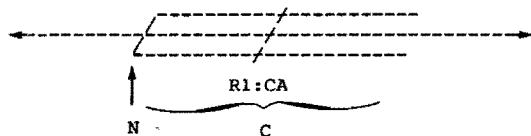
The tense relationship expressed in the sentence in (49) is indicated by four morphemes in underlying structure. This structure would be approximately that in (51).

- 51) /ba + ø + ø + ø + ra + ø + ràgìr + Ir...e/
3pp-nant-nrm ant-nrm pos-segp-nul cam-tend-cmpl

Based on the interpretation of the tense morphemes occurring in this construction, the potential meaning would be "simultaneous with the point of reference, or later on the same day". However, by virtue

of its opposition to the construction *bà-rà-zì-ràgìr-à* (where we find the only difference to be that of aspect), which can only have the meaning "later today", the construction in (49) is restricted to the meaning "simultaneous with the point of reference". Recall that it is not the nucleus of the event or the event itself which is temporally related to the point of reference (here the moment of speaking), but the narrated aspect of the event, in this construction the completive. Therefore, it is the point marked CA in (50) that is temporally marked with respect to the moment of speaking. This relationship is illustrated in (52); the symbol RI : CA indicates the concurrence of the primary reference point (the speech event) and the completive aspect.

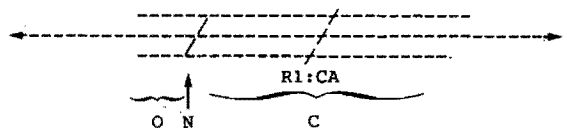
52)



We thus arrive at the meaning of sentence as narrated in (49) : "the nucleus of the event 'tend' has been completed, the speaker's perspective is from a point in the coda phase of the event 'tend', this point is simultaneous with the moment of speaking".

The interpretation of the sentence in (48) is analogous to that in (49) because the events in both sentences are characterized by an internal structure incorporating a coda phase. Consequently, we can visualize the relationship among tense, aspect and event structure in (48) as

53)

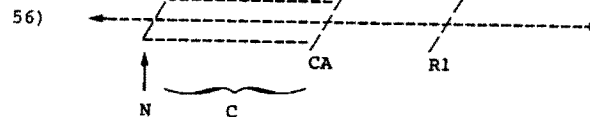


in which we again find an interpretation of completive point simultaneous with the moment of speaking.

A change of vector morphemes - from \emptyset to *-a-* produces a change in the relationship of the completive aspect with respect to the moment of speaking.

- 54) *bà-à-à-zì-ràgì-yè*
 "they tended them (cows) (earlier in the day)"
- 55) *γ-à-rwàà-yè umulliro*
 i. "he became ill with a fever"
 ii. "he was ill with a fever"

In (54) the foregrounded aspect of the event is narrated as anterior to the moment of speaking; furthermore, the event is understood to have been completed. This relationship is illustrated in the following schema.

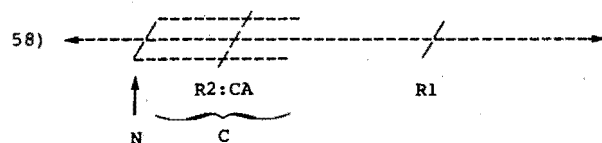


Note that a significant difference in interpretation of the placement of the completive point is to be found between that in (52) and that in (56). In (52) the point is situated at an indefinite location in the coda phase; in (56) it is interpreted as the final point of the coda and, consequently, of the event itself. This difference in meaning may be attributed to simple pragmatic aspects of the speech event; we wish to communicate to our listener whether or not a characteristic phase of an event is occurring at a particular point in time or is anterior or posterior to the reference point. In Kinyarwanda an event may be narrated as on-going with respect to a point in the past, as in (57).

- 57) *bà-à-rì bà-zì-ràgì-yè*
 "they were tending them (at that moment)"

The defective verb *-rì* "be" in effect specifies a second reference point to which the event is temporally oriented. The tense markers in this verbal construction indicate the relationship of this second reference point to the primary reference point (the moment of speaking).

This complex interaction is illustrated in (58).

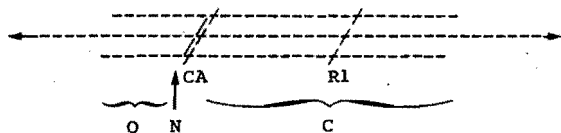


By virtue of the systemic opposition between (54) and (57), the meaning of the sentence in (54) is restricted to completion of the event.

In (55) we find one interpretation analogous to that described for (54), that is, the event is interpreted as having occurred and as having been completed in the past. There is, however, a second interpretation possible. In this second reading, the completive aspect is interpreted as marking the initial point of the coda phase, in effect signaling the completion of the "coming to be" (onset) of the event. Consequently, the construction in (55) is ambiguous with respect to the placement of the completive point; and, in fact, there are contexts in which the coda phase will be interpreted as on-going at the moment of speech.

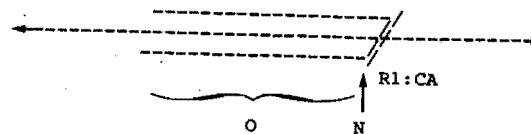
- 59) kángabo yárwááyè umuliro ejo hanyumá mmujyana ku bitaro.
Azaagaruka ejo ni akíra.

"Kangabo became feverish yesterday and I took him to the hospital.
He will come back tomorrow if he is well".



This second interpretation is rather restricted in usage, treating the onset phase and nucleus of the transitional inchoative event in a manner similar to that found with achievement events.

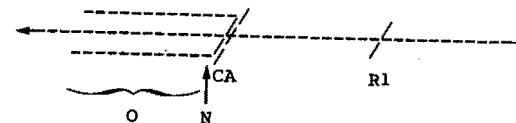
Returning to the original set of examples (47-49), we find that the example in (47) is representative of the interpretation given achievement verbs in the "present completive" construction. The event 'return home' is interpreted as having just taken place; the completive aspect indicates that the nucleus of the event has just been completed, which, in the case of achievement inchoatives, is also the final phase of the event.



The change of one of the vector morphemes from non-anterior (-Ø-) to anterior (-a-) results in a change in the relationship of R1 to CA.

- 60) y-à-tàà-shyè ku manywa

"he returned home at noon (on day of speech event)"



Of particular interest in (47) is the lack of the segmental tense morpheme -ra- that is found in both (48) and (49). This phenomenon was commented on in the introduction where I stated that it is both syntactically and semantically based. If the verbal expression has an external complement included in its syntagme, then the segmental morpheme does not occur in the surface structure. For example, if the pronominal object prefix in (49) is replaced with the complement noun, as in (61), then we find that the -ra- is deleted.

- 61) bà-ràgl-yè lntaama

"they are tending the sheep"

This phenomenon is not found in all verbal constructions. It is semantically restricted to those constructions which express an instantiation (and completion) of the *nucleus* of the event anterior to the moment of speaking. Since the constructions above with inchoative verbs specify the nucleus of the event as anterior to the moment of speaking, we find the syntactic context determining the presence or absence of the segmental tense morpheme. We see then that these morphemes function in two ways, and are not limited solely to the grammatical expression of tense.

II. We have seen in the preceding discussion the relationship of completive aspect to inchoative events, and the temporal relationship of this complex structure to the moment of speaking. It is of interest here to make a few remarks on the perfective aspect before considering

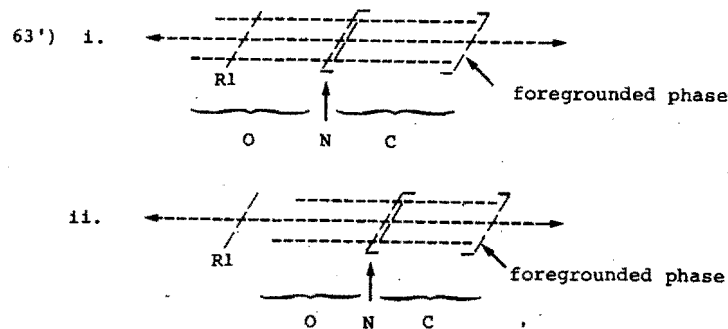
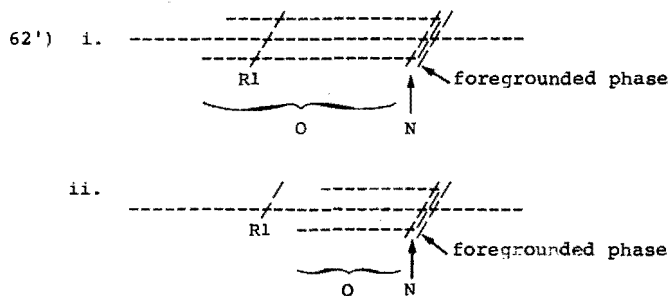
the relationship of the aspectualizer -táàngìr- to inchoatives. Sentences such as those in (62) and (63), for example, have two possible interpretations: "coming to be of E" or "E later in the day".

- 62) à-rà-gèr-à lwe
 i. "he is arriving home (on his way now)"
 ii. "he will arrive home (later in the day)"
 à-rà-s\l\inz\lìr-à
 i. "he is falling asleep"
 ii. "he will sleep (later in the day)"

These two interpretations are possible because the relationship of event to moment of speaking (expressed by tense markers) is dependent upon the foregrounded phase of the event. The perfective, as I have stated previously, functions to bring to the foreground the nucleus of the event, which, in the case of inchoatives, is punctual. The segmental tense marker -ra- in (62-63) indicates that this foreground phase is to be interpreted as occurring between the moment of speaking and the end of the day. The onset phase, however, may be interpreted as simultaneous with the moment of speaking, thus allowing the "coming to be" interpretation. If there is no onset phase, as with the event named by -ràgìr- in (64), there is no reading as "coming to be".

- 64) à-rà-ràgìr-à intaama
 "he will tend the sheep (later in the day)"
 *"he is about to tend the sheep"

The different interpretations in (62-63) arise, as shown by the schemas in (62'-63'), from the perceived relationship of the onset phase of the event to the moment of speaking; in either interpretation the nucleus is interpreted as posterior to the moment of speaking.



Although I have previously stated that the perfective foregrounds the nucleus of events, it appears that with transitional and resultative inchoatives - such as -s\l\inz\lìr- and -ràgìr-, respectively - this is not the case. Rather, the perfective embraces both the nucleus and the coda as a complete whole. (Notice that the interpretation of (63ii) is not simply that the individual will fall asleep at some later moment in the day, but additionally that the duration of 'sleep' will occur within the same day). Thus, it is perhaps better to describe the perfective as foregrounding the 'perceived' characteristic state or activity of the event, rather than simply the nucleus¹³.

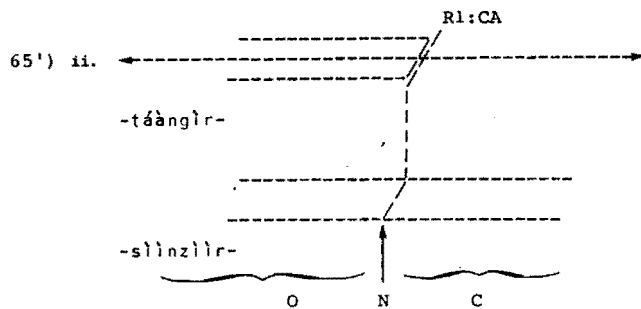
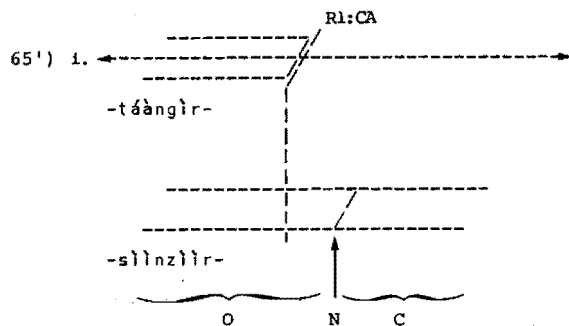
III. The final point that I will consider in this section is the interaction of inchoatives with the aspectualizer -táàngìr- "begin". As we have seen previously, this verb is inchoative in nature (achievement) and only occurs with transitional inchoatives (all contexts) or resultative inchoatives (non-present contexts). We can consider first its limitation to transitional inchoatives in constructions expressing "presentness".

The verb -táàngìr- refers to the onset phase of the event, including the initial point of the nucleus. Thus, the nucleus of the event named by -táàngìr- may indicate either a point in the onset phase of the narrated event or the initial point of the nucleus. This dual

(13) The perfective aspect appears to function in the same manner as that outlined for the imperfective earlier. Notice that it may bring to the foreground either (1) the nucleus of the event.
 a) à-rá-kór-à imodoka (n\l muunsi)
 "he will work on the car (this afternoon)"
 as a complete whole, or (2) the relevant time period in which some part of the event occurs.
 b) à-rá-kór-à imodoka (nonaha)
 "he is working on the car (now)"

potential permits two temporal interpretations of constructions with transitional verbs.

- 65) à-tààngì-yè gú-sìnzììr-à
 i. "he has begun to fall asleep"
 ii. "he has just fallen asleep"



With resultative inchoatives there is no onset phase; the event begins with the nucleus. Consequently, we only find these verbs occurring in constructions in which *-tààngìr-* is specified as anterior or posterior to the moment of speaking, as in (66). The reason for this reconstruction is that we cannot indicate that a point (such as the nucleus of an achievement event or resultative event) is simultaneous with the speech event; we can only indicate that the point is anterior or posterior to the speech event.

- 66) a. y-á-tààngì-yè gú-túúr-à i kigali ukweezi gushize
 "he began living in Kigali last month"

- b. à-zà-à-tààngìr-a gú-túúr-à i kigali ukweezi gutaaha
 "he will begin living in Kigali next month"
 c. *à-tààngì-yè gú-túúr-à i kigali
 "he is beginning to live in Kigali (now)"

Having examined the use of *-tààngìr-* with respect to transitional and resultative verbs, we must consider why it is that this aspectualizer does not co-occur with achievement verbs. As we have seen, *-tààngìr-* refers to the onset phase and the initial point of the nucleus. More significantly, though, it characterizes this phase as the preparatory stage for a *durative* activity or state. Since achievement events cannot be characterized by a durative nuclear or coda phase, they do not co-occur with *-tààngìr-*. That is, the use of *-tààngìr-* entails that the narrated event include a durative phase characteristic of that particular event.

CONCLUSION

Inchoative verbs, as we have seen, represent a syntactically and semantically distinct set of verbs in Kinyarwanda. Within the framework of the analysis developed here these verbs have been characterized as denoting events comprising a punctual nuclear phase, and an onset and/or coda phase. The set of inchoatives has, in addition, been sub-categorized into three groups according to differences among them in syntactic/semantic behavior and in associated temporal structure. I have termed the verbs in these sub-groups as achievement, transitional, or resultative according to the principal semantic characteristic of each group.

The classification of certain verbs as "inchoative" has been based entirely upon linguistic evidence within the language itself, and upon the assumption that events comprise an internal temporal structure that can be inferred from the linguistic behavior of the verbs that name them. The verbal constructions that I have described in this article permit us to associate temporal structures with events. However, what is of primary importance in this analysis is not the association of a particular temporal structure with a specific event, but rather the explanatory value such a correlation provides when considering the linguistic behavior of verbs, whether inchoative or non-inchoative.

The present classification of certain verbs in Kinyarwanda as inchoative (e.g. *-ràgìr-* "tend (animals)", *-téèk-* "cook") certainly

does not correspond to what linguists intuitively consider to be inchoative verbs in other languages, in particular Indo-European languages. Classification, however, cannot be based upon the intuition of the linguist, or upon what is true of another language. Evidence must be presented from within the language under consideration in order to obtain a valid and valuable classification. The linguistic data that I have described here provide strong evidence that Kinyarwanda speakers perceive certain events as inchoative (as I have defined the term), events which are not necessarily perceived as such in Indo-European languages.

The data and analysis I have set forth here suggest the need of reconsidering the nature of "equivalence in meaning" between linguistic items from different languages. Although we might claim that English "sit", French "asseoir" and Kinyarwanda -lìcàr- refer to the same event, it would appear to be the case that the event is perceived differently by these languages according to the nature of the temporal structure associated with it. We might expect to find that these verbs behave differently in these languages with respect to duration adverbials, aspect and tense, all of which are sensitive to the internal temporal structure of the event named by the verb. Obviously, there is more to the meaning and functioning of verbs than the nature of the internal structure that we can associate with the event the verb names. Nevertheless, an approach such as that I have argued for here can contribute to the understanding and explanation of the syntactic and semantic behavior of verbs both intra- and inter-linguistically.

TABLE 3 - A Partial Classification of Kinyarwanda Inchoatives

achievement :	-cùùcùùr-	"steal everything"
	-gèrùk-	"come back"
	-gèr-	"arrive"
	-gì-	"go"
	-fìr-	"merit"
	-ráb (ìràn)-	"fade"
	-rààngìz-	"finish"
	-táàngìr-	"start/begin"
transitional :	-ààmbàr-	"be (come) dressed/put on clothes"
	-bábàr-	"suffer morally"
	-éèr-	"bear fruit"

-hùm-	"be (come) blind"
-fìzèèr-	"hope"
-nànùk-	"be (come) thin"
-rààkàr-	"be (come) angry"
-rwáàr-	"be (come) sick"
-sàr-	"be (come) crazy"
-sìlìnzìlìr-	"be (come) asleep"
-tèèk-	"cook"

resultative :	-còòcèr-	"be dressed in rags"
	-cùùmbìk-	"be lodged/camped"
	-lìcàr-	"be seated"
	-éégám-	"lean on"
	-éégèr-	"be near"
	-fátàny-	"work together/cooperate"
	-ràgìr-	"tend (animals)"
	-ryáám-	"be lying down"
	-tégèrèz-	"wait for"
	-túrùk-	"come from/be from (place of origin)"
	-túúr-	"live/reside"
	-úùgám-	"be sheltered from (rain, sun, etc.)"
	-yòb-	"mistake route"

REFERENCES

- BOTNE, Robert D., 1982, "La Sémantique du temps en kinyarwanda", in *Linguistique et sémiologie des langues au Rwanda II*, ed. Joseph Nsengimana (n.p. : GERLA, p. 4-42).
- 1981, "On the Nature of tense and aspect : studies in the semantics of temporal reference in english and kinyarwanda". Diss. Northwestern University.
1980. "Phonological and morphological aspects of verbal structure in kinyarwanda". Master's Thesis, Northwestern University.
- BULL, William, 1960, *Time, tense and the verb*. Berkeley : University of California Press.
- COMRIE, Bernard, 1976, *Aspect*. Cambridge : Cambridge University Press.
- COUPEZ, André, 1980, *Abrégé de grammaire rwanda*. Butare, Rwanda : INRS.
- 1961, *Grammaire rwanda simplifiée*. Usumbura, Burundi : Edition du Service de l'Information.

- DILLON, George, 1977, *Introduction to contemporary linguistic semantics*. Englewood Cliffs, N.J. : Prentice-Hall, Inc.
- FREED, Alice, 1980, *The semantics of English aspectual complementation*. Dordrecht, Holland : D. Reidel Publishing Company.
- KIMEYNI, Alexandre. 1973. "Tense-aspect modality systems in english and kinyarwanda". Master's Thesis, UCLA.
- OVERDULVE, C.M., 1975, *Apprendre la langue rwanda*. The Hague : Mouton.
- QUIRK, Randolph, S. GREENBAUM, G. LEECH and J. SVARTVIK, 1972, *A Grammar of contemporary english*. London : Longman Group Ltd.
- van OVERSCHELDE, G., 1967, *Méthode pour apprendre le kinyarwanda*. Kabgayi, Rwanda : Imprimerie de Kabgayi.
- van OVERSCHELDE, G., P. BERTRAND and Cam. GASANGWA, 1977, *Dictionnaire kinyarwanda-français, français-kinyarwanda*. n.p. : n.p.
- VENDLER, Zeno, 1967, *Linguistics in philosophy*. Ithaca, N.Y. : Cornell University Press.