

Sentence Initial Elements in Brazilian Guarani

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1. INTRODUCTION AND OVERVIEW.

The nature of the content structure and the hierarchical structure of a narrative, and the relationship between the two, are important questions for the analysis and formation of texts. In Guarani, some light is shed on these matters by the sentence constituents that occur sentence initially and precede the independent clause.¹ Such a sentence initial element serves one or both of two text forming functions: to indicate a content relationship between the sentence at hand and what has preceded it, or to indicate the onset of some hierarchical grouping of sentences. The content relationships thus indicated are of either the temporal or the causal type; the hierarchical groupings are either paragraphs or episodes.

From the distribution of sentence initial elements the following pattern emerges: the content relationships indicated across paragraph and episode boundaries are predominantly temporal, while those indicated between successive sentences within a paragraph are predominantly causal. This principle of text organization incorporates two distinct views of narrative: the view that a narrative is basically a report of a temporal sequence of past events (Longacre 1976. 199ff), and the view that a narrative paragraph is a passage whose events and states (including inferred states) are "joined into a complete causal chain" (Schank 1974.11).

In this section a broad overview of the relevant factors is presented. These ideas are developed, along with examples, in subsequent sections.

1.1. All sentences in Guarani narrative are of the form

$$(1) \quad \left(\begin{array}{c} \text{Referential} \\ \text{connective} \end{array} \right) \left(\begin{array}{c} \text{Dependent} \\ \text{clause} \end{array} \right)^n \text{ Clause} \left(\begin{array}{c} \text{Dependent} \\ \text{clause} \end{array} \right),$$

where

$$(2) \quad \begin{array}{c} \text{Dependent} \\ \text{clause} \end{array} = \text{Clause} \quad \text{Clause subordinator.}$$

Theoretically there seems to be no maximum value for n in (1), but the value $n=3$ is not only adequate for most texts but rarely invoked.

Thus the only sentence constituents that can occur sentence initially and precede the independent clause are the referential connectives and dependent clauses.² Referential connectives are conjunction phrases, which, like English because of that, make pronominal reference to the preceding context. Of the dependent clauses, by far the most common type that

occurs sentence initially consists of those dependent clauses that restate some previous clause. Other common types are those dependent clauses that report the fulfillment of a preview or establish a new calendric temporal setting.

This study of sentence initial elements focuses on referential connectives, discusses dependent restatements less fully, and hardly mentions other types at all. The proportion of time devoted to each type of sentence initial element corresponds roughly to its frequency of occurrence: referential connectives are initial in 46% of all narrative sentences, dependent restatements are initial in another 11%, and dependent clauses of all other types are initial in only 8%; the remaining sentences (35%) begin with the independent clause.

1.2. As already mentioned, two different ways of organizing a narrative are useful in describing sentence initial elements: organization by means of content relationships, and groupings of sentences into hierarchical units.

For a first approximation of the content organization of a narrative, it consists of events in a temporal framework. Most narratives, however, include along with the events occasional descriptions of states, particularly those states that enable subsequent events in the sense of rendering them reasonably possible or well motivated. The presence of such states in a narrative indicates the existence of a causal framework that is present alongside the temporal framework (Schank 1974). Not only do states enable events, but events can result in states, and events can make possible subsequent events by means of intermediate and often unexpressed states. The temporal framework and the causal framework have, of course, many elements in common. Taken together, they make up a skeletal framework that incorporates all of the basic content relationships found in a narrative. This content framework is defined informally as all of the events and states in the narrative, including those states that must be inferred, connected together with temporal or causal relationships that are either indicated explicitly or are readily inferable.³

As a narrative is in progress, the content framework is incremented, or successively built up, as new events and states are added on to the part of the content framework that already exists. These new elements must be connected to the existing framework by ties of either the temporal or causal type.

As to its hierarchical structure, a Guarani narrative is made up of episodes, episodes of paragraphs, and paragraphs of sentences. The following types of episodes are relevant to the discussion: an obligatory introduction consisting primarily of participant information; passages within the body of the narrative that end with some sort of resolution; an optional summary of the story; and an optional application or moral. Episodes other than those in the main body of the narrative usually consist of only a single paragraph. Hence, in speaking of paragraphs as distinct from episodes, I am referring to paragraphs within the main body of the narrative. Such a paragraph is roughly defined as a grouping of sentences that is bounded by discontinuities in temporal or locational setting or by changes in participant interaction, but that is internally continuous in all three of these respects. This paper assumes rather than proves the existence of

episodes and paragraphs, but this assumption is shown to be reasonable in that it makes possible descriptions of sentence initial elements that are both simple and well motivated.

1.3. The primary function of sentence initial elements is to indicate specific content relationships between new material and the existing content framework, in the case that the new material is in a subsequent sentence from the point in the content framework to which it is to be connected. This is the same function that conjunctions serve in English, to indicate "a specification of the way in which what is to follow is systematically connected to what has gone before" (Halliday and Hasan 1976. 227).

The new material in each instance is the event or state reported by the independent clause of the sentence in which the sentence initial element is found. If the event or state in the independent clause is not informationally new, there is ordinarily no other sentence constituent preceding it.⁴

The particular point in the existing content framework to which new material is tied by sentence initial elements, is indicated within the sentence initial elements themselves. For referential connectives, for example, the anaphoric pronoun refers to the part of the existing content framework that is to serve as the point of connection. In paragraph medial cases this point of connection is always the independent clause of the preceding sentence, but in paragraph initial cases it is with rare exception the entire paragraph or episode immediately preceding. For dependent restatements, the point of connection is the clause from the preceding context that is being restated. In almost all cases this is the independent clause of the preceding sentence. Hence, no matter which of these two types of sentence initial element is being considered, the point of connection that it indicates includes at least the preceding independent clause.

A sentence initial element indicates not only the point of connection to the existing content framework, but also which particular content relationship the connection consists of. This is done by the clause subordinators that are final in both referential connectives and dependent restatements. In Guarani, clause subordinators are of two types: temporal and causal. There are no clause subordinators, for example, that mean 'in the same location as' or 'in the same manner as'. This restriction to temporal and causal relationships is of course implied in the claim that by means of these clause subordinators the kind of content framework that was defined in 1.2 is to be built up.

Clause subordinators, of course, do not have to occur in sentence initial elements in order to perform the function of indicating explicit content relationships between new material and the existing content framework. This happens whether they are used in sentence initial elements as already discussed or in other dependent clauses. There is however the following difference. In the case of a referential connective or dependent restatement the old material to which the new is connected is in a preceding sentence or more, specifically in the passage indicated by ha'e or the restatement. In contrast, other types of dependent clauses do not point outside the sentence in indicating the place to which the new material in the following independent clause is to be

connected. Instead the dependent clause itself, as soon as it is uttered, becomes the old material to which the new is connected.

'After that the king said thus: "Don't you know (which is) your bed?" he said. When he (the king) showed it, he (the other) went to bed'. (The dependent clause, underlined, is the point to which the following independent clause is logically connected.)

It still requires explanation why a dependent clause, which is in general not connected to the preceding content framework in any explicit way, can be treated as part of the content framework as soon as it is uttered, and new material accordingly connected onto it. This is only possible because, as substantiated in 3.1, dependent clauses tend to encode information that is to some degree recoverable from the preceding context. For this reason their connection to the content framework can be left unexpressed, being understood as part of their general recoverability. Dependent restatements are then just the limiting case of the recoverability that tends to be true for dependent clauses in general.

1.4. All referential connectives and dependent restatements function as just described, building up the existing content framework by means of either a temporal or a causal tie. Some paragraph initial referential connectives serve an additional function that for the class of sentence initial elements as a whole is secondary: to indicate the onset of a hierarchical grouping. This function can be signaled by purely formal means: referential connectives that include medial rami 'like, as' generally occur paragraph initially.⁵ But semantic features can indicate hierarchy as well: referential connectives that denote temporal ties generally occur paragraph initially.⁶ When the formal and semantic signals are both present in a referential connective, in the case of temporal referential connectives that include medial rami, not just paragraph onset but episode onset is indicated.

1.5. In sections 2 and 3 referential connectives and dependent restatements are considered in some detail. Section 4 summarizes the inferences drawn from sentence initial elements regarding the content and hierarchical structure of a narrative.

The primary corpus from which this analysis is developed consists of six narrative texts, each by a different speaker. Among these six speakers there is considerable variation in the choice and usage of sentence initial elements, and the present study represents only the part common to all their narrative styles. Other narrative texts have been occasionally consulted. Non-narrative discourse is not treated in this paper.

2. REFERENTIAL CONNECTIVES.

A referential connective takes the form

(3) ha'e (rami) Clause subordinator,

where the set of clause subordinators is, with exceptions to be noted later, the same as that in formula (2). The three positions in this construction can in a general sense be said to correlate with three text forming phenomena: ha'e with anaphoric reference, rami with hierarchical grouping, and the clause subordinators with connections within the content framework.

2.1. The anaphoric pronoun ha'e occurs in many types of constructions. It can refer to persons, things, locations, temporal settings, or the content of clauses or larger units. Within a referential connective, however, ha'e refers to a whole proposition at the least. Specifically, if ha'e is paragraph medial, its referent is the content of the preceding independent clause; if paragraph initial, its referent is the content of the largest hierarchical grouping that immediately precedes it.⁷ Very rarely in paragraph initial cases, ha'e refers to the largest hierarchical grouping before the one immediately preceding.

These rules are the simplest generalizations that can be drawn consistent with the data, in the following sense. Although in any given instance more than one referent may be logically possible for ha'e, given the facts of the story and the specific temporal or causal relationship being indicated, yet always included in those possible referents is the one given by the above rules; moreover, no other possible referent is inherently more likely than the one given above.

For example, in all paragraph medial cases of referential connectives no factual errors or contradictions arise if the referent of ha'e is taken as the independent clause of the preceding sentence.

'So his grandfather removed all the clothes from the youngster. That after (ha'e gwi) he took him to bathe him there.'

For paragraph initial referential connectives, however, it is often insufficient to suppose that ha'e refers to the previous independent clause only. In one narrative, for example, the final section within the body of the text tells how in a test of bravery a jaguar lost his nerve. The final sentence in the section reports how the jaguar was killed. Then follows a summary section, beginning with the sentence

'That like after (ha'e rami rire) the jaguar is no longer brave.'

The point of the statement is that because one jaguar lost his nerve long ago, today all jaguars are cowardly. Thus in this example and similar ones, the pronoun ha'e cannot refer to just the content of the preceding independent clause and still allow the content relationship denoted by the referential connective to have a reasonable application within the narrative. In such paragraph initial cases, a reasonable content relationship does become possible if ha'e is understood as referring to the content of the largest hierarchical grouping (paragraph or episode) that immediately precedes it.

The scope of the reference of ha'e that is given by the rules of this section can occasionally be corroborated by a dependent clause which, appearing subsequent to a referential

connective, represents the referent more specifically. For instance, following the previous example is the sentence

'Because Tupã (a folk hero) came emitting lightning and thunder, the jaguar is no longer brave.'

The dependent clause above is a summary of the episode preceding the former example. Because its position in the sentence corresponds to that of the referential connective in the former example, and since the independent clauses are exactly the same, the obvious inference is that the dependent clause is a kind of expansion of the referent of ha'e rami.

Actually, it is more common to find such an expansive dependent clause in the same sentence as the referential connective, between it and the independent clause, and in an appositional relationship to it. When this is so, the two clause subordinators must be the same or have the same meaning.

'So after crying remorsefully, he cut his own throat. That in=consequence=of (ha'e vy), because he cut his own throat (vy), he killed himself.'

The preceding example shows a clausal expansion of ha'e occurring paragraph medially and restating the preceding independent clause. The earlier example is of a clausal expansion of paragraph initial ha'e, which summarizes the preceding episode. In this way, in every case where clausal expansions of ha'e are found, they verify the rules given for identifying the referent of ha'e.⁸

As mentioned, the referent of a paragraph initial ha'e can refer to the paragraph or episode preceding the one immediately preceding the referential connective. Only one clear example of this phenomenon has been found (paragraph onsets are noted by indentation).

'After that her mother put a flower into her hand. And she said thus: "Throw it at the one you like the best," she said. And so, as she was about to throw it she said thus: "I am just going to throw it at that one," she said, and she threw it at the ugly negro.

That in=response=to (ha'e rã) her younger sisters laughed derisively at the ugly negro.

That in=response=to (ha'e rã), because the old man was angry with his daughter, he said thus: "There are so many good looking young men, but you throw the flower at this one," he said.'

Since the father is responding in anger to his daughter's throwing the flower, it is clear that the ha'e at the beginning of the third paragraph refers to the events of the first paragraph. Although this type of referential skipping brings in complications to the general rules under consideration, it also provides the narrator with a useful device. In the above example the last

two paragraphs are indicated as standing in the same content relationship to the first paragraph, even though only one can be adjacent to the first in linear arrangement.

2.2. Before the optional element rami is considered, the clause subordinators that occur at the end of a referential connective are discussed. There are six such clause subordinators: jave 'during', rire 'after', gwi 'after', vy 'in consequence of', ramo and its shorter form rã 'in response to'.⁹

Two modifications need to be made to formula (3) with respect to these clause subordinators. First, although ha'e rami jave 'that like during' occurs, *ha'e jave does not. The postpositional phrase ha'e jave py 'that time=span in' occurs in its place with jave being used as a nominal, possibly because jave is more readily understood as a nominal than as a clause subordinator. Second, although ha'e gwi 'that after' occurs, *ha'e rami gwi does not. The reason for this non-co-occurrence is perhaps hierarchical, and is explained in footnote 12.

Two types of temporal relationships are indicated by the clause subordinators under discussion: simultaneity and sequence. Simultaneity is indicated by jave:

'She was going sadly down the path. That like during (ha'e rami jave) a youngster cried noisily in the hole where a palm tree had once been.'

By far the more common type of temporal relationship is sequence. This can be indicated by either rire or gwi.

'And so the girl came there. That after (ha'e rire) her mother put a flower into her hand.'

'He put it away. That after (ha'e gwi) he went.'

The difference between rire and gwi is not in meaning but in hierarchical function, and is discussed in 2.3.

The non-temporal clause subordinators in referential connectives are vy, ramo, and rã. vy in a referential connective is glossed 'in consequence of'. It is used when new material being added to the content framework is routinely fulfilling cultural expectations in some sequence of actions. This expectation can have been set up by any one of the following three factors: cause and effect relationships as culturally perceived, even though perhaps not actually experienced; familiar patterns of action commonly experienced within the culture; patterning or preview established by the preceding context. These three sources of expectation are illustrated respectively in the following three examples.

'When he arrived there, he didn't know what to do with the sheep. So the sheep were all there outside. That in=consequence=of (ha 'e vy) the king, being angry, said thus: "Don't you know to put the sheep there in the pen?" he said.' (Although there are no kings and few sheep in Guarani culture, it can be projected from cultural experience that if a king's sheep were running loose, he would be angry and want them penned up.)

'At that time a youngster cried noisily in the hole where a palm tree had once been. That like in=consequence=of (ha 'e rami vy) when the old woman looked, she became very happy.' (The Guarani are very affectionate towards babies even when they cry, so this happiness would be considered culturally routine.)

'So he (the Negro) spoke to him. "Here is money. If I die first, as may happen, put the money on top of my grave," he said. "After I am buried," he said. "But don't let me be laid out," he said. "Stand me up. Then put the money on top of my head," he said. Afterwards, eight days later, the Negro died. That like in=consequence=of (ha 'e rami vy) the owner of the goat put the money on top of his head.' (The expectations set up earlier in the text are fulfilled as previewed.)

The element ramo and its shorter form rã in a referential connective do not in contradistinction to vy indicate that an action is contrary to cultural expectations, but instead relate to a different facet of causation.¹⁰ These elements are glossed 'in response to', where response is considered to be a volitional reaction to some stimulus. The stimulus is that event or state reported in the preceding independent clause, and is most commonly direct speech by another person. When the stimulus is direct speech, the response can either be a conversational reply or a non-verbal response such as compliance or non-compliance to a request.

'When he arrived home he said thus: "Look, grandmother. I found a companion," he said. That in=response=to (ha 'e ramo) his grandmother said thus: "Fine. You both go again. Kill a lot of birds," she said.'

'Then, "Bring it. Let me see it", his grandfather said. That in=response=to (ha 'e rã) he didn't want to show it to his grandfather.'

Occasionally the stimulus is not in quoted speech, in which case again the response may be either verbal or non-verbal.

'So he didn't want to leave his son-in-law's house. He stayed there constantly. That in=response=to (ha 'e rã) his daughter said thus to her father in anger: "Go bring mother. Let mother stay here too," she said.'

'When he arrived there where the house had stood, around the hole of the corner post frogs were croaking. That in=response=to (ha 'e rã) the old king sat listening.'

Since response is understood as volitional, the independent clause of a sentence with ramo or rã in its referential connective has an agent as its subject.¹¹ On the other hand, with any of the other clause subordinators in referential connectives, both agentive and non-agentive subjects occur freely in the independent clause.

'Afterwards, after he went to the negro's house, as he was coming back, he forgot the path. That like in=consequence=of (ha 'e rami vy) it got quite late.'

When vy, ramo, and rã occur in dependent clauses instead of in referential connectives, they have structural meaning rather than semantic meaning. In a dependent clause, vy indicates that two clauses have the same subject, while ramo and rã indicate that they have different subjects. The two clauses whose subjects are being compared are the dependent clause in which the subordinator occurs, and the clause adjacent to it in the direction of the independent clause, which may be and often is the independent clause itself. Formula (1) gives the range of possibilities for these two clauses.

'So (because) the old man was angry with his daughter (vy) same=subject, he said thus: "There are a lot of good looking boys but you throw the flower at this one," he said.'

'So (since) the jaguar is not brave (ramo) different=subject, nowadays we can really kill it.'

'(Since) (as) he listened (rã) different=subject the sheep was bleating at the base of the slope (rã) different=subject, he ran to there.'

It is not clear how these structural meanings in dependent clauses are related to the semantic meanings that vy, ramo, and rã have in referential connectives. A relationship does seem to be indicated by the fact that when they occur with referential connectives, the structural meanings of these elements are correct in predicting the subject about 90% of the time, where the two clauses being compared are those on either side of the referential connective. It should also be pointed out that although these clause subordinators in dependent clauses do not indicate any

specific semantic relationship between the clauses of that sentence, some temporal or causal relationship is always the case in actual fact. Within a dependent clause other means are available, besides the clause subordinator itself, for indicating a specific temporal or causal relationship.¹² Not surprisingly, these content relationships that exist alongside vy, ramo, and rã obtain between the same two clauses whose subjects these clause subordinators compare. Thus in the preceding example, the first dependent clause has its content relationship with the second dependent clause rather than directly with the independent clause. However, since most sentences contain no more than one dependent clause, most dependent clauses have their content relationship with the independent clause.

When a clause subordinator is used as part of a referential connective, as has been noted, it indicates a particular semantic relationship between the independent clauses of two sentences, and this relationship is either a specific temporal type or a specific causal type. The particular semantic relationship indicated, however, is not completely determined by the actions in the narrative itself. The speaker often has a true choice as to which semantic relationship to present, in the sense that several such relationships could plausibly be claimed to hold between two sentences. Quite similar patterns can be presented in different lights, as the following three expressions of exasperation show.

'Afterwards he was standing outside. That in=consequence=of (ha 'e vy) the king said thus: "Don't you know that here is where you always come in and sit?" he said.'

'It was already late at night but he was still (sitting) there. That after (ha 'e gwi) the king said thus: "Don't you know (which is) your bed?" he said.'

'The ugly negro was walking around outside, not really knowing what to do. That in=response=to (ha 'e rã) the old woman said thus: "You too go take a bath ..." she said.'

The point is that the relationship between two consecutive sentences is whatever the speaker chooses to present it to be, and can be predicted from the context only within broad limits.

2.3. Besides adding new material onto the existing content framework, referential connectives can also indicate the onset of hierarchical units.¹³ This second function accounts for the fact that about 70% of all paragraph initial sentences begin with referential connectives, compared with 47% of all sentences in general. Paragraph onset is signaled by referential connectives in either one of two ways: by the presence of the medial rami, or by the presence of a clause subordinator that indicates a temporal relationship.

The postposition rami 'like, as' in a referential connective has the anaphoric pronoun ha 'e as its grammatical head, and ha 'e rami 'that like' denotes something in vaguer terms

than ha'e does by itself. This suggests that ha'e rami in a referential connective might refer to more than just the preceding independent clause, thereby raising the possibility that the referential connective is functioning on a level higher than the purely intersentential. This explanation is basically conjectural at this point, and will not be pressed, but the fact remains that ha'e rami ramo and ha'e rami rã occur only paragraph initially, while ha'e ramo and ha'e rã are under no such restriction.

Referential connectives with vy, on the other hand, occur almost exclusively paragraph medially. With vy, therefore, rami can serve little hierarchical function, so that there is no contrast between ha'e vy and ha'e rami vy. In fact, the two forms do not co-occur within a single narrative; a speaker uses one exclusively of the other. In the rare cases when a speaker does use vy in a paragraph initial referential connective, however, it may be significant that ha'e rami vy is the form that occurs.

Initial constituent of sentence	Paragraph initial sentences	Paragraph medial sentences
Temporal referential connective	38 (47%)	10 (5%)
Causal referential connective	17 (22%)	59 (32%)
Dependent clause	15 (19%)	35 (20%)
Independent clause	10 (12%)	78 (43%)
	80 (100%)	182 (100%)

Figure 1.

Initial sentence constituents and sentence position within paragraphs

The second type of referential connectives that occur regularly at paragraph onsets are those that indicate temporal relationships, as Figure 1 shows. This is actually part of a more general phenomenon: temporal relationships are seldom indicated by any means except at the beginning of paragraphs. This is related to the fact that paragraphs, as defined in 1.2, are internally continuous as to temporal setting, but at their boundaries often have temporal gaps. The gaps are the things to be noted, so that indications of temporal relationships are associated with paragraph boundaries, and with paragraph onsets in particular, since a time setting must be established for the paragraph. Similar comments apply as well to locational setting and

participant orientation, the other two parameters in terms of which paragraphs are defined: specification of location and explicit reference to participants are most commonly found at or near paragraph onsets.

The ten paragraph medial instances of temporal referential connectives that are noted in Figure 1 all occur in a single narrative, and all are realized by ha' e gwi 'that after'. In that text temporal sequence is denoted by two referential connectives: ha' e gwi occurs only paragraph medially and ha' e rire only paragraph initially. So in that one text hierarchical information can be inferred from the particular expression used to indicate temporal sequence. In all other texts only one of these two expressions appears at all, and then only paragraph initially, so that the very presence of a referential connective of temporal sequence implies hierarchical information.

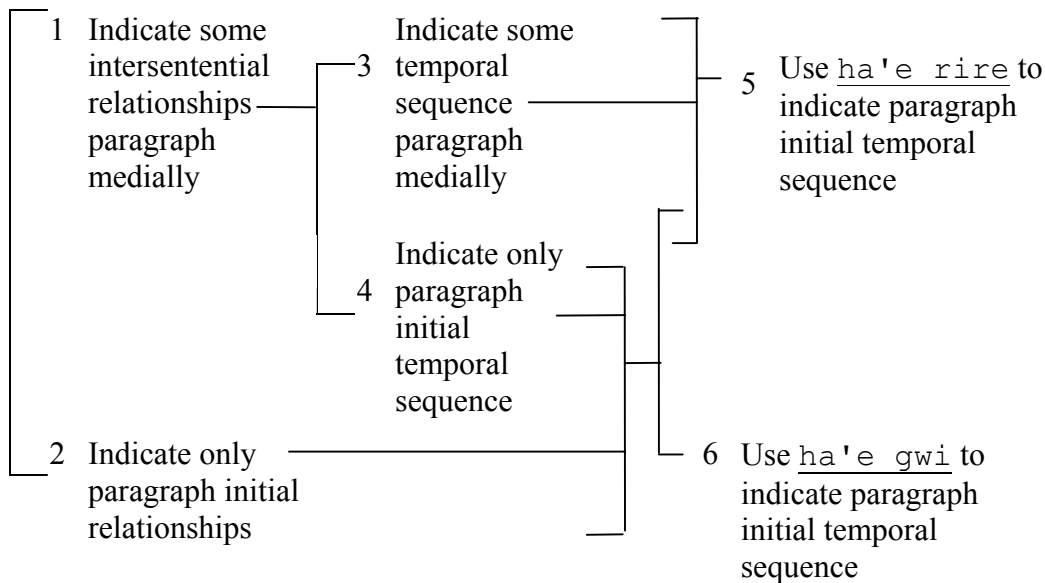


Figure 2.
Policy options in force throughout an entire narrative

Policy options such as these for a narrative as a whole are presented as a systemic network in Figure 2, with square brackets indicating alternative options. The numbers key this network to one presented later.

When rami is present in a referential connective that also indicates a temporal relationship, two signals of hierarchical onset are thereby present. Accordingly, ha' e rami jave 'that like during' and ha' e rami rire 'that like after' are found only at episode onsets. Because of this hierarchical stair stepping effect, rami (except when it co-occurs with vy) can be understood as giving a referential connective one higher level of hierarchical significance than it would otherwise have.¹⁴

2.4. Because temporal relationships can indicate hierarchical information, the speaker's choice whether to indicate hierarchy is not entirely independent of his choice as to what type of semantic connection to indicate. For example, if for a given sentence he decides to indicate temporal sequence, he must also thereby indicate the onset of either a paragraph or an episode, unless by having selected policy 3 of Figure 2 for the text as a whole he has allowed himself the possibility of indicating temporal sequence paragraph medially. Figure 3 is a systemic network which shows such interdependencies between the speaker's options for a given sentence, assuming that for that sentence he has already made the decision to use some referential connective. In this figure the policy options previously displayed in Figure 2 for the narrative as a whole are indicated as broken lines, with numbers matching those in Figure 2.

Branching, where one alternative is of the form "Indicate X" and the other is of the form "Do not indicate X" or "Indicate Y", is actually an abbreviated representation. The more complete representation would have preceding branching with alternatives "X is the case" and "X is not the case", followed by the branching that is actually furnished. If X is not the case, then necessarily "Do not indicate X" or "Indicate Y" is selected. Only if X is the case does the narrator have a true choice between "Indicate X" and "Do not indicate X" or "Indicate Y".

From the various options indicated as numbers in Figure 2 and letters in Figure 3, it is possible to determine in most cases the particular form of the referential connective that is to be used. This information is presented as Figure 4.

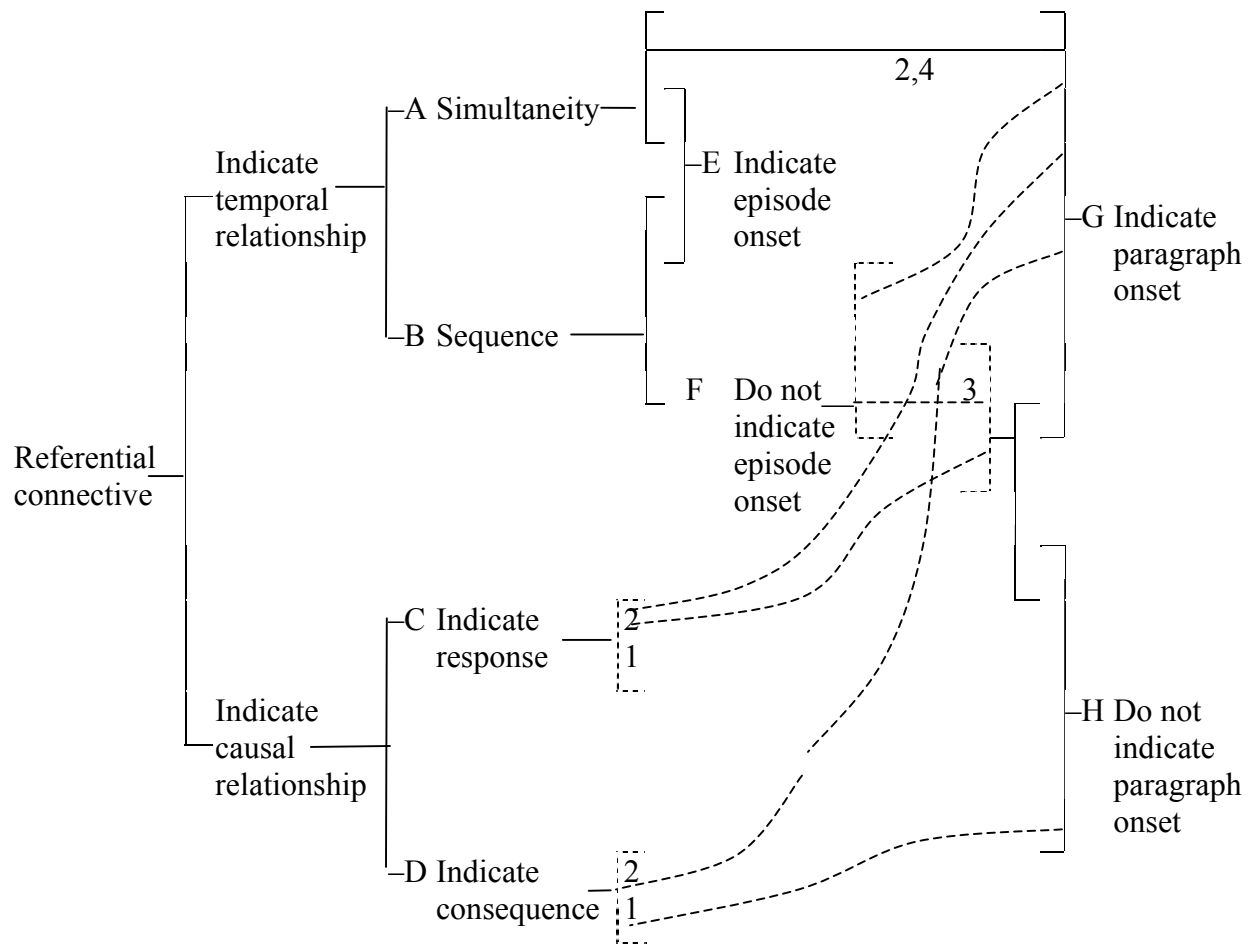


Figure 3.
Options for the referential connectives in a given sentence

Options in Figure 2	Options in Figure 3	Referential connective(s)
	A G	<u>ha'e rami jave</u>
	A E	<u>ha'e jave py</u>
	B E	<u>ha'e rami rire</u>
5	B F G	<u>ha'e rire</u>
6	B F G	<u>ha'e gwi</u>
3	B F H	<u>ha'e gwi</u>
	C G	<u>ha'e rami ramo, ha'e rami rã,</u> <u>ha'e ramo, ha'e rã</u>
1	C H	<u>ha'e ramo, ha'e rã</u>
	D G	<u>ha'e rami vy</u>
1	D H	<u>ha'e rami vy, ha'e vy</u>

Figure 4.
Referential connectives resulting from options in Figures 2 and 3

3. DEPENDENT RESTATEMENTS.

A restatement reports again the content of a previous clause, called the protostatement.

3.1. The distribution of restatements and proto-statements within the structure of a Guarani sentence (see formula (1)) follows a distinctive pattern. With few exceptions, the protostatement is the independent clause of the sentence immediately preceding the sentence in which the restatement occurs.¹⁵ Restatements, on the other hand, are encoded as dependent clauses in the great majority of cases. This pattern, with a dependent clause restating the independent clause of the previous sentence, is discussed in Grimes 1975 as linking, and has been studied in several geographically diverse languages (Grimes and Glock 1970, Lewis 1972, McCarthy 1965, Stout and Thomson 1971, Thurman ms.).

The fact that restatements occur predominantly in dependent clauses is a special case of a more general principle at work in Guarani: event and state information that is recoverable from the preceding context tends to be encoded in dependent clauses, and information that is not thus recoverable tends to be encoded in independent clauses.¹⁶ Figure 5 shows this tendency numerically. In this chart, fulfillments are to be understood as reports of whether and how earlier previews are fulfilled; since contra-expectancies are counted as fulfillments, the content of fulfillment clauses is only partially recoverable from the preceding context.

	Restatements	Fulfillments	Clauses of all other types
Dependent clauses	40 (85%)	25 (40%)	36 (15%)
Independent clauses	<u>7</u> (15%)	<u>37</u> (60%)	<u>200</u> (85%)
	47 (100%)	62 (100%)	236 (100%)

Figure 5.
Encoding in dependent and independent clauses

It is relevant to the scope of this paper that dependent restatements are in almost every case sentence initial. The few exceptions to this regularity are those restatements that occur following a referential connective and expand its pronominal reference, as discussed in 2.1.

3.2. A dependent restatement builds new material onto the existing content framework in much the same way that a referential connective does. The main difference is in the way the two constructions point out the part of the content framework to which the new material is to be connected. Whereas a referential connective does this by means of pronominal reference, a dependent restatement repeats the point of connection. These two means of representation are in syntactic correspondence within their respective constructions: a referential connective has ha'e (rami) (formula 3) where a dependent restatement has a clause that restates (formula 2).

The elements in final position, the clause subordinators, are essentially the same for both constructions. Dependent restatements, and dependent clauses in general, have available a slightly greater selection of clause subordinators than are discussed in 2.2 for referential connectives, but the differences are minor.¹⁷ There are also meaning differences for some clause subordinators that appear in both constructions: vy, ramo, and rã are discussed in 2.2, and gwi, in its rare occurrences as a clause subordinator, seems to indicate some type of causal relationship instead of temporal sequence. Once these differences have been noted, however, it can still be said that clause subordinators in any construction connect new material to the existing content framework, and the connection is either temporal or causal.

3.3. As to hierarchical function, restatements are not as closely related to paragraph boundaries as are referential connectives. While it is true that restatements can occur paragraph initial as well as medial, less than 10% of all narrative paragraphs do, in fact, begin with a dependent restatement. This figure is to be compared to the 70% of narrative paragraphs that have an initial referential connective.

The scarcity of paragraph initial dependent restatements could well be due to the very specificity with which restatements relate to the preceding context. The pronominal reference of a referential connective is by comparison a less specific way of representing anaphora, and

therefore when used paragraph initially can conveniently be taken to refer to an entire paragraph or episode. This is especially true, as noted in 2.3, when rami is present. Since on the other hand a dependent restatement represents exactly the previous independent clause, information with regard to broad hierarchical units is more difficult to infer from it.¹⁸

For dependent restatements, a more characteristic position is sentence initial in the second sentence of a paragraph.

'Afterwards, when the appointed day arrived, from very early in the morning the young men were all arriving. As they arrived, the ugly negro was walking around outside, not really knowing what to do.'

This position within the paragraph is the case in about half of all occurrences of restatements.

This tendency should be considered in view of the many kinds of information that are commonly found in the paragraph initial sentence. As in the case of the preceding example, the initial sentence is often heavy with non-event information: besides the anaphoric, hierarchical, and semantically connective information usually provided by the paragraph initial referential connective, there are often adjuncts of temporal or locational setting and explicit identification of participants. Amid all these other details, the event information encoded in the independent clause could well become lost to the hearer. By restating this event information at the beginning of the next sentence, the speaker ensures that this loss, if it has indeed taken place, is not permanent.¹⁹

3.4. The close and many sided relationship between dependent restatements and referential connectives is here summarized. First, the two constructions are internally parallel in syntax, each composed of two constituents: some representation of anaphora followed by a clause subordinator.²⁰ For this reason the two constructions sometimes appear in apposition within a sentence, the dependent restatement expanding the meaning of the referential connective, as discussed in 2.1.

Second, the two constructions both have as their primary function to connect new material to the existing content framework by means of a temporal or causal tie. The point of connection is the anaphora they represent, the content tie is indicated by the clause subordinator, and the new material in almost every case is found in the independent clause.

Third, aside from the rare instances when a dependent restatement occurs in apposition to a referential connective, the two constructions are in a paradigmatic relation with one another; they serve as alternate choices for the sentence initial element.

The principal basis on which the speaker makes his choice between these two constructions seems to be the simple fact that dependent restatements represent anaphora more specifically than do referential connectives. Thus paragraph initially, where the speaker wishes to refer broadly to the content of the preceding paragraph or episode, a dependent restatement would be less useful than a referential connective. On the other hand, when the second sentence

of a paragraph is called upon to remind the hearer of the event information of the paragraph initial sentence, the specificity of a dependent restatement is required.

One other observation is noted here without explanation. When ha'e in a referential connective refers to a clause, that clause can encode either an event or a state. A clause that is restated, however, can encode only an event.

4. CONTENT AND HIERARCHY.

The usage and meaning of sentence initial elements suggest general observations on the organization of Guarani narratives in terms of both content and hierarchical structure. These observations, discussed in some detail throughout the paper, are here brought together in summary form.

First, sentence initial elements suggest the basic form, which the content structure and the hierarchical structure have as separate entities. The most basic types of content relationships between the events and states of a narrative can be inferred from those indicated between sentences. These ties are either temporal or causal. Although other content relationships can be indicated by other means, these two intersentential types can be taken as the more basic.

Hierarchical groupings of sentences are also signaled by sentence initial elements, by certain referential connectives in particular. In this way two levels of the hierarchy emerge: paragraphs and episodes. Paragraph onsets are signaled by a referential connective in one of two ways: by the presence of either rami or a temporal clause subordinator. When these two elements are both present, the onset of an episode is being indicated.

With regard to hierarchical units two points should be made clear. First, these hierarchical groupings are not defined in terms of surface signals, but in 1.2 are defined by means of semantic parameters. Thus their boundaries can be located with some certainty from semantic criteria alone. The formal surface signals, once recognized at semantically unambiguous boundaries, can afterwards be used to clarify those boundaries where the semantic criteria are more difficult to apply. The second point is that not all paragraph and episode boundaries are indicated as such by referential connectives. Some are indicated by other surface manifestations of the defining semantic criteria, such as verbs of motion or expressions of distance which indicate change of location. The claim being made in this paper is that those referential connectives that do indicate paragraph or episode onsets occur only at those respective onsets, and therefore are reliable as hierarchical indicators whenever they occur.

Sentence initial connectives, in addition to indicating the nature of the content and hierarchical structures separately, also point to a relationship between the two. Content relationships between consecutive paragraphs or episodes tend to be indicated as temporal, while between consecutive sentences within a paragraph causal relationships tend to be indicated. This reflects the fact that, in narrative at least, temporal gaps are one and possibly the main defining feature of paragraph boundaries, while internally a paragraph is the realization of "a complete causal chain" of events and states (Schank 1974.11).

FOOTNOTES

1. Guarani is a language of the Tupi-Guarani family spoken by approximately 2000 persons in the states of Rio Grande do Sul, Santa Catarina, Paraná, and São Paulo in southern Brazil. Related dialects of Guarani are found in Argentina, Paraguay, and Bolivia. This study is based on field work carried out during 1975 and 1976 at the Posto Indígena Rio das Cobras, Paraná, under the auspices of the Summer Institute of Linguistics in cooperation with the Fundação Nacional do Índio and the Museu Nacional. This paper was prepared as part of a linguistics workshop held in Porto Velho, Rondônia, Brazil in 1976. The author is greatly indebted to Joseph E. Grimes, who conducted the workshop, for many helpful ideas and suggestions.
2. Some sentence initial phrases are constituents of the initial clause rather than of the sentence as a whole, and for this reason are not under discussion in this paper. Such phrases, including ha'e py 'in that place' and ha'e rami 'in that manner', do not even occur consistently in clause initial position. There are other initial sentence constituents, such as aÿ ma 'now then', that do not occur in narrative.
3. In order for one element to cause another, it must temporally precede the other. (Purpose clauses are only an apparent exception.) This would suggest that the causal framework might be a substructure of the temporal framework. States, however, are not usually incorporated in the temporal framework (Litteral 1972), especially those states that have to be supplied by the hearer from cultural or anaphoric factors. Nor can the temporal framework be a substructure of the causal framework, for one event can precede another without causing the other. Nevertheless the two frameworks are closely connected, and can be considered as intersecting partially ordered sets whose orders agree on their common elements, in the sense that if A causes B, then A precedes B.
4. There are only two counterexamples in the corpus. One is 'After that he went to take a bath. As he grabbed the soap he went.' The other is the third example in 2.1, which because of hierarchical considerations is irregular in other respects. The converse of the general rule does not hold. If an independent clause is sentence initial, the event or state it reports can be either informationally new or given.
5. Guarani has six vowels i, i (written y), u, e, a, o and fourteen consonants p, t, ʃ (written x), k, k^w, ' (glottal stop), m (written mb preceding oral vowels), n (written nd preceding oral vowels), ɲ (written nh preceding nasal vowels and j preceding oral vowels), ŋ (written ng), ŋ^w (written gw), v, r, h. Nasalization is regressive throughout a word whose final syllable is written either with ~ or with one of the nasal consonants m, n, ŋ. Nasalization is also regressive from a nasal consonant m (or mb), n (or nd) or ŋ (ng). Stress is on the last syllable of a noun or verb phrase unless indicated otherwise by an acute accent ´.
6. Minor exceptions to this and the preceding sentence are discussed in 2.3.
7. An alternative analysis would be to say that the referent of ha'e is indeterminate in such cases, but includes at least the preceding independent clause. A third analysis would be to disregard the referential function of ha'e. This third analysis would be similar to that of Halliday and Hasan 1976 for English, who state that "in analytical forms such as after that we respond to the cohesive force of the phrase as a whole rather than singling out that as an anaphoric element on its own" (230). To these writers the analysis adopted in the present paper is not a viable option, for paragraphs are defined graphically instead of semantically: "The paragraph is a device introduced into the written language ..." (296).
8. Dependent clauses following referential connectives often expand other elements of the connective besides the pronominal reference. Commonly at the beginning of a paragraph and especially of an episode, a referential connective of temporal sequence is followed by a dependent clause specifying the extent of elapsed time.
9. jave also occurs as a substantive, meaning 'a span of time'. gwi is commonly a postposition meaning 'from the source or origin of, 'due to the effects of, 'since the time of, or 'than' in comparisons. rire can also be a postposition, meaning 'after'. The meanings that gwi, vy, ramo, and rã have when they occur in dependent clauses are different from those listed here, and are discussed later.

10. ramo is the form used in written texts. In oral texts ramo tends to be used in paragraph initial referential connectives, and rã tends to be used elsewhere.

11. Only one exception to this agent-as-subject restriction has been found; it might indicate that the gloss 'in response to' is being conceived too narrowly: 'He untied his (grandson's) hand that was wrapped up. That in=response=to (ha'e rã) his hand was a beautiful gold.'

12. If the dependent clause reports an event, then certain markers in that clause can indicate that the event temporally precedes the event or state reported in the following clause. These markers include the aspect expressions ma 'already', jevvy 'again', rai 'almost', and -pa 'completely' following the verb, and -ve 'more' following the clause subordinator. A verb like -vaẽ 'arrive' with a definite cutoff point in its underlying time set can also have the effect of indicating temporal sequence with respect to the following clause. In the absence of such indicators of temporal sequence, some causal relationship is in fact present, perhaps with a temporal relationship as well. A causal relationship is usually prominent when the dependent clause reports a state instead of an event. With most instances of vy, ramo, and rã, however, both temporal sequence and causality are in fact the case, and often neither is more prominent than the other.

13. Bridgeman 1966 reports the same phenomenon in Kaiwá, another Brazilian Tupi-Guarani language.

14. This view of rami explains the non-occurrence of *ha'e rami gwi. ha'e gwi 'that after' occurs either paragraph initially or paragraph medially; it is hierarchically distinct from ha'e rire 'that after' only when paragraph medial. Since rami invests a form with hierarchical significance on the next higher level, then *ha'e rami gwi would presumably indicate paragraph onset, or perhaps episode onset, as well as temporal sequence. But indicating paragraph onset it would be both hierarchically and semantically indistinguishable from ha'e rire, and indicating episode onset it would be likewise indistinguishable from ha'e rami rire. Thus *ha'e rami gwi would not be functionally unique in any context.

15. The exceptional cases, which comprise less than 5% of all restatements, are either the second or third restatements in a series, or restatements of a narrative summary.

16. One speaker encodes only 40% of his restatements as dependent clauses, as compared to 85% for all speakers taken together. But this is only a reflection of his reluctance to use dependent clauses of any type (an average of .17 per sentence, as compared with .44 for all speakers taken together).

17. reve, usually a postposition 'with', is used but rarely as a clause subordinator indicating some type of simultaneity. It is possible that rami can also be used as a clause subordinator.

18. There are dependent clauses, though not restatements, that occur paragraph initially and summarize the content of the preceding paragraph or episode. These occur in about 5% of all paragraphs.

19. There is another consequence of this type of crowding of information in paragraph initial sentences. The speaker often encodes in the initial independent clause of a paragraph events with either minimal functional value with respect to the story itself (such as motion with change of setting) or high recoverability from the preceding context (this may account for those few restatements that do occur paragraph initially). Encoding such information in that position is a provision so that if such information is actually lost to the hearer, the loss will not be important.

20. In Asurini, another Tupi-Guarani language of Brazil, all dependent restatements with ramo as clause subordinator are obligatorily transformed into the referential connective a'e ramo (Harrison 1975:87). Harrison (p. 20) glosses this referential connective as 'como consequência de', that is, 'as a consequence of', and says that the anaphoric pronoun a'e refers to the preceding sentence. Were it not for the fact that ha'e in Guarani can refer to more than the preceding sentence, referential connectives in Guarani could largely be accounted for by transformations of the type Harrison cites, except optional.

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