

**DISCOURSE STUDIES
IN
MESOAMERICAN LANGUAGES**

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Volume 1: Discussion

Linda K. Jones, editor
Robert E. Longacre, project director

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INTRODUCTION

In a field as varied and complex as contemporary linguistics, the dissemination of information from one practitioner of the discipline to another is a major problem. For one thing, there is an enormous spread of interest within current linguistics. The scope and variety is such that linguists tend to become specialists on a narrow front: e.g., phonology (or some specific variety of phonology), syntax, development of language, language disorders, diachronic linguistics, discourse, conversation--or what have you. Specialization of this sort has built-in dangers, for very often research finds or conceptual frameworks in one field of specialization have important implications for another field of specialization. As a result the overly narrow specialist loses competence in his own field of specialty by failing to look beyond its borders. Add to this the further parochialism resultant from a hangover of the sectarianism of our immediate linguistic past--in which one read papers by and interacted with only those who consented to his own particular brand of linguistics--and scholarly interaction is even further reduced. Finally, add to both the above the tendency among field workers to specialize in one linguistic area of the world over against others, and it is evident that dialog among scholars can be reduced to a minimum. In the end one can find himself interacting with and reading the works of linguists limited to his field of specialty, sharing his particular approach and interested in his chosen linguistic area. Obviously, an occasional excursus beyond such self-imposed boundaries is called for.

Admittedly the present volume should be of interest to students of discourse and/or those interested in Mesoamerican languages--as well as to those accustomed to the general sort of approach here embodied. Nevertheless, it is hoped that the material included here can have a certain significance over and beyond these restrictive boundaries. The study of discourse is not a specialization; rather it embodies new perspectives for any student of human language. In this new perspective the study of verbs, nouns, and particles comes alive in a sense not previously possible, and some apparently disconnected linguistic phenomena are seen to have broad connections. That the material is Mesoamerican is, in a sense, incidental; a similar study in any linguistic area would be significant. And, again, the significance of any such study should outrun the theoretical perspectives of those who conducted it.

Specifically: seventeen field investigators of the Mexican and Central American branches of the Summer Institute of Linguistics were brought together for a two month's workshop at Ixmiquilpan in the Mexican state of Hidalgo during the summer of 1978. As director of the project, I was assisted by Larry and Linda Jones and Stephen Thrasher as linguistic consultants. The language families and stocks represented were Mayan, Totonacan, Otomanguan, Utoaztecan, and Algonquian. While the first four are typically Mesoamerican, the representative of Algonquian (Kickapoo) is a recent newcomer.

The avowed aims of the project were to investigate monolog discourse structured from a twofold perspective: that of uses of tense-aspect in verbs, and participant reference (including nouns, pronouns, verb affixes, and null). Ultimately this proved to be practically equivalent to accounting for discourse functions of verbs and nouns, along with substitutes for the latter. But other matters inevitably came in by the board, e.g., the function of certain sequence signals and mystery particles.

Out of the study various conclusions emerged: (1) that tense-aspect distinctions are best explained in reference to the texture of connected discourse; (2) that different discourse genre feature different ensembles of tense-aspects; (3) that other features of verb inflection can enter in and complicate the picture; (4) that the explanation of a mystery particle of apparently random distribution can reveal very sophisticated patterns; (5) that varying ways of introducing, tracking, and removing participants involve highly systematic rules; (6) that full understanding of such rules ties into: (a) thematic structuring of discourses and paragraphs; (b) and consideration of dominance in participant interaction--with dominance and thematicity not fully isomorphic.

While few of the above are startlingly new, much of previous discourse research was solidly confirmed and amplified. Perhaps the most significant advances are: (1) the synthesis involved in recognizing multiple levels of information relevance (see Jones and Jones); and (2) the recognition of thematicity and dominance as intertwining considerations in participant reference (see Part 5).

As for the significance of relative levels of information relevance (as over against a simple division of a discourse into foregrounded and backgrounded material), this is the main point of the Jones and Jones paper. In relating this new material to previous work, it should be noted that (1) *backbone* or *eventline*--used interchangeably in the Colombia-Panama-Ecuador volumes (Longacre and Woods, eds. 1976-7)--referred there rather to significant or major events than routine events on the eventline. Thus, in the Guajiro materials of Mansen and Mansen, the verb auxiliary *calacá*, was considered to mark 'important events', not simply events *per se*. (2) What was lacking in the South American

materials was a careful exploration of the routine eventline as marked in discourse. (3) The Mexican workshop program brought into clear focus the distinction between privileged events and routine events in narration with consequent terminological refinements. The Jones and Jones paper makes these refinements and attempts to relate all this to recent work of the Pikes' on referential hierarchy, to work on foregrounding in discourse by Hopper and others, and my own work on marking of discourse peak (Longacre 1976a). The result is a new and insightful synthesis.

One feature that repeatedly is illustrated in the material of this volume can be summarized in the rubric *peak as zone of turbulence*, i.e., at the peak of a discourse we do not have the usual discourse flow but distortion of this flow by a superimposed marking of prominence. In the generally heightened style that is characteristic of a peak, features that mark either the routine eventline or the more major events may be absent or replaced by other features. For this reason, analytically speaking, the peak is the worst of all places to begin the study of the discourse structure of a text.

The Totonac materials--to cite data which I am especially familiar with--illustrate the manner in which apparently unrelated matters come together rather dramatically in the study of discourse. The apparently disparate features that are relevant here are: tense-aspect of verbs; suppression of reference to subjects by verb affixation; uses of adverbial and relative clauses; prefixes of negation and frustration in verbs; use of the conjunction *tuncan* 'and then'; and meaning and function of a mystery particle *-tza'*. These various features are seen to mark levels of information relevance and peak: (1) The eventline is indicated by choice of the preterite tense-aspect, but only non-collateral, independent preterites are to be regarded as on the eventline. (2) The mystery particle *-tza'* labels supportive material which is crucial to something which is on the eventline. (3) Preterites in adverbial and relative clauses are seen not to be on the eventline in that they may on occasion take *-tza'*. Furthermore, adverbial clauses are often used in back-reference where they refer to a previous event but are not in and of themselves reporting anything. This is further evidence of their off-the-line status. (4) Relative clauses, even though having a verb in the preterite, may likewise be marked with *-tza'*, marker of crucial supportive material. Again, the attributive function of relative clauses agrees well with their off-the-line status. (5) Independent preterites which are prefixed with *tū'* 'negative' and *ti-* 'frustrative' may likewise take *-tza'*. That they are thus marked as important supportive materials (collateral) agrees with their status as non-events rather than events--in spite of the occurrence of the preterite. (6) *Tuncan* 'and then' marks the clause which it introduces as containing especially foregrounded material, i.e., important rather than routine events. (7) While for various

reasons involving thematicity and dominance the identity of the subject of a clause may be suppressed by use of the suffix *-ca/can*, the identity of the global participant (central character) may not be suppressed except as in (8) below. (8) Under the special conditions which prevail at peak several of the above rules are qualified or suspended: (a) Under certain conditions the imperfect rather than the preterite occurs on the eventline, or better, the distinction between preterite and imperfect, i.e., on-the-line and off-the-line, is suspended and only imperfects occur. (b) The identity of the global participant may be suppressed with *-ca/can* (with the adversary, who is being defeated, made thematic at the peak of the action). (c) Multiple *-tza'* marking can occur in the same clause, while this is not the case elsewhere (where one or two *-tza'* per clause is more normal). In summary, Totonac illustrates well a 'prominence' conspiracy that embraces many apparently disparate features and involves several features of the verb morphology.

This volume is prepared, then, with the hope of reaching as its audience not only a few people with special interest in Mesoamerican languages, but the more general linguistic reader to whom such concerns as those just illustrated are relevant.

This introduction would not be complete without a word of appreciation to Linda Jones for her meticulous work in editing these materials for publication. Without her considerable investment of energy and time these data would either not have been published or would have emerged in much less readable form. I also acknowledge the help of Larry Jones and Stephen Thrasher as linguistic consultants along with Linda and myself. Marilyn Thrasher and Carolyn Kent assisted us in the many secretarial duties incidental to the project. All of us further take the occasion to express our gratitude to the directorate of the Mexican Branch of the Summer Institute of Linguistics for their help in many details of workshop operation and to the colleagues with whom we worked for those two months. And last, but by no means least, our appreciation to the speakers of Mesoamerican languages who are the sources of these data. Our best wishes to the indigenous peoples of Mesoamerica in their search for the good life.

Robert E. Longacre
Dallas, Texas

TENSE, TENSE EMBEDDING, AND THEME IN DISCOURSE
IN MAZATEC OF JALAPA DE DIAZ

by T. L. Schram

This paper is an innovative approach to the study of tense in relation to discourse. The basic reference for each tense in the small Mazatec inventory is determined by its meaning in isolated clauses. But in discourse there are different, derived references for each tense, which vary according to discourse type. Each discourse type has a characteristic tense which is used on all verbs that are central to the development of the discourse. This tense, called the global tense, establishes the time and aspect frame within which other tenses are interpreted. Here is the crux of T. Schram's analysis. For example, the global tense of Mazatec narrative is the distant past, while other tenses report various supportive material. If a present incomplete tense (e.g., 'is thinking') occurs within the narrative, it is interpreted within the context of the distant past (e.g., 'was thinking'), that is, as action going on at the moment of some event reported in the distant past. What makes this system intriguing is its recursive nature, with each tense serving as the framework for immediately embedded tenses, which in turn may be frameworks for their embedded tenses, and so on. This system of tense frameworks relates tense to themes, as the author points out. T. Schram's stimulating presentation of this tense system may prove to be an important pioneering work in the study of tense in discourse.

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1 Introduction

This paper describes the use of tenses in Mazatec of Jalapa de Diaz.¹ Although the set of verb tenses is small, in connected discourse the whole set of tense references can be embedded within the tense reference of one of its members, thus multiplying the use of the whole set. Moreover, sequence of tenses is an important aid in distinguishing and ordering themes in Mazatec discourse.

1.1 Tense and reference

A Mazatec verb carries three kinds of reference: reference to an action or process; reference to participants in this action or process; and reference to a view of this action or process as generic or as specified in terms of time and aspect. This paper will describe the way the third of these is used in discourse.

This third kind of reference carried by a verb is generally called the TENSE of the verb, and it is convenient to use this term. But tense is a grammatical category usually having to do with the structure of the verb and the different forms a verb may have. This paper examines rather the *use* of tense in discourse; that is, the use of time and aspect reference as it functions along with other kinds of reference to mean something when people are talking. Therefore, the term *tense* will be used here to mean that part of the whole verb reference that indicates how the action or process is viewed in regard to time and aspect when the verb is used.

1.2 Tense and discourse

The various tenses that exist in Mazatec of Jalapa de Diaz will be described in relation to each other in Section 2. In that section, there is in fact an exposition of the structure of the verb system. But it is simply a preliminary survey of the set or class of forms that function in a slot in speech, that is, in the telling of a story or explaining of a point or making of a request or whatever.

Mazatec does not have a large set of verb tenses. Consequently the number of distinct time and aspect references available for us in discourse is apparently small. Paul Hopper (1977) surveys the use of the simple past tense in various languages to recount the sequence of important events, and the use of other tenses to recount background information. In some languages there are many tenses available for this support function in discourse. But, Hopper asks (p. 31), "What of languages which do not possess elaborate tense systems?" Mazatec resolves the problem simply and elegantly. Select one tense, e.g., the past tense for narrative discourse as in many languages, and let it set a time and aspect orientation frame for the other tenses.

Then the whole set of distinct time and aspect references can be placed in the context of that one tense to describe action in regard to time and aspect at that point in the past. This device is described in Section 3 as a kind of embedding of one reference within another (on the analogy of embedding structural elements one within another in language).

The recursive use of this device is described in Section 4.

Because this device is used to recount supporting information, it in effect *marks* supporting information; that is, tense embedding marks the support relation of material recounted in one tense to material recounted in another tense. The relation of tense embedding to ordering of themes is considered in Section 5.

2 Inventory of verb tenses

There are six verb tenses in Mazatec of Jalapa de Diaz. These are distinguished both in terms of time and in terms of aspect of the action referred to in the verb. Neither time nor aspect by itself provides a set of parameters that distinguish all the verb forms from each other as a set, but the two together do define a systematic relationship among them.

2.1 Specific tenses

Combining the two considerations of time and aspect as parameters, a matrix can be constructed for displaying the tenses of the Mazatec verb. An action is referred to as either present or not present in time, and as either completed or not completed in aspect.

		ASPECT	
		Incomplete	Complete
TIME	Present		
	Non-present		

Non-present completed action is further specified as to whether the action was completed some time earlier in the day or at some more distant point in the past.

The forms specifically marked for time and aspect are displayed in Chart 1. For illustration, the respective forms of the verbs *tsu* 'he says' and *fi* 'he goes' are given.²

CHART 1
 SPECIFIC TENSE FORMS IN MAZATEC OF JALAPA DE DIAZ

	ASPECT	
	Incomplete	Complete
TIME	PRI	PRC
Present	tftsu 'he is saying' tffi 'he is going'	vatsu 'he just said' cfi 'he just went'
Non-present	FUT cuatsu 'he will/may say' ngjuaI 'he will/may go'	REC catsu 'he said (today)' cafi 'he went (today)' <hr/> DIS quitsu 'he said' ngji 'he went'

The abbreviations used to refer to these specific tenses will be as follows:

- PRI present incomplete
- PRC present complete
- FUT future or projected, i.e., non-present incomplete
- REC recent, i.e., recent non-present complete
- DIS distant past, i.e., distant non-present complete

Reference to whether an action has been completed or not is more strongly contrastive in the present forms. Since completed action is *ipso facto* past, and future or projected action is *ipso facto* not yet complete, the aspect and time reference apparently fall together in the non-present forms.³ Consequently, it is the distinction of complete and incomplete in the present that favors description in terms of a matrix determined by two parameters.

2.2 Generic tense

One of the Mazatec verb tenses, however, is distinguished from all the others by including no particular time or aspect reference.

Its reference is primarily to action or process generically, without qualification as to the time that it occurs or to whether or not it is completed. Since a verb in this tense carries no reference to time or aspect of the action, it is the referentially or lexically unmarked form with regard to the time-aspect system.

The generic tense is also the simplest form of the verb morphologically. The other forms are generally derived from it by prefixing tense markers and/or modifying the tone. The generic forms of the verbs given in Chart 1 are *tsu* 'he says' and *fi* 'he goes'. The abbreviation used to refer to this tense will be GEN.

2.3 Base reference of each tense

The primary or base reference of each of the verb tenses, i.e., the meaning assigned each in isolation when a Mazatec speaker is asked the differences in meaning among the various forms, is as follows:

GEN	customary action
PRI	action going on at the moment
PRC	action that has just been completed (with some relevance to the moment)
FUT	future or projected action
REC	action that happened sometime earlier in the day
DIS	action that happened sometime before the day of speech

2.4 Morphology

The morphology of the generic (unmarked) and specific (marked) forms is especially clear in a regular verb like *tsu* 'he says'. Some verbs, typically the very common ones like *fi* 'he goes', use alternate stems for distinguishing tense forms. They are irregular. Some of the tense prefixes have allomorphs. All forms including the generic are regularly inflected for person (subject and perhaps object) by the addition of a suffix and/or change of tone and/or change of stem. In general, the Mazatec verb is not characterized by regularity.⁴ Chart 1 shows none of the complexity of Mazatec verb morphology but only the set of tense forms established by time and aspect reference distinctions; that is, the chart illustrates the combination of time and aspect reference carried by each of the specific forms, while the generic carries none.

3 Use of verb tenses in discourse

There are various types of discourse in Mazatec. The present study is based mainly on narrative discourse, which, however, includes embedded explanatory and hortatory discourse. Additional explanatory and hortatory discourse has been examined for confirmation of hypotheses. Four basic principles emerge from an examination of how tense

functions in discourse as a whole and how tenses relate to each other within a discourse. These are stated and illustrated in the following four sub-sections.

3.1 Global tense

PRINCIPLE 1. One particular tense functions as the basic or global tense of a discourse type, the tense in which the important events or propositions are related.

For Mazatec narrative discourse this global tense is the distant past; for explanatory discourse it is the generic; and for hortatory discourse it is the future.⁵ Presumably other discourse types will have their own respective global tenses or further uses of these three. In this use of a global tense to mark important events, Mazatec discourse follows the pattern appearing in much discourse analysis in many languages (cf. other articles in this volume; Longacre 1978, 1979; Hopper 1977).

The global tense of a discourse expresses the base reference (Section 2.3) of that tense. That is, for example, since narrative discourse relates incidents that occurred some time ago (at least this is true of all narrative texts collected so far), the distant past tense is used as its basic or global tense and carries a reference to action that happened before the day of speech. The importance of this observation will appear in Section 3.3.

3.2 Supporting tenses

PRINCIPLE 2. Supporting materials explaining or amplifying the important events or propositions may be in any tense, including the global tense.

If material is in a tense other than the global tense, its function as supportive is generally clear. Two examples will be given of this. Then the case of supporting materials in the global tense will be illustrated in Examples 3 and 4.

Example 1 Narrative; global tense DIS.

- Ncu-xú niyá nqu'ia y'ejña-∅ ncu nda xi quiqu'in-∅
one-rep time then DIS/be-3 one man who DIS/be called-3*

nda Jua nasuu.
man John ash
- Nda Jua nasuu ∅-'mi-∅ ndo jint'aa t'a-nd'fú-xú
man John ash GEN-be called-3 man because by-fire-rep

v'ejña-t'a-∅ tente-xú ndo.
GEN/be-by-3 constantly-rep man

*The suffix *-xú* 'reportative' used in narrative means the material is based on what has been reported by someone else. The speaker does not assert it as something he has seen.

'One time there was (DIS) a man who was called (DIS) Ash John. He was called (GEN) Ash John because he sat (GEN) by the fire all the time.'

In this example the verb meaning 'be called' is repeated in the second sentence in the generic tense for the sake of adding explanatory detail as to why the man was called Ash John. The story returns to the global tense later to begin developing the important events of the story (cf. Example 7 and the discussion of sequence of tenses in Sections 4.1 and 4.2).

Example 2 Narrative; global tense DIS.

1. *Jins'a_i-xú ngji-xú xuta-chjuún-chóo mánga tí-jña-∅*
soon-rep DIS/go/3-rep person-woman-old where PRI-be-3
nda rey.
man king

2. *Je-xú tí-fi-nqui-xú tsacjí-in nda rey*
auxiliary-rep PRI-go-ask/3-rep daughter-3 man king
xuta-chjuún-chóo.
person-woman-old

'Then the old woman went (DIS) where the king was (PRI). The old woman was going to ask (PRI) the king for his daughter [i.e., that the king give his daughter to the old woman's son in marriage].'

In this example the information that the old woman went to the king's house is amplified in the second sentence, telling why she went there. The second reference to her going, as well as the verb used to refer to the king's location at the time, are in the present incomplete tense, indicating their role as giving supporting material.

Material in the global tense may be marked as supporting other material, rather than reporting major events, by the use of a subordinating conjunction. This is illustrated in Example 3.

Example 3 Narrative; global tense DIS.

1. *Guu, je-xú cu-ma-∅ ndyina ndo tsacai,*
well auxiliary-rep FUT-be-3 rich man perhaps

2. *jint'aa quicho-xú xi je qui-sacu-∅*
because machete-rep which auxiliary DIS-acquire-3
nga'yún-ra ndo tsacai.
strength-probably man perhaps

'Well, the man might have become (FUT) rich, because it was the machete that would have gotten (DIS) power for the man.'

In this example the first clause is marked as supporting material both by its non-global tense and its contrary-to-fact nature. The second clause, with verb in the global tense, is marked as supporting the first clause in turn by the subordinating conjunction *jint'aa* 'because'. It tells why the man might have become rich, thus supporting the primary supporting material.

Material related in the global tense may also be marked as supporting material by lexical parallels to other supporting material related in a non-global tense. This is illustrated in Example 4.

Example 4 Explanatory; global tense GEN.

1. *Jmi ñá Ø-ya-á nga tí-ch'atse-é quicho, tsa*
not 1pi GEN-know-1pi when PRI-buy-1pi machete whether
xi nda, xi Ø-vate quicha-cfe, co tsa
which good which GEN-cut/3 machete-? and whether
xi jmi Ø-vate quicha-cfe.
which not GEN-cut/3 machete-?
2. *Cui tu nqu'ia jaá nga Ø-v'atse já Ntáxjo*
that just then more when GEN-buy/3 people Jalapa de Diaz
quicho, tu Ø-j'uáji-ín nga naxu.
machete just GEN-examine-emphasis relator straight
 'We don't know when we're buying (PRI) a machete whether it's a good one that the file sharpens or whether it's one the file doesn't sharpen. So just the more, when the people of Jalapa de Diaz buy (GEN) a machete, they examine well that it is straight.'

In this example the first reference to buying a machete is in a subordinate clause and in a non-global tense. It is giving supporting information. The second reference to buying a machete, in the second sentence, is in the global tense, but its function as supporting material is marked by the fact that it has lexical parallels to the first reference to buying a machete: both its parallel occurrence with a subordinating time conjunction, *nga* 'when', and the repetition of the lexical item itself, 'to buy'. It tells the occasion of the main verb, 'to examine'.

3.3 Global time and aspect frame

PRINCIPLE 3. The global tense of narrative or explanatory discourse⁶ establishes a time and aspect frame within which supporting tenses of the discourse are interpreted.

The time and aspect reference of Mazatec verbs giving supporting information is oriented within a framework of time and aspect reference fixed by the global tense. It is not the narrator's here-and-now but rather the base reference (Section 2.3) of the global tense which determines the orientation within which supporting actions and processes are regarded as present or non-present, and as complete or incomplete, or as generic in contrast to any time and aspect restriction. The base reference of all supporting tenses is thus moved to within the base reference of the global tense.

There is a system of tense embedding. As discourses embed within discourses structurally, and paragraphs within paragraphs, sentences within sentences, and so on, tenses also embed within tenses. More exactly stated, the time and aspect reference of supporting tenses (Section 3.2) embeds within the time and aspect reference of the discourse global tense (Section 3.1). This results in a new set of *derived* references (as contrasted with the set of base references), as the whole set is reinterpreted within the base reference of the global tense.⁷

For example, a present incomplete form in a Mazatec narrative discourse (e.g., 'he is thinking') does not refer to action going on while the narrator is speaking but rather to action which was going on at the time of some event reported in the DIS tense which provides the distant past time orientation.

Example 5 Narrative; global tense DIS.

1. J̄incui j'ai-xú chánatsé ni'ya.
so? DIS/arrive/3-rep rabbit house

2. Tf-ts'fncj̄in-cj̄ún-xú-cun.
PRI-think/3-much-rep-inside

'So Rabbit arrived (DIS) at home. He was thinking (PRI) intensely.'

In the story from which this example is taken, Rabbit has just borrowed money from four of his acquaintances, using his non-existent corn crop as collateral. How can he pay them back when the time comes? This is the problem he is turning over in his mind. The 'present' of the PRI 'he is thinking hard' is not the time of storytelling but rather the time of Rabbit's return home. The DIS 'so Rabbit arrived at home' provides the time frame within which the PRI functions.

Examples 1 and 2 (Section 3.2) are similar. The time that Ash John 'is (customarily, GEN) called Ash John' is not the narrator's present, but rather the time when 'there was (DIS) a man who was called (DIS) Ash John'. And the time when the woman 'is going to ask (PRI) the king' is the time when 'she went (DIS)'. In both of these, as well as Example 5, the global tense sets a time and aspect

orientation within which the support tenses are construed.

Example 6 presents a longer stretch of narrative text for the sake of illustrating how several tenses can be used with the DIS tense providing the time and aspect reference frame for all of them. This is one episode from the story of "Rabbit".

Example 6 Narrative; global tense DIS.

1. J_{ins}'ai-xú niva-∅.
soon-*rep* DIS/arrive-3
2. Jincui j'ai-xú chánatsé ni'ya.
so? DIS/arrive/3-*rep* rabbit house
3. Tí-ts'ínnjcjin-ncjú-n-xú-cun.
PRI-think/3-much-*rep*-inside
4. "Ncú ne-é jóo 'eini?" ∅-tsu-xú.
how FUT/do-1*pi* people here? GEN-say/3-*rep*
5. "Jincui tu saá v'i n'e-é 'eini ∅-ma-∅,"
so? just more thus FUT/do-1*pi* here? GEN-be-3
∅-tsu chánatsé.
GEN-say/3 rabbit
6. Cui-xú nga je tsichu ch_{uva},
that-*rep* when now DIS/reach/3 hour
7. j_{ins}'ai-xú *-mje-∅ ts'ífn-qu'ien jóo.
soon-*rep* *-want-3 FUT/do/3-dead people
8. Tuxí ndyjaa chjí xi cuac'ai chánatsé.
much FUT/lack/3 price which PRC/receive/3 rabbit
9. Jint'aa je ∅-ve chánatsé nga najmi cjiñaa
because now GEN-know/3 rabbit that not GEN/be/3
jnu.
cornplants
10. Jint'aa tu ncu-ú jnu-chí jasu suva.
because just one-emphasis corn-little DIS/sprout/3 alone
11. Síñaa ngava ntóo.
GEN/be across water
12. Cui ni yoni ∅-ma-∅,
that thing there? GEN-be-3
13. nqu'ia-nga qui-ts'ínnjcjin-cun,
when-that DIS-think/3-inside
14. "Tu saá v'i ne-é.
just more thus FUT/do-1*pi*

15. N'e-qu'ién," Ø-tsu-xú.
 FUT/do-dead/lpi GEN-say/3-rep

*mje does not take tense prefixes.

1. 'Then he arrived (DIS). 2. So Rabbit arrived (DIS) at home. 3. He was thinking intensely (PRI). 4. "Now how shall we handle (FUT) them?" he said (GEN). 5. "Well let's do (FUT) this now," said (GEN) Rabbit. 6. That's why when he got (DIS) to that hour, 7. soon he wanted (unmarked) to kill (FUT) them. 8. The money was going to be completely lacking (FUT) which Rabbit had just gotten (PRC). 9. Because Rabbit was aware (GEN) that he didn't have (GEN) corn plants. 10. Because exactly one corn plant had grown (DIS) all by itself. 11. It was standing (GEN) across the river. 12. That's why it was (GEN) 13. that he thought (DIS), 14. "Let's do (FUT) this. 15. We'll kill (FUT) them," he said (GEN).'

As commented above in connection with Example 5, which is taken from this episode of the story, Rabbit has a problem. He is going to have to pay back his acquaintances, but he in fact has no corn crop. At this point in the story he decides that he will kill them, and the rest of the story tells how he accomplishes this. The first part of the episode is marked by a doublet⁸ in the DIS tense (lines 1, 2), which informs the hearer/reader that a significant new piece of information is being related (in this case, that a new episode is starting). The PRI tense of line 3 embeds in the DIS tense of lines 1 and 2, as noted in connection with Example 5. The two GEN tenses of the quote formula in lines 4 and 5 actually embed in the PRI tense of line 3, giving the content of Rabbit's thoughts on the matter (a kind of recursive embedding to be discussed in detail in Section 4). Line 6 is a formal announcement of time, explicitly setting the time frame for what follows, perhaps because the main verb of line 7 is irregular and takes no tense prefixes but needs nonetheless to be explicitly marked for time because it relates the important event of this episode: Rabbit's proposed solution to his problem and the impulse to all the action that follows in the story. The FUT and PRC tenses of line 8, the two GEN of 9, the DIS of 10, and the GEN of 11 all embed in this time frame formally established in line 6. The GEN of 12 is in a frozen expression. The DIS of 13 returns to the global tense. It repeats the verb of line 3, marking it as significant information of the episode, just as the proposed solution is repeated, once in the narrator's words and once in speech attributed to Rabbit.

This narration of Rabbit's action and his considerations for acting the way he did uses nearly all the tenses of the Mazatec verb system. Only the REC tense is missing. Chart 2a collects examples and displays them with their base references (Section 2.3) as in the matrix of Chart 1 (Section 2.1).

CHART 2a

BASE REFERENCES OF VARIOUS VERBS
USED IN AN EPISODE OF THE "RABBIT" STORY

PRI tfts'fncjinnccjuncun (3) 'he is thinking'	PRC cuac'ai (8) 'he just received'	GEN ve (9) 'he knows'
FUT ndyja (8) 'it will be lacking'	REC <hr/> DIS jasu (10) 'it grew'	

CHART 2b

DERIVED REFERENCES OF VARIOUS VERBS
USED IN AN EPISODE OF THE "RABBIT" STORY,
EMBEDDED IN THE DISTANT PAST TENSE

DIS niva 'he arrived' (1), j'ai 'he arrived' (2), tsichu 'it reached' (6)		
PRI tfts'fncjinnccjuncun (3) 'he was thinking'	PRC cuac'ai (8) 'he had just received'	GEN ve (9) 'he knew'
FUT ndyja (8) 'it was going to be lacking'	REC <hr/> DIS jasu (10) 'it had grown'	

In the narration, however, all these verbs are used within the time and aspect reference frame established by verbs in the distant past, namely the repeated statement that Rabbit arrived home and then the announcement that a pivotal time had arrived. Chart 2b redisplay all of these verbs as embedded in the DIS tense, giving now their derived references for comparison.

Comparison of Charts 2a and 2b shows that in the latter, each time and aspect reference has been reinterpreted within the reference frame of the DIS tense. For example, the base reference of the PRC tense (action just completed with some relevance to the moment, Section 2.3), 'he just received', has become embedded within the reference of the global tense, which maintains its own base reference (Section 3.1). The result is that the verb in the embedded PRC tense relates action just completed at the moment announced (line 6) as a pivotal moment in the development of the story; at that time, 'he had just received'. Similarly, the base reference of each of the other verbs is moved to within the distant past time and aspect reference of the global tense. There is a new set of derived references as the whole set is interpreted within the DIS tense.

3.4 Varying derived reference of tenses in different discourse types

PRINCIPLE 4. The derived reference of a particular tense used to give supporting material in discourse varies in accord with the tense that provides its time and aspect frame.

This is a corollary of Principle 3. Since a global tense establishes a time and aspect frame within which supporting tenses are interpreted, a particular tense will have different interpretations within different global tense frames.

This principle is most easily illustrated with the present incomplete tense from examples already given. The use of the PRI tense within a DIS time and aspect frame has been shown in Examples 2 and 5 (Sections 3.2 and 3.3), and its use within a GEN time and aspect frame has been shown in Example 4 (Section 3.2). It has been shown that the PRI functions as supporting tense within either of these and contributes to the meaning of the whole discourse whichever tense provides its time and aspect frame. However, the specific meaning contributed to the whole by the PRI tense is quite different in the two cases, depending on whether it is interpreted within a DIS reference or interpreted within a GEN reference. That is, the derived reference of the PRI tense in narrative discourse is quite different from its derived reference in explanatory discourse.

In narrative discourse, the PRI reference functions within a DIS global reference; the DIS superimposes its own reference to action in the past, modifying the basic PRI reference to action going on at the moment. The PRI is therefore interpreted as a reference to an

action which *was occurring* at some moment in the *past* (a moment defined by some action reported in DIS). Accordingly, in Example 5 (Section 3.3), 'Rabbit *is thinking*' (PRI) is interpreted as 'Rabbit *was thinking*' (PRI-within-DIS).

In explanatory discourse, on the other hand, the PRI reference functions within a GEN global reference; here the GEN superimposes its reference to customary action, modifying in a different way the basic PRI reference to action going on at the moment. Rather than moving the moment of occurring action to some other particular time, the dominant GEN (which carries no particular time reference) generalizes the moment. The PRI tense is therefore interpreted as a reference to *any occurrence* of that action or an *occurrence* of that action *at any time*. Accordingly, in Example 4 (Section 3.2), 'we *are buying* a machete' (PRI) is interpreted as '*when, i.e., any time, we buy* a machete' (PRI-within-GEN).

The actual function of the PRI tense is remarkably similar in these two different kinds of discourse. In each, some action reported in PRI serves as background to some more central action (i.e., more closely related to the basic development of the discourse) reported in the global tense. But the particular import of the PRI tense is quite different in the two, because the derived reference of PRI varies in dependence on the tense that provides its time and aspect frame.

3.5 Time and aspect frame in hortatory discourse

In regard to tense embedding, the non-present incomplete global tense of hortatory discourse does not establish a time and aspect frame in the future. Apparently this is because of the overriding importance of the speaker-hearer axis in this discourse type, and because the course of action being described is not quite what *will* happen in the future (as narrative tells what *did* happen in the past) but rather what the speaker *projects* as desirable for the hearer. The time and aspect orientation of supporting tenses is, consequently, the speaker's (and hearer's) here-and-now. It is the speaker's time--projecting a course of action--that fixes the time and aspect frame rather than the future time of the projected action.⁹

4 Recursive tense embedding

It has been shown that the global tense of narrative or explanatory discourse establishes a time and aspect reference frame within which supporting tenses are interpreted. In addition to this, the device of tense embedding is recursive.

The distinction has been made between important events or propositions in the global tense of the discourse and information that explains or amplifies in supporting tenses. But support information may itself be explained or amplified, in which case it will itself

have support information attendant on it. And tenses used in this secondary supporting information are oriented within the tense used in the primary supporting information. That is, the time and aspect reference of verbs in this secondary supporting role functions within the time and aspect reference frame of the primary supporting material, which itself functions within the global time and aspect frame. The embedding relationship is recursive.

This embedding structure can be displayed schematically as follows:

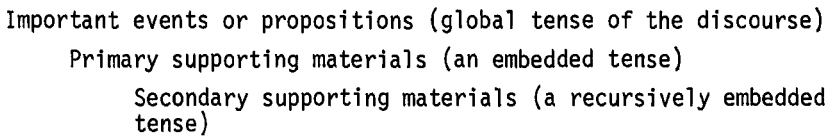


Diagram 1. Supporting material and tense embedding.

4.1 Illustration: the introduction of "Ash John"

Recursive embedding is illustrated in the following example, which is necessarily somewhat longer than earlier examples. Example 7 extends Example 1, the opening sentences of the story "Ash John". It continues on through all the introductory information of the story until the first important event of the story is reached.

Example 7 Narrative; global tense DIS.

1. Ncu-xú niyá nqu'ia y'ejña-Ø ncu nda
one-rep time then DIS/be-3 one man
2. xi quiqu'in-Ø nda Jua nasuu.
who DIS/be called-3 man John ash
3. Nda Jua nasuu-xú Ø-'mi-Ø ndo,
man John ash-rep GEN-be called-3 man
4. jInt'aá t'a-nd'fu-xú Ø-v'ejña-t'a tente-xú ndo.
because at-fire-rep GEN-be-at/3 constantly-rep man
5. Co cui xIncu nda Jua nasuu, najmi
and that deictic? man John ash not
 Ø-ts'inxá-xú-ya.
GEN-work/3-rep-very?
6. Tu-nisí ts'e-xú-ya cui nda Jua nasuu.
just-very lazy-rep-very? that man John ash
7. Tu-ncu t'a-nd'fu-xú Ø-v'ejña-nqui-xú cui nda Jua nasuu.
just-one at-fire-rep GEN-be-down/3-rep that man John ash

8. Y_o-xú \emptyset -cuyá-xú niñu xi \emptyset -vjá-ya
there-rep *GEN-wait/3-rep* *tortilla* *which* *GEN-pat-very?*
 na.
mother
9. Jins'ai-xú \emptyset -'vai ni xi \emptyset -cjine.
soon-rep *GEN-receive/3* *thing* *which* *GEN-eat/3*
10. 'Yun-xú ts'e cu-ma-xú- \emptyset ndo.
very-rep *lazy* *DIS-be-rep-3* *man*
11. Ncu nda xi tu-nixí xqu'íén-xú cu-ma-ya.
one *man* *who* *just-very* *skinny-rep* *DIS-be/3-very?*
12. Co-xú tsé-ncjún-ya cu-ma- \emptyset cui ndo,
and-rep *scab-much-very?* *DIS-be-3* *that* *man*
13. jint'aa nasuu-xú-ya xi tsitj'ájnu-xú- \emptyset cui ndo.
because *ash-rep-?* *which* *DIS/serape-rep-3* *that* *man*
14. Cui-nga tsé-'yun cu-ma-xú-ya co ya cui
that-that *scab-very* *DIS-be-rep/3-very?* *and* *very?* *that*
 nda Jaa nasuu.
man *John* *ash*
15. Tí-jña-xú- \emptyset na.
GEN (or PRI?)-be-rep-3 *mother*
16. Tu ngu'ia-xú je tsichu nistjin,
just *then-rep* *now* *DIS/reach/3* *day*
17. ta 'yun-xú chjuún cu-ma-mje- \emptyset cui nda Jaa
continuation *very-rep* *wife* *DIS-be-want-3* *that* *man* *John*
 nasuu.
ash
18. Ncuu, tu yo-xú \emptyset -j'ua xincúu jincj'í-in
well... *just* *there-rep* *GEN-walk/3* *deictic?* *daughter-his*
 nda Rey.
man *king*
19. 'Án jins'ai-xú ta 'yun-xú cui
exclamation *soon-rep* *continuative* *very-rep* *that*
 cu-ma-xcai- \emptyset cui nda Jaa nasuu!
DIS-be-want-3 *that* *man* *John* *ash*

¶1 1. 'One time long ago there was (DIS) a man 2. who was called (DIS) Ash John. 3. He was called (GEN) Ash John 4. because he constantly sat (GEN) by the fire. 5. And this Ash John, he didn't work (GEN) at all. 6. This Ash John [was] extremely lazy. 7. This Ash John only sat (GEN) by the fire. 8. He waited (GEN) there for the tortillas his mother always made (GEN). 9. Then he got (GEN)

what he ate (GEN). 10. He had become (DIS) very lazy. 11. A fellow [he was] who had become (DIS) extremely skinny. 12. And this fellow had become (DIS) all scabby, 13. because [it was] charcoal that this fellow scratched (DIS) [himself with]. 14. That's why this Ash John had become (DIS) very scabby all over. 15. He had (GEN, or PRI?) a mother.

¶2 16. 'Then, when the day came (DIS), 17. this Ash John began to very much want (DIS) a wife too. 18. Well, this daughter of the king used to pass by (GEN) there. 19. How this Ash John fell in love (DIS) with her!'

This is the beginning of the story. The narrator first introduces the central participant, Ash John (lines 1-15), and then begins the first important event of the story, how Ash John fell in love with the king's daughter (lines 16-19 and following). In his introduction (lines 1-15), the narrator first presents Ash John (lines 1, 2) and then goes on to give explanatory detail about him that will be useful in understanding how the story develops later (lines 3-15). He gives four items of supporting information about Ash John: the origin of his unusual name (lines 3,4), that he is lazy (lines 5-11), that he is ugly (lines 12-14), and that he has a mother (line 15).¹⁰ This can also be displayed schematically.

Introduction of Ash John (lines 1-15)

 Origin of his unusual name (lines 3,4)

 That he is lazy (lines 5-11)

 That he is ugly (lines 12-14)

 That he has a mother (line 15)

How Ash John fell in love with the king's daughter (lines 16-19ff.)

Diagram 2. The beginning of the story "Ash John".

4.2 Sequence of tenses in the introduction of "Ash John"

The first sentence of the story (lines 1 and 2) presents Ash John as the central character of the story, using the DIS tense. The narrator then switches to the GEN tense to give supporting information about Ash John. This has been examined in Example 1 (Section 3.2). The transition to supporting information is made by repeating the same verb 'be called', first in the global tense (DIS, line 2) and then in support tense (GEN, line 3). Most of the introductory information that follows is in the GEN tense. Just as this is the tense of explanatory discourse, it is the tense used here (within the time

and aspect frame of narrative DIS) to give explanatory information about Ash John.

This relation of DIS as global tense to GEN as supporting tense is clear enough, and the introduction continues in the GEN tense for several lines. But there is a switch back to the DIS tense at line 10. This is the global tense of the entire discourse. Is the information of line 10 therefore a return to the sequence of important events and propositions of the story? Clearly it is not. The narrator marks it well as supporting information in this way:

1. The second and third items of information about Ash John (lines 5-11 and 12-14) are each marked as new information coordinate with what has preceded by the use of the coordinating conjunction co 'and' (lines 5 and 12). Line 10 is still within this stretch of introduction.
2. The second item of information (lines 5-11) is given coherence lexically by details that illustrate his laziness.
3. And most importantly, just as line 3 is marked as supporting line 2 by repeating the same information with the same verb in a different tense, line 10 repeats line 6 with the verb in a different tense. (When the copula *ma* is GEN it is optionally left implicit, as in line 6; it must be made explicit to specify non-generic tenses, as in line 10.)

Therefore, line 10 is in a supporting relation to what precedes, repeating line 6 and giving the result of the life style described in lines 7-9. Ash John had become lazy. This is *not* an important event that begins to develop the story and starts the sequence continued by the events of lines 17 and 19. Rather it is continued background information.

The DIS tense of line 10 is therefore oriented within the GEN tense of lines 5-11, which is oriented within the DIS tense of lines 1-15. That is, the DIS tense of lines 1,2 dominates the whole introduction, lines 1-15; the GEN of reporting Ash John's laziness dominates all of the sub-section, 5-11; the DIS of 10 is, therefore, a past reference embedded within a generic reference embedded within a past reference. Consequently, it is interpreted as what would be called a past perfect in English. At the time the story starts (DIS), it was the case (GEN embedded in DIS), that Ash John *had become* lazy (DIS recursively embedded in GEN embedded in DIS).

Line 11 continues the recursive embedding in DIS. The unusual grammatical construction, a type of cleft sentence, marks it as a summarizing conclusion of lines 5-11. Its relation to the preceding material is the same as line 10.

Line 12 continues with DIS again, this time across a paragraph (or some information unit) boundary marked with co 'and'. Here there are two possible interpretations.

1. The coordinating conjunction relates the following material back to the level of the preceding coordinating conjunction at line 5. Then lines 12-14 (that he had become ugly) is coordinate with lines 3,4 (origin of his unusual name) and 5-11 (that he is lazy). In this interpretation, the DIS of 12 is coordinate with the GEN of 3,4 and 5-11, and embedded in the DIS of 1,2.
2. The coordinating conjunction relates the following material back to the preceding material in the same tense, namely in lines 10, 11. Then lines 12-14 (that he had become ugly) is coordinate with lines 10,11 (that he had become lazy and skinny), continuing the result of his lazy sitting by the fire. In this interpretation, the DIS of 12 continues the recursive embedding of 10,11 in the GEN of 5ff.

As to which of these interpretations is the correct one, actually lines 12-14 do both: they develop further the theme of lines 5-9 (Ash John's lazy life style and its results), and they directly support lines 1 and 2 (introductory information about Ash John). As embedding becomes recursive, the time and aspect horizons may become more difficult to keep straight.

Line 13 utilizes a DIS tense in support of the DIS of line 12, marked by the subordinating conjunction *jint'aa* 'because'. It tells why Ash John had become so scabby. Again, it is difficult to keep the recursive time horizons clear (as English has a past perfect but not a past past perfect).

Line 15 apparently has a verb in the PRI tense (with PRI marker *tí-*), but this particular verb is defective in having no generic form or else having its GEN and PRI forms homophonous. At any rate, the verb is functioning here as a generic. It is coordinate with earlier items of introductory information and embeds in the DIS tense of lines 1,2.

Lines 16,17 again have verbs in the DIS tense. Here the hearer is faced with a choice of interpretation similar to the one at line 10. DIS is the global tense. Is the information of lines 16 and 17 therefore a return to the higher-level use of lines 1 and 2, or is it a continuation of the recursive embedding of lines 10-14, or is it a new embedding within the GEN tense of line 15? Again the narrator makes the correct interpretation clear as follows:

1. The fronting of the subordinate time clause (normal order is following the verb; cf. the similar use of this device in Example 6, line 6 to mark the important event of the episode there).
2. The typical setting information; that is, the announcement that a particular time has been reached.
3. The lack of any coherence with the immediately preceding material. Lines 16,17 do not give any support to the information that Ash John had a mother.

All of this serves to signal the hearer/reader that the *cumamje* of line 17 is not further introductory background (as though Ash John *had come to want* a wife--derived reference of DIS embedded in DIS), but rather what happened at the start of the story (he *came to want* a wife--base reference of DIS). The narrator, and hearer with him, returns to the primary use of DIS as global tense to mark the sequence of important events of the story.

4.3 Interpretation of recursive embedding

The case of line 10 and of lines 16,17 is instructive. The device of tense embedding and recursive tense embedding is useful and common in Mazatec discourse, but the hearer must be able to distinguish an embedded use of a tense from a non-embedded use. He must know when a change of tense does *not* signal embedding but rather a return to a higher-level use of that tense. The problem is similar to the problem of embedded discourses, embedded sentences, etc. There must be markers to indicate where the embedded material starts and where it stops again. In the case of tense embedding, the markers are both grammatical (e.g., conjunctions and unusual syntax) and lexical (e.g., coherence and kind of information). The latter involves a consideration of theme in relation to tense embedding, the subject of Section 5.

It has appeared from this examination of one example of tense embedding that the data are sometimes clear (the case of line 10 and 16,17), and sometimes difficult to interpret (the case of lines 12-14). In general, high-level embedding is well marked (e.g., the beginning border between lines 2 and 3 and the ending border between lines 15 and 16, in relation to the narration of important events and propositions). But low-level embedded material, that is, material that is recursively embedded two or three times, is of comparatively low importance; consequently, it can be left ambiguous. There is a correlation between relative importance of information and clarity of embedding markers. This also points to a discussion of theme in relation to tense embedding.

5 Tense embedding and theme

The relation of supporting tenses to the global tense in Mazatec discourse is repeated in the relation of secondary supporting tenses to a primary supporting tense. So far this relationship has been referred to with the term *supporting*. A corresponding reciprocal term is *thematic*. If B supports A, then A is thematic to B.

For example, in the story of "Ash John", lines 3-15 support lines 1,2; lines 1,2 are thematic to lines 3-15, establishing the theme of this section--"introduction of Ash John". Line 10 supports line 6; line 6 (along with line 5, which is lexically synonymous) is thematic to line 10, establishing the sub-section theme for all of lines 5-11--"Ash John is lazy".

The concept of theme applies at various levels. The highest-level theme--"the story of Ash John"--pertains to the whole discourse. Supporting this discourse-level theme there will be themes of the sort--"introduction of Ash John", and "how Ash John fell in love with the king's daughter". Again, supporting themes at this second level, there will be subordinate themes explaining and amplifying, e.g., themes of the sort--"origin of his unusual name", and "he is lazy". A theme is what gives coherence to a stretch of discourse.

5.1 Ordering of themes

Distinguishing and ordering the themes at various levels of a discourse is a common school exercise, namely outlining. An outline enumerates the themes of a discourse and orders them hierarchically. It appears that the hearer of a Mazatec discourse does approximately the same thing mentally as he keeps track of the verb tenses and their theme-support relations to each other in the course of the discourse.

The global tense is the tense of highest-level thematicity. This tense marks the important events or propositions of the discourse. On the analogy of the outline, the global tense marks the first degree of indentation--materials that directly support the discourse theme. Then in the development of an event or proposition at this degree of indentation, some supporting tense becomes thematic for the second degree of indentation and marks the materials coordinated under that head. In other words, there are levels of thematicity marking or marked by (the relation is reciprocal) change of verb tense and the embedding or end of embedding of one tense reference within another.

In the story "Ash John", several levels of thematicity have been distinguished by means of the tense changes involved at each step. These can be collected and displayed as follows:

Story of Ash John (line 0)

DIS--Introduction of Ash John (begins at line 1)

GEN--Origin of his name (begins at line 3)

GEN--(And) he is lazy (begins at line 5)

DIS--He became lazy (begins at line 10)

*DIS--*DIS--(And) he became ugly (begins at line 12)

GEN--He has a mother (line 15)

DIS--Ash John falls in love with the king's daughter
(begins at line 16)

*The information that he became ugly is ambiguous as to thematic level; cf. the discussion in Section 4.2.

Diagram 3. Tense change and levels of thematicity.

Diagram 3 makes explicit the analogy of the outline. Just as each theme dominates the themes indented under it, in exactly the same way each tense is thematic for the tense(s) indented under it and thus establishes for it (them) a time and aspect reference frame.

5.2 Sequence of tenses and thematicity

Sequence of tenses in Mazatec discourse is an important aid in distinguishing change in level of thematicity. As the story proceeds and adds information, the tense may be the same as or different from the immediately preceding tense, and the theme (kind of information) may be the same as or different from the immediately preceding theme. At each new piece of information there are four possibilities:

1. Same theme and different tense. This indicates a support relationship and the embedding of the support tense within the thematic tense (e.g., Example 7, line 3: Ash John's name; line 10: his laziness).
2. Different theme and same tense. This indicates addition of new information at the same level of thematicity as the preceding (e.g., line 5: his laziness, same level of thematicity as information in the GEN tense in lines 3 and 4 about his name).
3. Same theme and same tense. This amounts to repetition; doublets have various functions in Mazatec discourse¹¹ (e.g., line 6).
4. Different theme and different tense. The new information has to relate to some higher-level theme (if it relates to nothing that precedes, it is incoherent and indicates a jump to some other discourse); therefore, it indicates the border of some higher-level thematic unit. The reader goes back in the story to a point of either same theme or same tense and analyzes as alternative a or b respectively. That is, the new information is either:
 - a. A new kind of support information for a higher-level theme (a new sub-theme under that theme), with embedding of this new support tense under that thematic tense (e.g., line 15 if it were taken as PRI tense--there is no clear example in this data); or
 - b. Addition of new information at the same level of thematicity as the earlier information in the same tense (e.g., line 16 in DIS, where the narrator adds new information to earlier information given in DIS at lines 1,2).

Naturally, these rules are only part of the process of ordering the themes of the story. Conjunctions and unusual syntax have been mentioned as also important considerations. Typical story phrases will also give clues ("now when the day came . . ." at line 16). In addition, sometimes there is explicit identification of background

material ("so that's why Ash John did that when it got dark", as the narrator explains at one point later in the story). And cultural assumptions about what kinds of information typically offer an explanation for a phenomenon will also influence the hearer's estimate of themes.

Sequence of tenses is only one marker operating along with many others in Mazatec discourse, but it is an important one. It is also more important (and more likely to be combined with other markers) at higher levels of thematicity than at lower levels, as the ambiguous case of lines 12-14 (at a very low level) shows. As the possible past past perfect time horizon of line 13 can be left unclear, the exact support-theme relationship of lines 12-14 can be left vague without hindering the telling or understanding of the story.

6 Conclusion

Given the device of tense embedding and recursive tense embedding, Mazatec discourse has considerable flexibility in regard to how different actions and processes are referred to in regard to time and aspect. Although there is not a large inventory of tenses, the use of each is multiplied by the way it can function within the time and aspect reference frame provided by other tenses in connected discourse. Moreover, change of tense and consequent tense embedding or end of tense embedding is correlated with change of thematic level in discourse; it is, therefore, an important factor in the hearing/reading of the discourse.

The use of this device varies with individual storytellers. Some discourses have large blocks of material almost exclusively in the global tense. Others have enough material in the global tense to hold the discourse together and keep the hearer oriented to the basic time and aspect frame and the major themes of the discourse but also have long stretches of non-global tense material. Besides adding flexibility in how an action or process can be referred to, the use of tenses in relation to each other allows for great variety in individual expression.

Notes

¹ Mazatec of Jalapa de Diaz is a Popolocan language of the Otomanguean family, spoken by about 8,000 people in the district of Tuxtepec, Oaxaca, Mexico. The materials on which this article is based were collected under the auspices of the Summer Institute of Linguistics on field trips to San Felipe Jalapa de Diaz during 1976 and 1977 and at field seminars during 1978.

Genaro Zarate Garcia told the "Rabbit" story and wrote the story "Ash John", two narratives which are drawn on heavily for illustrative materials for this article. He also aided the analysis by answering many questions about the verb forms used in both his own materials and materials gathered from other Mazatec speakers. The narrators of other texts prefer to remain anonymous.

² The phonemes of Jalapa de Diaz Mazatec are as follows (orthographical symbols, where different, are given in parentheses): t, c (ts), č (ch), k (qu before front vowels, c before back vowels), k^w (cu), d, j (dz), ʃ (dy), g, g^w (gu), s, ʃ (x), m, n, ñ, l, r, w (v), y, h (j), ? ('); i (y only when meaning 'second person singular' or 'first person plural exclusive'), æ (e), u, o, ɒ (a); high tone (´), mid tone (unmarked), low tone (˘); nasalization (n syllable finally); ballistic versus controlled (unmarked); sequence hw (f before front vowels, ju before back vowels).

³ Or perhaps in non-present complete (DIS and REC) the stronger consideration is time, i.e., the pastness; and in the non-present incomplete (FUT) the stronger consideration is aspect, i.e., the incompleteness. This would account for the further specification of recent and distant past, and also for a kind of vagueness as to whether the reference of the FUT tense is to action that will occur or simply may occur.

The reference of the PRI tense can be extended at least a little into the future by using time words, a clue that incompleteness may be a stronger factor than presentness in this tense as well. For instance, it is possible to say either: *tjuntjáfn̄l tíf̄i Naxitsé* 'next week he is going (PRI) to Tuxtepec', or: *tjuntjáfn̄l ngjuai Naxitsé* 'next week he will (FUT) go to Tuxtepec'. The difference in the two expressions is that the first (with PRI) seems to make a stronger assertion that he will indeed go. With this particular verb, the distance of the going also seems to influence how far into the future the PRI tense can be extended, suggesting again that the relative certainty that he will manage to go that far away is what distinguishes PRI from FUT in this context. Perhaps the term *projected* would be a more exact label than *future* for the non-present incomplete.

Given these considerations, an alternate view of time-aspect distinctions can be put alongside the matrix display of Chart 1. Time and

aspect can be viewed as two ends of a continuum with the verb tenses spread out between them. Time reference is most dominant in the past and least in the future; aspect reference is most dominant in the future and least in the past.

Time DIS REC PRC PRI FUT Aspect

⁴ Cf. the studies of Huautla Mazatec verbs and Chiquihuitlan Mazatec verbs respectively in K. L. Pike 1948.106-167, especially pages 136, 137; and in Carole Jamieson 1976.85-107.

⁵ Hortatory discourse also has many imperatives, and FUT tense combined with second person should probably also be interpreted as a weaker imperative. In fact, the speaker-hearer axis of direct address is an even more distinctive marker of hortatory discourse than its global tense. Imperatives have not yet been studied in detail. The global tense of hortatory discourse also functions differently from narrative and explanatory discourse in relation to supporting tense. This will be described in Section 3.5.

⁶ On hortatory discourse, cf. the preceding footnote.

⁷ The Bahinemo language of New Guinea sets the time of a narrative paragraph (with sentence and paragraph collapsed into one hierarchical level) by the use of an initial dependent verb referring back to the previous paragraph. All subsequent verbs within the paragraph are independent but mark time relative to the time established by the initial dependent verb (Longacre 1972, Vol. 1.47,48; Vol. 2. 211,212).

⁸ On doublets, cf. the study of participant reference in Mazatec discourse by J. Schram and L. Jones, elsewhere in this volume.

⁹ Or perhaps hortatory discourse should simply be characterized in terms of the imperative mood rather than in terms of a particular tense. For now the future is suggested as global tense of hortatory discourse but with the caution that tense embedding does not work in the future and that *future* may simply mean 'even more incomplete than present incomplete'; cf. footnote 3.

¹⁰ Alongside the other introductory information about his laziness and his appearance, the information that he has a mother seems a little incoherent here, but it is important in what immediately follows. When Ash John falls in love with the king's daughter, he sends his mother to talk to the king about the possibility of marriage. (In Mazatec custom, marriage is traditionally arranged by an intermediary.) The fact that the mother is specifically introduced here, even though she actually has been referred to in passing already in line 8, indicates that she will be a participant in the action of the story;

cf. the discussion of participant reference in Mazatec discourse elsewhere in this volume.

¹¹ See footnote 8.