

ERGATIVITY IN MAMEAN (MAYAN) LANGUAGES¹

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0. Introduction. The Mamean branch of the Eastern Mayan languages includes Mam, Teco, Ixil, and Aguacatec. All are spoken in the western highlands of Guatemala and all, like other Mayan languages, have an ergative pattern of verbal inflection (although the different languages vary in detail) (Larsen and Norman 1980:348). Mam is the largest of the Mamean languages, with well over 400,000 speakers, and is the language I will base my discussion on, using data from the town of San Ildefonso Ixtahuacán.

Nouns in Mam have no case marking, but direct arguments are cross-referenced on the verb through two sets of inflectional prefixes. One set, the ergative, cross-references the agents of transitive verbs (and also marks possessors on nouns); the other set, the absolutive, cross-references the patients of transitive verbs and the subjects of intransitive verbs. These two sets combine with a single set of enclitics to indicate all of the different possibilities of person and number, as in table 1.² The variants are mostly phonologically conditioned.

The following examples illustrate the ergative patterning on verbs. Examples (1) and (2) are transitive verbs, and so have two person markers to indicate the participants: first the patient is indicated by the

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² Mam is innovative among Mayan languages in having only four different prefixes of either the ergative or absolutive set. These distinguish first person from non-first person in the singular and plural, while the enclitics mark the presence or absence of second person (England 1976). Since the enclitics indicate the person and number of participants regardless of case, ambiguity is possible (e.g., first person on second person is not distinguished from first person on third person).

TABLE 1
PERSON MARKING

	Ergative Prefixes	Absolutive Prefixes	Enclitics
1s	<i>n- ~ w-</i>	<i>chin-</i>	<i>-a ~ -ya</i>
2s	<i>t-</i>	$\emptyset-$ ~ <i>tz'- ~ tz- ~ k-</i>	<i>-a ~ -ya</i>
3s	<i>t-</i>	$\emptyset-$ ~ <i>tz'- ~ tz- ~ k-</i>	
1p excl . . .	<i>q-</i>	<i>qo-</i>	<i>-a ~ -ya</i>
1p incl . . .	<i>q-</i>	<i>qo-</i>	
2p	<i>ky-</i>	<i>chi-</i>	<i>-a ~ -ya</i>
3p	<i>ky-</i>	<i>chi-</i>	

absolutive prefix, and then the agent by the ergative prefix.³ In examples (3) and (4) the verb is intransitive and only an absolutive prefix is used to indicate the argument.

(1) *ma tz'ok n-tzeeq'a-n-a*
asp 2sA-dir 1sE-HIT-ds-1s/2s⁴
'I hit you'.

(2) *ma chin ok t-tzeeq'a-n-a*
asp 1sA dir 2sE-HIT-ds-2s/1s
'You hit me'.

(3) *ma chin b'eet-a*
asp 1sA WALK-1s
'I walked'.

³ The order of affixes on the verb is fixed. Note that the transitive examples include a directional which appears between the absolutive and ergative markers. The directional also requires the suffix *-7n* on the main verb. This suffix is the same as that which forms participles. I have used transitive verbs with directionals to illustrate ergative patterning because it is extremely rare to find an example of a transitive active verb without a directional in Mam. An example with one of the transitive verbs which can occur without a directional is:

(1) *ma \emptyset -w-il-a*
asp 2sA-1sE-SEE-1s/2s
'I saw you'.

(2) *ma chin t-il-a*
asp 1sA 2sE-SEE-2s/1s
'You saw me'.

⁴ The following abbreviations are used in the examples: A = absolutive, agt = agent, asp = aspect, dep = dependent, dir = directional, ds = directional suffix (same as participle), E = ergative, ex = exclusive, inf = infinitive, intr v = intransitive verb derivational suffix, QUEST = question particle, p = plural, pat = patient, pl = plural clitic, REL = relative particle, RN = relational noun, s = singular.

- (4) *ma* \emptyset -*b'eet-a*
 asp 2sA-WALK-2s
 'You walked'.

If the arguments are third person, they can be lexically specified by NPs which follow the verb, as in (5) and (6). Mam basic word order is V-ERG-ABS.

- (5) *ma ch-ok t-tzeeq'a-n Cheep qa-xiinaq*
 asp 3pA-dir 3sE-HIT-ds José pl-man
 'José hit the men'.
- (6) *ma tz'-ok ky-tzeeq'a-n qa-xiinaq Cheep*
 asp 3sA-dir 3pE-HIT-ds pl-man José
 'The men hit José'.

How to handle ergative languages within a general theory of language is still being debated. (For recent contributions, see Plank 1980 and Dixon 1979.) Mam and Mamean languages contribute to work in this area in several respects. First, there is evidence that Mam ergativity is syntactic as well as morphological, which is not the case in all languages with ergative morphology (Dixon 1979). Second, the environments in which Mam shows a change in verb agreement principles are not well documented in the general literature (Dixon 1979:97), so data on this point add to a general understanding of ergativity. Third, Mam shows an innovation in split verb agreement which gives us information about one kind of syntactic change which ergative languages can undergo. Data from other Mamean languages suggest the way in which this change has developed. I address these three points here.

1. Syntactic ergativity. Mam ergativity has consequences for the grammatical system and is certainly syntactic as well as morphological. This is not true of all languages which show ergative agreement patterns (cf. Dixon 1979:125–26, in which Walmatjari is shown to have an entirely accusative syntax although NPs are marked in an ergative case pattern). In such languages, syntactic processes like relativization, topicalization, and control of deletion operations treat subjects of intransitive and agents of transitive verbs as a natural class, despite their difference in superficial case marking. This is the syntactic pattern characteristic of accusative languages. In languages like Mam, however, these syntactic processes treat subjects of intransitives and *patients* of transitives as a natural class, which is to be expected if the superficial agreement categories of absolutive and ergative reflect deep grammatical relations. Several facts support the analysis that Mam ergativity has syntactic consequences.

1.1. Focus constructions. One is that ergatives (i.e., transitive agents) cannot be focused, negated, or questioned directly, while absolutes (i.e., transitive patients and intransitive subjects) can. In general, an NP is focused, or given contrastive emphasis, by preposing it to the verb. The verb itself is usually, but not obligatorily, marked with dependent aspects⁵ in the past or recent past, but no other changes occur, as in (7*b*) and (8*b*) below.

(7*a*) Transitive

ma chi kub' t-tzyu-7n xiinaq qa-cheej
 asp 3pA dir 3sE-GRAB-ds MAN pl-HORSE
 'The man grabbed the horses'.

(7*b*) Patient (absolute) focus

qa-cheej xhi kub' t-tzyu-7n xiinaq
x-chi
 dep asp-3pA
 'The man grabbed *the* horses'.

(7*c*) *Agent (ergative) focus

**xiinaq chi kub' t-tzyu-7n qa-cheej*

(8*a*) Intransitive

ma tz-uul xiinaq
 asp 3sA-ARRIVE HERE MAN
 'The man arrived here'.

(8*b*) Subject (absolute) focus

xiinaq s-uul
x-tz-uul
 dep asp-3sA-ARRIVE HERE
 '*The man* arrived here'.

(7*c*) above is ungrammatical because transitive agents cannot be focused in this way. Two different strategies are available to focus on an agent: it can be preposed to the verb in an *oblique* noun phrase introduced by a characteristic relational noun,⁶ or the verb can be made *intransitive* through the antipassive suffix *-n*, in which case the agent becomes the absolute subject of the verb and can be focused like any

⁵ The dependent aspects are variants of the past and recent past aspect markers which are used in certain subordinate clauses. In general, if temporal information is to be indicated in the subordinate clause, then dependent aspects are used, while if temporal information is conveyed elsewhere, then other means of marking dependency, such as changes in the agreement system, are used. For a full discussion of the differences between these two types of dependent clauses, see England (in press).

⁶ Relational nouns are a special category of always possessed nouns in Mayan languages which primarily introduce NPs showing case and locative relationships.

other absolutive. Either of the following sentences can be used for sentence (7) with (grammatical) agent focus:

(9a) Oblique NP

t-u7n xiinaq ma chi kub' t-tzyu-7n qa-cheej
 3s-RN/agt MAN asp 3pA dir 3sE-GRAB-ds pl-HORSE
 'The man grabbed the horses'.

(9b) Antipassive

xiinaq x-∅-kub' tzyuu-n t-e qa-cheej
 MAN dep asp-3sA-dir GRAB-antipassive 3s-RN/pat pl-HORSE
 'The man grabbed the horses'.

In the antipassive sentence there is only one person prefix, the absolutive, and it cross-references the agent. The patient is expressed by an oblique phrase introduced by a relational noun.

There are similar constraints against the direct interrogation or the focused negation of an agent. The negated agent appears in an oblique NP, or if it is in a direct NP, it is followed by an antipassive verb:

(10a) *miyaa7 xiinaq x-∅-kub' tzyuu-n t-e*
 NEG MAN dep asp-3sA-dir GRAB-antipassive 3s-RN/pat
qa-cheej
 pl-HORSE
 'It wasn't the man who grabbed the horses'.

(10b) *miyaa7 t-u7n xiinaq xhi kub' t-tzyu-7n*
x-chi
 NEG 3s-RN/agt MAN dep asp-3sA dir 3sE-GRAB-ds
qa-cheej
 pl-HORSE
 'It wasn't the man who grabbed the horses'.

(10c) **miyaa7 xiinaq xhi kub' t-tzyu-7n qa-cheej*

A questioned agent in a direct NP is similarly followed by an antipassive verb, as in (11a). If an agent is questioned by using an oblique NP, as in (11b), then the main verb is passivized. Note that this is not the case when a negated agent appears in an oblique phrase (10b above).

(11a) *alkyee x-∅-kub' tzyuu-n t-e qa-cheej*
 WHO dep asp-3sA-dir GRAB-antipassive 3s-RN/pat pl-HORSE
 'Who grabbed the horses?'

(11b) *al u7n xhi kub' tzy-eet qa-cheej*
x-chi
 QUEST RN/agt dep asp-3pA dir GRAB-passive pl-HORSE
 'By whom were the horses grabbed?'

(11c) **alkyee xhi kub' t-tzyu-7n qa-cheej*

As the data demonstrate, the constraints on these focusing rules must be stated to separate absolutes (and obliques) from ergatives. This would not be a natural class of NPs if Mam were analyzed as having an entirely accusative syntax.

The use of the antipassive in constructions involving focus, negation, and question of an agent are what Smith-Stark (1978) calls the agent promotion function of the antipassive in Mayan languages. He also includes relativization in this function of the antipassive, but Mam relativization is a bit more complex. If the relativized noun is an absolute in the relative clause, then no special treatment is needed other than dependent aspect marking:

- (12a) *ma* \emptyset -*w-il-a* *tii-xiinaq* $\left[\begin{array}{l} \textit{saj} \\ x-\emptyset\text{-} \textit{tzaj} \\ \textit{dep asp-3sA-dir 3pE-GRAB-ds} \\ \textit{qa-xjaal} \\ \textit{pl-PERSON} \end{array} \right]$ *ky-tzyu-7n*
 asp 3sA-1sE-SEE-1s BIG-MAN
 'I saw the gentleman the people grabbed'.

- (12b) *ma* \emptyset -*w-il-a* *tii-xiinaq* $\left[\begin{array}{l} x-\emptyset\text{-} \textit{7ooq}' \\ \textit{dep asp-3sA-CRY} \end{array} \right]$
 'I saw the gentleman who cried'.

If, however, it is the agent (ergative) in the relative clause which corresponds to the head noun in the main clause, the verb can be either antipassive or active transitive. If the verb is antipassive, the action in the relative clause is understood to precede the action in the main clause; if the verb is active, the action in the relative clause is understood to occur at the same time as the action in the main clause:

- (13a) *ma* \emptyset -*w-il-a* *tii-xiinaq* $\left[\begin{array}{l} \textit{saj} \\ x-\emptyset\text{-} \textit{tzaq} \\ \textit{dep asp-3sA-dir GRAB-antipassive} \\ \textit{ky-e} \quad \textit{xjaal} \\ \textit{3p-RN/pat PERSON} \end{array} \right]$ *tzyuu-n*
 'I saw the gentleman who had grabbed the people'. (I saw him later on.)

- (13b) *ma* \emptyset -*w-il-a* *tii-xiinaq* $\left[\begin{array}{l} \textit{xhi} \\ x\text{-} \textit{chi} \\ \textit{dep asp-3pA dir 3sE-GRAB-ds PERSON} \end{array} \right]$ *tzaj t-tzyu-7n xjaal*
 'I saw the gentleman who was grabbing the people'. (I saw him while he was grabbing the people.)

Thus direct agents may be relativized, but the antipassive, which transforms an agent into an absolute subject, can be used with a different

meaning. A similar strategy for distinguishing meaning is apparently not available for an absolutive constituent in a relative clause.

1.2. Control of EQUI-NP deletion. The second way in which ergatives are treated differently from absolutives is the condition on the rule which deletes NPs in nonfinite sentential complements to certain verbs. This deletion, comparable to EQUI-NP deletion in English, is controlled only by absolutives, and never by ergatives. The complements of two types of verbs take infinitives which are not marked for person (or aspect): intransitive verbs of motion and certain causative verbs. While it is the agent or subject of the dependent clause which is deleted (and thus one of the few places where agents and subjects pattern together),⁷ it is the absolutive in the independent clause which controls such deletion:

(14a) *o chi e7x xjaal*
asp 3pA GO PERSON

'The people went'.

(14b) *o tz'ex ky-laq'o-7n xjaal juun waakxh*
asp 3sA-dir 3pE-BUY-ds PERSON ONE COW

'The people bought a cow'.

(14c) *o chi e7x xjaal* [*laq'oo-l t-ee*]
[BUY-inf 3s-RN/pat]

'The people went to buy it'.

(15a) *ma chin-x aaj-a*
asp 1sA-dir RETURN-1s

'I went'.

(15b) *ma chin b'eet-a*
asp 1sA WALK-1s

'I walked'.

(15c) *ma chin-x aaj-a* [*b'eeta-l*]
[WALK-inf]

'I went to walk'.

(16) *ma tz'ok n-q'o-7n-a* [*tx'eema-l sii7*]
asp 2sA-dir 1sE-GIVE-ds-1s/2s [CUT-inf FIREWOOD]

'I made you cut wood'.

⁷ I suspect that this patterning together of subject and agent may well be a consequence of what Dixon calls universal subjectivity (1979:112ff.) and would therefore not be an argument against ergative syntax in any event.

Sentence (14) shows deletion of an agent in the dependent clause which is equivalent to the (absolutive) subject in the independent clause; (15) shows deletion of a subject in the dependent clause which is equivalent to the (absolutive) subject in the main clause; (16) shows deletion of the agent in the dependent clause which is equivalent to the (absolutive) patient in the main clause.

If there is no absolutive NP to control the deletion, it cannot be controlled by an ergative NP. A complement whose subject or agent is equivalent to the (ergative) agent in the independent clause, for instance a complement of the verb 'want' (the paradigmatic EQUI verb), has a verb which is marked for person, and deletion does not apply:

- (17) \emptyset -*w-ajb'el-a* [*chin aq'naa-n-a*]
 3sA-1sE-WANT-1s [1sA WORK-antipassive-1s]
 'I want to work'.

(I assume that there is 3sA marking on the main verb and that it "cross-references" the sentential complement. Since 3sA marking is zero, however, it cannot be proved.)

The fact that the deletion of NPs in nonfinite sentential complements is only controlled by absolutes is not characteristic of all Mayan languages. Jacaltec, for one, has both ergatively and absolutely controlled EQUI-like deletion (Craig 1977:314) in which complements of the verb 'want' also have infinitive verbs. The data have not yet been well reported for other Mayan languages, but Aguacatec (a Mamean language) is like Mam in having only absolutely controlled EQUI (Larsen 1979). Without wishing to make too much of an agreement pattern which occurs with a relatively limited number of verbs, I do want to point out that Mam and Aguacatec are quite probably innovative in this respect. This leads to the hypothesis that the change in the agreement pattern is not fortuitous but is a result of a syntactic rule which is sensitive to ergativity.

1.3. Cross-referencing lexical NPs. A third way in which absolutes pattern differently from ergatives is in the interpretation of sentences in which the verb cross-references two third-person NPs. If only one of those NPs is represented lexically, then it is always interpreted as the absolutive NP, even when both interpretations are pragmatically possible:

- (18a) *ma* \emptyset -*tzaj t-tzyu-7n xiinaq*
 asp 3sA-dir 3sE-GRAB-ds MAN
 'He grabbed the man'.

(18b) *ma* \emptyset -*tzaj t-tzyu-7n cheej*
HORSE

‘He grabbed the horse’.

How, then, can ‘the man grabbed it’ be said? The antipassive must be used:

(18c) *ma* \emptyset -*tzyuu-n xiinaq*
-antipassive

‘The man grabbed it’.

Otherwise both NPs must have a lexical representation:

(18d) *ma* \emptyset -*tzaj t-tzyu-7n xiinaq cheej*
‘The man grabbed the horse’.

This interpretation of a single lexical NP parallels the interpretation of sentences with intransitive verbs, in which the only possible lexical NP is cross-referenced by an absolutive marker:

(19) *ma* \emptyset -*b’et xiinaq*
asp 3sa-WALK MAN

‘The man walked’.

The strength of this argument depends on one’s assumptions about how the semantic interpretation rules of a language relate to a syntactic analysis of it, and what those interpretation rules should do. In this analysis a special rule is needed to pick out the first NP of a [V NP NP] sequence as ergative. The “elsewhere” interpretation rule is one which associates a single NP with a verb as its absolutive argument. Alternative interpretation rules which refer to verbs specified by the grammar as transitive or intransitive, or which are formulated in terms of direct objects, are certainly possible. My approach, using the number of NPs as the trigger for the rule, seems to me to be the simplest; moreover, it also leads one to expect the Mam facts, rather than the reverse, where the single NP of a transitive sentence would be interpreted as ergative.

To summarize, agents of transitive verbs are cross-referenced by ergative markers, patients of transitive verbs and subjects of intransitive verbs are cross-referenced by absolutive markers, and the pattern of morphological cross-referencing has syntactic consequences. Absolutes pattern differently from ergatives in that only absolutes can be directly focused, negated, or questioned, only absolutes control EQUI-like deletion, and in a transitive sentence with third-person cross-referencing on the verb and only one lexical NP, the NP is interpreted as the absolutive.

2. Split ergativity. It has been noted (e.g., Silverstein 1976 and Dixon 1979) that all ergative languages have a split case system (or a split verb agreement system) in which nonergative case assignment principles apply in at least some circumstances. Mayan languages are no exception. According to Larsen and Norman (1980), the factors which precipitate nonergative verb agreement in Mayan are certain persons (only in Mocho), particular tenses or aspects, subordinate clauses, and certain types of focused constituents immediately preceding the verb (the last attested only in Mamean languages). Man has a split verb agreement system which results in the use of ergative markers instead of absolutive markers in the contexts of focused adverbials and certain aspectless subordinate clauses.

2.1. Temporally dependent clauses. These clauses are optionally introduced by a particle meaning 'when', such as *ela* in (20) or *ok* (potential), *aj* (nonpotential), or *kwanto*. Ergative markers replace absolutive markers (typeset in boldface in the examples). Such clauses often have no 'when' particle, as in (21); the use of ergative rather than absolutive markers signals the dependency.

(20) *ela t-b'aj meq't n-∅-xi7 t-waa-7n xjaal*
 WHEN 3sE-dir BE HEATED asp-3sA-dir 3sE-EAT-ds PERSON
 'When it was heated, the person ate it'.

(21) *n-chi ooq' n-poon-a*
 asp-3pA CRY 1sE-ARRIVE THERE-1s
 'They were crying when I arrived'.

2.2. Result clauses. These are introduced by the particle *ii* 'so that, it is necessary that' or by the relational noun *t-u7n* 'in order that', and similarly require ergative rather than absolutive markers. (*T-u7n* is the relational noun which also indicates agents, causatives, and instruments.)

(22) *n-∅-kub' t-q'aaq' xjaal t-u7n t-meq't*
 asp-3sA-GO DOWN 3s-FIRE PERSON 3s-RN/so that 3sE-BE HEATED
t-waa
 3s-TORTILLA

'The person was making a fire so that he could heat his tortillas'.

(23) *ii t-jaa-tz miiij mangeera ii*
 IT IS NECESSARY THAT 3sE-GO UP-dir HALF HOSE SO THAT
t-xi7 ky-jaa-qa-j
 3sE-GO 3p-HOUSE-pl-demonstrative

'It is necessary to raise the hose so that it can reach their houses'.

2.3. Focused adverbials. Three kinds of focused adverbials trigger ergative rather than absolutive marking on the verb. These adverbials appear in front of the verb, which is the typical focus position in Mam. One, in (24), is the focused affect verb. Affect verbs in Mayan are verbs which are derived from positional and affect roots and which describe an action done in the characteristic position or motion specified by the root. They have a special derivation and syntax. They need not be focused, but when they are, they trigger ergative rather than absolutive marking:

- (24) *pal-alaan* *t-iky'* *nimaal* *ich'*
 LYING DOWN-affect verb 3sE-PASS BY DEMONSTRATIVE RAT
 'Floating, the big rat went by'.

Affect words, as in (25), describe a characteristic sound or movement. They are always focused, but only optionally trigger ergative rather than absolutive marking on the following verb.

- (25) *txa7q'* *t-eel* *tanaq* *squk'* *t-uj*
 CRUNCH! 3sE-GO OUT DEMONSTRATIVE LOUSE 3s-RN/in
t-k'u7j
 3s-STOMACH

'Crunch! went the louse in its stomach (when it died)'.

Positionals, as in (26), are obligatorily focused in their adjectival form if they occur in a verbal predicate, and the verb obligatorily takes ergative instead of absolutive prefixes.

- (26) *tz'un-l* *t-kub'* *jun kuch t-uj* *jb'aal*
 SCRUNCHED-positional 3sE-GO DOWN ONE PIG 3s-RN/in RAIN
t-u7n-j *k'alo-7n-∅*
 3s-RN-because TIE-participle-3sA

'The pig is scrunched up in the rain because of being tied'.⁸

A few manner adverbs, such as *qit* 'at times', *b'aaka* 'little by little', and *na7x* 'still not', require ergative in place of absolutive marking. Other manner adverbs do not, even when they occur preverbally. An example with *qit* follows.

- (27) *noq qit* *t-jaa-tz* *nimaal* *a7*
 ONLY AT TIMES 3sE-GO UP-dir DEMONSTRATIVE WATER
 'The water only rose sometimes'.

⁸ Stative adjectives, such as *k'alo-7n-∅*, suffix person markers which closely resemble the absolutive markers on verbs, although there are some minor differences (England, in press). *T-u7n-j* 'because' does not behave like *t-u7n* 'in order that' and does not require ergative marking.

2.4. Focused generic qualifiers. Focused generic constructions are constructions which involve a special use of the *-njtz* passive (one of the four or possibly five Mam passives). An adjective such as ‘bad’ or ‘good’ is followed by the passive form, which is marked ergatively, and the statement is generic. The following examples illustrate the construction.

(28) *naach t-k'aa-njtz a7*
 BAD 3sE-DRINK-passive WATER
 ‘It’s bad to drink water’.

(29) *walaan t-k'aa-njtz a7*
 GOOD
 ‘It’s good to drink water’.

(30) *mii-b'an t-waa7-njtz*
 NEG-GOOD 3sE-EAT-passive
 ‘It’s not edible’. (It’s not good to eat it.)

These sentences can be analyzed as consisting of a stative (the adjective phrase) followed by an embedded clause. Usually, however, in such a construction the embedded clause would be marked with dependent aspects. The generic nature of the statements containing the *-njtz* passive makes the dependent aspect marking inappropriate.

2.5. Relative clauses. These only trigger ergative marking instead of absolutive marking when a usually active verb in the relative clause is used statively. Thus (31a) shows the verb ‘enter’ in a relative clause with normal absolutive marking, while (31b) shows the same verb marked ergatively—it now means ‘is in’ rather than ‘enter’.

(31a) *aj txkup s-ook-x t-uj jaa*
x-tz'-ook-x
 REL ANIMAL dep asp-3sA-ENTER-dir 3s-RN/in HOUSE
ich'-jal
 MOUSE-classifier

‘The animal that went in the house is a mouse’.

(31b) *aj txkup t-ok-x t-uj jaa ich'-jal*
 3sE-ENTER-dir

‘The animal that is in the house is a mouse’.⁹

2.6. Summary. Most of the contexts for changes in the person marking principles have in common temporal dependency (the time reference of a clause can be determined only by reference to the time of

⁹ *Ok* is the directional form of *ook*, but it is not functioning as a directional in (31b). The stative use of intransitive verbs of motion, such as in (31b), requires the directional form of the verb, if it is different from the independent form.

the main clause) or temporal irrelevancy (there is no reference to the time of the event, as with generics). Thus the changes in verb agreement occur in aspectless dependent clauses. Dixon (1979:96ff.) suggests that the factors which condition changes in case marking or verb agreement in main versus subordinate clauses will be found to be similar to the changes conditioned by tense/aspect. Some subordinate clauses (i.e., purposives) may correspond to future/imperfective and therefore be expected to show accusative patterning, while others (i.e., relatives) may correspond to past/perfective and can be ergative. If there is a split agreement system, then the main clause would have the opposite (ergative vs. accusative) marking from the subordinate clause. Mam data fit Dixon's suggestions insofar as the contexts for changes in verb agreement in subordinate clauses have something to do with temporal reference and may therefore be related in a general way to tense/aspect conditioning.

The situation with relative clauses is particularly relevant here. The "stative" relatives (characterized by nonergative agreement) can be analyzed as perfectives. Thus the gloss of (31*b*) could be 'the animal that has entered (and is therefore now inside) the house is a mouse'. The "active" relatives would then be imperfective. Even if this is a better analysis, however, it still does not quite fit Dixon's predictions because it is then the imperfective which shows ergative patterning and the perfective which shows nonergative agreement.

In the other examples of factors which trigger changes in verb agreement patterns it seems that what is critical in this language is temporal dependence or the lack of a temporal context rather than a strictly past/future, perfective/imperfective, or complete/incomplete distinction. For instance, the first type of clause described above, the temporally dependent clause, indicates a past completed (and temporally dependent) action, while the second type, the result clause, indicates a potential and incomplete action (which depends on the action in the main clause), but both show the same type of marking (nonergative). It can be assumed that, following Dixon, what is more important here is the perfective/imperfective distinction, which is why both clause types show the same agreement pattern. While both types of clauses can be perfective, I am not at all sure that both need be perfective. Further, both types show nonergative agreement, while Dixon predicts that perfectives should be ergative. The focused generic qualifiers are not conditioned by any distinctions such as past/future or perfective/imperfective. Thus while Mam data support the idea that main versus subordinate clause splits in verb agreement are related to temporal reference and therefore to tense/aspect, the actual details do not seem to parallel those surveyed by Dixon for tense/aspect.

3. An innovation in split verb agreement. All of the examples in 2 show what happens to intransitive verbs under the conditions which trigger changes in verb agreement. According to Larsen and Norman (1980:353), transitive verbs in other Mayan languages maintain their normal agreement patterns under the same conditions, thereby giving rise to an accusative marking pattern in that subjects of intransitive verbs as well as agents of transitive verbs are marked ergatively, while patients of transitive verbs are marked absolutely. (In Dixon's 1979 terms, this is "extended ergativity," since the ergative case is marked and so does not correspond precisely to the unmarked nominative case in accusative languages.)

In Mam, however, the *patients* of transitive verbs are cross-referenced ergatively in these same contexts (as well as the agents), so transitive verbs do not in fact maintain their normal agreement patterns:

- (32) \emptyset -jaw q'oj-l Luuch (aj) t-jaw ky-tx'ee7ma-n
 3sA-dir ANGER-intr v Pedro (WHEN) 3sE-dir 3pE-CUT-ds
 xjaal t-tzee7
 PERSON 3S-TREE

'Pedro got mad when the people cut his tree'.

- (33) tqal k-b'ant-eel q-u7n t-u7n t-jaw
 WHAT 3sA-DO-potential 1p-RN/agt 3s-RN/so that 3sE-dir
 q-tx'ee7ma-n tzee7
 1pE-CUT-ds TREE

'What are we going to do to cut the tree?'

- (34) o chin ooq'-a aj n-kub' t-tzeeq'a-n-a
 asp 1sA CRY-1s WHEN 1sE-dir 2sE-HIT-ds-2s/1s

'I cried when you hit me'.

These sentences show that the ergative prefix which precedes the directional does in fact cross-reference the patient, since while the patient is 3s in (32) and (33) and is cross-referenced by *t-*, it is 1s in (34) and is cross-referenced by *n-*.

The transitive verbs in (32), (33), and (34) are accompanied by directionals. These are verbal auxiliaries which are derived from intransitive verbs of motion and which are practically required by all active transitive verbs in Mam (but are more optional in other Mayan languages). It can be argued that the forms in (32), (33), and (34) consist of a directional acting as an intransitive verb, followed by a nominalized form of the main verb, with the agent phrase marked as its possessor. (The prefixes which cross-reference ergative phrases also cross-reference noun possessors.) Then the appearance of the ergative prefix on the directional would be a result of the fact that it cross-references the

TABLE 2

REYNOSO'S INTRANSITIVE PARADIGM

<i>ma-chim-vli</i>	'ya yo vine'	[I came now]
<i>ma-tz-uli-a</i>	'ya tu veniste'	[you came now]
<i>ma-tz-uli-hu</i>	'ya aquel vino'	[he came now]
<i>ma-εo-vli-o</i>	'ya nosotros venimos'	[we came now]
<i>ma-che-vli-e</i>	'ya vosotros venistes'	[you-all came now]
<i>ma-che-vli-hu</i>	'ya aquellos vinieron'	[they came now]

“intransitive subject” of the directional in an appropriate context. If, however, we look at one of the few transitive verbs which does not customarily take a directional, such as *il* ‘see’, we find it still takes two ergative markers under conditions where there is a change in verb agreement:

- (35) *ok chi tzaalaj-al ok t-ky-il u7j*
 asp 3pA HAPPY-potential WHEN 3sE-3pE-SEE BOOK
t-e yool t-e I7tzaI
 3s-RN/possessive WORD 3s-RN/possessive Ixtahuacán

‘They will be happy when they see the Ixtahuacán dictionary’.

Therefore, all NPs are cross-referenced ergatively under conditions which trigger changes in the agreement pattern. While the pattern of case marking is different in independent and dependent clauses, the subject of an intransitive verb and the patient of a transitive verb are always marked the same. There is no circumstance in which there is an accusative (or extended ergative) pattern in which all “subjects” are distinguished from all “objects.”

The history of the Mam system can be partially reconstructed. Ergativity is assumed to be characteristic of Proto-Mayan (Norman and Campbell 1978 and T. Kaufman, personal communication), and it existed in seventeenth-century Mam (Reynoso 1644). The following examples from Reynoso show ergative patterning on transitive verbs, and table 2 shows one of his intransitive verb paradigms with absolutive marking. The ϵ represents *k*, *k'*, *q*, *q'* indiscriminately in the orthography of this edition of Reynoso. The morpheme cuts are his.

- (36) *ma-tz-el-ε-iεim-o*
 asp-3sA-dir-1pE-TAKE/BRING-1p ex
 ‘Ya nosotros quitamos’. [Now we took it away.]
- (37) *ma-εubi-vu-aεon*
 asp-3sA.dir-1sE-PUT
 ‘Ya yo lo puse’. [I put it now.]

TABLE 3

REYNOSO'S DEPENDENT CLAUSE PARADIGM

<i>v-uli</i>	'cuando yo vine'	[when I came]
<i>t-uli-a</i>	'cuando tu veniste'	[when you came]
<i>t-uli-hu</i>	'cuando aquel vino'	[when he came]
<i>ε-uli-o</i>	'cuando nosotros venimos'	[when we came]
<i>ε-uli-e</i>	'cuando vosotros venistes'	[when you-all came]
<i>ε-uli-hu</i>	'cuando aquellos vinieron'	[when they came]

Whether Mam had any examples of verb agreement which showed an accusative or extended ergative pattern during Reynoso's time is not clear. His verb paradigms show the use of ergative rather than absolutive markers on intransitive verbs in dependent contexts, as in table 3. Reynoso does not, however, give examples of transitive verbs in the same situations. This might be because transitive verbs maintain their normal agreement pattern and he therefore did not find the paradigm noteworthy. He does mark the paradigm in table 3 "other," suggesting that he found it puzzling. On the other hand, he might not have encountered the transitive examples for a number of reasons, so it is difficult to assess his lack of data on this point. Ixil, another Mamean language, does today have split ergativity (Ayres 1981 and Lengyel 1978) in which intransitive subjects are marked ergatively after focused adverbials and in certain aspects, but transitive verbs maintain normal agreement. Ixil data, then, suggest that the Mamean subgroup had split ergativity which resulted in an accusative or extended ergative marking pattern, and the Reynoso data on earlier Mam are inconclusive.

Aguacatec has a system somewhere between the Ixil and the Mam systems. In time adverbial clauses in the indefinite past, after focused time adverbs, and in purpose clauses intransitive verbs cross-reference their subjects ergatively. Transitive verbs without directionals or with directionals which follow the main verb maintain their normal agreement patterns (agent marked ergatively and patient absolutely), but transitive verbs which take a *preceding* directional mark both agent and patient ergatively (T. Larsen, personal communication). Table 4 summarizes verb agreement in the three Mamean languages about which I have information.

Aguacatec then provides a model of how the Mam system developed historically. We can assume that the earlier Mam system was like Ixil and a number of other Mayan languages and was a split or extended ergative system in which intransitive subjects were marked ergatively under certain conditions but transitives maintained normal agreement.

TABLE 4
PERSON MARKING IN THREE MAMEAN LANGUAGES

	Agent TV	Subject IV	Patient TV
Normal Configuration:			
Ixil	ergative	absolutive	absolutive
Aguacatec	ergative	absolutive	absolutive
Mam	ergative	absolutive	absolutive
Dependent Clauses:			
Ixil	ergative	ergative	absolutive
Aguacatec: following or no directional on TV	ergative	ergative	absolutive
preceding directional on TV	ergative	ergative	ergative
Mam	ergative	ergative	ergative

Then, transitive verbs with preceding directionals marked both the agent and patient ergatively. Next, Mam lost any following directionals and so now has only preceding directionals. Finally, the marking pattern was extended so that even transitive verbs without directionals marked both the agent and patient ergatively.

What were the steps that led to the reanalysis of transitive verbs in Mam? Two facts are important. First, all directionals which precede the verb in Aguacatec, and all directionals in Mam, are derived from intransitive verbs of motion and carry the person prefixes which cross-reference the patient. Second, Larsen analyzes the main verb in such complex verb phrases as an active verbal noun. It is possible that the Mam main verb with a directional is also a nominalized form, since a transitive verb with a directional always carries the participle suffix *-7n*.

I propose that the following steps were involved in the emergence of the present Mam system: (1) The main verb in a transitive verb phrase with directional was nominalized and cross-referenced the agent with ergative (possessive) markers. (2) The absolutive markers on the directional were reanalyzed as cross-referencing the subject of the basically intransitive verb.¹⁰ (3) Under certain conditions, all subjects of intransitive verbs,

¹⁰ This means that patients were reanalyzed as subjects. The question immediately arises about whether this could have been semantically possible. I think that directionals could have functioned as main predicates with a slight shift from their "directional" meanings to their "intransitive" meanings; for instance, 'come', 'go', 'go up', etc., instead of, respectively, 'toward', 'away', 'up'. This has been reflected in translation conventions, at least occasionally. For example:

including those of directionals, were marked ergatively. (4) As a consequence of (1), the person marker on a directional was blocked from referring to the agent, since that was already cross-referenced by the ergative marker on the main verb, so it was interpreted as referring to the remaining argument, which is the patient. Consequently, the marker on the directional referred to a patient but behaved syntactically as if it were cross-referencing an intransitive subject, as in (3). (5) Then, later, the pattern of double ergative marking under appropriate conditions spread to transitives without directionals. This implies that the person markers on directionals have been reanalyzed (or back-analyzed) as patients, while the form of the main verb in a transitive plus directional construction is no longer interpreted as a deverbal noun. Today, all absolutive markers are replaced by ergative markers under conditions which trigger a change in verb agreement, rather than the earlier situation in which only intransitive subjects were marked ergatively under those conditions.

4. Conclusions. The historical development of the system does not affect the synchronic analysis. Mam always maintains the same marking for intransitive subjects and transitive patients, and there is therefore no situation in which there is an accusative agreement pattern. There is some evidence that syntactic ergativity is stronger in Mam than in some other Mayan languages, such as the fact that EQUI-like deletion is only controlled by absolutes. The innovation in the Mam split agreement pattern, then, may be evidence of spreading ergativity.

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(38) *ma Ø-tzaj n-laq'o-7n-a laanch*
 asp 3sA-dir 1sE-BUY-ds-1s ORANGE
 'I bought an orange.'

was explained to John Watanabe (personal communication) as meaning 'it came (by) my buying the orange', where the patient functions as the subject of 'come' and the agent is in an oblique phrase consisting of a nominalized and possessed form of the main verb. I never received a similar explanation of a transitive sentence with a directional and am reluctant to place too much weight on it, but at least it does not violate my analysis.

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