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Voice and Ergativity in Mayan Languages

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In recent years there has been a good deal of interest in ergativity and voice in linguistics because of the implications these have for grammatical theory. This paper is basically a description of the verbal category of voice in the context of ergativity in Mayan languages (see Table 1).[1] Mayan languages are morphologically ergative, and many of them display characteristic features of syntactic ergativity as well. In addition, split-ergative constructions are also found in many of the languages. The category of voice is well developed in the family, and many of the languages have rather complex voice systems which include active, one or more passives, one or more antipassives, and instrumental and referential voices. The main purpose of this paper is to bring together data on voice and ergativity in the family as a whole. Voice and ergativity are discussed in some detail for at least one language from each of the main subgroups of Mayan: Huastecan[2], Yucatecan, Cholan, Tzeltalan, Kanjobalan, Mamean, Quichean, Pocom, and Kekchí.

Before actually presenting descriptions of voice and ergativity for particular languages, a number of concepts and working definitions are introduced in the section below 'Some Concepts and Working Hypotheses'. The discussion is informal and not meant to be definitive. The theoretical approach that emerges is perhaps at the same time rather eclectic and idiosyncratic, although I hope not necessarily inconsistent.

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After discussing some concepts and definitions, a general charac-
terization of what Mayan languages are like is presented. Then a dis-
cussion of voice and ergativity in particular languages is given. In
the conclusion, some generalizations on ergativity and voice are stated
and some hypotheses on voice and ergativity in Proto-Mayan are proposed.

Some Concepts and Working Definitions
Transitivity and the notion of subject.[3]

An a priori assumption made in this paper is that there are two
types of basic and fundamental universal activities recognized in all
languages: transitive and intransitive. Transitive activities are those
which involve two participants: one is a 'doer' herein called the agent
(A), and the other is a 'nondoer' called the patient (P). Intransitive
activities are those which involve only one participant called a subject
(S). The S may be a 'doer' or a 'nondoer', the distinction isn't nec-
essarily important. All languages, therefore, recognize and manifest a
distinction between two fundamentally different classes of verbs which
denote the two basic types of activities, respectively: transitive
verbs (TVs) which require two arguments, A and P, in direct relation-
ship with them; and intransitive verbs (TVs) which require only one
argument, S, in direct relationship with them. Any other arguments
(or NPs) in relationship with a verb are in an oblique relationship
with it (e.g. dative, locative, instrumental, etc.).

Because the two participants in a transitive activity have differ-
ent functions (i.e. 'doer' and 'nondoer') languages need to indicate the
distinction between As and Ps by some grammatical means such as: (1)
case inflections or particles, (2) word order, and (3) cross-referencing
on the transitive verb. Cross-referencing, however, must always occur in

conjunction with (1) or (2), or take semantic features of the particular verbs and noun phrases into account, since cross-referencing alone can not distinguish the function of two 3rd person NPs, if they are not marked in some other way.

With respect to IVs, since S is the only participant in intransitive activities, there is no particular need to distinguish semantic As from semantic Ps, so languages tend to ignore the distinction. However, there are several possibilities for the manner in which Ss may be marked: (1) they may be marked in the same way as A (= nominative/accusative marking, see the section below 'Ergativity and Pivot'); (2) they may be marked in the same way as P (= absolutive/ergative marking, see 'Ergativity and Pivot'); (3) they may be marked like A if they are semantically agent-like and marked like P if they are semantically patient-like (= agent/patient marking); and (4) they may be distinguished completely from A and P. Nominative/accusative marking is perhaps the most common and well attested in the world's languages (e.g. Indo-European, Uto-Aztecan, Quechuan, and Japanese, to name but a few). Absolutive/ergative marking is found throughout the world in a number of different language groups such as Mayan, Eskimo, Basque, Georgian, some Australian languages, Hindi, and some Polynesian languages. Agent/patient marking is found in Siouan, Caddoan, and Iroquoian languages, as well as others, but the marking never seems to be 100 percent semantically consistent. Apparently, the only languages that distinguish S from both A and P are the Australian languages in the Ngura group and perhaps Motu (although the data isn't clear on the latter; cf. Dixon, 1979).

The choice of the term agent for the 'doer' participant in a transitive activity reflects the view held here that there is a central or

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core meaning to the term: agents par excellence are human (or at least animate) and volitional, and they initiate and control activities. However, in natural languages the notion of agent is usually extended to include experiencing participants as well as inanimate and nonvolitional participants which do something to something else or cause some effect in something else. The term patient also has a central or core meaning: patients par excellence are inanimate, nonvolitional, noncontrolling, and noninitiating, and they normally receive, suffer, or are affected by the action of some agent. However, in natural languages the notion of patient is extended to include any 'nondoer' participant, animate or inanimate, in a transitive activity, as well as to things perceived or experienced (which usually are not affected by being experienced).

There is, then, a hierarchy of agency[4], or potentiality for being an agent, the inverse of which is a hierarchy of patienthood (see (1) below). On the far left are first and second persons, who, because they are inevitably human, are highest on the agency hierarchy (but lowest on the patienthood hierarchy). On the far right are inanimate objects which are lowest on the agency hierarchy (but highest on the patienthood hierarchy).

Agency Hierarchy

(1) $\begin{Bmatrix} \text{1st person} \\ \text{2nd person} \end{Bmatrix}$ > proper human noun > human > animate > inanimate

Included within the agency hierarchy are two other (sub)hierarchies: (1) the animacy hierarchy (human > animate > inanimate), and (2) the person hierarchy (1st and 2nd person > 3rd person). These hierarchies indicate what is most likely to be an agent (or inversely, a patient), or at least what ought to be an agent, other things being equal. The hierarchies

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are especially relevant in ergative languages, and perhaps in all languages.

The term S (of IV) has no particular central meaning since it is the only participant in an intransitive activity and may be either a 'doer' or a 'nondoer'. However, some languages, perhaps, assign meaning to S by aligning it with either A or P.

It should be noted that the terms A, P, and S are defined as funda-mental (deep) semantic-syntactic functions as well as relations; these semantic-syntactic relations and functions along with the contrast between transitive and intransitive verbs are taken as axiomatic. This view con-trasts markedly with, for example, Chomsky's constituent structure and de-pendency relations, and with relational grammar (as outlined by Johnson 1976, and Perlmutter and Postal 1974). In neither of these two schools is there a claim made that the transitive/intransitive contrast is funda-mental. In the Chomskyan school there are no basic terms (e.g. agent, patient, subject, object, etc.), rather, these kinds of relations are secondarily defined by dependency relations. In relational grammar, how-ever, Subject, Object, and Indirect Object, are defined as basic and uni-versal terms having first order relationships with the verb.

In relational grammar, the term deep, logical, or semantic Object more or less coincides with P as used here, although the two terms are defined differently. The Indirect Object in relational grammar has a first order relationship with a verb, but in this paper it is viewed as basically having an oblique relationship with the verb. The deep, logical, or semantic Subject (with a capital S) in relational grammar includes the two terms, A and S (subject with small case s). The view held here is that Subject is not a fundamental term (like A, P, and S), although it is

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a universal category which primarily has syntactic relevance. Thus, in the languages of the world the S of intrasitive verbs and A of transitive verbs are usually treated alike in constructions like: (1) imperatives where both A and S are second persons; (2) jussives (e.g. I order you to X) where the P of the main verb is coreferential with an A or S of the subordinate verb, and therefore one of them is usually deleted; (3) those with verbs like 'can', 'try', 'begin', and 'finish', where the A (or S?) of the main verb is coreferential with the A or S of the subordinate verb and therefore is usually omitted under Equi-deletion; and (4) 'make do X' causatives where the P of the main clause is coreferential with the A or S or the subordinate verb, and therefore, one is usually deleted. A and S are treated alike (i.e. as Subjects) in constructions like these probably because A is a 'doer' and S may be a 'doer.'

The universal category of Subject as outlined above is often confused with language specific categories having to do with topic, theme, and syntactic pivot, by mistakenly calling them 'surface' subject.

Ergativity and Pivot[6]

A language is morphologically ergative if it treats the S of IVs and the P of TVs in the same way grammatically, and the A of TVs in another way. This may be done with case inflections or cross-referencing affixes on the verb (e.g. in Mayan languages). The S of IVs and the P of TVs are called the absolutive and the A of TVs is called the ergative. This absolutive/ergative system (henceforth, simply 'ergative' system) contrasts with a nominative/accusative system (henceforth, simply 'accusative' system), where the S of IVs and A of TVs are treated alike grammatically, as opposed to the P of TVs. Here the S of IVs and A of TVs are the nominative and the P of TVs is the accusative.

Absolutive/Ergative vs Nominative/Accusative

ergative   absolutive

(2)   TV agent   IV subject   TV patient

             nominative   accusative
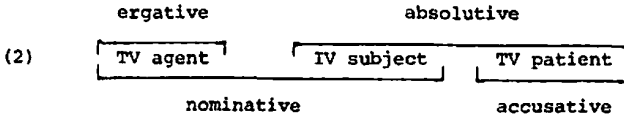
Note that whether the S of IVs falls with the A of TVs morpholo-
logically, or with the P of TVs, makes no difference with respect to main-
taining the fundamental distinctions of A, P, and S, since IVs have only
one basic argument.

In general, the absolutive is the unmarked category and the ergative
the marked category in ergative languages, while in accusative languages
the nominative is usually unmarked and the accusative is the marked cate-
gory (cf. Dixon 1979, Silverstein 1977). Marking here has to do with
things like: (1) which categories have null case inflections and/or
cross-referencing affixes; (2) which categories are obligatorily included
in each sentence; and (3) which categories feed syntactic processes.

Note that in ergative languages, since the ergative category is the
marked one, what really is being given special status is the fundamental
term _agent_. It is kept distinct from both P and S (= absolutive), and in
many ergative languages the syntactic processes affecting the ergative
(= agent) are highly restricted. For example, in many Mayan languages an
ergative NP can not be questioned, relativized, or clefted. Smith-Stark
(1976b) has called this the 'Inert Ergative Constraint', which really means
that the fundamental relationship between a TV and its agent cannot be
violated directly, at least without making compensatory modifications.
The notion of transitive agent is marked as if it were sacrosanct in erga-
tive languages.

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One characteristic feature of most ergative languages is that they

display split-ergative systems (cf. Dixon 1979, Silverstein 1977).[7] In

other words, along side of constructions with ergative marking, they also

have constructions which are marked in a nominative/accusative way (cf.

Table 3, which identifies languages in Mayan which have morphological

split-ergativity). Split-ergativity is not random, rather it occurs in

well defined areas: (1) In some ergative languages certain IVs may re-

quire more agent-like marking because of their semantic features (e.g.

jump, run, speak). In other words, IVs whose Ss are semantic agents,

may require their Ss to be treated like As of TVs, thus making this part

of the system essentially nominative.   (2) In some ergative languages

some Ss of IVs may be treated like As of TVs because their semantic

features make them higher on the agency hierarchy (e.g. 1st and 2nd

persons). Thus, with these NPs the system becomes essentially nominative.

(3) In some ergative languages, nonpast/incomplete/imperfective tenses or

aspects may require nominative marking while past/complete/perfective re-

quire ergative marking. Dixon (1979) claims that nonpast/incomplete/

imperfective presuppose a more agent-like perspective for both IVs and TVs,

so the Ss of IVs tend to be treated like As of TVs, making this part of

the system essentially nominative. And (4), in some ergative languages

subordinate clauses may require accusative marking while main clauses re-

quire ergative marking (we shall discuss the motivation for this in the

Conclusion).

In Mayan languages, only one language, Mot, has a split system based

on (2), the semantic features of nouns; first and second person are treated

in an accusative way, third person in an ergative way. There are a number

of Mayan languages which have splits in their tense/aspect systems, (3),

with accusative structures in the incompletive or progressive aspects and ergative marking in other tense/aspects. There are also a number of languages which use accusative structures in subordinate clauses, (4), and ergative structures in main clauses. It should be noted that in all Mayan languages with split-ergative structures, ergative marking has been extended to intransitive verbs. This is what is called an Extended Ergative System or a Marked Nominative System (Dixon 1979).

A language has syntactic ergativity if there are syntactic processes which rely on ergative structures for their operation. In other words, ergative structures feed syntactic processes like coordination, subordination, relativization, etc., rather than accusative structures. It is possible for a language to be morphologically ergative but not syntactically ergative if syntactic processes rely on accusative structures rather than on ergative ones (cf. examples in Dixon 1979). The more ergative a language is, the more syntactic processes will operate on ergative structures.

As noted above, in syntactically ergative languages usually the ergative category is restricted syntactically. For example, in Dyirbal (Dixon 1972, 1979), ergative NPs cannot be coordinated, relativized, or subordinated in purposive clauses. Ergative NPs first must be converted into absolutives by an antipassive transformation (see the next section on 'Voice' for a discussion of 'antipassive'). In many Mayan languages, ergative NPs cannot be questioned, relativized, or clefted: they must first be converted into absolutives by antipassiviztion (or passiviztion, at times) in order to participate in these syntactic constructions. In accusative languages, the obverse is usually the case; accusative NPs are restricted syntactically. For them to participate in certain syntactic operations they must be converted into nominatives via

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passivization (cf. Keenan 1976, and Keenan and Comrie 1976, for examples). What this means is that in ergative languages, the absolutive is the syntactic pivot, whereas in accusative languages the nominative is the syntactic pivot.[8]

In the literature there has been a good deal of discussion over the notion of 'subject', in large part due to confusing the universal category of Subject as defined above and the language specific category of syntactic pivot.

<div align="center">Voice</div>

Voice is an overt grammatical category basically pertaining to transitive verbs. The function of voice is to indicate the relationship the verb has with its arguments. The normal unmarked voice is the active voice which manifests the fundamental transitive relationship in which there are two arguments, agent and patient, in direct relationship with a transitive verb.

(3) Normal Active Voice: TV A P

A change in voice involves a disruption of the basic transitive relationship, along with overt morphological or syntactic marking of such a change.[9]

One important function of voice changes is to allow the ommission of one of the basic arguments of a TV in the semantic (deep) structure. This is a discursive device which makes possible the discussion of a transitive activity without mentioning one of the basic arguments when it is unknown or irrelevant, or when there is a desire on the part of the speaker to withhold such information. However, the omission of one of the arguments requires overt marking indicating that the basic transitive relationship

<div align="center">14</div>

has been disrupted. When one of the arguments is omitted, the normally transitive verb must be converted into a derived intransitive verb and the remaining argument is inflected like any other S of IV. (Obviously, the techniques for doing this are language specific.)

Thus, the absolutive passive voice marks the omission of the agent. Since the A is omitted the verb is converted into a derived intranstive and the P becomes the S. Thus, other things being equal, in an ergative language the S will be inflected as an absolutive, and in an accusative language the S will be inflected as a nominative.

			ABSOLUTIVE
(4)	ACTIVE		PASSIVE
		--->	
	VT A P		VI S (= P)

Note that this view of passive is not the same as having transformations delete agents (whole, or dummy elements like someone/something). The agent is simply not specified lexically or referentially, although a non-specific agent is implied in a passive construction.[10] True medio-passive voices differ from passives only in that there is no implied agent. An activity which is normally viewed as transitive is marked by medio-passive voice indicating that it occurs without an agent (see Table 9).

The absolutive antipassive[11] voice is the obverse of the passive (see Table 10). It indicates that the patient has been omitted from the discussion of a normally transitive activity. Since the patient is omitted, the normally transitive verb must be converted into a derived intranstive, and the A becomes S of the derived IV. Other things being equal, in an ergative language the S will be inflected as an absolutive, and in an accusative language having an antipassive the S will be inflected as nominative.

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                                      ABSOLUTIVE
(5)          ACTIVE            ANTIPASSIVE
                       --->
             VT A P           VI S (= A)
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Another important function of voice changes is to make possible the

rearrangement of the arguments in relationship with a transitive verb.[12]

Here none of the participants basic to a transitive activity are omitted

from the discussion, rather they are put in different functions with re-

spect to the verb, usually by promotional or demotional processes. These

rearrangements are usually motivated by syntactic restrictions (e.g. on

what may be the syntactic pivot), and by discourse requirements (e.g. what

is topic, theme, or in focus). Thus, for example, in many accusative

languages, an accusative NP is not accessible to certain syntactic pro-

cesses, so passivization is required in order to promote the P (= accu-

sative) to the nominative case; the A is demoted from the nominative case

to an oblique case. Since the A is no longer in direct relationship with

the TV, it must be converted into a derived IV with P becoming S like with

the absolutive passive. This type of passivization is also usually re-

quired when the P is the topic or theme of the discourse.

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                                      REARRANGING
(6)          ACTIVE            PASSIVE
                       --->
             VT A P           VI S (= P) oblique A
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As discussed above in 'Ergativity and Pivot', in a number of Mayan

languages there is an Inert Ergative Constraint which restricts the par-

ticipation of ergative NPs in syntactic processes such as questioning,

relativization, and clefting, or more generally when they are in focus.[13]

In order for an ergative NP to participate in such processes the normally

transitive verb is put into the focus antipassive voice converting it to

a derived intransitive. The ergative NP is clefted and promoted to

absolutive. There is also evidence that it is promoted to a higher

clause becoming a predicate noun. The patient is either demoted to an

oblique case or apparently remains intact.[14]

(7)   ACTIVE   FOCUS
                                  ANTIPASSIVE
                    --->
          VT A P   (A) VI (oblique)

(Here the circled (A) indicates that the agent is clefted, and

perhaps is in a higher clause.)

The incorporating antipassive is another voice occurring in a number

of Mayan languages and many other ergative languages (as well as in non-

ergative languages, e.g. Algonquian). The incorporating antipassive voice

makes it possible for a nondistinct, nonspecific patient of a certain

class to be incorporated into the verb complex. Here there is no parti-

cular patient specified, only a class of patients without specific refer-

ence (like in the English forms 'to bird-watch' and 'to deer-hunt').

Since the patient is incorporated into the verb complex, it is no longer

an argument in direct relationship with the verb, so the verb must be

converted into a derived intransitive, and the A becomes S.

(8)   ACTIVE   INCORPORATING
                                  ANTIPASSIVE
                    --->
          TV A P   IV-P S (= A)

There is another type of voice which occurs in a number of Mayan

languages that allows the rearrangement of the transitive relationship.

In what is called the referential voice an NP that is normally in an

oblique relationship with a TV is promoted out of the oblique case and

is then treated as if it were one of the basic arguments in a transitive

predication (see Table 11). The kinds of oblique arguments that may be

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promoted are datives, benefactives, malefactives, and possessors of Ps.
In those languages which have a referential voice, if one of these oblique
arguments occurs in a transitive sentence it usually must be promoted.
The TV remains transitive but has a referential voice suffix. The pro-
moted argument is cross-referenced on the verb with absolutive marking
as if it were the P. The P is not cross-referenced on the verb, nor does
it receive oblique marking. Thus, it is demoted from having a direct
relationship with the verb, but it is not demoted enough to receive
oblique marking, rather it is left in limbo, or, using a term from re-
lational grammar, it becomes a chômeur without status.

(9)   ACTIVE   REFERENTIAL VOICE

         TV A P oblique R --->   TV A R en chômage P

(R = dative, benefactive, malefactive, and possessor of P)

Another voice related historically to the referential voice is the
instrumental voice. The instrumental voice optionally allows an instru-
ment NP to be promoted out of the oblique instrumental case; however, if
it is promoted, it must also be put in focus. The instrumental voice is
used when an instrument is questioned, relativized, or clefted.[15] A TV
in the instrumental voice remains transitive but has an instrumental
voice suffix. Whether the instrument or the patient is cross-referenced
on the verb in the instrumental voice depends on the language (see de-
tails in the section below on 'Voice and Ergativity in Selected Mayan
Languages').

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(10)   ACTIVE   INSTRUMENTAL VOICE

            TV A P oblique I --->   (I) TV A P

A General Characterization of Mayan Languages

In this section a brief and rather general characterization of Mayan
languages is given. The discussion is not meant to be comprehensive, but
rather is provided to give the reader a sense of what Mayan languages are
like, especially with regard to verb structure and basic sentence struc-
ture.

Mayan languages are mildly synthetic and agglutination is the primary
technique used in word formation. Prefixation is mostly restricted to
person and tense/aspect inflections. Suffixation is the most common
technique; almost all derivational affixes as well as many inflectional
affixes are suffixes. Infixation occurs but is rare. Compounding is
also a moderately important word formative process.

In general, Mayan languages are verb-first languages (see Table 4).
The basic word order in the majority of the languages is Verb Patient
Agent (VPA); however, VAP is the basic order in a number of languages,
especially in the Kanjobalan and Mamean groups. AVP is recorded as the
basic order in Chortí only, and is probably a rather recent innovation.
All of the VPA languages, and some of the VAP languages have topical-
ization processes which front agents allowing them to occur before the
verb; some of the languages also permit topicalized patients to occur
before the verb as well. Thus, other possible (nonbasic) orders are
AVP, APV, and occasionally, PVA. The latter is usually only permis-
sable if the agent is higher on the animacy hierarchy than the patient
(see the section above on 'Transitivity and the Notion of Subject.').

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Hua and Tenejapa Tzl are reported to have both VAP and VPA as basic orders. VAP is the normal order when the agent and patient are equal on the animacy hierarchy and VPA is the normal order when the agent is higher on the hierarchy than the patient. Norman and Campbell (1978) suggest that this was the situation in Proto-Mayan (PM). In most languages PAV order is ungrammatical in normal active transitive sentences but does occur in some languages (e.g. Quichean) in focus antipassive constructions when the patient is topicalized while the agent is in focus.

It should be noted that what is meant by 'basic word order' is the order used in normal active declarative transitive sentences which are not subordinate and in which none of the major constituents (V, A, P) is topicalized or in focus. The basic orders are not necessarily the most frequent statistically, since in normal conversation one or the other of the major constituents is often the topic or theme, in which case the basic order is usually modified. The basic order is the one which strictly provides information about a predicate and its arguments without highlighting any one of them.

Mayan languages are morphologically ergative, since the pronominal affixes which cross-reference Ss of IVs are the same as those indicating the Ps of TVs, while, on the other hand, the As of TVs are cross-referenced with a different set of pronominal affixes. The affixes cross-referencing Ss of IVs and Ps of TVs are called absolutive (B) pronominal affixes (see Table 6), and are often referred to as 'Set B' in Mayan studies. The affixes cross-referencing As of TVs are called ergative (A) pronominal affixes (see Tables 7 and 8), and are often referred to as 'Set A' in Mayan studies. Compare the following examples from Tzt and Kek.[16]

(11) Tzt tal   - em - ot   'you have come'

          come - perf- B2

(12) Tzt s - maj - oj   - ot   'he has hit you'

          A3 - hit - perf - B2

(13) Tzt a - maj - oj   - on   'you have hit me'

          A2 - hit - perf - B1

(14) Kek x   - at - b'e   'you went'

          asp - B2 - go

(15) Kek x   - at - x - b'oq   'he called you'

          asp - B2 - A3- call

(16) Kek x   - in - aa - b'oq   'you called me'

          asp - B1 - A2 - call

The ergative markers are always prefixes and usually have differing
preconsonantal and prevocalic forms. Besides cross-referencing the
agents of TVs, they also cross-reference possessors (e.g. Kek x-tz'i7
'his dog', aa-tz'i7 'your dog', r-aaq 'his pig', aaw-aaq 'your pig').
The absolutive markers are prefixes in some languages and suffixes in
others, and sometimes occur as both prefixes and suffixes in the same
language, usually in differing constructions. They also often function
as independent pronouns, or at least as the formative bases on which
the independent pronouns are built. Finally, they are used to indicate
subjects in stative (nonverbal) sentences with, for example, predicate
adjectives and predicate nouns (e.g. Chl winik on 'I am a man'). It
should be noted that the third person singular absolutive marker is ∅ in
Mayan languages (with nonnull morphological variants in Hua and Chr only),
and that inflection, especially tense/aspect inflection, is sometimes
somewhat distinct with the third person singular null element.

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Nouns in a direct relationship with a predicate (i.e. subjects of IVs
or stative predicates, and agents and patients of TVs) are morphologically
unmarked in Mayan languages (except for the cross-referencing on the verb).
That is, there are no overt case marking affixes on nouns. However, nouns
in an oblique relationship with a predicate are marked for case with either
prepositions or relational nouns or a combination of both. Most Mayan
languages have few prepositions but those that exist function like pre-
positions in European languages (e.g. Tzu pa tinaamit 'in town').
Relational nouns function like prepositions or case inflections but are
formally nouns and are usually followed by their head noun and possessed
by it (e.g. Tzu w-umaal 'by me', aw-umaal 'by you', r-umaal jar aachi
'by him the man = by the man', ch-aaw-e 'to you' < ch prep 'to, at'
aaw- E2 -e 'to').

As the examples above indicate, possession in Mayan languages is
normally indicated with an ergative prefix on the possessed noun, and if
the possessor is third person, then it normally follows the possessed
noun (e.g. Tzu ruu-tz'ii7 jar aachi 'his dog the man = the man's dog',
ruu-q'a7 jar iixoq 'her hand the woman = the woman's hand'). Under
possession some nouns undergo stem modification or omission of suffixes
(cf. Tzu tz'i7 'dog', q'ab'-aaj 'hand'). Possessor nouns may be omitted
in context and fronted via topicalization processes.

Mayan languages have at least the following word classes, defined
morphologically and syntactically: nouns, verbs, adjectives, and
particles of various sorts. There are often other classes such as
affect words, adverbs, numeral classifiers, and noun classifiers. Nouns
are normally subcategorized depending on their behavior under possession.
Verbs are always minimally sub-classified into transitive and intransitive,

and sometimes further into root transitives (RTV) and derived transitives (DTV); and rarely (Yucatecan only?) different kinds of intransitives are distinguished. TVs are always distinguished from IVs since they take both the ergative and absolutive person markers, while IVs only take the absolutive markers (or under special circumstances in some languages, only the ergative markers), never both sets at once.

The different classes of verbs are also usually distinguished by what modal suffixes they require. For example, in Quiché in the indicative mode RTVs require -o̱, DTVs -Vj̱, and IVs - ik (cf. xub'an-o̱ 'he did it', xukamisa-Vj̱ > xukamisaaj̱ 'he killed it', xkam-ik 'he died').

There is also a special root class in Mayan called positional roots. These never occur in isolation but rather have special derived adjective and verb forms, as well as others. The roots get their name from the fact that they typically indicate the position, condition, state, or form that an object is in.

The structure of transitive verbs (see Table 5) in Mayan languages is typically of the form:

(17) aspect + absolutive + ergative + TV stem (+ mode)
      Qui x-at-u-ch'ay-o 'he hit you'

                     or

(18) aspect + ergative + TV stem (+ mode) + absolutive
      Lac t-inw-il-aj-ech 'I saw you'

Aspects minimally include completive and incompletive, and other common ones are progressive, potential or future (unrealized). What goes in the aspect slot, in some languages may actually be tense markers (e.g. past, remote past, present, future), or mode markers (e.g. imperative, optative). As noted above, the ergative person markers

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are always prefixes while the absolutive markers may be prefixes or suffixes depending on the language. Mode suffixes include indicative, imperative, and subjunctive. In many languages, one or more verb classes may have zero marking in a given mode, and in some cases the mode suffix only appears when it would be in phrase final position. That is, it is omitted when anything follows in the same phrase or clause; this is especially true in the indicative mode. These suffixes are often called 'phrase final suffixes'. To a certain extent they have a dual function of indicating mode as well as phrase and clause boundaries.

Intransitive verbs conform to the structures above except that they always only have a single person marker, either a prefixed or suffixed absolutive marker; or, in some languages under certain conditions, an ergative prefix instead of an absolutive marker (see Tables 3 and 5).

Some languages distinguish between perfective and nonperfective verb structures, the ones above being the forms used in the nonperfective. Perfective verbs have no aspect prefix and a perfective marker occurs in place of a mode suffix. Cf.

(19) Tzu x - in - war - i   'I slept'
         compl-B1 - sleep- indic
(20) Tzu in - war - naq   'I have gone to sleep'
         B1 - sleep-perf
(21) Tzu x - at - nuu - ch'ey - Ø
         compl-B2 - A1 - hit -indic 'I hit you'
(22) Tzu at - n - ch'ey - oon   'I have hit you'
         B2 - A1- hit   - perf

In many languages, directional affixes, and at times, adverbial particles, may intervene between one or more of the position slots

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outlined above. However, the details are too complex to go into here.

Stative predicates, such as predicate adjective and predicate noun constructions, rarely have a formal copula. Usually, the predicate is simply juxtaposed with an absolutive person marker (e.g. Tzu in aachi 'I am a man', Ø ixoq 'she is a woman').

Mayan languages always have a series of plain stops and affricates and a corresponding glottalized series (see Table 2). There are also series of fricatives, nasals, resonants and semivowels. Most languages have a five vowel system, and some have a corresponding set of long vowels. A few languages have a six vowel system (see Campbell, Fox, Kaufman, and McQuown, especially Kaufman 1966-69).

Some other typical features of Mayan languages are briefly mentioned. Usually, there is an existential/locative particle which is roughly equivalent to Spanish estar 'be (located)' and hay 'there is/ are'. It is used to indicate the existence or location of something. It is also used in possessive sentences in the construction: exists my X, meaning 'I have X'. Plurality as an inflectional category on nouns is well developed only with human nouns, if at all. Noun and numeral classifiers are important in some of the languages. And finally, reflexive constructions are formed with transitive verbs having a possessed object noun meaning 'self', the possessor being cross-referenced with the ergative prefix on the verb, which also has the Ø third person singular absolutive marker.

Voice and Ergativity in Selected Mayan Languages

In this section the voice systems of a number of Mayan languages are outlined, and split-ergative constructions are discussed, in those

languages which have them (the languages marked with an asterisk '*' in Table 1 are those under discussion in this section). The presentation will begin with Kek in the Greater Quichean group and proceed westward through other languages of the Eastern division, then move on to languages of the Western division, then northward to Yucatecan, and end with Huastec. At the beginning of each subsection the sources for each language are listed.[17]

Greater Quichean

Kek: Eachus and Carlson (1966), Freeze (1970, Haeserijn (1966), Pinkerton (1978), Stewart (1978).

Pcm: Smith-Stark (1976a, b, 1978a, b).

Pch: Brown (1978), Mayers and Mayers (1966), Stoll (1888, 1896).

Qui: Brasseur de Bourbourg (1961, Burgess and Fox (1966), Fox (1973), Larson (field notes), Mondloch and Eruska (1975), Norman (1978), Ximénez (1701-03).

Cak: Brinton (1884), Larsen (field notes), Norman (1978), Townsend (1960).

Tzu: Butler (1977), Daylay (1978, 1982, field notes).

Greater Quichean - Kekchi

TVs in the active voice are unmarked in the indicative. RTVs end in a consonant and DTVs end in a vowel. Some examples are given below and should be compared with forms in other voices discussed later on.

(23) x-at-in-sak'   'I hit you'

T-B2-A1-hit

(24) x-Ø-a-yok' li si7   'you cut the firewood'

T-B3-A2-cut the firewood

(25) x-at-in-ch'iila   'I scolded you'

T-B2-A1-scold

(26) x-Ø-x-kamsi   'he killed it'

T-B3-A3-kill

Simple passives with absolutive and rearranging functions are marked
with -e7 on RTVs, and vowel length plus an intransitive mode suffix (e.g.
-k) on DTVs. An A may optionally be expressed in the sentence with a RN
(e.g. -b'aan 'by').

(27) x-at-sak'-e7 (in-b'aan)   'you were hit (by me)'

T-B2-hit-Ps   A1-by

(28) x-at-ch'iila-a-k (in-b'aan) 'you were scolded (by me)'

T-B2-scold-Ps-M   A1-by

There is also an 'impersonal' passive formed with -man which can
only have a 3rd person P and never allows an A to be expressed, although
it is implied.

(29) x-Ø-yok'-man li si7

T-B3-cut-Ps   the firewood

'the firewood was cut/they cut the firewood'

Like most Mayan languages, Kek has past participial adjectives de-
rived from TVs, which function in passive-like constructions. These
participles form stative predicates requiring an absolutive S which

cross-references the P of the underlying TV. The participles emphasize the result of a transitive activity; that is, that the P is in the state or condition resulting from the activity. Agents may optionally be indicated by a RN. -b'il derives participles from RTVs, and -mb'il derives them from DTVs (e.g. sak'-b'il at 'you are/have been hit', ch'iila-mb'il at in-b'aan 'you are/have been scolded by me').

In the Chamil dialect, there is also a reduplicating suffix $-C_1o$ which derives both adjective and IV passives from RTVs only (cf. x-in-aa-b'ak' 'you tied me up', b'ak'-b'oo-k in 'I am tied up', x-in-b'ak'-b'o 'I got tied up').

Antipassives are formed with -o on RTVs and -n on DTVs. These suffixes derive all three types of antipassives: absolutive, focus, and incorporating. The P is demoted to the dative case marked with the RN -e 'to, of, for' in focus antipassive constructions. In incorporating antipassive sentences, a generic patient NP follows the verb without further marking.

Absolutive

    (30) x-at-b'is-o-k   'you were measuring'

           T-B2-measure-Ap-M   (< b'is 'measure' TV)

    (31) x-in-ch'iila-n   'I was scolding'

           T-B1-scold-Ap

Incorporating

    (32) x-at-yok'-o-k si7   'you cut firewood (e.g. for a

           T-B2-cut-Ap-M firewood   living)'

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(33) laa7at x-at-sak'-o-k   w-e

you   T-B2-hit-Ap-M   A1-to

'it was you who hit me'

(34) ani x-∅-sak'-o-k   aw-e   'who hit you?'

who T-B3-hit-Ap-M   A2-to

(cf. in active: ani x-∅-a-sak'   'who did you hit?)'

who T-B3-A2-hit

(35) li winq li x-∅-kamsi-n r-e ...

the man who T-B3-kill-Ap A3-to

'the man who killed him...'

Morphological split-ergativity does not occur with finite verbs in

Kek. However, there are passive infinitives of TVs formed in -b'al

(e.g. sak'-b'al 'to be hit'), which may take the ergative prefixes which

then cross-reference the underlying P of these nominalizations (e.g.

aa-sak'-b'al 'your being hit/for you to be hit'). The ergative prefixes,

here are formally possessive prefixes that semantically mark patients.

The passive infinitives are used in, for example, the progressive aspect

marked with the stative predicate yoo- 'to be in the act of doing some-

thing', which requires an absolutive S that is coreferential with the

Subject (A of TV or S of IV) of an infinitive embedded in a clause marked

by the preposition chi 'at'.

(36) yoo-k   in chi aa-sak'-b'al

prog-M B1 at   E2-hit-nom

'I am hitting you'

It is difficult to decide if this is a true case of split-ergativity or whether the apparent split is due simply (and perhaps unimportantly) to the possessive nature of the ergative prefixes. However, since the construction does occur in the progressive aspect, I have indicated in Table 3 that it is a possible case of split-ergativity.[18]

Greater Quichean - Pocom

Pcm and Pch are essentially alike in terms of their voice categories and ergativity, so they will be discussed together. Differences will be noted when relevant to the discussion. The active voice is unmarked on RTVs, but DTVs require a mode suffix in the indicative (i.e. Pch -Vj, and Pcm - Vh - -ej). IVs take the phrase final suffixes -ik in Pch and -i in Pcm.

(37) Pch x-at-in-ch'ey   'I hit you'

      T-B2-A1-hit

(38) Pcm x-in-ru-q'at   'he cut me'

      T-B1-A3-cut

(39) Pcm ih-Ø-ru-kaansa-ah   'he killed it'

      T-B3-A3-kill-M

The simple passive is marked with -Vr on RTVs and -j on DTVs. Agents may optionally be expressed with a RN (e.g. -u7uun 'by').

(40) Pcm ih-Ø-q'at-ar-i (r-u7uum)

      T-B3-cut-Ps-M   E3-by

      'it was cut (by him)'

(41) Pcm ih-Ø-kaans-j-i   'he was killed'

      T-B3-kill-Ps-M

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Pcm has another passive in -aam'j (e.g. ih-Ø-q'axp-aam'j-i 'it was split'
< q'axpi 'to split'). Pch has a similar historically related form
in -V₁7nj, which derives passives from TVs derived from positionals
(e.g. Ø-Ø-oq'-o7nj-ik 'it was wrapped up' < oq'aa7 'to wrap up'). There
are two other passives in Pch, one in -mV₁j (e.g. x-in-ch'ey-mej-ik
'I was hit'). Brown states that As are not specified with this passive.
The other passive, derived in -Vb', has the meaning 'to be repeatedly Xed'
(e.g. x-in-ch'ey-eb' ik 'I was repeatedly hit').

Both Pch and Pcm have past pasticiples used in adjective passive
constructions, marked with -ooj on RTVs (e.g. Pch ch'ey-ooj 'it is/
has been hit'), and -V₁maj on DTVs (e.g. Pcm kaans-amaj 'it is/has been
killed').

Absolutive and focus antipassives are marked with -w on RTVs, and
with -in in Pcm and -Vn in Pch on DTVs. There apparently is no in-
corporating antipassive.

Absolutive

(42) Pcm x-in-k'at-w-i   'I burned/did some burning'
            T-Bl-burn-Ap-M
            (cf. active: ih-Ø-nu-k'at   'I burned it')
                          T-B3-Al-burn
(43) Pcm ih-Ø-kaans-in-i   'he was killing'
            T-B3-kill-Ap-M

In Pcm the focus antipassive has the functions listed above in the
section 'Voice' and an additional one: it also occurs when the A is a
negative indefinite pronoun. In both Pch and Pcm the focus antipassive
is optional; and in Pcm it is used only with 3rd person As, especially

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when ambiguity would occur if it were not used. Ps are optionally de-
moted to the dative case marked with the RN -eh 'to, for, of'. However,
in Pcm when the P is not demoted, it is impossible to tell whether the
A or P is marked on the verb, since with 3rd persons the S is always the
∅ absolutive. Examples of the focus antipassive with clefted, questioned,
and negative As are given below.

    (44) Pch re7 tz'i7 x-∅-hoy-w-ik   r-e   winaq
                  the dog   T-B3-bite-Ap-M A3-to man
                  'it was the dog that bit the man'

    (45) Pch   re7 hin x-in--b'uhyu-n-ik   r-eh
                  the I   T-B1-quiet-Ap-M   A3-to
                  'I am the one who quieted him down'

    (46) Pcm   ha7 wach ih-∅-tok-w-i   (r-eh)
                  who   T-B3-hit-Ap-M   B3-to
                  'who hit him?'
                  (cf. with 1st per: ha7 wach ih-∅-nu-tok
                   'who did I hit?')

    (47) Pcm qu ham' wach ∅-∅-to7-w-i   r-eh
                  nobody   T-B3-help-Ap-M A3-to
                  'nobody helped him'

    Both Pocom languages have an instrumental voice, marked with
-b'e in Pch and -b'e --7e in Pcm. The addition of this suffix results
in a DTV whether or not it is attached to a RTV or DTV. In both lan-
guages the instrumental voice is used in order to put the instrument
NP in focus (see section on 'Voice'). The instrument is promoted out
of an oblique case marked with a preposition or RN, and is clefted.

In Pcm the P is optionally demoted to an oblique case marked with a
RN. Patient demotion apparently does not occur in Pch, but since the
examples available for Pch are only in the 3rd person it is impossible
to tell whether the P or the instrument is marked on the verb. The
examples below are all from Pcm.

(48) hila7 x-∅-a-q'at-7i-eh   w-ihchin   (N.B. -7e+Vh
      what   T-B3-A2-cut-I-M   A1-to   > -7ich)
      'what did you cut me with?'

(49) hila7 x-in-a-q'at-7i-eh   (cf. with (48))
      what   T-B1-A2-cut-I-M
      'what did you cut me with?'

(50) ma7 ha7 ih-∅-nu-muh-7i-eh   r-e
      the water T-B3-A1-wet-I-M   A3-to
      'with the water I wet it'

Notice in (48) and (50) that the instrument is promoted to
absolutive and marked on the verb as B3, and the P is demoted to the
dative case. In (49) the instrument is promoted out of an oblique
case but the P is not demoted. In Pcm, the instrumental voice suffix
may also be used optionally in a sentence with an instrument in an
oblique case, without instrument promotion or patient demotion.

(51) hin ⎰ih-∅-nu-sir   ⎱   ma7 xuut pech r-iij   ak'ach
           ⎱ih-∅-nu-sir-7i-eh ⎰

      I   T-B3-A1-paint-I-M   the jug with A3-back feather
      'I painted the water jug with a feather'

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And it can be used in sentences where the P is demoted, but the instrument is not promoted!

    (52)   ih-∅-nu-mek-7i-eh r-eh ma7 chie7 pech ma7 maachit

          T-B3-A1-pull-I-M   A3-to the tree with the machete

          'I pulled the tree with the machete'

These last two examples seem to indicate that the instrumental voice in Pcm is in a state of flux and is perhaps breaking down, as it has in Cak (see the next section on 'Quichean Proper').

    Both Pcm and Pch have accusative marking in the incompletive aspect marked with the proclitic <u>na</u> in Pch and <u>nV</u> in Pcm. And Pch has accusative marking with the progressive particle <u>k'ahchi7</u>. In both cases the ergative prefixes have been extended to IVs in these aspects because the IVs are really action nominalizations derived with nominalizing infinitive suffixes. They, therefore, require the ergative possessive prefixes. These nominalizations are subordinate to the aspect particles, which Brown and Smith-Stark claim are higher predicates.

    (53) Pcm nu ru-wir-iik   'he sleeps'

           T A3-sleep-infin

    (54) Pcm nu ∅-ru-q'at-om   'he cuts it'

           T B3-A3-cut-infin

Greater Quichean - Quichean Proper

Qui, Tzu, and Cak[19] are discussed together, because in general their voice systems are similar. Differences will be noted as they occur.

The active voice in the indicative on RTVs is unmarked in Tzu and
Cak but is marked with the phrase final suffix -o in Qui. DTVs have the
indicative mode suffix -Vj in Qui and Tzu, and -j in Cak.[20] IVs are
marked with -ik in Qui, -i in Tzu, and unmarked in Cak. Examples of
the active voice are given below.

(55) Qui   x-in-a-ch'ay-o   'you hit me'

    Tzu   x-in-aa-ch'ey

    Cak   x-in-a-ch'äy

        T-B1-A2-hit (-M)

(56) Qui   x-in-a-tzuku-uj   'you looked for me'

    Tzu   x-in-a-kaano-oj

    Cak   x-in-a-kano-j

        T-B1-A2-search-M

The simple passive with both absolutive and rearranging functions is
marked with -x on DTVs, and with the infix -j- in Tzu on RTVs, which has
become vowel length -V- in Qui, and in Cak has either become zero or
vowel ablaut. In the Milpas Altas dialect of Cak the suffix -e7 may
optionally mark passive on RTVs, especially where zero marking would
otherwise result.

(57) Qui   x-in-ch'aay-ik   'I was hit'

    Tzu   x-in-ch'ejy-i

    Cak   x-i-ch'ay(-e7)

        T-B1-hit(Ps)-(M)

(58) Qui   x-in-tzuku-x-ik   'I was looked for'

    Tzu   x-in-kano-x-i

    Cak   x-i-kano-x

        T-B1-search-Ps(-M)

Agents may be expressed with RNs (e.g. Tzu <u>xinch'ejy</u> <u>aw-umaal</u> 'I was hit by you'), but in Qui expressed As are restricted to 3rd person.

All three languages have a 'completive' passive in -(V)<u>taj</u> used on both RTVs and DTVs. This passive emphasizes the result of the activity and/or its termination. Agents may be optionally expressed in any person.

    (59)   Qui   x-in-tzuku-taj aw-umaal   'I was finished being

                    T-B1-search-Ps A2-by   looked for by you'

All three languages have a passive in -<u>Vr</u> which is restricted in use to only a handful of RTVs and seems to be identical in function to the simple passive discussed above (e.g. Cak <u>x-Ø-k'am-är</u> 'it was taken). Dayley (1978) has called this the 'archaic' passive because of its restriction in use and because it is cognate with the simple passive (-<u>Vr</u>) in Pocom.

Tzu has a nonproductive medio-passive formed with the infixes -<u>7</u>- or -<u>j</u>-, which occurs only on a dozen or so roots (e.g. <u>x-Ø-k'i7s-i</u> 'it stopped' < RTV <u>k'is</u> 'stop'; <u>x-Ø-tzajq-i</u> 'it fell down' < RTV <u>tzaq</u> 'lose').

Adjectival passives based on past participles occur in all three languages. They are formed with -<u>oon</u> (> -<u>on</u> in Cak) on RTVs and -<u>Vn</u> (> -<u>n</u> in Cak) on DTVs. Agents may optionally be expressed with these forms (e.g. Tzu <u>at</u> <u>ch'ey-oon</u> <u>w-umaal</u> 'you are/have been hit by me', <u>in</u> <u>kaano-on</u> <u>r-umaal</u> 'I an/have been looked for by him'). Another adjectival passive occurs, in at least Qui and Tzu, that is related to the -(V)<u>taj</u> passive. It is built on -(V)<u>tal</u>. This adjectival passive emphasizes the result of the activity and deemphasizes the activity itself (e.g. Qui <u>in</u> <u>kuna-tal-ik</u> 'I am cured').

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The absolutive antipassive is formed with -oon (> -on in Cak) on
RTVs and -Vn (> -n in Cak) on DTVs.

(60)   Tzu   x-at-ch'ey-oon-i   'you were hitting/did

               T-B2-hit-Ap-M   some hitting'

               x-at-kaano-on-i   'you were searching'

               T-B2-search-Ap-M

It should be noted that the absolutive voice is not used with all TVs.
There are a few which apparently, because of their semantic features,
cannot be put into absolutive voice. For example, in Qui the TVs meaning
'take out' and 'cry over' do not have absolutive antipassive forms. There
are also a few derived IVs that are formally like absolutive antipassives;
however, they have been lexicalized so that their Ss refer to the P of
the underlying TV not the A. For example, in Qui x-∅-raqi-n-ik (< DTV
raqi 'to break apart') means 'it broke apart' not the expected 'he broke
(something) apart'. It is also noteworthy, that in Qui (but not in Tzu
or Cak), the P may be expressed with the dative relational noun in abso-
lutive antipassive sentences.

(61)   ka-∅-loq'o-n lee in-tat   ch w-eh
        T-B3-love-Ap   the my-father   to me-to
        'my father loves (to) me'
        cf. active: k-in-u-loq'o-oj   lee in-tat
                     T-B1-A3-love-M   the my-father
                     'my father loves me'

Mondloch and Hruska (1975) say this construction is used to disambiguate
possible ambiguities. Norman and Larsen (1979) say that absolutive

sentences with patients expressed, have a slightly different meaning
than their active counterparts. For example, the active form
x-in-u-ch'ay-o means 'he hit me', whereas the absolutive sentence
x-∅-ch'ay-on ch q-eh means something like 'he hit at me'. In the
latter case, the P in the dative case is in some sense only marginally
a P, since it isn't necessarily affected by the activity. The abso-
lutive voice with Ps demoted to the dative case may, then, be a means
for expressing the distinction between true Ps and marginal ones
in Qui (in the same way that prepositions apparently function in
English; i.e. 'I hit him' vs. 'I hit at him').

Focus antipassives are marked with -ow (> -o in Cak) on RTVs, and
-Vn (> -n in Cak) on DTVs. Verb agreement in the focus antipassive is
rather interesting in Quichean. Normally, the absolutive person marker
on the verb cross-references whatever is higher on the person hierarchy
(cf. the section above on 'Transitivity and the Notion of Subject'.),
whether it is the A or the P. Compare the Tzu examples below.

(62)   Tzu   Inin x-in-ch'ey-ow-i jar aachi

                I   T-Bl-hit-Ap-M   the man

                'I was the one who hit the man'

(63)   Tzu   Jar aachi x-in-ch'ey-ow-i

                the man   T-Bl-hit-Ap-M

                'the man was the one who hit me'

There is no problem with ambiguity in these cases because the A is
always clefted and occurs immediately before the verb. The P may
either occur after the verb or be fronted via topicalization, in which
case the P occurs first in the sentence. Sentences in the focus anti-
passive with a topicalized P are the only instances in Quichean with

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P A V word order. Compare the following examples.

(64)   Tzu   jar aachi x-∅-ch'ey-ow-i jar ixoq

           the man   T-B3-hit-Ap-M the woman

           'the man was the one who hit the woman'

(65)   Tzu   jar iixoq x-∅-ch'ey-ow-i jar aachi

           the woman T-B3-hit-Ap-M the man

           'the woman was the one who hit the man'

(66)   Tzu   jar iixoq jar aachi x-∅-ch'ey-ow-i

           the woman the man   T-B3-hit-Ap-M

           'the woman, the man was the one who hit her'

In Qui one of the arguments, A or P, must be 3rd person in focus antipassive sentences. However, in Tzu the non-3rd persons may occur, and when they do the verb always agrees with the A and the P occurs in the genitive case marked with the RN -Vxiin 'of, for'. Also, in Tzu the person hierarchy can be overridden by using -Vxiin to mark the P.

(67)   TZu   Inin x-in-ch'ey-o aw-xiin

           I   T-B1-hit-Ap A2-of

           'I was the one who hit you'

(68)   Tzu   Je7ee7 x-ee-ch'ey-o w-xiin

           they   T-B3p-hit-Ap A1-of

           'they were the ones who hit me'

Tzu has an incorporating antipassive marked with 'short' forms of the focus antipassive, -o for RTVs and -n for DTVs, which normally occur when indefinite NPs follow. The A is always clefted in the incorporating antipassive, like in the focus antipassive, and a generic P immediately follows the verb.

(69)   Tzu   Je7ee7 x-ee-ch'ey-o winaq

        they   T-B3s-hit-Ap people

        'they are the ones who hit people'

Instrumental voice is marked with -b'e in Quichean. This voice
behaves differently in the three languages, however. In Qui and Tzu the
instrument must be put in focus by clefting in the instrumental voice.
In Qui the instrument is promoted to absolutive and the P is demoted to
the genitive case marked by the RN -ee(ch).

(70)   Qui   ch'iich' x-Ø-in-sok-b'e-j   aw-eech

               machete T-B3-A1-wound-I-M   A2-of

               'it was a machete that I wounded you with/

               I used a machete to wound you'

In Tzu the instrument is promoted out of the instrumental case but it
is not advanced as far as the absolutive; the P remains in the absolutive.

(71)   Tzu   machat x-in-r-choy-b'e-ej

               machete T-B1-B3-cut-I-M

               'it was a machete that he cut me with'

In Cak when -b'e is used, the instrument is not promoted at all,
although the instrument along with its RN case marker may be fronted
(i.e. topicalized).

(72)   Cak   r-ik'in jun machat x-i-ru-sok-b'e-j

               A3-with a machete T-B1-A3-wound-I-M

               'with a machete he wounded me'

```
(73)   Cak    x-∅-u-choy(b'e-j)      r-ik'in    jun machät
              T-B3-A3-cut(-I-M)       A3-with    a    machete
              'he cut it with a machete'
```

Thus, in Cak -<u>b'e</u> no longer has voice changing power; the basic tran-
sitive relationship is not disrupted when it occurs. Rather it is used
simply to optionally indicate that there is an instrument in the sentence.

The instrumental voice may be used in conjunction with the passive.
Examples are given in (74). These examples also illustrate the different
degrees of advancement of the instrument NP in Qui, Tzu, and Cak, res-
pectively. In Qui the instrument is clearly advanced to the absolutive
since it is cross-referenced on the verb while the P is in an oblique
case. In Tzu the instrument is extracted out of the oblique case but
is not advanced to absolutive, since the P is cross-referenced on the
verb with the absolutive prefix. In Cak the instrument is fronted (i.e.
topicalized) but is neither extracted from an oblique case nor advanced.

```
(74)   Qui    ch'iich'     x-∅-sok-b'e-x       aw-eech
              machete      T-B3-wound-I-Ps     A2-of
              'a machete was used to wound you'
       Tzu    machat    x-in-choy-b'e-x-i
              machete   T-B1-cut-I-Ps-M
              'it was a machete that I was cut with'
       Cak    r-ik'in  jun  machät    x-i-sok-b'e-x
              A3-with  a    machete   T-B1-wound-I-Ps
              'with a machete I was wounded'
```

It is interesting to note that the three Quichean languages taken
together reflect the rather complex situation in Pcm with the

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instrumental voice.

There are no morphological accusative structures in Quichean proper,
although there are passive infinitives of TVs that may take the ergative
possessive prefixes which reference semantic Ps. These nominalizations
do not function in any paradigmatic way in the tense/aspect systems of
Quichean, as they did, for example, in Kek and Pocom.

Mamean

Mam: Canger (1969), England (1975), England et al (1979),
Peck and Sywulka (1966).

Agt: Larsen (1978 and field notes), McArthur and McArthur
(1966).

Ixl: Ayres (1979), Elliot and Elliot (1966).

Mamean - Mam

Relative to other Mayan languages, Mam is rather distinct in two
ways. First, some of the pronominal affixes have conjunct forms, and
the second and third persons are merged to a certain degree (cf. Tables
6, 7, and 8, and England for details).[21] Second, active transitive verbs
almost always require directional (D) particles within the verb complex.
Some active TVs may occur without Ds but it is uncommon. The Ds are
similar in function and meaning to directional particles used with many
verbs in English (e.g. up, down, in, out, away, at, etc.), and like
English, many of the particles are lexically determined. That is,
all Ds do not occur with any TV, and usually one or two particular Ds
always occur with a given TV. In many cases, the Ds do not add any
significant meaning to the TV, they are simply (almost) obligatory

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elements. All of the Ds are derived from IVs of motion; they are usually slightly modified, short forms of the IV root (e.g. xi 'away' < xi7 'go', ok 'in' < ook 'enter'). Whenever there is a directional element in the TV complex, the verb must always have the suffix -7n (~ -7~... -n ~ -VVn). Compare the examples below.

(75) ma Ø-t-tsuy   'he grabbed it' SI

    T B3-A3-grab

    ma Ø-tzaj t-tzy-u7n   'he grabbed it' SI

    T B3-D   A3-grab-suf

    ma chin t-tzeeq'a-ya   'you hit me' SI

    T B1   A..-hit-..2

    ma chin-ok t-tzeeq'a-n-a   'you hit me' SI

    T B1-D   A..-hit-suf-..2

    ma Ø-ky-tx'aj   'they washed it' TS

    T B3-A3p-wash

    c Ø-kub' n-b'y-o7n   n-man   'I hit my father' TS

    T B3-D A1-hit-suf A1-father

Mam has a number of passives, but they are not well distinquished functionally in the literature (cf. England 1979, with England et al, 1979). The simple passive seems to be marked with -eet (~ -at ~ -t). There are conflicting reports on whether or not As may be expressed, and in any event, no examples are given.

(76) ma Ø-tzy-eet   'it was grabbed' SI

    T B3-grab-Ps

    ma cyi-txj-et   'they were washed' TS

    T B3p-wash-Ps

Other passives occurring in Mam are: (a) an unmarked 'impersonal' passive used only with 3rd person Ps, and which does not allow As to be expressed; (b) one in -b'aj which requires a directional; (c) one in -j ~ -l used on RTVs only, which emphasizes the result of the activity, and allows an expressed A, but if one is not expressed, then England says that it implies there was no A; (d) one in -(VV)njtz which allows an expressed A, but like the preceding passive, if one is not expressed, then it implies there was no A; (e) participial passives marked by -7n (~ -7-...-n . -VVn).

(77) ma Ø-tzuy   'it was grabbed/they grabbed
      T B3-grab   it' SI

      Ø tz-ul q'a-b'aj   'it is left' SI
      T B3-D leave-Ps

      ma Ø-ku7x yuup-j (w-u7n-a) 'it want out/it was put out
      T B3-D put out-Ps (Al-by)   by me' SI
             fire

      ma Ø-yuup-anjtz (t-u7n   'it was put out by itself
      T B3-put out-Ps (Al-by)   (by him)' SI

      Ø txaqo-7n   'it is/has been lit' SI
      B3 light-Pp

All antipassives in Mam are marked with the suffix -n (~ -(V)Vn). The absolutive voice has two functions, one for omitting Ps, the other allowing a P to be expressed in the sentence, usually with the topic RN -i7j 'about'. Its primary function, apparently, is to allow the expression of a transitive activity without a directional particle.

(78)   ma cyin-txj-on   'I washed' TS

        T   B1 - wash-Ap

        ma cyi-txj-on t-i7j mes   'they washed the table' TS

        T   B3p-wash-AP A3-RN table

Apparently, there is an incorporating antipassive function which
allows generic nouns to occur in the sentence without further marking.

(79)   ma cyi-txj-on   mes   'they washed tables' TS

        T   B3p-wash-Ap table

        ma chi-tzy-uun xiinaq cheej

        T   B3p-grab-Ap man   horse

        'the men caught horses' SI

There is also a focus antipassive in which the A is clefted. If
an overt 3rd person P occurs in the sentence, it is marked with the
dative RN -e(e) 'to'. However, the focus antipassive verb has the 3rd
person absolutive marker cross-referencing the P anyway; that is, even
though the overt patient NP is in the dative case. For example, in (80)
the overt patient NP is in the dative case, the verb has the ∅ 3rd
person absolutive marker cross-referencing the P anyway, and the A is
not cross-referenced on the verb at all. In (81), there is no overt
patient NP, but the verb is inflected with cyi-, 3rd person plural
absolutive, cross-referencing the P. Thus, in Mam, a verb in the focus
antipassive does not agree with the A, but does agree with the P, even
if it is overtly marked by a RN in the dative case.

(80)   na7yan e ∅-kub' b'y-on t-e   n-man

        I   T B3-D   hit-Ap A3-to A1-father

        'I was the one who hit my father' TS

(81) na7yan ma cyi-kub' b'y-on

     I   T B3p-D   hit-Ap

     'I was the one who hit them' TS

(82) aal tzun ma Ø-kub' paat-an t-e jaa-7

     who   T B3-D   burn-Ap A3-to house

     'who burned the house down?' TS

(83) Xwan ma Ø-kub' paat-an   t-e jaa-7

     Juan T B3-D   burn-Ap   A3-to house

     'John was the one who burned the house down' TS

In certain kinds of subordinate clauses, and after affect words and some adverbs (which may also be subordinating), the ergative pre-fixes are also used to mark Ps in these subordinate clauses, at least when there is a directional (no examples have been found without directionals). Cf.

(84) aj   t-kan-eet ...   'when it was found...'

     when A3-find-Ps

     na7xtzan t-ex q-laq'o-7n   'we still haven't bought it'

     still not A3-D A1p-buy-suf

Since the directionals are ultimately derived from IVs, and since patient markers are always prefixed to the directionals, it is difficult to say whether the ergative prefixes have been only extended to Ss of IVs or to Ps of TVs as well. In any case, these constructions are examples of extended ergativity, and perhaps of accusative marking. It should be noted that if the ergative prefixes are extended to both Ss of IVs and Ps, then this is not a case of accusative marking, since all three arguments in these constructions are marked with ergative prefixes.

Agt and Ixl will not be discussed in the same detail as Mam. The various voice categories will simply be noted and examples will be given.

Examples of TVs in the active voice in Agt are given below. Note that there is a distinction between RTVs and DTVs.

(85)   ja kxh n-b'iy   'I hit you'

        T B2 A1-hit

        ja ∅ 7n-qatz   'I tore it'

        T B3 A1-tear

        ja ∅ 7n-kyimsa-aj   'I killed it'

        T B3 A1-kill-M

The simple passive is marked with -<u>lij</u> (~ -<u>chij</u> ~ -<u>wij</u>) on RTVs and -<u>ij</u> on DTVs. Agents may optionally be expressed with the RN -<u>a7n</u> 'by'. RTVs also have another passive in -<u>xij</u> which seems to emphasize the fact that there was an agent present in the activity (more than with the simple passive), regardless of whether or not it is expressed in the sentence. Participial passives are marked with -<u>ij</u> on RTVs and -<u>7n</u> on DTVs.

(86)   ja ∅-b'iy-lij   (w-a7n)   'he was hit (by me)'

        T B3-hit-Ps   A1-by

        ja ∅-b'iy-xij   (t-a7n)   'he was hit (by him)'

        T B3-hit-Ps   A3-by

        b'iy-ij-chin   'I am/have been hit'

        hit-Pp-B1

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ja Ø-kyims-ij   'he was killed'

T B3-kill-Ps

kyims-a7n-Ø   'he is/has been killed'

kill-Pp-B3

There is also a nonproductive medio-passive occurring with a few RTVs, which is indicated by lengthening the root Vowel; historically (perhaps synchronically ??) the lengthened vowel comes from an infixed -h- (e.g. ja Ø-qaatz 'it tore' < qatz RTV 'tear').

The absolutive antipassive voice is marked with -oon on RTVs and -Vn on DTVs. The root vowel of most RTVs is lengthened in this construction. Patients may be expressed in the absolutive with either of the RNs tz-eetz 'to' or tz-e7 'with, about'; however, there is a slight meaning change from that of the active voice.

(87)   ja chin-b'iy-oon   'I fought/was hitting'

    T B1-hit-Ap

    ja chin-b'iy-oon tz-aw- $\begin{smallmatrix}\text{eetz}\\\text{e7}\end{smallmatrix}$ 'I fought with/hit at

    T B1-hit-Ap   to-A2- to   you'
                                with

    ja chin-kyimsa-an   'I killed'

    T B1-kill-Ap

The focus antipassive is also marked with -oon/-Vn but there is no lengthening of a root transitive vowel. In this voice the A is clefted and the verb agrees with the P if it is non-3rd person, and it may agree with either the A or the P if the P is 3rd person. Note that focus antipassives require the dependent tense/aspect markers (e.g. m ~ n dependent proximate past = ja main proximate past). This probably indicates that the clefted A is in a higher clause and is a predicate noun.

(88)   in n-xh-b'iy-oon   'I was the one who hit you'

        B1 T-B2-hit-Ap

        in m-∅-kyimsa-an   'I was the one who killed him'

        B1 T-B3-kill-Ap

        ~ in m-in-kyimsa-an

          B1 T-B1-kill-Ap

Extended ergative accusative structures occur in Agt in dependent
time adverbial clauses in the indefinite past tense (with null marking).
The verb forms, however, in these cases are nominlizations and therefore
the ergative prefixes cross-referencing underlying Ss of IVs are formally
possessors.   Cf.

(89)   ye a-b'iy-ool in...   'when you hit me...'

        art A2-hit-nom B1

        ye a-kyim-e7n...   'when you died...'

        art A2-die-nom

                        Mamean - Ixil

    Examples of TVs in the active voice in Ixl are given in (90).   Note
that there is a distinction between RTVs and DTVs.

(90)   kat a-q'os in   'you hit me'

        T   A2-hit B1

        kat t-echb'u ∅   'he ate it'

        T   A3-eat   B3

    DTVs have a passive in -l. RTVs have passives in -ax (~ -Vx),
-p, and -l ~ -ch, which Ayres does not distinguish further. Agents
may be expressed with the RN -a7n 'by' with at least some of these
passives. Participial passives are marked with -el on RTVs and -mal on
DTVs.

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(91)   kat q'os-ax-i Ø   (t-a7n)   'it was hit (by him)'

        T   hit-Ps-M B3 (A3-by)   ·

        kat q'os-p-i Ø   'it was hit'

        T   hit-Ps-M B3

        kat q'os-1-i Ø   'it was hit'

        T   hit-Ps-M B3

        q'os-el Ø   'it is/has been hit'

        hit-Pp B3

        kat echb'u-1-i Ø   'it was eaten'

        T   eat-Ps-M   B3

        echb'u-mal Ø   'it is/has been eaten'

        eat-Pp   B3

Absolutive and focus antipassives are marked with -on on RTVs and
-n on DTVs. Patients may be expressed optionally in the absolutive with
either of the RNs -e 'to' or -i7 'for, to'. It is not clear how abso-
lutives with expressed Ps differ from the active voice.

(92)   kat q'os-on axh (s w-i7)   'you hit (me)'

        T   hit-Ap B2   (A1-for)

        kat echb'u-n o7   'we ate'

        T   eat-Ap   B1p

With focus antipassives the A is clefted and the verb agrees with
the P.

(93)   in kat q'os-on axh   'I was the one who hit you'

        B1 T   hit-Ap B2

Unlike Mam and Agt, Ixl has an instrumental voice in b'e. In the
instrumental voice the instrument is promoted out of an oblique case
marked with a RN like -ucy' or -a7n, and it is clefted to the front of

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the sentence. Depending on the speaker, the P may either be demoted
to an oblique case marked with the RN -i7, or it may remain in the abso-
lutive. As in all Mayan languages with -b'e, the passive and instru-
mental voices may occur together. Compare the following sentences.

(94)   n-in-tzok' Ø tze7 t-ucy'   machit

       T-A1-cut   B3 tree A3-with machete

       'I am cutting the tree with a machete'

(95)   machit n-in-tzok'-b'e Ø tze7

       machete T-A1-cut-I   B3 tree

       'with a machete I cut the tree'

(96)   u   machit kat tzok'-ox-b'e Ø u   tze7 (s w-a7n)

       the machete T   cut-Ps-I   B3 the tree   (A1-by)

       'with a machete the tree was cut (by me)'

(97)   ma71 u tze7 Ø-i-q'os-b'e Ø u   naj t-i7 u   ixoj

       one the stick T-B3-cut-I   B3 the man A3-to the woman

       'with a machete the man hit (to) the woman'

(98)   uula   Ø-a-k'oni-b'e in

       sling-shot T-A2-shoot-I B1

       'with a sling-shot you shot me'

The ergative prefixes are extended in use to cross-reference Ss
of IVs in Ixl in the progressive aspects, in certain dependent clauses
without tense/aspect markers, with certain beginning adverbs without
tense/aspect markers, with the question words for 'how' and 'why', and
in one type of imperative in the Chajul dialect. In all of these cases
the IV must occur with the suffix _e7, which is also the incompletive
transitive phrase final suffix. It is noteworthy that focus anti-
passives do not take ergative prefixes like other IVs in the

progressive aspects; rather they are inflected with the absolutive markers. An example of extended ergative constructions is given below in the progressive aspect marked with in.

(99)   in w-il-e7 Ø   'I am seeing it'

      T Al-see-M B3

      in w-ul-e7   'I am arriving'

      T Al-arrive-M

Greater Kanjobalan

Chj: Hopkins (1967), Lengyel (notes), Maxwell (1976, m.s.),
       Williams and Williams (1966).

Toj: Furbee-Losee (1976).

Jac: Aissen (1979), Day (1973), Grinevald-Craig (1977),
       Stratmeyer and Stratmeyer (1966).

Greater Kanjobalan – Chujean

In Chj, in the indicative RTVs take the phrase final suffix -a7, DTVs take -ej, and IVs take -i. Examples of TVs in the active indicative are given in (100) and (101).

(100)   tz-in-y-il-a7   'he sees me'

        T-B1-E3-see-M

        tz-oñ-s-mak'-a7   'he hits us'

        T-B1p-E3-hit-M

(101)   7ix-Ø-s-mak' waj Xun 7ix Malin   'Mary hit John'

        T-B3-A3-hit he John she Mary

Chuj has two passives, one in -aj (~ -chaj) and another in -ax (~ -max). Maxwell says these are essentially the same. Lengyel claims

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that -aj places emphasis on the fact that there is an agent involved while -ax does not. Compare the examples below with the RN y-uj 'by', on account of'.

(102) 7ix-∅-mak'-chaj waj Xun   (y-uj 7ix Malin)

T-B3-hit-Ps   he John   A3-by she Mary

'John was hit (by Mary)'

(103) no wakx 7ix-∅-mak'-chaj (> xma7chj) Y-uj Petul

the cow T-B3-hit-Ps   A3-by Peter

'the cow was hit by Peter'

(104) no wakx 7ix-∅-mak'-ax (> xma7x) y-uj   Petul

the cow T-B3-hit-Ps   A3-on account of Peter

'the cow was hit on account of Peter'

There is also a participial passive adjective formed with -b'il (e.g. mak'-b'il 'he is/has been hit').

Chj has an incorporating antipassive in -w that allows indefinite NPs to be incorporated into the verb complex.

(105) 7ix-ach-mak'-w-i 7anima   'you hit people'

T-B2-hit-Ap-M   people

There is an absolutive antipassive in -waj which optionally allows Ps to be expressed obliquely in a prepositional phrase with t'a 'to'. Note the difference in meaning between active sentences and abso-lutive sentences with expressed Ps.

(106) 7ix-∅-mak'-waj 7ix Malin (t'a waj Xun)

T-B3-hit-Ap   she Mary   to he John

'Mary did some hitting (to John)'

A focus antipassive occurs in -an. It is not clear how verb agreement works in this voice in Chj, since the only available examples

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are in the 3rd person.

(107) ha   7ix Malin 7ix-∅-mak'-an waj Xun

       cleft she Mary T-B3-hit-Ap   he John

       'It was Mary who hit John'

Chj has accusative marking in the progressive aspect marked with
wan+. When wan+ is used with IVs their Ss are cross-referenced with
the ergative prefixes. In addition, when wan+ is used with TVs, they
are (psuedo)intransitivized with the focus antipassive suffix -an.
They, therefore, require the IV phrase final suffix -i. Neverthe-
less, their As are cross-referenced with the ergative prefixes and
their Ps with the absolutive prefixes. In other words, wan+ makes
IVs behave somewhat like TVs, and TVs somewhat like IVs. Cf.

(108) wan k-olu7maj-i   'we are getting dirty'

       T   Alp-get dirty-M

       wan ∅-k-aw-an-i   'we are planting it'

       T   B3-Alp-plant-Ap-M

Toj is briefly mentioned. In the indicative TVs take the phrase
final suffix -a and IVs -i(y). Like Chj, Toj has a passive in -j
which seems to place emphasis on the fact that there is an agent in-
volved, and another in -x which does not emphasize agent involvement.
There is a participial passive in -ub'al. Cf.

(109) x-∅-j-mak'-a   'I hit him'

       T-B3-Al-hit-M

       ∅-mak'-j-iy-on (y-uj)   'I was hit (by him)'

       T-hit-Ps-M-B1

       ∅-mak'-x-iy-on (y-uj)   'I was hit (by him)'

       T-hit-Ps-M-B1

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mak'-ub'al Ø   'he is/has been hit'

                    hit-Pp   B3

     There is an absolutive antipassive in -wan ~ -wun (e.g. mil-wan-

'kill' IV < mil- TV and te7-wun 'wound' IV < te7- TV). From the examples

in Furbee-Losee, there do not seem to be focus or incorporating anti-

passives. However, there is an intransitivizing suffix -Vn which

apparently is cognate with focus antipassives in nearby languages

(e.g. nul-in 'suck, chew' < nul- 'suck on, eat' TV). There is also

an intransitivizing infix -j- which is probably cognate with the

Quichean passive and Agt medio-passive (cf. Toj majk'- 'hit' IV <

mak' TV, nijk-'tremble' < nik- 'stir' TV, kujch-'be carried' < kuch-

'carry on the back' TV). From the available examples it is difficult

to tell the precise functions of -Vn and -j-.

     There apparently are no accusative structures in Toj.

                    Greater Kanjobalan - Kanjobalan Proper

     From this group Jac will be discussed in some detail. In the active

indicative RTVs have the phrase final suffix -a, and DTVs -e; IVs have

-(y)i in the indicative (n.b. the enclitic an occurs finally in a clause

with a 1st person). In the irrealis (including future) RTVs have the

phrase final suffix -a7 (~ -o7 ~ u7) and DTVs -7, while IVs have -oj.

Examples of TVs in the active voice are provided in (110).

     (110)   ch-in ha-maq'an   'you hit me'

             T-B1   A2-hit   1st

             (x)-Ø-s-maq' naj ix   'he hit her'

             T-B3-A3-hit   he   she

                                   55

```
x-Ø-a-maq'-a              'you hit it'
T-B3-A2-hit-M
ch-Ø-aw-il-a              'you see it'
T-B3-A2-see-M
ch-ach-w-il- an           'I see you'
T-B2-A1-see 1st
x-Ø-y-il-a                'he saw it'
T-B3-A3-see-M
```

(n.b. x- ~ (x)k- = complete; ch- = incomplete)

Jac has several passives which Craig distinguishes in the following ways: (a) -ot: can not occur in the future; usually does not occur with an expressed A, and when it does only with a 3rd person A; however, As are not necessarily presupposed; (b) -lax: same as -ot except that it can occur in the future and presupposes an A; (c) -lo: normally occurs with an expressed A in any person; usually used in negative or restrictive senses; is not 100 percent productive; (d) -cha: may occur with an expressed A in any person; implies the P is helpless; is not 100 percent productive; and (e) -b'il: participial adjective passive, which may take an expressed A.

```
(111)  x-Ø-maq'-ot ix (y-u   naj)     'she was hit (by him)'
       T-B3-hit-Ps she (A3-by he)
       x-in-maq'-ot an                'I was hit'
       T-B1-hit-Ps  1st
       ch-in-il-lax-oj  (y-u  naj)    'I'll be seen (by him)'
       T-B1-see-Ps-M
       matxa   x-Ø-7il-la  (w-u)   an) 'it was not seen yet
       not yet T-B3-see-Ps (A1-by  1st)            (by me)'
```

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```
ch-ach-kil-cha   (w-u    an)        'you are helped (by me)'

T-B2-help-Ps     (Al-by 1st)

tz'un-b'il Ø     (w-u    an)        'it is/has been planted

plant-Pp    B3   (Al-by 1st)                 (by me)'
```

Jac has an incorporating antipassive in -w and an absolutive
antipassive in -wa.

```
(112)  ch-ach-il-w-i    anima        'you people-watch'

       T-B2-see-Ap-M    people

       ch-ach-il-wa-yi               'you watch'

       T-B2-see-Ap-M
```

There is a focus antipassive in -n which is normally used only with
3rd person As. The absolutive prefix on the verb cross-references the
P not the clefted A. This indicates that the clefting function of the
focus antipassive raises the A into a higher clause making it a predicate
noun.

```
(113)  ha7    naj x-Ø-maq'-n-i    ix      'it is he who hit her'

       cleft he   T-B3-hit-Ap-M   she

       mak k-ach 7il-n-i                   'who saw you?'

       who T-B2   see-Ap-M
```

There is another construction involving the suffix -n, which com-
bines focus and incorporating functions. The RN -et 'to, with' along
with an ergative prefix marking its head (e.g. w-et 'to/with me') may
be incorporated into the verb structure between the absolutive marker
and the verb stem. TVs are always intransitivized with -n in this
construction. In addition, there is a clefted conjunct argument
occuring outside the verb structure.

(114) ha7   naj x-Ø-w-et-7il-n-i   'I saw it with him'

cleft he   T-B3-A1-to-see-Ap-M

Craig notes that informants consistently translate the head of the in-
corporated RN as the subject in Spanish, not the clefted conjunct, in
sentences such as these. This is the only case that I know of in
Mayan languages where incorporating constructions of this sort occur.
They deserve further study.

Accusative structures occur in Jac in what are called 'tenseless'
embedded clauses. Tenseless embedded clauses are those which do not
have either of the two 'tenses': 'incompletive' marked by ch- and a
number of allomorphs, and 'completive' marked by x- ~ xk- (and other
allomorphs). Tenseless clauses include, among others, those with the
subordinating aspect particles: lañan continuative, kat post-
sequentive, and lahwi presequentive. In tenseless embedded clauses,
IVs require the ergative prefixes cross-referencing their Ss. TVs in
tenseless embedded clauses become 'psuedo-intransitives' marked with
the focus antipassive suffix -n, and with intransitive mode and/or
phrase final suffixes. However, these psuedo-intransitives require
ergative prefixes cross-referencing their As, and absolutive prefixes
cross-referencing their Ps. Thus, in tenseless clauses TVs behave
somewhat like TVs in that they take ergative prefixes, and TVs behave
somewhat like IVs in that they require IV mode and phrase final
suffixes. This is similar to the situation in Chj in the progressive
aspect. Cf.

(115) lañan ha-way-i   'you are sleeping'

       prog A2-sleep-M

(116) x-∅-ul   naj kat ∅-y-il-n-i   naj ix

       T-B3-arrive he seq B3-A3-see-Ap-M he she

       'he came and then he saw her'

(117) x-∅-y-il   naj him ha-maq'-n-i

       T-B3-A3-see   he   B1 A2-hit-Ap-M

       'he saw you hit me'

       Greater Kanjobalan - A Note on Motozintlec (= Mocho)

There are no available sources on Mot but Larsen and Norman (1979)

cite examples from Kaufman's field notes showing that Mot exhibits

split-ergativity according to semantic features of NPs. Specifically,

the ergative prefixes are used to cross-reference 1st and 2nd person As

of TVs and Ss of IVs. On the other hand, in the 3rd person, As of

TVs are cross-referenced with the ergative prefixes, and the Ss of IVs

in the 3rd person are cross-referenced with the absolutive ∅ marker.

Ps of TVs are always cross-referenced with the absolutive markers.

Thus, in the 1st and 2nd persons Mot exhibits marked nominative

(= extended ergative) structures; while in the 3rd person Mot exhibits

ergative marking. Compare the examples in (118) and (119).

       (118) ii-muq-u-∅   'I burned it'

              A1-burn-M-B3

              ii-maaq-i   'I went up'

              A1-go up-M

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(119) x-muq-u-∅   'he burned it'

       A3-burn-M-B3

       maaq-i-∅   'he went up'

       go up-M-B3

Mot is apparently the only Mayan language which exhibits split-
ergativity governed by the semantic features of NPs.

Tzeltalan

Tzt: Aissen (1977), Cowan (1969), Cowan and Merrifield
       (1968), Hurley de Delgaty and Sánchez (1978), Jacobs
       and Longacre (1977), Laughlin (1975), Sarles (1966),
       Smith (1975).

Tzl: Kaufman (1963, 1971), Robles (1966), Smith (1975).

Tzeltalan - Tzotzil

In Tzt the absolutive markers cross-referencing Ps of TVs can
be both prefixes and suffixes with differing forms in each position
(cf. Table 6). In the active indicative, TVs are unmarked. IVs are
also unmarked in the indicative. Subjects of IVs are prefixes in the
nonperfective indicative, but suffixes in the perfective, and Ss of
stative predicates are also suffixes. Examples of TVs in the active
voice are given below.

(120) ch-a-mil-un   'you kill me'

       T-A2-kill-B1

       ch-i-s-maj   'he hits me'

       T-B1-A3-hit

```
              i-∅-k-ak'                           'I gave it'

              T-B3-A1-give

              ch-i-s-kolta-un                     'he helps me'

              T-B1-A3-help-B1

      (121)  i-∅-s-maj     Maryan   li  nlo7         e

             T-B3-A3-hit   Mariano  the Chamulan    dem

             'the Chamulan hit Mariano'
```

Tzt has a simple passive in -at (~ -ot in San Bartolo). In some dialects (Zinacantán only ?), there is another passive in -e, which apparently is used only on RTVs. There is a present passive participle in -Vl and a past passive participle in -b'il. In passive sentences, As may optionally be expressed with the RN -u7un 'by'.

```
      (122)  n-i-maj-at                           'I was hit'

             T-B1-hit-Ps

             ch-imaj-e     (y-u7un le7e)    'I am hit (by that one)'

             T-B1-hit-Ps   (A3-by   that)

             pak'-al-∅                       'it is stuck on'

             stick on-Prp-B3

             pak'-b'il-∅                     'it has been stuck on'

             stick on-Pp-B3

      (123)  i-∅-maj-e     y-u7un ulo7        li   Maryan   e

             T-B3-hit-Ps   A3-by  Chamulan    the  Mariano  dem

             'Mariano was hit by the Chamulan'
```

Tzt has an absolutive antipassive in -wan which can be used on virtually any TV.

```
      (124)  n-i-mil-wan                     'I killed'

             T-B1-kill-Ap
```

There are two other absolutive antipassives which are not productive:
-(o)maj (e.g. tzuk'-omaj 'wash' IV < tzuk' 'wash' TV), and -Vwaj (e.g.
nau-waj 'sew' IV < nau 'sew' TV).

There is a focus antipassive in -on which is used only with 3rd
persons, and is rare. Since it is used only with 3rd persons it is
impossible to say whether the verb agrees with the A or P. The A is
clefted to the front of the sentence.

(125)   ulo7   i-∅-maj-on   li Maryan

         Chamulan T-B3-hit-Ap   the Mariano

         'the Chamulan was the one who hit Mariano'

Tzt has a referential and instrumental voice in -b'e. In the refer-
ential voice, dative, benefactive, and ablative or malefactive NPs, and
prossessors of Ps, are obligatorily promoted from an oblique case to the
absolutive. The P is not demoted to an oblique case, but is no longer
cross-referenced on the verb with an absolutive marker. However, if the
P is plural, it is marked on the verb with the plural suffix -ik.

(126)   dative: ch-a-k-al-b'-ot   'I'll tell it to you'

                    T-B2-A1-tell-R-B2

                    ch-aw-ak'-b'e-∅   'you'll give it to him'

                    T-A2-give-R-B3

         bene-
         factive: ch-a-j-mil-b'e-ik   'I'll kill them for you'

                    T-B2-A1-kill-R-plr

         male-
         factive: ch-i-s-poj-b'-un   'she'll snatch it from me'

                    T-B1-A3-snatch-R-B1

```
            possessor
              of P:  n-a-tik-b'-un        j-wakax

                     T-A2-enclose-R-B1    Al-cow

                     'you enclosed my cattle'

                     la-∅-j-mil-b'e

                     T-B3-Al-kill-R

                     'I killed it of/for him'
```

Note that the referential voice may be used in conjunction with the
the passive voice.

```
    (127)    ch-i-7ak'-b'-at        jun tzeb'

             T-B1-give-R-Ps         a   girl

             'I am being given a girl'
```

In the instrumental voice, an instrument NP may optionally be promo-
ted out of an oblique case marked with the preposition ta 'by, with, at,
to'. However, it is not clear whether the instrument or the P is cross-
referenced on the verb in the instrumental voice, because the only avail-
able examples are in the 3rd person where the absolutive marker is null.
Compare the two examples in (128); in the first one, the instrument has
not been promoted; in the second, it has.

```
    (128)    la ∅-s-mil      ta    machita

             T-B3-A3-kill  with   machete

             'she killed him with a machete'

             ta-∅-s-paj-b'e     akuxa   ti   ka7e

             T-B3-A3-prick-I   needle  the  horse

             'he pricked the horse with a needle'
```

It is noteworthy, that the instrumental voice in Tzt does not require
clefting of the instrument as it does, for example, in Quichean.

Voice categories in Tzl are similar to those of Tzt. Examples of TVs in the active voice in Tzl are provided in (129). Note that the absolutive markers are always suffixed in Tzl.

(129)　　la j-pas-Ø　　　　　　　　'I did/made it'

　　　　T　Al-do-B3

　　　　ya j-mil-at　　　　　　　'I kill you'

　　　　ya s-maj-Ø　　　　　　　'she hits him'

　　　　T　A3-hit-B3

In (130) a number of sentential examples of TVs (from Tenejapa Tzl) in the active voice are provided. These sentences illustrate how word order differs depending on the status of the A and P on the animacy hierarchy: if A equals P the order is V A P; if A is higher than P the order is V P A.

(130)　　la s-mil-Ø　　Jpetul te　Jwan　　　　　　　A=P

　　　　T　A3-kill-B3 Peter　　the John

　　　　'Peter killed John'

　　　　la s-t'om-Ø　　　ta　ti7el tz'i7　te　baka　　A=P

　　　　T　A3-bite-B3　　with teeth　dog　　the cow

　　　　'the dog bit the cow (with teeth)'

　　　　la s-mil-Ø　　baka te　Jpetul　e　　　　　　A>P

　　　　T　A3-kill-B3 cow　the Peter　dem

　　　　'Peter killed the cow'

　　　　ya s-maj-Ø　y-inam　ta　Jpetule　　　　　　A>P

　　　　T　A3-hit-B3 A3-wife　agt Peter

　　　　'Peter hits his wife'

Tzl has a passive in -ot (e.g. maj-ot 'he was hit' with null tense and person marking). Kaufman (1963) states that As may be expressed in passive sentences with either the RN -u7un 'by' or the preposition ta 'by, with, to, at'; or they may be unmarked. Kaufman gave no examples; however, Smith has presented a number of examples of passive sentences with unmarked As, some of which are given here in (131).[22] Note that in passive sentences, like with active sentences, word order differs depending on the status of the A and P. But the order in passive sentences is the converse of that in active sentences. In passive sentences, if the P is equal to the A, then the order is V P A; if the P is higher than the A, then the order is V A P.

(131) Ø-mil-ot-Ø Jpetul te Jwan   A=P
    T-kill-Ps-B3 Peter the John
    'Peter was killed by John'

    Ø-mil=ot=Ø baka te Jpetul   P>A
    T-kill-Ps-B3 cow the Peter
    'Peter was killed by the cow'

    Ø-maj-ot-Ø y-inam te Jpetul   P>A
    T-hit-Ps-B3 A3-wife the Peter
    'Peter was hit by his wife'

There is a past passive participle in -b'il (e.g. pas-b'il-Ø 'it has been done').

Tzl has a fully productive absolutive antipassive in -awan (e.g. mil-awan 'kill' IV < mil TV), and there are two other fairly productive ones: -omaj (e.g. tz'is-omaj 'sew' IV < tz'is TV), and -(V)wej (e.g. k'aj-awej 'harvest IV < k'aj TV). No evidence of incorporating or focus antipassives have been found in Tzl.

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Like Tzt, Tzl has a referential voice in -b'e, which obligatorily promotes dative and benefactive NPs, and possessors of Ps, to the absolutive. No examples of instrumental promotion have been found.

(132)   la y-ak'-b'e-Ø   'he gave it to him'

         T A3-give-R-B3

         ya s-pas-b'-on   'he does it for me'

         T A3-do-R-B1

         la s-mil-b'e-Ø   s-tz'i7   Jwan   te   Jpetul   e

         T A3-kill-R-B3   A3-dog   John   the Peter   dem

         'Peter killed John's dog'

The referential and passive voices may be used together.

(133)   Ø-ak'-b'e-t-Ø   jun   Jwan te Xmal   e

         T-give-R-Ps-B3   a   John the María   dem

         'María was given paper by John'

No split-ergative constructions have been reported for either Tzt or Tzl.

Cholan

Chr: Fought (1967, 1972), Larsen (fieldnotes), Mader (1977).

Chl: Aulie and Aulie (1978), Warkentin and Whittaker (1970), Whittaker and Warkentin (1965).

Cholan - Chorti

In Chr, TVs are not inflected for tense or aspect; these categories are distinguished in context and by adverbials. RTVs end in a consonant and in the indicative they take the mode suffix -i (~ -e). DTVs end in a vowel and have a null indicative marker. Absolutive markers cross-

referencing Ps are always suffixed. In the indicative, most IVs require
a mode suffix (e.g. -vy, or -a ~ -i ~ -o ~ ∅). IVs distinguish incomple-
tive and completive aspects by the way person markers are attached. In
the incompletive, a distinct set of person markers (neither absolutive
nor ergative) is prefixed (e.g. in-kan-o 'I learn'). In the completive,
absolutive person markers are suffixed (e.g. kan-w~e7n 'I learned').
Note that often there are phonological modifications when affixes are
attached to stems and when they are juxtaposed. Examples of TVs in the
active indicative are provided in (134).

(134)   in-xur-i-∅   'I cut it'

          Al-cut-M-B3

          u-xur-i-∅   'he cut(s) it'

          A3-cut-M-B3

          u-chamse-∅   'he kills/killed it'

          A3-kill-B3

          inw-ajk'u-∅   'I hit it'

          Al-hit-B3

          inw-ajk'-e7t   'I hit you'

          Al-hit-B2

     The simple passive on RTVs is marked with an infix -j-, and on DTVs
with -n. Only 3rd person As may be expressed in the simple passive.
There is another passive in -tz', but it is not clear how it is distin-
guished from the simple passive. All TVs have a past passive participle
in -b'ir. An A in any person may be expressed with the participial
passives.

(135)   in-xujr-a   'I am cut'

          Bl-cut(Ps)-M

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```
xujr-e7n      u-men          'I was cut by him'
cut(Ps)-M-B1  A3-by                 .
chamse-n-a-Ø                 'it was killed'
kill-Ps-M-B3
ajk'u-n-a-Ø                  'it was hit'
hit-Ps-M-B3
a-man-tz'-a                  'it is bought
B3-buy-Ps-M
xur-b'ir-Ø   a-men           'it has been cut by you'
cut-Pp-B3
ajk'u-b'ir-Ø                 'it is/has been hit'
hit-Pp-B3
```

There are three suffixes which apparently derive medio-passives: -k', -p, and -t. It is not certain how productive these suffixes are. The -t suffix is probably cognate with the -ot passive in Tzeltalan.

(136)   a-b'ut'-k'-a   'it fills'

         B3-fill-Mp-M

            cf. u-b'ut'-i 'he fills it'

         a-muk-p-a   'it gets covered'

         B3-cover-Mp-M

            cf. u-muk-i 'he covers it'

         a-tz'ak-t-a   'it accumulates'

         B3-add to-Mp-M

            cf. u-tz'ak--i 'he adds to it'

Absolute antipassives are formed with -on on RTVs and -(w)an on DTVs.

(137)   a-xur-on   'he cuts'

         B3-cut-Ap

```
        a-chams-an                    'he kills'

        B3-kill-Ap
```

RTVs have another absolutive antipassive in -m, which emphasizes the fact
that there is a P involved in the activity, even though it is not
specified.

```
(138)   a-xur-m-a                     'he cuts (something)'

        B3-cut-Ap-M
```

There do not appear to be focus or incorporating antipassives in Chr.

Chr does not have an overtly marked referential voice (as, for
example, in Tzeltalan and Chl), but dative NPs are usually advanced to
the absolutive. Verbs with advanced datives may be in the passive as
well. In (139) dative advancement has not occurred; the dative NP is
marked by the preposition ta 'to' and the RN -b'a. In (140) dative advance-
ment and passive occur together.

```
(139)   e   Jwan uy-eb'ta'Ø in-te7 karta    ta ni-b'a

            the John A3-send-B3 one    letter  to A1-dative

            'John sent a letter to me'

(140)   uy-ajk'u-7on    e    chicha

        A3-give-B1p     the  rum

        'he gave me the rum'

(141)   ajk'u-n-o7on    e    chicha

        give-Ps-B1p     the  rum

        'we were given the rum'
```

In the incompletive, Chr displays certain accusative-like features.
The 1st person prefixes used to cross-reference Ss of IVs are identical
with the ergative prefixes (cf. Tables 6, 7, and 8).[23] The 2nd person
singular IV prefix may be an extension from the 2nd person plural erga-

tive. The 3rd person singular is not null as it is in other Mayan languages, although it is not identical with the 3rd person ergative either. It seems that there is a tendency towards accusative marking in the incompletive, especially with 1st person.[30]

<center>Cholan - Chol</center>

In Chl, there is an important distinction between the completive aspect (marked with tza7 and allomorphs) and the incompletive aspects (e.g. mi present, woli progressive, and mu7 ~ mux incompletive). In the completive indicative, RTVs have the mode suffix $-V_1(\underline{y})$ which is a reduplication of the root vowel; and DTVs have null marking. In the incompletive aspects, RTVs have null marking, and DTVs take -n. IVs in the completive (indicative) take the suffix $-\underline{i}(\underline{y})$ (~ $-\underline{e}(\underline{y})$), and their Ss are cross-referenced with the absolutive suffixes (e.g. tza7 ach-iy-on 'I entered'). In the incompletive, IVs take the suffiz -el, and their Ss are cross-referenced with the ergative prefixes (e.g. mi k-och-el 'I enter'). Thus, Chl displays split-ergativity since it has ergative structures in the completive, and accusative structures in the incompletive. The accusative structures in the incompletive are examples of extended ergative or marked nominative structures. Examples of TVs in the active indicative are presented below.[24]

(142)   mi-j-k'el-∅   'I see it'

         T-A1-see-B3

         mi-j-k'el-et   'I see you'

         T-A1-see-B2

         tza-j-k'el-e-∅   'I saw it'

         T-A1-see-M-B3

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tza-j-k'el-ey-et	'I saw you'
T-A1-see-M-B2	
mi-k-taj-∅	'I meet him'
T-A1-meet-B3	
tza-k-taj-a-∅	'I met him'
T-A1-meet-M-B3	
mi-7-taj-on	'he meets me'
T-A3-meet-B1	
Tz-i7-taj-ay-on	'he met me'
T-A3-meet-M-B1	
mi-k-cha7le-n-∅	'I do it'
T-A1-do-M-B3	
tza-k-cha7le-∅	'I did it'
T-A1-do-B3	

Passives of RTVs are formed with the infix -j-, unless the root ends
in s̲, x̲, or j̲. If the root ends in one of these consonants, then the
passive is formed with -t̲ in the incompletive and -l̲ in the completive.
Passives of DTVs are formed with -nt̲.

(143)	mi-j-k'ejl-el	'I am seen'
	T-A1-see(Ps)-M	
	tza7 k'ejl-iy-on	'I was seen'
	T see(Ps)-M-B1	
	mi-k-taj-t-äl	'I am (being) met'
	T-A1-meet-Ps-M	
	tza7 taj-l-ey-on	'I was met'
	T meet-Ps-M-B1	

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woli-7-cha7le-nt-el   'it is being done'

T   A3-do-Ps-M

tza7 cha7le-nt-i-∅   'it was done'

T   do-Ps-M-B3

Agents may be expressed with the preposition <u>ti</u> 'by, with, to' or <u>cha7an</u>
'by, because of'.

    (144)   tza7 päs-b'e-nt-i-∅   jun   Jwan ti Alponso

        T   show-R-Ps-M-B3   paper John by Alphonse

    'John was shown paper by Alphonse'

Past passive participles are formed with <u>-b'il</u> (e.g. <u>k'el-b'il-on</u> 'I am/
have been seen', <u>kolta-b'il</u>-∅ 'he is/has been saved').

    There are no antipassive constructions in Chl. Aside from Hua, Chl
is the only Mayan language which does not have an antipassive voice of
any kind.

    Chl has a referential voice in <u>-b'e</u> in which dative, benefactive, and
malefactive NPs, and possessors of Ps, are advanced to absolutive. Ps are
removed from the absolutive but are not demoted to an oblique case.

    (145)   mi-j-k'ajti-b'e-n-et   'I am asking you it/it of you'

        T-A1-ask-R-M-B2

        woli-j-k'el-b'e-n-∅   'I am watching for him'

        T-A1-see-R-M-B3

        tz-i7-taj-b'e(y)-on   'he met him for me'

        T-A1-meet-R-B1

        m-i7-b'ejlä-b'e-n-∅ i-we7el   'she drags his food'

        T-A3-drag-R-M-B3   A3-food

As the example in (144) illustrates, the referential voice may be used in
conjunction with the passive.

At the beginning of this discussion of Chl, it was noted that in the incompletive Chl has accusative marking since the ergative prefixes are used to cross-reference the Ss of IVs as well as the As of TVs. It is noteworthy that the mode suffix on IVs in the incompletive is -v̱1. This suffix is used throughout Mayan languages as a nominalizing suffix form-ing verbal nouns as well as deriving nouns in other types of constructions (e.g. Chl yä̱x Adj. 'clear of water', yä̱x-el n. 'greenness'; Tzu ra̱x 'green', ra̱x-aal 'greenness'). It seems likely, then, that IVs in the incompletive aspects are (or at least originally were) nominalizations requiring the possessive ergative prefixes to cross-reference their Ss. The incompletive aspect particles may be (have been) higher predicates subordinating verbs following them.

Yucatecan

Yuc: Andrade (1957), Blair (1964), Bricker (1978), Durben and
Ojeda (1978), McClaran (1972), McQuown (1967), Straight (1976),
Tozzer (1921).

Yuc is the only language discussed from this group of Mayan languages.

In Yuc there is a major distinction between RTVs and DTVs. Active IVs are also distinguished from inactive IVs. Active IVs (AIVs) are those which have a semantic A as subject, and inactive IVs (IIVs) are those which have a semantic P as subject. The distinction between AIVs and IIVs results in a further sub-classification of DTVs. Inflectionally, TVs derived from AIVs are distinguished from TVs derived from IIVs, under certain conditions. In addition, there is an important distinction between verbs in the (indicative) incompletive aspect, and verbs in all other aspects and/or modes. In the incompletive, verbs display accusa-

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tive marking, since both As of TVs and Ss of IVs are cross-referenced with

ergative prefixes, and Ps of TVs are cross-referenced with absolutive

suffixes. In the completive aspect, and subjunctive and perfective modes,

verbs have ergative marking since As of TVs are cross-referenced with

ergative prefixes, and Ss of IVs and Ps of TVs are cross-referenced with

absolutive suffixes. This kind of split-ergativity is an example of

extended ergative or marked nominative morphological marking.

In the incompletive, TVs have the mode suffix -ik, and IIVs have

-$\underline{V}_1\underline{l}$, while AIVs are unmarked. In the completive, TVs take the mode

suffix -aj, and IVs have the phrase final suffix -i.[25] Examples of TVs

in the active indicative are given in (146).

(146)	RTV	k-in-tz'on-ik-∅	'I shoot it'
		t-in-tz'on-aj-∅	'I shot it'
		T-A1-shoot-M-B3	
		k-in-jek'-ik-∅	'I break it'
		t-in-jek'-aj-∅	'I broke it'
		T-A1-break-M-B3	
	DTV	k-u-míist-ik-∅	'he sweeps it'
	< AIV	t-u-míist-aj-∅	'he swept it'
		T-A3-sweep-M-B3	
	DTV	k-in-kíins-ik-ech	'I kill you'
	< IIV	t-in-kíins-aj-ech	'I killed you'
		T-A1-kill-M-B2	

The passive voice on RTVs is marked with the infix -$\underline{7V}_1$- which causes

the preceding vowel to have high tone. On DTVs the passive is marked with

the suffix -á7a in the incompletive and -á7a plus -b' (> -á7ab') in the

completive. Agents may be expressed with the preposition t(i)plus the RN

(147)   k-in-tz'ó7on-ol   'I am (being) shot'

          T-A1-shoot(Ps)-M

          tz'ó7on-en   'I was shot'

          shoot(Ps)-B1

          k-u-jé7ek'-el   t-u-mèen tèen 'it is broken by me'

          T-A3-break(Ps)-M by   I

          jé7e'-∅   t-u-mèen tèen 'it was broken by me'

          break(Ps)-B3 by   I

          k-u-míist-á7a-1   'it is (being) swept'

          T-A3-sweep-Ps-M

          míist-á7ab'-i-∅   'it was swept'

          sweep-Ps-M-B3

          k-in-kíins-á7a-1 t-u-méen leti7

          T-A1-kill-Ps-M   by   he

          'I am (being) killed by him'

          kíins-á7ab'-en t-u-méen leti7

          kill-Ps-B1   by   he

          'I was killed by him'

Some RTVs have a medio-passive voice which is marked by vowel length and high tone. Here the P is subject but no A is implied.

(148)   k-u-jéek'-el   'it breaks'

          T-A3-break(Mp)-M

          jéek'-i-∅   'it broke'

          break(Mp)-M-B3

Both RTVs and DTVs have 'passive infinitives' in -b'il (e.g. kon-b'il 'to be sold' and kíins-b'il 'to be killed'). These forms in -b'il

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are cognate with past passive participles in many other Mayan languages
(cf. Table 9). It is not clear whether the forms in -b'il in Yuc can
serve as past passive participles as well as infinitives.

Bickerton states that Yuc also has 'agentless' passives in -p and
-k', but no examples are given. These suffixes seem to be cognate with
the corresponding medio-passive suffixes in Chr.

The absolutive antipassive of RTVs is formed by lengthening the root
vowel, along with low tone, in the incompletive. In the completive, the
suffix -naj is added to the stem with a lengthened vowel and low tone.
The absolutive antipassive of DTVs from IIVs is formed with the suffix
-aj in the incompletive, and -aj plus -naj in the completive. DTVs from
AIVs do not have an absolutive antipassive per se, since the active in-
transitive verb itself fills this semantic slot. However, in the comple-
tive AIVs require the -naj absolutive suffix anyway. Let's look at the
examples in (149).

(149   RTV   k-in-tz'òon   'I shoot'

                T-A1-shoot(Ap)

                tz'òon-naj-en   'I shot'

                shoot(Ap)-Ap-B1

                k-in-jèek'   'I break (something)'

                T-A1-break(Ap)

                jèek'-naj-en   'I broke (something)'

                break(Ap)-Ap-B1

        DVT

        < IIV   k-in-kíins-aj   'I kill'

                T-A1-kill-Ap

kíins-aj-naj-en   'I killed'

                    kill-Ap-Ap-Bl

    < AIV   k-u-míis   'he sweeps'

                    T-A3-sweep

                    míis-naj-i-∅   'he swept'

                    sweep-Ap-M-B3

There is an incorporating antipassive in Yuc, in which indefinite

generic patient NPs may be incorporated within the verb, at least within

RTVs (forming IVs). No examples of an incorporating antipassive have

been found with DTVs. In the incompletive the incorporated P occurs

immediately following the verb root with no further marking. In the

completive, the incorporated P occurs immediately following the verb

root, and then is followed by the antipassive suffix -naj. Cf.

    (150)   k-in-p'o7-nòok   'I wash clothes'

             T-Al-wash-clothes

                cf. active: k-in-p'o7-ik nòok 'I wash the clothes'

                p'o7-nòok-naj-en   'I washed clothes'

                wash-clothes-Ap-Bl

                cf. active: t-in-p'o7-aj nòok 'I washed the clothes'

Patient incorporation in Yuc is complete. It is the only instance in a

Mayan language (that I know of), where the incorporated generic P is

inserted between the verb stem and following suffixes.

    There is a focus antipassive used in Yuc when As are questioned and

clefted.[26] In this construction, the agent NP occurs at the beginning of

the sentence but is not cross-referenced on the verb. In fact, the verb

apparently has no tense, aspect or mode marking, with the exception of

the phrase final suffix -e. The P is cross-referenced on the verb with

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an absolutive suffix. Compare the examples in (151).

(151) mas puch-en?   'who hit me?'

       who hit-B1

       tèen puch-ech   'I was the one who hit you'

       I   hit-B2

       max puch-e-∅?   'who hit him?'

       who hit-M-B3

       tèen puch-e-∅   'I was the one who hit him'

       I   hit-M-B3

       max míist-e-∅? naj   'who swept the house?'

       who sweep-M-B3 house

       tèen míist-e-∅ naj   'I was the one who swept the house'

       I   sweep-M-B3 house

       max il-ech?   'who saw you?'

       who see-B2

            cf. active: max t-aw-il-aj-∅? 'who did you see?'

These forms appear to be intransitive and in the completive aspect,

since there is null mode marking and only Ps are cross-referenced. How-

ever, the phrase final siffix -e is usually used on TVs when no other

mode suffix occurs (e.g. in the subjunctive), and the phrase final suffix

-i is normally used on IVs in the completive. In other words, forms in

the focus antipassive display features of both transitive and intransitive

verbs. The focus antipassive needs further study in Yuc.

The historical origins of the passive and medio-passive markers in

Yuc are noteworthy. High tone and vowel length marking the medio-passive

on RTVs is cognate with the infix -j- occurring as a passive or medio-

passive marker in a number of other Mayan languages (cf. Table 9). Yuc

syllables of the form CVVC are reflexes of PM *CVhC or *CVjC (cf. Campbell
1977, Fox 1978, Kaufman 1966-69, and McClaran 1977). Evidence from
Quichean shows that the PM infix was originally *-h- not *-j-. There is
evidence that the infixed -7V₁- marking the passive on RTVs in Yuc was
originally *ab'. In Classical Yuc the passive on both RTVs and DTVs was
-ab' (cf. McQuown 1967); and in Modern Yuc the passive is marked with
-V₁b' on RTVs which end in 7 (e.g. tz'a7 'give' > tz'a7-ab' 'be given',
chi7 'bite' > chi7-ib' 'be bitten'). Also, in contemporary Mopán,
closely related to Yuc, the passive on RTVs is -V₁b' and on DTVs it
is -ab' (Will Norman, p.c.). The suffix -á7a marking the passive on DTVs
in Modern Yuc reflects the earlier -ab'; the *b' has become 7, and an
echo vowel has been added (7 ~ b' is a common alternation in many Mayan
languages). The form of the passive in the completive of DTVs (i.e.
-á7ab') has probably been created analogically on the basis of -á7a-l
incompletive passive, and -á7a-k subjunctive passive, originally from
*-ab'-al and *ab'-ak, respectively. Thus, it seems likely that RTVs
originally had passives of the form *CVC-ab' which became *CVC-V₁7. Then
this suffix became an infix resulting in passives of the form *CV7C.
Syllables of this form regularly become CV7V₁C in Yuc with the addition
of an echo vowel.

As was discussed at the beginning of this section on Yuc, the erga-
tive prefixes are used to cross-reference Ss of IVs in the incompletive
aspect, resulting in accusative marking. It is noteworthy that the erga-
tive prefixes cooccur with the (IV mode) suffix -Vl in the incompletive.
It was pointed out in the previous section on Chl, that -Vl is a pan-
Mayan nominalizing suffix. Therefore, accusative marking in Yuc probably
can be attributed to the use of possessive ergative prefixes on verbal

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nouns in the incompletive aspect. These verbal nouns were (are?) probably
subordinate to adverbial particles used in the incompletive, some of which
have prefixal forms (e.g. k- < ki present, which is kaj in Lac; t- < tan
durative; tz'- < tz'o7ok terminative).

Huastec

Hua: Alejandre (1890), Andrade (1946), Larsen (1955), McQuown (1976),
Norman (1978), Norman and Campbell (1978).

There are no good grammatical descriptions of Hua, so what is said
here is rather brief and tentative. TVs always end in a thematic suffix
(Tm), which is usually of the form -Vy, -Vw, or -V(7). In the incomple-
tive this suffix is then followed by -al; in the completive no suffix
follows. The ergative and absolutive person markers are proclitics.
When the marker of the P of a TV is nonnull (i.e. when it is not 3rd
person), then collapsed pronominals are used (e.g. tin A2/A3 -> B1, ti
A3 -> B2, tu A2/A3 -> B1p or A1 -> B2). Some examples of TVs in the
active voice are presented in (152).

(152)   Ø-u   nuj-uw-al   'I sell it'
        B3-A1 sell-Tm-M

        Ø-in   al-iy-al   'he looks for it'
        B3-A3 search-Tm-M

        Ø-in   kwee7-ey-al   'he robs it'
        B3-A3 rob-Tm-M

        Ø-u   t'aj-a-al   'I do it'
        B3-A1 do-Tm-M

        Ø-u   t'aj-a7   'I did it'
        B3-A1 do-Tm

```
tin     kw'iy-a-al              'he scolds me'

A3->B1  scold-Tm-M

tin     kw'iy-a7                'he scolded me'

A3->B1  scold-Tm

tu      kwath-a-al              'I hit you' present

A1->B2  hit-Tm-M

tin     kwath-a7                'he hit me' past

A3->B1  hit-Tm
```

Like Tzl, Hua has differing word order depending on the status of
the A and P on the animacy hierarchy. If the A equals the P then the
order is V A P; if the A is higher than the P then the order is V P A.

```
(153)   Ø-in   kwath-a7 an uxum  an  inik                A = P

        B3-A3  hit-Tm    the woman the man

        'the woman hit the man'

        Ø-in   k'at'-uw  an  pik'o7 an  olom             A = P

        B3-A3  bite-Tm   the dog    the pig

        'the dog bit the pig'

        Ø-in   k'oj-ow   oox i ajan    an  inik          A > P

        B3-A3  pick-Tm   three corn    the man

        'the man picked three ears of corn'
```

Hua has a passive formed in -aab'; and -b'il plus -aab' form past
passive participles.

```
(154)   Ø juj-uw-aab'                    'it is (being) sold'

        B3 sell-Tm-Ps

        in al-iy-aab'                    'I am (being) looked for'

        B1 search-Tm-Ps
```

t'aj-b'il-aab'   'made/done'

do-Pp-Ps

kwe7-b'il-aab'   'robbed'

rob-Pp-Ps

There is another passive suffix -n̲, which apparently forms both

passives and medio-passives.

(155)   in kw'iy-n-al   'I am scolded'

          B1 scold-Ps-M

          ti t'aj-a-n   'te hiciste'

          B2 do-Tm-Ps   (Sp. 'you do it to yourself/

                                   it was done to you')

          Ø kwajl-a-n   'it fell'

          B3 knock down-Tm-Mp

              < kwajl-a-al 'knock over/down' TV

          Ø k'ib'-a-n   'it got lost'

          B3 lose-Tm-Mp

              < k'ib'-a-al 'lose' TV

This passive or medio-passive suffix is probably cognate with the anti-

passive suffix -(V̲)n̲ found in most other Mayan languages (cf. Table 10).

However, there does not appear to be an antipassive of any kind in Hua.

There is a referential voice formed in -ch̲(i̲), which has the redupli-

cated plural form -chinch̲.

(156)   Ø u nuj-ch-al   'I sell it to him'

          B3 A1 sell-R-M

          Ø u nuj-chinch-al   'I sell it to them/

          B3 A1 sell-R-M   I sell them to him'

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   Ø in kwe7-ch-al   'he robs him of it'

   B3 A3 rob-R-M

   Ø in t'aj-ch-al   'he does it to him'

   B3 A3 do-R-M

The referential voice may be used in conjunction with either of the two
passives.

  (157) in nuj-chinch-aab'   'I am (being) sold them'

     B1 sell-R-Ps

     in kwe7-chi-n-al   'I am (being) robbed of it'

     B1 rob-R-Ps-M

  Kaufman (p.c.) has noted that there is a suffix -na7 which derives
instrumental verbs (e.g. t'aj-na7 'do with' < t'aj-a-al 'do', and
koto-x-na7 'cut with' < kot-oy-al 'cut'). It is not clear whether this
suffix is productive or whether it is a voice changing suffix, as, for
example, -b'e in some other Mayan languages (cf. Table 11).

Conclusion

  In this section a number of generalizations about ergativity and
voice are stated, especially with respect to Mayan languages. In addi-
tion, some speculations are made about the voice system of Proto-Mayan
(PM). The speculations are meant to be working hypotheses pointing to
areas of further research, and are not intended as actual reconstructions.
And since the primary purpose of this paper is not historical, the argu-
mentation justifying the hypotheses is neither rigorous nor comprehensive.
The motivation for presenting the hypotheses is to stimulate further
investigation on the part of Mayanists to provide evidence supporting or
disproving them. It should be noted that what is said about PM primarily

pertains to the non-Huastec part of the family (i.e. to the stage of PM after Huastec split off), since Huastec is not only the most divergent Mayan language, it is also one of the least documented.

Ergative languages differ in one important respect from other types of languages (e.g. accusative languages): the agent of a transitive verb is a marked (ergative) category, and has a rather sacrosanct position. Therefore, it is often the case that the (ergatively marked) transitive agent is not accessible to certain kinds of grammatical processes like relativization, questioning, and clefting (and, in some non-Mayan languages, coordination). In order for a transitive agent to undergo processes such as these, it must be modified so that it does not formally look like a transitive agent; that is, it must not have ergative marking. The focus antipassive construction, therefore, plays an important role in many ergative languages. Its primary function is to make unequivocally explicit who the agent is without marking it (sacrosanctly) ergative. It is used in those grammatical processes which are not accessible to ergatively marked agents. It may also be used when there is a possibility of ambiguity as to which NP in a transitive sentence is the agent and which is the patient.

In ergative languages like Mayan languages, which do not have morphological case marking on agent and patient NPs, but rather only cross-reference these roles with affixes on the verb, the possibility of ambiguity can arise when there are two 3rd person NPs in the sentence, and when certain kinds of grammatical processes (e.g. topicalization) disrupt the normal word order. Thus, for example, if the normal order is V A P (or V P A, for that matter), when one of these NPs is fronted via topicalization the result is NP V NP, and therefore, it may not be clear

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which NP, the agent or the patient, has been fronted. The focus anti-passive may be used to disambiguate in this situation because it explicitly indicates that the NP immediately preceding the verb is the agent.

In all Mayan languages which have a focus antipassive the agent is always clefted to the left of the verb and the verb becomes a derived intransitive. However, generally speaking, there are three different ways in treating patients and verb agreement: (1) In Kek and Pocom, and sometimes in Tzu, the patient is demoted to an oblique case marked with a RN, and the verb agrees with the agent because it is the only argument left in direct relationship with the verb. Pcm optionally allows the patient to not be marked with an RN. In Tzu, the patient is demoted and the verb agrees with the agent when there are two non-3rd person arguments in the sentence, or, in order to override person hierarchy agreement (discussed next). (2) In Qui and Cak, and usually in Tzu, the verb agrees with whatever argument (agent or patient) is highest on the person hierarchy, and the patient is not demoted. Aquacatec also optionally allows the verb to agree with a non-3rd person agent if the patient is 3rd person. (3) In other Mayan languages (i.e. in Mamean, Kanjobalan, Tzeltalan, Yucatecan) with a focus antipassive, the verb agrees with the patient.

In those cases where the verb agrees with the patient, it seems likely that the process of focus antipassivization removes the agent from having a direct relationship with the transitive verb. The removal of the agent then leaves the patient as the only argument of the verb, so the verb agrees with it and also becomes intransitive. This situation is illustrated in (158).

(158) [VT P Ⓐ]   --->   [Ⓐ[VI P]]

<div align="center">Focus</div>

<div align="center">Antipassive</div>

In those cases where the verb agrees with the argument highest on the person hierarchy the situation is essentially like that in (158), if the patient is equal to, or higher than, the agent. But if the agent is higher on the person hierarchy than the patient, its higher status over-rules verb agreement with the patient, and forces the verb to agree with the agent even though it has been removed from a direct relationship with the verb.

Since Kek and Pocom are the only languages in which the verb in the focus antipassive regularly agrees with the agent, and since in Quichean proper, and optionally in Aguacatec, verb agreement with the agent is restricted to special circumstances (i.e. those governed by the person hierarchy), it seems likely that verb agreement with the agent in the focus antipassive is an innovation, given that in all other Mayan languages the verb agrees with the patient.

The suffix -(V)n occurs as a marker of the focus antipassive in all Mayan languages, except Yuc (cf. Table 10). In Greater Quichean, another suffix, -ow (~ -o ~ -w), marks the focus antipassive on RTVs only. The use of this suffix in Quichean in the focus antipassive is viewed here as an innovation. As a first approximation then, the following hypothesis is made with regard to the focus antipassive in PM.

Hypothesis 1: PM had a focus antipassive voice marked with the suffix *-(V)n, in which the verb agreed with the patient , and the agent was clefted to the left of the verb and removed from having a direct relationship with it (as in (158)). The focus

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antipassive was used when agents were questioned, relativized, and clefted.

In Chl, Tzeltalan, Greater Kanjobalan, Kek, and Pocom, there is a suffix -w̱ (with various modifications) used to mark the absolutive antipassive (cf. Table 10). Other languages with an absolutive antipassive mark it with -(V̱)ṉ, at least under certain conditions. In this paper, the view is that the use of -(V̱)ṉ as an absolutive marker has come about by extending its usage from the focus antipassive construction. And conversely, the use of the -o̱w̱ suffix in Greater Quichean to mark the focus antipassive on RTVs has come about through extension from the absolutive passive. At present, I have no good explanation of precisely how this postulated flip-flop in functions of -(V̱)ṉ and -o̱w̱ came about in Quichean.

Hypothesis 2: PM had an absolutive antipassive voice marked with *-w̱, which allowed the omission of the patient in the expression of a transitive activity (as in (5)).

Several languages scattered throughout the Mayan family have an incorporating antipassive (cf. Table 10). In Greater Kanjobalan this voice is marked with -w̱, and in Kek and Tzu it is marked with -o̱ (<*-o̱w̱) on RTVs.

Hypothesis 3: In PM the suffix *-w̱ was also used in incorporating antipassive constructions in which a nonspecific generic patient was incorporated into the verb complex (as in (8)). The verb became a derived intransitive and agreed with the agent.

The incorporating antipassive is marked with -(V̱)ṉ in Mam and Yuc, and it is used on DTVs in Kek and Tzu. The use of -(V̱)ṉ in these languages to mark the incorporating antipassive is viewed here as having come about

through extending its use from the focus antipassive.

Hua and Pch have passives in -Vb', and Classical Yuc had one in -ab' (cf. Table 9). Mam has one in -b'aj, which historically is a compound formation from -b' plus -aj. Kek has a passive in -e7 which historically comes from *-eb'. The suffix -e7 (<*-eb') is also found in Quichean marking intransitive verbs from positional roots, and in Milpas Altas Cak marking passives of RTVs. Adjectival passives in -b'il are found in Hua, Yucatecan, Cholan, Tzeltalan, Kanjobalan, and Kek. Historically, this suffix is a compound formation built on -b' plus an adjectival/nominal suffix -il. Whenever there is a passive construction based on the suffix -b', unrestricted expression of agents in an oblique case is allowed.

Hypothesis 4: PM had a passive in *-Vb', which allowed unrestricted expression of agents in an oblique case (as in (6)). PM also had a past passive participle in *-b'-il, which also allowed unrestricted expression of agents in an oblique case.

In Yuc, Tzl, Agt, and Tzu, there are medio-passives marked with an infixed -j- or -V-. And in Cholan and Quichean there are passives in -j- and -V-. Historically, these infixes can be shown to be a reflex of PM *-h-.[27] In those languages where the infix is used as a passive marker, there are usually restrictions on the expression of agents (e.g. only 3rd person agents may be expressed in Chr and Qui), and in general, the infix passive seems to deemphasize the role of the agent.

Hypothesis 5: PM had a medio-passive, or perhaps a passive deemphasizing the role of the agent, marked with the infix *-h- (cf. (4) and discussion of medio-passive).

Passives in -t are also fairly widespread in a number of Mayan languages. Cholan has one in -t; Tzeltalan and Jac have one in -ot (~ -at);

and Quichean has one in -taj which can be further analized into -t plus
-aj historically.[28] Will Norman (p.c.) says that there is a cognate of
this suffix in Hua which is used as an intransitive verb marker on
positional roots.

Hypothesis 6: PM may have had a passive in *-t.

A recurrent element in Mayan languages in passive constructions, and
in some cases in antipassive constructions, is the suffix -Vj ~ -Vn, from
PM *-Vŋ.[29] This suffix occurs in many languages as a generalized intran-
sitive marker (and in a few languages as a transitive marker as well).
It probably did not have a specific passive (or antipassive) function in
PM, but has been restricted in use in a number of languages.

In Tzeltalan and Chol the suffix -b'e marks the referential voice,
and in several Eastern Mayan languages, as well as in Tzt, -b'e functions
as the instrumental voice marker. There is internal evidence in Quichean,
which indicates that there was once a referential voice in these languages
as well (e.g. Tzu   tzijo-b'e-xik 'to talk to' < tzijo-xik 'to speak
about').

Hypothesis 7: PM had a referential voice marked with *-b'e, which
(obligatorily ?) promoted datives, benefactives, malefactives, and
possessors of patients, to the absolutive. *-b'e also (optionally ?)
promoted instruments to absolutive, especially when they were in
focus. The patient removed from the absolutive was not put in an
oblique case, but rather left en chômage without further marking.

Accusative morphological marking occurs in a number of Mayan languag-
es (cf. Table 3). All accusative structures in Mayan are instances of
extended ergativity: that is, in every case the ergative prefixes have
been extended to IVs marking their subjects. Accusative structures in

Yuc, Chl, Agt, Pocom, and Kek, have clearly come about through the use of nominalizations in certain kinds of constructions, especially in embedded clauses which may include the incompletive and progressive aspects. In all of these cases the possessive ergative prefixes occur on nominalizations of IVs cross-referencing their underlying subjects. The use of nominalizations in the incompletive and progressive aspects in Kek and Pocom are clearly cases of (aspect marking) adverbial particles acting as higher predicates with embedded clauses containing the nominalizations. The use of nominalizations in the incompletive aspects in Yuc and Chl may have come about in a similar way, but it isn't clear that this is the case synchronically.

Chj, Jac, Mam, and Ixl have accusative marking in several kinds of subordinate clauses (which do not seem to be embedded nominalizations). In all of these cases, it appears that the verbs of the subordinate clauses are not marked with the normal tense/aspect inflections. They are either tenseless/aspectless, or have subordinating adverbial particles which may denote time and aspect, among other things.

Mot appears to be the only Mayan language with accusative marking governed by the semantic features of NPs (i.e. non-3rd persons are marked accusatively and 3rd persons are marked ergatively).

Hypothesis 8: (A) PM was morphologically ergative in that agents of transitive verbs were cross-referenced on the verb with a set of ergative prefixes, and the subjects of intransitive verbs and the patients of transitive verbs were cross-referenced with another set of absolutive affixes. Possessors of NPs were also cross-referenced with ergative prefixes. (B) PM may have had marked accusative structures (= extended ergative structures) in certain

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kinds of tenseless/aspectless subordinate clauses, especially
with embedded nominalizations in which the underlying subjects
of intransitive verbs were cross-referenced with ergative posses-
sive prefixes.

An important question remains unanswered in the study of ergativity.
In many ergative languages accusative structures are found in the incom-
pletive/nonpast tenses and aspects. Why should there be such a tendency?
Even if accusative marking can be attributed to nominalizations in many
of these cases, why should there be more of a tendency towards nominal-
izations in these aspects and tenses than in the completive or past?

Footnotes

[1] The family of Mayan languages contains about 30 languages which,
with the one exception of Huastec, are all spoken in a more or less
contiguous area stretching from the states of Chiapas, Tabasco, Yucatán,
Campeche, and Quintana Roo, in southeastern Mexico, into Guatemala, Belize,
and Honduras. Huastec is separated from the rest of the family and is
spoken over 1000 miles to the north in the states of San Luís Potosí and
Vera Cruz, Mexico. The separation of Huastec dates very early in the
development of the Mayan family, and it is generally thought that the
territory occupied today by Mayans has not changed a great deal for a long
time, although there have been internal movements of particular language
groups within the contiguous area (see Kaufman 1966-69, 1974).

The abbreviations used for grammatical terms in this article are as
follows:

A   agent; and ergative (Set A) person prefix (e.g. A1 = 1st person
       singular ergative, A2p = 2nd person plural ergative).

AIV   active intransitive verb.

Ap   antipassive suffix.

B   absolutive (Set B) person affix (e.g. B1 = 1st person singular

      absolutive, B2p = 2nd person plural absolutive).

C   consonant.

C_x consonant determined by the x-consonant of the preceding root or stem.

D   directional particle.

DTV   derived transitive verb.

I   instrumental voice suffix.

IIV   inactive intransitive verb.

IV   intransitive verb.

M   mode suffix and/or phrase final suffix.

Mp   medio-passive voice suffix.

P   patient.

Pp   past participle deriving suffix.

Pr   preposition.

Ps   passive voice suffix.

R   referential voice suffix.

RN   relational noun.

RTV   root transitive verb; i.e. a nonderived transitive verb.

S   subject.

T   tense/aspect prefix or proclitic.

Tm   thematic suffix.

TV   transitive verb.

V   vowel (lexically determined).

V_x vowel harmonizing with the x-vowel of the preceding root or stem.

[2]The discussion of Huastec, however, is wanting, because, unfortunately, there is not sufficient literature on this important language to give a full account of voice.

[3]Some of the discussion of transitivity here, parallels that found in Dayley (1978) and Dixon (1979), and has been influenced by earlier works, especially Fillmore (1968), Chafe (1970), and Smith-Stark (1976a).

[4]See M. Silverstein's (1977) important article on ergativity and the agency hierarchy for a more detailed and rigorous discussion. Note that the diagram of the agency hierarchy given here omits many details. For example, plural forms are always higher on the hierarchy than singular forms.

[5]See Dixon (1979) for a detailed discussion of 'Subject' in this sense.

[6]For discussions of ergativity see, especially Dixon (1979) and Silverstein (1977), and also Anderson (1976), Comrie (1972), Dixon (1972, 1976), Fillmore (1978), Hale (1970), Heath (1976), Jacobsen (1969), Johnson (1976), Keenan (1976), Keenan and Comrie (1977), Smith-Stark (1976a), Van Valin (1977), Woodbury (1977), and Larsen and Norman (1979).

[7]Dixon (1979) makes the stronger claim that no language is 100 percent morphologically ergative, that all ergative languages have constructions displaying accusative morphology. This seems to be an overstatement, since, for example, there are a number of Mayan languages which do not appear to have any signs of accusative morphology (cf. Table 3).

[8]The term pivot is defined and discussed in detail in Dixon (1979). The notion of pivot is a good one, although I wish there was a better term.

[9]The overt nature of a voice change is meant to exclude such sentences as:

We ate.

John drinks.

The stick broke.

from being viewed as having undergone a voice change (e.g. antipassiviza-
tion and medio-passivization). The normally transitive verbs 'eat',
'drink' and 'break', are viewed here as having lexical intransitive forms.
This view contrasts, for example, with Heath (1976) and Postal (1976).

[10]Cf. Friedn (1975) and Langacher and Munro (1975) for insightful
discussions of nonderived passives similar to the one outlined here.

[11]Antipassive voices most commonly occur in ergative languages but
also occur in some accusative languages as well (e.g. Uto-Aztecan). The
term antipassive was first coined by Silverstein ca. 1968 (cf. 1977).
There are a number of different kinds of antipassives with differing
functions (cf. Heath 1976). In this paper we will only be concerned with
absolutive, incorporating, and focus or agent antipassives because they
are the only ones occurring in Mayan languages (cf. Table 10). For other
discussions of antipassives see Dayley (1978), Dixon (1972, 1979), Postal
(1977), and Smith-Stark (1976b, 1978). The term absolutive (or verbo
absoluto in Spanish) describing the absolutive antipassive in Mayan
languages goes back at least to the colonial period (cf. Ximénez 1701-03).

[12]The two different functions of voice changes, i.e. the omission of
arguments and rearrangement of arguments, could be viewed as semantic and
syntactic voice changes, respectively. Although, I prefer to view them
both as ultimately semantically motivated.

[13]For a relationship between focus and relativization see Schacter
(1973).

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[14]This is a simplified generalization; the details of the focus anti-
passive differ in different Mayan languages, especially with respect to
which argument, A or P, is referenced on the verb with an absolutive
person marker. See the section on 'Voice and Ergativity in Selected
Mayan Languages' for details in particular languages. I prefer the term
'focus antipassive' because it describes the function of this voice.
Perhaps a more accurate, albeit cumbersome, name would be the <u>agent</u> <u>focus</u>
<u>antipassive</u>.

[15]Compare the uses or functions of the instrumental voice with those
of the focus antipassive and agents. See Norman (1978) for a discussion
of the instrumental voice in Mayan.

[16]Abbreviations of the language from which examples come sometimes
precede the examples in order to avoid confusion.

[17]Data on the various languages discussed here varies a great deal
in both quantity and quality, and so exemplification of voice and ergativ-
ity will differ accordingly in the presentation of each language. It
would be nice if, for example, the same verb(s) could be used to exemplify
each of the voices in a given language. However, in the literature it is
seldom the case that examples of each voice are available for the same
verb. I present examples of forms cited by authors of the primary sources,
and use the same verb(s) when they are available. Usually examples are
presented with dashes indicating morpheme boundaries and minimal glosses
are given for each morpheme (cf. the list of abbreviations in footnote 1).
A certain amount of morphological analysis is left up to the reader in
order for the discussion not to become too redundant. Phonological rules
are not discussed unless absolutely necessary, but the reader should be
aware that there are rules lengthening, shortening, and deleting vowels

under certain conditions (e.g. in stressed or unstressed syllables, because of certain affixes, etc.). Also many affixes are cited with one of the segments being V or C. Without a subscript number a V or C is lexically determined; with a subscript number a V_x or C_c is determined by the x-V or C of the root or stem. For example, $-\underline{V1}$ means the vowel of the suffix is lexically determined; $-\underline{V_1 1}$ means the vowel of the suffix is the same as the first vowel of the preceding root or stem. Orthographies of all of the languages have been regularized to conform with Kaufman (1975).

[18]Many of the cases of split-ergativity in Mayan can be traced historically (if not synchronically) to nominalizations like these where ergative possessive prefixes are used to mark underlying Ss of IVs (see the Conclusion). Kek seems to show an incipient stage of this development

[19]Data on Tzu is from the San Juan dialect; the Qui data is from the Nahualá dialect; and the Cak data is from Magdalena Milpas Altas and Comalapa. In general, dialectical differences within Mayan languages are not discussed unless they are crucially relevant to voice and ergativity.

[20]There is actually another class of DTVs marked with the indicative suffix $-\underline{V7}$. These will not be discussed since they behave essentially like DTVs in $-\underline{Vj}$ (see Dayley 1978 and 1982, for details).

[21]The absolutive affixes in Table 6 given for Mam as well as for Agt are underlying or basic forms. These two languages have complex morphophonemics in the absolutives. See England (1975) and Larsen (1978) for detailed discussions. The data on Mam is from Northern Mam, either from Todos Santos (TS) or from San Ildefonso Ixtahuacán (SI). Northern Mam differs substantially from Western and Southern Mam, not discussed here.

[22]Norman and Campbell (1978) mistakenly called passives in $-\underline{ot}$, 'antipassives'. This error was probably due to the fact that Tzl allows

unmarked As in passive sentences, an abnormality in Mayan languages. This makes them look somewhat like focus antipassives which, in some languages, allow A and P to both be unmarked even though the verb is formally intransitive. That these are not focus antipassives is clear since the As are not clefted, and according to Kaufman the As can be overtly marked in an oblique case with ta or -u7un, like normal passives. Verbs in -ot are not absolutive antipassives either; this voice is marked by -awan (cf. (132)). Active and passive sentences are clearly distinguished in Tzl by the suffix -ot and by the contrasts in word order in the two different voices. It is noteworthy, however, that the preposition ta may be used to mark As in active sentences as well as passives (cf. the last example in (130) where ta is used to mark the A of an active sentence).

[23] The 1st person singular is not particularly criterial, since in many Mayan languages the 1st person singular absolutive and ergative affixes are similar.

[24] N.B. mi plus the 3rd person ergative prefix i- becomes mi7 and woli plus i- becomes woli7; mi and woli plus the 2nd person singular ergative prefix a- become ma7 and wola7, respectively. The 1st person ergative prefix k- becomes j- before k.

[25] Throughout this paper the perfective, subjunctive, and imperative modes have been ignored since they are not really relevant to a discussion of voice and ergativity. It should be noted, however, that most Mayan languages have at least three of the following four modes: indicative (= nonperfective), perfective, subjunctive, and imperative. In Yuc the perfective is formed with the suffix -maj on TVs and with -á7an on the completive stem of IVs. The subjunctive is marked with the phrase final suffix -e on TVs, and with the suffix $-V_1 k$ ~ -ak on the completive stem

of IVs.

[26]The focus antipassive is not well documented in Yuc. The examples
cited here are from Blair (1964:118) and Tozzer (1921:94). This construc-
tion needs further study to see, for example, if it is used in agent-
relativization and other aspects and modes.

[27]Pocom reflects PM *h̲ as h̲ and PM *j̲ as j̲. The infixed -h̲- occur-
ring in Pocom cognate with the (medio) passive in other languages, is
used to mark intransitive verbs from positional roots (e.g. yohk-ik 'to
lie down' < yok- 'lying down'). Also Qui reflects syllabic internal PM
*-j̲- as -j̲- (e.g. najt 'far' < PM *najt), but reflects syllabic internal
PM *-h̲- as -V̲- (e.g. b'aalam 'tiger' < *b'ahlam).

[28]N.B. the -eet passive suffix in Mam is not cognate with other
passives in -t̲. The t̲ in the Mam suffix reflects PM *r̲.

[29]N.B. -V̲n̲ (~ -V̲j̲) here from PM *-V̲ŋ̲ is distinguished from -V̲n̲ of
the (focus) antipassive which clearly comes from PM *-V̲n̲, since the *n̲
is reflected as n̲ in all languages.

[30]Since this article was written there have been two others comment-
ing on the section herein on Chorti. One is John Fought's (1982) criti-
cisms of Dayley's treatment of Chorti verb morphology, and the second is
Dayley's (1982) response to Fought's comments. For a detailed discussion
of the verb morphology of Chorti, as well as other Cholon languages, the
reader might also consult Kaufman and Norman's (1982) excellent article.

Mayan Language Family

(Kaufman 1974, 1975)

I	Huastec complex		Chicomuceltec (Chi)	Huastec (Hua)*
II	Yucatec (Maya) complex		Yucatec (Yuc)* Lacandón (Lac)*	Itzá (Itz) Mopan (Mop)
III	Western division			
	A	Greater Cholan branch		
	1	Cholan group	Chol (Chl)* Chortí (Chr)*	Chontal (Chn)
	2	Tzeltalan group	Tzeltal (Tzl)*	Tzotzil (Tzt)*
	B	Greater Kanjobalan branch		
	1	Chujean group	Tojolabal (Toj)*	Chuj (Chj)*
	2	Kanjobal group		
		a Kanjobal complex	Kanjobal (Kan) Jacaltec (Jac)*	Acatec (Act)
		b Motozintlec (Mot)		
IV	Eastern division			
	A	Greater Mamean branch		
	1	Mamean group	Mam*	Teco (Tec)
	2	Ixilan group	Aguacatec (Agt)*	Ixil (Ixl)*
	B	Greater Quichean branch		
	1	Uspantec (Usp)		
	2	Quiché complex	Quiché (Qui)* Sacapultec (Sac) Tzutujil (Tzu)*	Achí (Ach) Sipacapa (Sip) Cakchiquel (Cak)*
	3	Pocom complex	Pocomam (Pcm)*	Pocomchí (Pch)*
	4.	Kekchí (Kek)*		

*These languages are discussed in detail in this paper. Abbreviations for languages are enclosed in parentheses.

Table 1

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Orthographies for Mayan Languages

(Kaufman 1975)

p	t	tz	ty	ch	tx	cy	ky	k	kw	q	
p'	t'	tz'	ty'	ch'	tx'	cy'	ky'	k'	kw'	q'	7
b'	d'										
f	th	s		xh	x	sh				j	h
m	n			ñ			ñ̈				
w	l	r		y							

Loans: b, d, g, rr

	i	ä	u		ii		uu	
	e	a	o		ee	aa	oo	

Explanations

Symbols have their normal phonetic values except for the following:

C' = [Ċ]   glottalized ejective consonant.
VV = [V:]   long vowel.
 7 = [ʔ]   glottal stop.
 n̈ = [ŋ]   velar nasal.
Cy = [Cʸ]   palatal consonant.
Cw = [Cʷ]   labial consonant.
 j = [x̣]   uvular fricative.
th = [θ]   theta.
tz = [ȼ]   split apico-alveolar affricate.
tx = [ç]   retroflex palatal affricatate.
cy = [č]   lamino-palatal affricate.
ch = [č]   lamino-palatal affricate; except in Todos Santos Mam and Chajul Ixil where it is [ċ], a groove apico-alveolar affricate contrasting with cy and tz.
xh = [š̌]   lamino-palatal fricative; except in Todos Santos Mam where it is groove apico-alveolar.
 x = [ṣ]   retroflex fricative in Mam, Agt, Ixl, Jac, Kan, and Act where it contrasts with xh;
   = [š̌]   lamino-palatal fricative in all other languages where there is no contrast between xh and x.
sh = [š̌]   lamino-palatal fricative occurring only in Todos Santo Mam, where it contrasts with xh and x.
 ä = [ɨ] or [ə] depending on the language.

Table 2

Mayan Languages Exhibiting Nominative/Accusative Structures
(Split-Ergativity)

Lang	Nom/Acc	Incomp	Subord		Prog	Other
Hua						
Yuc	x	x				
Lac	x	x				
Chr	(x)	x				
Chl	x	x				
Tzl						
Tzt						
Toj						
Chj	x				x	
Jac	x		x			
Mot	x					x
Mam	x		x			
Agt	x		x			
Ixl	x		x		x	x
Qui						
Cak						
Tzu						
Pcm	x		x	=	x	
Pch	x		x	=	x	
Kek	x		x	=	x	

Table 3

Basic Word Order in Mayan Languages

V O S: (V P A)	Yuc, Lac, Mop Chl Tzl, Tzt Toj, Chj	Qui, Cak, Tzu Pcm, Pch Kek
V S O: (V A P)	Chj, Jac Mam, Agt, Ixl Cak	
S V O: (A V P)	Chr	
V O S/V S O: (V P A/V A P)	Hua, Tenejapa Tzl	

N.B. All of the V O S (V P A) languages commonly allow subjects (agents)
to occur before the verb under topicalization; some of the V S O
(V A P) languages do as well. Some languages also allow topicalized
objects (patients) to occur before the verb. Thus, other commonly
occurring (nonbasic) word orders are S V O and S O V, and occasion-
ally, O V S. In Hua and Tenejapa Tzl, V S O is the basic order when
agent and patient are equal on the animacy hierarchy, and V O S when
the agent is superior to the patient. In Chj and Cak, there are
dialects with basic V S O, and others with basic V O S.

Table 4

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Transitive   1)   asp + erg + TVstem (+ mod) + abs
Verb (TV)

              Yuc, Lac   Toj
              Tzl, Tzt   Ixl
              Chr, Chl

         2)   asp + abs + erg + TVstem (+ mod)

              Hua   Mam, Agt
              Tzt   Qui, Cak, Tzu
              Chj, Jac   Pcm, Pch
                                      Kek

Intransitive 1)   asp + IVstem (+ mod) + abs
Verb (IV)

              Yuc, Lac   Toj
              Tzl   Ixl
              Chr, Chl

         2)   asp + abs + IVstem (+ mod)

              Hua   Mam, Agt
              Tzt   Qui, Cak, Tzu
              Chj, Jac   Pcm, Pch
                                      Kek

         3)   asp + erg + IVstem (+ mod)

              Yuc, Lac   Mam, Ixl
              Chr, Chl   Pcm, Pch
              Jac

N.B. 'Directional' particles may occur between some of the morpheme

     slots indicated above in some of the languages.

                              Table 5

Absolutive Affixes (Set B)

Lang	S1	S2	S3	Plexcl	Plincl	P2	P3
Hua	in	it	∅/u	u		ix it..chik	u..chik chik
Yuc	-en	-ech	∅	-o7on	-o7onc7ex	-e7ex	-o7ob'/∅
Lac	-en	-ech	∅	-oon	-ooneex	-eex	-ijo7/∅
Itz	-en	-ech	∅	-o7on		-e7ex	-oo7
Chr	in- -en	i- -et	a- ∅	ka- -on		ix- -ox	a..ob' -ob'
Chl	-on	-et	∅	-onlajon	-onla	-etla	-ob'
Tzl	-on	-at	∅	-otikotik	-otik	-ex	-ik/laj-
Tzt	i- -on	a- -ot	∅	i..kutik -unkutic	ij..kutik -kutik	a..ik -oxuk	-ik
Toj	-on	a-	∅	-otikon	-otik	-ex	-e7
Chj	(h)in	(h)ach	∅	(h)oñ		(h)ex	(h)eb'
Jac	(h)in	(h)ach	∅	(h)oñ		(h)ex	(h)eb'
Mam	(ch)in..(y)a -iina	-(y)a	∅	(q)o..(y)a -7ya	(q)o7- -o7	i..(y)a -e7ya	(ch)i- -e7
Agt	(ch)in- -(i)in	(a)(k)xh- -(k)ixh	∅	(q)o7- -o7		(i)(k)x- -(k)ix	(ch)e7- -e7
Ixl	in	axh	∅	o7		ex	∅
Qui	in-	at-	∅	oj-		ix-	e7-/e-
Cak	in-/i-	at-	∅	oj-		ix-	e7-/e-
Tzu	in-	at-	∅	oq-		ix-	e7-/ee-
Pcm	(h)in	ti- (h)at	∅	aj/ah		ti..ta (h)at..ta	i-/∅
Pch	in- -iin	at- -aat	∅	oj- -ooj		at..taq -aattaq	i..tage -eeb'
Kek	in	at	∅	oh/o/oo		ex	e7/eb'

Forms marked with a preceding dash are suffixes; with a following dash
they are prefixes; with no dash they are both prefixes and suffixes.
When no 1st person plural inclusive form occurs, then there is no dis-
tinction between inclusive and exclusive.

Table 6

Preconsonantal Ergative Prefixes (Set A)

Lang	S1	S2	S3	Plexcl	Plincl	P2	P3
Hua	u	a	in	i		i/a..chik	in..chik
Yuc	in	a	u	k		a..e7ex	u..o7ob'
Lac	in	a	u	in..o7	∂k..eex	a..eex	u..o7
Itz	in	a	u	k		a..e7ex	u..oo7
Chr	in/ni	a	u	ka		i	u..0b'
Chl	k/j	a	i	k..lojon	lak	la7	i..ob'
Tzl	j	a	s	j..kotik	j..tik	a..ik	s..ik
Tzt	j	a	s	j..kutik	j..tik	a..ik	s..ik
Toj	j	ha	s	j..tikon	j..tik	ha..ex/ik	s..e7
Chj	hin	ha	s	ko/ki		he	s..heb'
Jac	hin	ha	s	ko		he	s..heb'
Mam	n..(y)a	t..(y)a	t	q..(y)a	q	ky..(y)a	ky
Agt	in	a	s/xh/ x/Ø	qa		i	chi
Ixl	in/un	a	i	ku/qu		e	i
Qui	in/nu	a(a)	u(u)	qa		i(i)	ki
Cak	in/nu	a	ru/u	qa		i	ki
Tzu	in/n(uu)	a(a)	r(uu)/ uu/Ø	qa(a)		e(e)	ki/kee
Pcm	nu	(h)a	ru	qa		(h)a..ta	ki
Pch	in/ni/n	a	ri/r/i	qa		a..taq	ki
Kek	in	a(a)	(i)x	qa		e(e)	x..eb' e7x

Forms separated by two dots are discontinuous morphemes, the first being
a prefix and the second a suffix or enclitic.

Table 7

Lang	S1	S2	S3	Plexcl	Plincl	P2	P3
Hua	u	a	in	i		a..chik	in..chik
Yuc	inw	aw	uy	k		aw..e7ex	uy..o7ob'
Lac	(in)w	aw	(u)y	(in)w..07	k..eex	aw..eex	(u)y..o7
Itz	(in)w	aw	(u)y	k		aw..e7ex	(u)y..oo7
Chr	inw/niw ni	aw a	uw/uy	kaw ka		iw/iy i	uw/uy..ob'
Chl	k	aw	(i)y	k..lojon	lak	la7w	(i)y..ob'
Tzl	k	aw	y	k..kotik	k..tik	aw..ik	y..ik
Tzt	k	aw	y	k..kutik	k..tik	aw..ik	y..ik
Toj	k	(ha)w	y	k..tikon	k..tik	(ha)w..{ex ik}	y..e7
Chj	w	h	y	k		hey	y..heb'
Jac	w	haw	y	j		hey	y..heb'
Mam	w..(y)a	t..(y)a	t	q..(y)a	q	ky..(y)a	ky
Agt	w	aw	t	q		it	ky
Ixl	w	aw/a	t	q		et	t
Qui	w/inw	(a)aw	r	q		(i)iw	k
Cak	w/inw	aw	r	q		iw	k
Tzu	w/(i)nw	(a)aw	r	q		(e)ew	k
Pcm	w	(h)aw	r	q		(h)aw..ta	k
Pch	w	aw	r	q		aw..taq	k
Kek	w	(a)aw	(i)r	q		(e)er	r..eb' e7r

Table 8

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Passive Voices in Mayan

Lang	Simple Pass	Other Pass	Medio-Pass	Adj Pass
Hua	-aab'	-n	-n	-b'il-aab'
Yuc	-7V-/-a7	-p -k'	-v-	-b'il
Lac				-b'il
Chr	-j-/-n	-t -tz'	-t -k' -p	-b'ir
Chl	-j-~-t/-nt			-b'il
Tzl	-ot		-j-	-b'il
Tzt	-at	-e		-b'il
Toj	-j		-x	-ub'al
Chj	-(ch)aj		-ax	-b'il
Jac	-ot	-lax -cha -lo		-b'il
Mam	-eet -j-~-1	-njtz -b'aj	Ø	-(VV)7n
Ixl	-l~-ch/-1	-p -Vx		-el/-mal
Agt	-1ij/-ij	-xij	-V-	-ij/-7n
Qui	-V-/-x	-(V)taj -Vr		-oon/-Vn
Cak	-V-/-x	-(V)taj -Vr -e7		-on/-n
Tzu	-j-/-x	-(V)taj -Vr	-7-~-j-	-oon/-Vn
Pcm	-Vr/-j	-aam'j		-ooj/-Vmaj
Pch	-Vr/-j	-mVj -Vb'		-ooj/-Vmaj
Kek	-e7/-V	-man		-(m)b'il -C_1o

Table 9

Antipassive Voices in Mayan

Lang	Absolutive	Incorporating	Focus	Other
Hua				
Yuc	⁻V-(-naj)/-aj(-naj)	∅(-naj)	∅ + NO {agt/asp}	
Lac	∅ + IV mode suff			
Chr	-on/-(w)an			-m
Chl				
Tzl	-awan			-(o)maj / -(V)wej
Tzt	-wan		-on	-maj / -(V)waj
Toj	-wan ~ -wun			-Vn
Chj	-waj	-w	-an	
Jac	-wa	-w	-n	-l
Mam	-(VV)n	-(VV)n	-(VV)n	
Agt	-V-..-oon/-Vn		-oon/-Vn	
Ixl	-on/-n		-on/-n	
Qui	-oon/-Vn		-ow/-Vn	
Tzu	-oon/-Vn	-o/-n	-ow/-Vn	
Cak	-on/-n		-o/-n	
Pcm	-w/-in		-w/-in	
Pch	-w/-Vn		-w/-Vn	
Kek	-o/-n	-o/-n	-o/-n	

Table 10

Referential and Instrumental Voices

Lang	Referential	Instrumental
Hua	-ch -chinch	(-na7)
Yuc		
Lac		
Itz		
Chr	-ø	
Chl	-b'e	
Tzl	-b'e	
Tzt	-b'e	-b'e
Toj		
Chj		
Jac		(-ni)
Mam	.	
Agt		
Ixl		-b'e
Qui		-b'e
Cak		(-b'e)
Tzu		-b'e
Pcm		-b'e ~ -7e
Pch		-b'e
Kek		

Table 11

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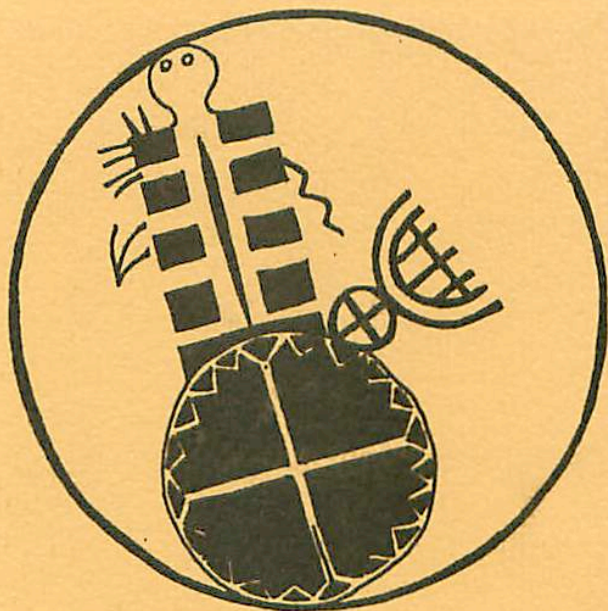
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