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# TOPIC AND FOCUS IN MAYAN

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Most Mayan languages are 'basically' predicate-initial, but various phrases occur before the predicate when they are focussed or topicalized. This paper assumes the framework of Chomsky 1986 and presents a phrase-structural analysis of topic and focus for three Mayan languages (Tzotzil, Jakaltek, Tz'utujil). Three distinct entities are distinguished: the focus and two types of topic, termed here 'internal' and 'external'. Each is argued to occupy a distinct structural position. At the heart of the analysis is an account of intonational phrasing and the distribution of several intonational phrase clitics in Tzotzil and Jakaltek. An algorithm is proposed for deriving intonational phrase structure from surface structure. Syntactic evidence further supports the phrase-structural differences established on prosodic grounds.\*

## MAYAN WORD ORDER

1. This paper presents a phrase-structural analysis of preverbal word orders in Mayan languages. Mayan languages are generally assumed to be 'basically' predicate-initial; most of the presently spoken 30 languages are VOS, but a few contiguous languages manifest VSO instead, presumably an innovation (England 1989). At the same time, most Mayan languages allow the subject and/or object (as well as other constituents) to precede the verb, giving rise to claims that various of the languages allow all of the six possible permutations of subject, verb, and object.<sup>1</sup>

The prevailing view of Mayan word order dates back to important work by William Norman (1977). Norman proposed that, while Mayan languages are generally verb-initial, there are two positions before the verb to which NPs can move: FOCUS position and TOPIC position. Norman defined focus position as preverbal and topic position as S-initial. (A focussed NP is interpreted like the clefted NP in an English sentence like *It was Sam that left*; the topic is roughly 'what the sentence is about'. More on this below.) Norman's proposal provides an immediate account of the observed orders in Mayan. Sentences in which one NP precedes the verb (SVO or OVS) will involve either focus or topicalization, as indicated in Table 1. Sentences with two NPs before the verb (SOV or OSV) will involve focus of one NP and topicalization of the other. Since focus position is preverbal and topic position is S-initial, SOV order must

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<sup>1</sup> Each of the following languages has been claimed to allow all six orders: Q'eqchi' (Pinkerton 1978), K'iche' (Mondloch 1978, Larsen 1988), Yucatec (Durbin & Ojeda 1978), and Tojolabal (Brody 1982); Tz'utujil is claimed to allow all but VSO (Dayley 1985).

Topic	Focus	
?	← S → ?	V O S
?	← O → ?	V O
S	O	V S
O	S	V
		V
		V S O

TABLE 1

represent subject topicalization and object focus, while OSV order must represent object topicalization and subject focus.<sup>2</sup>

This account has nothing to say about the alternation between VOS and VSO, which is probably a point in its favor, since the conditions governing pre- and postverbal orders are different. Preverbal orders are governed by logical and discourse-level relations like focus and topic, while postverbal orders appear to be governed by properties of individual NPs—definiteness, animacy, heaviness, and pronominal (see England 1989, a good synthesis of work on Mayan word order).<sup>3</sup>

However, there are several problems with Norman's account. One is that the term 'topic' subsumes two different entities. The 'topics' of Tzotzil and Jakalteq (and probably Tojolabal) are prosodically, syntactically, and pragmatically different from the 'topics' of Tz'utujil (and perhaps other languages). In general terms, Tzotzil and Jakalteq topics are less integrated into basic clause structure, being essentially prefixed to what is otherwise a fully well-formed clause. The connection to the following clause is pragmatic, not syntactic: the clause must be 'about' the topic.<sup>4</sup> By contrast, Tz'utujil topics appear to be much more tightly connected to the clause that follows. Two specific differences are that Tzotzil and Jakalteq topics do not occur in embedded clauses, while those of Tz'utujil do. Another is that third-person pronouns do not generally function as topics in Tzotzil and Jakalteq, but they do so freely in Tz'utujil. These differences suggest two sorts of entities; yet as far as I know, Norman's account did not distinguish two types of topic. A second, more general, problem is that the syntax associated with focus and topic in Norman's account is minimal, the difference between the two characterized only linearly (focus before the verb, topic S-initial). Accordingly, it is difficult to derive explanations for any observed differences from the syntax.

The goal of this paper is to propose a more elaborated account of the syntax of Mayan topic and focus. Two types of topic are distinguished, each different

<sup>2</sup> Compare Table 1 with the very similar Table 1 laid out in Kiss 1981 for Hungarian.

<sup>3</sup> Tzotzil, for example, normally VOS, allows VSO order when (a) the subject is a personal pronoun, or (b) the object is clausal.

<sup>4</sup> This view of Jakalteq topics is clearly articulated in Datz 1980. For the idea that the connection between (some kinds of) topics and what follows is more pragmatic than syntactic, see Kuno 1973, Li & Thompson 1976, Keenan & Schieffelin 1976, and Chomsky 1977 (on left-dislocation), and Reinhart 1982, among others.

from focus. These three entities or relations—two sorts of topic and the focus—are each associated with a distinct structural position. The relative order of the three need not be stipulated as it will follow from the structures proposed. The syntactic approach also provides a more satisfactory basis for the conclusion that the languages are basically predicate-initial than do the criteria discussed in the literature (e.g. frequency, morphological markedness, discourse-neutral status).<sup>5</sup>

Section 2 presents some of the crucial assumptions of this study, as well as the basic claims. Section 3, which deals with Tzotzil and Jakaltek, is the heart of the paper. After presenting several diagnostics for focus and topic, it establishes an algorithm that derives intonational phrasing in these languages from syntactic structure, based on the distribution of several intonational phrase clitics. This makes it possible to use intonational phrasing to support the proposed structures for topic and focus in a very precise way. Section 4 shows that the conclusions of §3, which are based on prosody, are supported by other syntactic properties of topic and focus. Section 5 contrasts the topics of Tzotzil and Jakaltek with those of Tz'utujil.

#### A MORE ELABORATED PROPOSAL

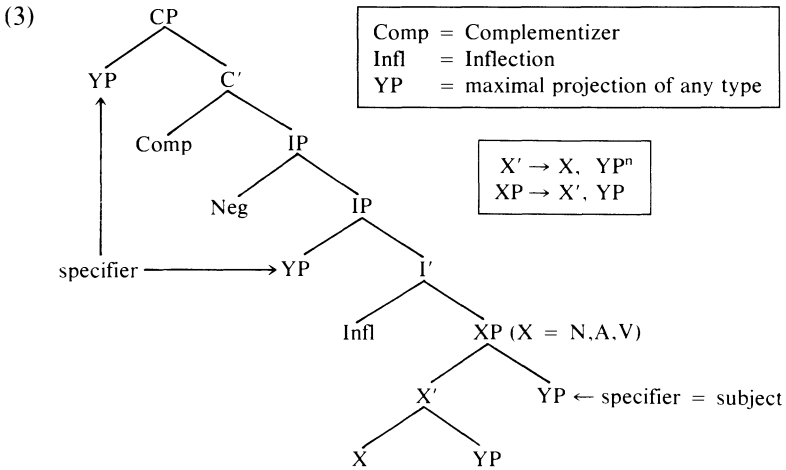
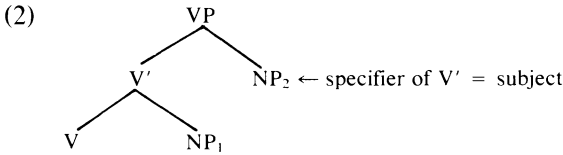
2. In what follows, I assume some ideas about phrase structure that have been widely adopted in the Government-Binding literature. I assume first that phrases are built around an element which is their head, and that such phrases come in two levels. The first, lower, level is called  $X_{\text{BAR}}$  (represented  $X'$ ).  $X_{\text{BAR}}$  consists of a head ( $X_{\text{ZERO}}$ , represented as  $X^0$  or simply  $X$ ) plus  $X$ 's subcategorized COMPLEMENTS.  $X$  may be instantiated by a LEXICAL item from a major word class, e.g. N, V, or A, or by a so-called FUNCTIONAL element, e.g. INFLECTION (abbreviated INFL or simply I) or COMPLEMENTIZER (COMP or C). The second, higher, level is called  $X_{\text{DOUBLEBAR}}$  (represented  $X''$  or simply XP). It consists of the  $X'$  just defined plus a phrase that is not subcategorized, but is referred to as the SPECIFIER of  $X'$ . XP is the MAXIMAL PROJECTION of  $X$ , its head. Elements that have been analyzed as specifiers of various  $X'$  categories include subjects, genitives, and WH-words. Specifiers and complements are both assumed to be maximal projections. These assumptions are summarized in the rules in 1 (cf. Chomsky 1986:3); these rules abstract away from the order of elements, which has to be established on a language-by-language basis.

- (1) a.  $X' \rightarrow X, YP^n$  (YP a subcategorized complement of  $X$ )  
 b.  $XP \rightarrow X', YP$  (YP the specifier of  $X'$ )

Where the head is a lexical category, like N, V, or A, these rules yield what are called SMALL CLAUSES, illustrated for  $X = V$  in 2 (the order of elements is appropriate for a VOS language like Tzotzil). In 2,  $V'$  is the predicate phrase,  $NP_1$  is the direct object, and  $NP_2$  is the subject, interpreted here as specifier of  $V'$ . Ss and Sbars of earlier work are integrated into this system by interpreting

<sup>5</sup> Brody 1984 provides a good discussion of problems with the various criteria used to establish 'basic' order in Mayan.

each as the maximal projection of a functional category. Specifically, S is interpreted as the maximal projection of Infl, i.e. S = IP, and Sbar as the maximal projection of Comp, i.e. Sbar = CP. The small clause in 2 can function as an independent clause once it is embedded as complement to Infl, and IP can function as a (type of) embedded clause when embedded as complement to Comp. The diagram in 3 represents the way in which I assume the various categories are structured in Mayan. Note that Infl' and Comp' define specifier



positions, per 1b. Negation occurs only in clauses with an Infl element and is represented as adjoined to IP. The order of elements in 3 follows three principles of Mayan word order:

- (4) a. The head  $X^0$  of a phrase  $X'$  precedes its complements; e.g., V precedes its object, Infl and Comp precede their sisters.
- b. The specifier of a functional category  $X'$  precedes  $X'$ , i.e., specifiers of  $I'$  and  $C'$  precede  $I'$  and  $C'$ , respectively.
- c. The specifier of a lexical category  $X'$  follows  $X'$ ; e.g., subject follows  $V'$ , genitive follows  $N'$ ).

Note that I am assuming a version of the VP-internal hypothesis, the hypothesis that the subject originates inside the maximal projection of the predicate (Fukui & Speas 1986, Kuroda 1988, Sportiche 1988, Koopman & Sportiche 1991, and other references cited in those works).

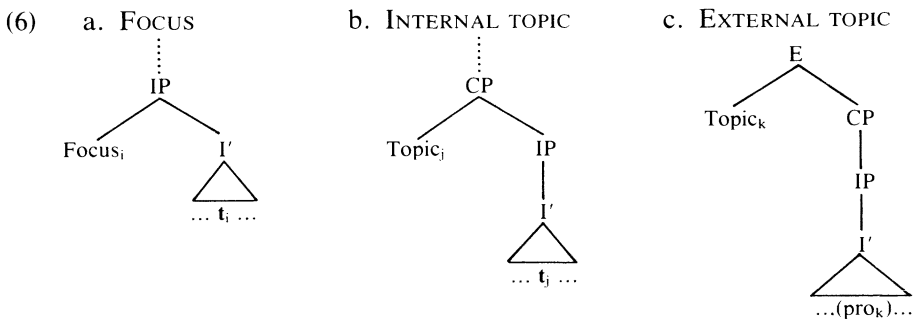
A relation of GOVERNMENT can also be defined in terms of structure 3<sup>6</sup>:

(5) A governs B iff:

- a. A is  $X^0$ ,
- b. A m-commands B,<sup>7</sup> and
- c. No maximal projection intervenes between A and B.

The effect of 5 is roughly that  $X^0$  governs everything inside its own maximal projection. For instance, Infl governs both its specifier and its complement, XP; the verb ( $X = V$ ) governs both its specifier (the subject) and its complement (the object).

This paper argues for the analyses represented in 6 for several Mayan constructions.



The structures in 6 embody the following claims. First, the focus (probably also WH-question words) functions as specifier of  $I'$ , and binds a coindexed trace, represented here and below as  $t_i$ , (see 6a). We can think of the focus as moving to specifier of  $I'$  from the position occupied by the trace. A second claim is that there are two distinct topic structures. In one, 6b, the topic functions as specifier of  $C'$ , binding a coindexed trace. These are INTERNAL TOPICS, and this is the structure proposed for Tz'utujil topics. In the EXTERNAL TOPIC structure, represented in 6c, the topic is outside the basic clause schema represented by 3 and is simply prefixed to that structure, crucially under the root node, represented here by E[xpression] (Banfield 1973, Emonds 1985). This position is not a landing site for movement, so a topic in that position must be base-generated there by the rule expanding E. Nor is there any binding requirement, though such topics MAY be coindexed with a coreferential pronoun. This structure is appropriate for the topics of Tzotzil, Jakaltek, and probably Tojolabal. There is evidence that these topics are 'outside' CP and that they do not move to their surface position. This construction is similar to what is

<sup>6</sup> The definition in 5, which is equivalent to that of Hale & Selkirk (1987:159) and is used for similar purposes, is closer to those considered in Chomsky 1981 than those of Chomsky 1986, which involve a more complex notion of 'barrier' (to government). Under 5c, it is simply intervening maximal projections that constitute barriers. What is defined in 5 corresponds to 'head' government, and ignores 'antecedent' government (Rizzi 1990), which plays no role in what follows.

<sup>7</sup> A m-commands B iff every maximal projection that dominates A also dominates B.

usually termed LEFT-DISLOCATION in the literature (Ross 1967:232ff., Chomsky 1977, McCloskey 1990:224–26, Cinque 1990:Ch. 2.2, and many others; see also Cinque 1977 on ‘hanging topics’ and Xu & Langendoen 1985 on ‘topics’). The idea that left-dislocated elements occur outside of CP (= S’) is not novel (see Chomsky 1977 on English and McCray 1982 on German; see also Van Valin 1990 for an analogous proposal in a different framework, including a discussion of Tzotzil topics).

There are two differences, then, between focus and internal topic, on the one hand, and external topic on the other. The external topic is outside the highest CP, while focus and internal topic are inside; and, while foci and internal topics must bind an element in the sentence, external topics need not.

It is worth explaining why I have adopted two recent proposals about phrase structure—the idea that Infl and Comp head phrasal categories, and the idea that subjects originate not in IP, but in the small clause complement to I’. I assume that Infl and Comp head phrases with specifiers because this provides precisely the range of positions needed to describe prepredicate NPs in Mayan and, combined with other assumptions, correctly accounts for various properties of these prepredicate NPs. As for the second assumption, it is useful to separate aspect in Mayan, which I identify with Infl, from the constituent containing the predicate and its subject. First of all, many Mayan languages have aspectual particles that precede the clause and are morphologically separate from it, consistent with 3. But more significantly, there is a class of complement structures, widely attested in Mayan, which do not express aspect. These complements, often termed ‘aspectless complements’, do, however, contain an overt subject that is crossreferenced on the verb. Given the structure in 3, these facts suggest that the top node of aspectless complements is a lexical projection, e.g. VP, not IP or CP. There are few detailed descriptions of these complements,<sup>8</sup> but they suggest that aspectless complements cannot express negation, they cannot contain preverbal subjects, and they cannot contain certain other prepredicate elements which plausibly occur in Infl or specifier of I’. All this is predicted by 3, together with the idea that subjects originate within the maximal projection of the predicate and that preverbal NPs function as specifiers of I’ or C’.

#### FOCUS AND TOPIC IN TZOTZIL AND JAKALTEK

**3.1. DISTINGUISHING FOCUS AND TOPIC IN TZOTZIL.** I start here by presenting various diagnostics for distinguishing topics and foci in Tzotzil, a VOS language spoken in Chiapas, the southernmost state of Mexico.<sup>9</sup> Like other Mayan languages, it has an ergative verb agreement system and no case-marking on NPs. Tzotzil is a pro-drop language: nonemphatic pronouns are not pronounced. In

<sup>8</sup> The most complete description is found in Craig’s work on Jakaltek (Craig 1977:Ch. 8).

<sup>9</sup> The Tzotzil data in this paper are based on a study of Tzotzil texts (principally those of Laughlin 1977, cited as OCK) and on work with two speakers from Zinacantán (named in the first footnote). All examples not from texts were checked with both speakers, and, unless otherwise noted, the judgments of the two speakers coincide both with respect to the particular examples cited here and with respect to the broader range of data that the particular examples represent.

fact, there are no overt third-person personal pronouns.<sup>10</sup> There are several surface differences between Tzotzil topics and foci. First, a particle *a* usually precedes the topic, but never the focus. Second, the topic is almost always opened by a definite determiner,<sup>11</sup> while the focus cannot be. And third, topics are always closed by an enclitic *-e*, while foci never are. The text fragment in 7 contains several instances of the topic construction and illustrates some of these features. (Throughout, I use bold-face for that part of the example which is relevant to the discussion at hand, here the topic.)<sup>12</sup>

- (7) a. There was a man and a woman, newlyweds.  
 b. ***a ti vinik-e*** *ta = xlok' ech'el, ta = xbat ta = xxanav.*  
 TOP DET man-ENC exits away goes travels  
 'The husband leaves, he goes, he travels.'  
 c. ***a ti antz-e*** *jun = yo'on ta = xkom ...*  
 TOP DET woman-ENC happily stays  
 'The wife stays at home happily ...' [OCK:67]

Line 7a opens the story. The NP *ti vinike* 'the man' is topicalized in the second line, 7b. It is introduced by the particle *a*, contains the determiner *ti*, and is closed by the enclitic *-e*. In the third line, 7c, the NP *ti antze* 'the woman' is in turn topicalized. It too is introduced by the topic marker *a*, contains the determiner *ti*, and is closed by the enclitic *-e*.

Compare an example of focus. The following passage comes from the middle of a text, where one individual, walking along, meets another working in a field. The latter opens with 8a and the narrative continues as in 8b:

- (8) a. 'I'm planting. I'm planting stones, I'm planting trees',  
 b. ***Pero chobtik tztz'un un.***  
 but corn he.plants ENC  
 'But it was corn he was planting.' [OCK:334]

<sup>10</sup> I assume here that the person/number affixes which appear on predicates are not themselves arguments, but simply agreement markers. This is consistent with the fact that, in contrast to Modern Irish, for example (Hale & McCloskey 1984), Tzotzil agreement affixes co-occur with overt nominal arguments. Even when pronominal arguments are covert, as they generally are unless emphatic, I assume that it is the (covert) pronoun which functions as the argument, not the person/number affixes. One could probably develop an account in which the agreement affixes were the arguments; cf. Jelinek 1984. This would not affect the conclusions reached here.

<sup>11</sup> Certain inherently definite NPs can occur as topics without a definite determiner, namely, personal pronouns and (occasionally) proper nouns.

<sup>12</sup> Note that *x* represents a voiceless alveopalatal fricative, *j* represents a voiceless velar fricative, *ch* represents a voiceless alveopalatal affricate, *tz* represents a voiceless alveolar affricate, ' represents glottal stop, and *k'*, *t'*, etc., represent glottalized versions of the corresponding stops. Two elements connected by '=' , as in 7, are parts of separate words, but correspond to a single gloss. Abbreviations used in the glosses are: 1st: 1st person; E1 (2,3): ergative markers, 1st (2nd, 3rd) person; ASP: aspect; A1 (etc.): absolutive markers, 1st (etc.) person; CL: 2nd position clitic; CLS: classifier; COMP: complementizer; DET: determiner; DIR: directional; ENC: intonational phrase enclitic; FOC: focus verb suffix; IRREAL: irrealis marker; IV: terminal suffix for morphologically intransitive verbs; NEG: negative particle; PL: plural; PR: particle; Q: interrogative particle; sg: singular; TOP: topic marker; and TV: terminal suffix for morphologically transitive verbs. I have provided full glosses only for verbs, and only when the internal structure is relevant to the discussion.



The NP *chobtik* is focussed in 8b. It is not preceded by the particle *a* and contains no determiner and no enclitic *-e*; nor are any of these possible under the focus interpretation. Here the lack of a determiner could be because *chobtik* is a mass noun, but personal pronouns and proper names, which routinely take definite determiners, cannot do so when they are focussed (see 15).

I turn now to the function or interpretation of focus and topic. The semantics of the focus construction has two essential parts, a presupposition and an assertion. The presupposition of a focus construction can be generated by translating the focussed element by a variable. Thus, the presupposition of 8b is roughly 'he (the man in question) was planting something', a presupposition which is well-supported by what precedes it in 8a. Because it is a presupposition, it persists as a presupposition under negation and questioning. Both 9a and 9b continue to presuppose that 'the man' was planting something.<sup>13</sup>

- (9) a. *Mu chobtik-uk tztz'un.*  
 NEG corn-UK he.plants  
 'It wasn't corn that he was planting.'
- b. *Mi chobtik tztz'un?*  
 Q corn he.plants  
 'Was it corn that he was planting?'

What the focus construction asserts is that the focussed constituent denotes an entity which satisfies the variable of the presupposition, and further that that entity is the only one in the current discourse which satisfies it. Thus 8b asserts that the man was planting corn and only corn. It is this 'uniqueness' part of the assertion that amounts in 8 to a denial of the first man's claim that he was planting stones or trees.

The topic construction in Tzotzil does not lend itself to a logical characterization. It is used to turn the attention of the hearer to some identifiable participant in the discourse, and then to assert something of that participant. This participant is the 'topic' of the current stretch of discourse, until some other entity is introduced as topic. The first line of 7 introduces two participants into the discourse. The second line turns our attention to the husband and asserts of him that he goes out, leaves, travels, and so on; the third line shifts attention to the wife and asserts of her that she stays home happily. There is an implied contrast in this example between the man and the woman, but it is not the contrast of focus, where the focus is contrasted with all other entities that might have satisfied the variable of the presupposition, but didn't. There is no presupposition in 7b-c that there is a unique someone who goes out/stays home, and therefore no assertion that that individual is the husband/wife.

These various differences between topic and focus are illustrated in the text fragment in 10:

- (10) a. Something had landed at the foot of the tree, they went to look.  
 There was a straw mat. 'Hell, what could it be? Come on, let's untie the straw mat!' the two men said to each other. They untied it. You know what?—

<sup>13</sup> In Tzotzil, *-uk* suffixes to nonverbal elements to delimit the scope of negation.

- b. *Tzeb san-antrex la te staik un.*  
 girl San.Andres CL there they.found ENC  
 'It was a girl from San Andres that they found there.'
- c. *A ti tzeb san-antrex un-e, iyik'ik la ech'el un.*  
 TOP DET girl San.Andres ENC-ENC they.took CL away ENC  
 'They took the San Andres girl with them.' [OCK:69]

In 10b the NP *tzeb san-antrex* is focussed, while in 10c the same NP, now with a determiner, is topicalized. The focus construction (10b) presupposes that the men found something in the mat, a presupposition amply supported by the preceding text (10a), and it asserts that what they found was a girl from San Andres. In effect, 10b asserts that of all the things the men might have found in the mat, the only thing that they in fact did find was a girl from San Andres. The focussed NP has the expected form: no introductory particle *a*, no determiner, no enclitic *-e*. The San Andres girl having been introduced into the discourse, the narrative turns our attention to her in 10c by topicalizing the NP *ti tzeb san-antrex une* 'the San Andres girl'. Now topicalized, the NP is introduced by *a*, contains the determiner *ti*, and is closed by the enclitic *-e*.

Tzotzil topics are always new or shifted topics. Once a participant has been established as topic, it is generally not referred to again by an overt nominal unless the topic shifts. Thus, the six sentences that follow the narrative in 10 all contain a covert pronoun referring to the San Andres girl ('they went and lit their fire for her, they let her warm up, they gave her tortillas...').

**3.2. RELATIVE ORDER OF TOPIC AND FOCUS.** The structures proposed in 6 make several straightforward predictions about the relative (linear) order of topic and focus. First, if two NPs precede the predicate in Tzotzil, their interpretations and their morphosyntactic properties should be strictly determined by the order in which they occur. The first NP will be the topic and the second the focus. Ex. 11 illustrates the point:

- (11) a. Once there was an orphan. The orphan suffered greatly. Whatever  
 the master's children ate, they ate first. They drank first.
- b. *A ti prove tzeb-e sovra ch'ak'bat.*  
 TOP DET poor girl-ENC leftovers was.given  
 'It was leftovers that the poor girl was given.' [OCK:204]

By our account, *ti prove tzebe* 'the poor girl' must be topic and *sovra* 'leftovers' must be focus. The morphosyntactic properties of the two NPs are consistent with this, as are their interpretations. The topic, *ti prove tzebe*, is introduced by *a*, it has a determiner, and it is closed by *-e*, while the focus has none of these properties. The girl is already a participant in the discourse, and line 11b turns our attention to her by topicalizing the NP that refers to her. If *sovra* is focussed in 11b, 11b must presuppose that the girl was given something, a presupposition supported by the preceding lines in 11a, and it must assert that she was given leftovers and only leftovers. The next line continues, 'of the things that they ate, she was only given the leftovers'.

The structures in 3 and 6, together with the assumption that the negative element is adjoined to IP in Mayan, predict that the negative (*mu* in Tzotzil)

should follow the topic but precede the focus. The example in 9a shows that it precedes the focus, which is under the scope of negation. Examples like 12 show that the topic precedes sentence negation:

- (12) *Pero li vo'on-e mu xixanav.*  
 but DET I-ENC NEG I.walk  
 'But me, I don't walk.' [OCK:350]  
 Cf. \**Mu (a) li vo'one ...*

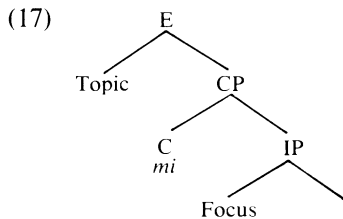
A third fact that should follow from the structures in 3 and 6 is the position of the interrogative marker *mi*. Like negation, *mi* always follows the topic and precedes the focus. In sentences with no fronted NPs, *mi* occurs clause-initially, both in main and embedded clauses:

- (13) *Mi batem xa li Xun-e?*  
 Q left CL DET Xun-ENC  
 'Has Juan left already?'  
 (14) *Mu jna' mi batem xa li Xun-e.*  
 NEG I.know Q left CL DET Xun-ENC  
 'I don't know if Juan has left already.'

Focussed elements are preceded by *mi*, as shown by 9b and 15; *mi* follows the topic, as in 16:

- (15) *Mi vo'ot batz'i xapas mantal?*  
 Q you really you.do order  
 'Are you the one who gives all the orders?' [OCK:82]  
 (16) *A li vo'ot-e mi mu k'usi xana' un?*  
 TOP DET you-ENC Q NEG what you.know ENC  
 'As for you, don't you know anything?' [OCK:21]  
 Cf. \**Mi (a) li vo'ote ...*

If *mi* is a complementizer, which seems plausible since it occurs in embedded questions, then its position relative to the focus and the topic follows from the proposed structures, as shown in 17. (It would also follow if the topic were specifier of C'; I argue against this possibility in §§3.3 and 4.)



The structures in 3 and 6 also make predictions about the relative STRUCTURAL positions of topic and focus in Tzotzil and Jakalteq—in particular, that the topic is outside CP, while the focus is inside. These predictions are the subject of the next section.

**3.3. POSITION RELATIVE TO CP.** In this section I argue that Tzotzil and Jakalteq topics constitute separate INTONATIONAL PHRASES, while the focus is part

of the intonational phrase that subsumes the following clause. By itself, this has no specific implications for the syntax of topic and focus. However, if we can develop an explicit algorithm for deriving intonational phrases from surface syntactic structure (S-STRUCTURE), which we will, then the intonational facts can lead to specific conclusions about the syntax.

**3.3.1. INTONATIONAL PHRASE ENCLITIC—TZOTZIL *un*.** We will approach the intonational phrase indirectly, by considering first the Tzotzil enclitic *un*. The following excerpt gives a sense of how *un* is used. The enclitic *un* cannot constitute a freestanding utterance, and it is phonologically dependent on the preceding word. It is meaningless as far as I can tell, and optional.<sup>14</sup>

- (18) a. *K'alal isut tal un-e,*  
 when returned coming ENC-ENC  
 'When he returned.'
- b. *mil xa yu'un ti j'ik'al un-e.*  
 kill CL he.can DET Spook ENC-ENC  
 'he had already killed the Spook.'
- c. *Tal ta sti' sk'ok'ik un.*  
 came to edge fire ENC  
 'He came to the fireside.'
- d. *Yul svatulan taj xchi'il un.*  
 came he.shook DET his.friend ENC  
 'He came to shake his friend.'
- e. *Ibatik un.*  
 they.went ENC  
 'They went.' [OCK:69]

This excerpt shows that *un* can occur at the ends of independent sentences (18b–e) and after an adverbial clause that precedes and modifies the main clause (18a). There are three other syntactic contexts in which *un* is found. It can occur sentence-internally immediately before an adverbial clause, as in 19–20:

- (19) *Muk' = bu lek istak'be li kajvaltik un-e,*  
 never well he.replied DET our.Lord ENC-ENC  
*k'alal ijak'bat-e.*  
 when he.was.asked-ENC  
 'He didn't reply properly to our Lord when he was asked.'
- (20) *Spasik xa k'in un k'u = ti lek xa ti sna-e.*  
 they.make CL fiesta ENC because good CL DET her.house-ENC  
 'They hold a fiesta because her house is a good one  
 now.' [OCK:200]

It can occur sentence-internally before complement clauses to verbs of communication and cognition, such as *al* 'say, report', *a'i* 'hear that, learn that',

<sup>14</sup> The *-e* which follows *un* in 18a–b and many other examples has a distribution similar to that of *un*. See below. Although *un* and *e* are elements of the same morphological type, I have followed Laughlin's practice (1977, 1980) of writing *un* as a separate word and *e* as a bound element. As far as I know, this difference has no linguistic significance.

*il* 'see that', and *na* 'know that'. These complements are plausibly CPs. They are usually introduced by *ti*, a word that elsewhere serves as the distal determiner (cf. English *that*), and they show the same range of syntactic possibilities as independent clauses (in particular, they are fully marked for aspect, may be negated, and can contain focussed elements).<sup>15</sup>

- (21) *Iyil ti sme' un-e*  
 she.saw DET his.mother ENC-ENC  
 [<sub>CP</sub>*ti muk' = bu ta = ssa' yajnil ti skrem un-e*].  
 COMP never he.seeks his.wife DET her.son ENC-ENC  
 'His mother saw her son was never going to get a wife.' [OCK:55]
- (22) *Ibat yal taj vinik un-e* [<sub>CP</sub>*ti xu' xa x'ech' karo*] ...  
 went he.say that man ENC-ENC COMP can CL pass car ...  
 'That man went to say that trucks could pass by now ...' [OCK:72]
- (23) *Ikalbeli kumpa Lol un-e* [<sub>CP</sub>*ti = yu'un chicham xa un-e*].  
 I.told DET Compadre Bob ENC-ENC COMP I.die CL ENC-ENC  
 'I told Compadre Bob that I was feeling awful.' [SSS:30]

And *un* can occur immediately following the topic. See again the text excerpt about the San Andres girl in 10: line 10b contains a topic and two occurrences of *un*, one right after the topic and one at the end of the sentence. Two additional (text) examples are given in 24:

- (24) a. *Ora, li rey un-e, chak' kastiko un.*  
 now DET king ENC-ENC gave punishment ENC  
 'Now the king meted out punishment.' [OCK:268]
- b. *A li vo'ot un-e, k'usi xana'?*  
 TOP DET you ENC-ENC what you.know  
 'And you, what do you know?' [OCK:328]

Before considering where *un* cannot occur, I will make some preliminary observations. First, *un* belongs to no obvious lexical category, and thus it is not clear that its position can be accounted for by the phrase-structure rules. This distinguishes *un* from some other Tzotzil clitics like the preposition *ta* and the complementizer *mi*. I will assume that the distribution of *un* involves attachment to either the right edge or the left edge of some constituent, as represented in 25. Prosodically, *un* is a dependent of what precedes it, not what follows it, but this does not rule out an analysis in which *un* selects a syntactic constituent to its right, as in 25b, but attaches phonologically to an element on its left (cf. Klavans 1985, Everett 1989, and Marantz 1989):

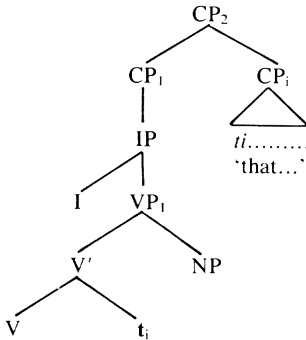
- (25) a. *un*, [ ]<sub>x</sub> \_\_\_\_\_  
 b. *un*, \_\_\_\_\_<sub>x</sub> [ ]

Examples like 18a–e suggest that *un* might attach to the right edge of CP, so we might set *x* = CP in 25a. This would account for the fact that *un* occurs at the ends of sentences, as well as the fact that it follows initial adverbial clauses. But there are two problems. One is that it is unlikely that the strings

<sup>15</sup> The fact that speakers replace *ti* with the Spanish loanword *ke* (<*que*, a complementizer) is also suggestive.

preceding either the adverbial clauses in 19–20 or the complement clauses in 21–23 are CPs. This would be the case only if the adverbial and complement clauses were extraposed and adjoined to the root node, forming a structure like 26, which illustrates the case of complement extraposition: CP<sub>1</sub> is the original top node, CP<sub>2</sub> the node formed by adjunction.

(26)



Although I will argue below that these clauses are in fact extraposed, I know of no evidence that they are extraposed out of the dominating CP entirely. The second problem, which I do not think can be overcome at all, is that *un* can follow the topic. While there may be some CP topics, there are also NP topics. Setting  $x = \text{CP}$  in 25a does not allow for the possibility of common sentences like 24a–b.

Alternatively, we might say that *un* attaches to the LEFT edge of CP, setting  $x = \text{CP}$  in 25b. This solves both of the problems that faced the right-edge account. It predicts that *un* can follow the topic, as long as the topic is outside CP—as proposed in 6c. It also predicts that *un* can precede postverbal complement and adverbial clauses, as in examples 19–23, for these are CPs.

The left-edge account also makes a number of correct predictions about positions in which *un* cannot occur. First, it correctly predicts that *un* cannot precede complements which are not of the category CP. As noted earlier, there is a class of aspectless complements in Mayan that I analyze as VPs. These complements are selected in Tzotzil by a closed set of intransitive verbs of motion, plus a few others. When the predicate of an aspectless complement is intransitive, it is suffixed with *-uk* (*-ik* word-internally). Aspectless complements cannot be separated from the governing verb by *un*:

(27) *K'ot* (\**un*) [<sub>VP</sub>*vay-ik-on*].  
 arrive (\*ENC) sleep-UK-A1sg  
 'I arrived to sleep.'

(28) *Ba* (\**un*) [<sub>VP</sub>*x-chon vaj*] *li Maruch-e*.  
 went (\*ENC) E3-sell tortilla DET Maruch-ENC  
 'Maruch went to sell tortillas.'

Since these complements are not CPs, the left-edge account where  $x = \text{CP}$  predicts the impossibility of *un* between the main verb and its complement.

Second, it appears that the verb *k'an* 'want', and perhaps others, can select an IP complement when the complement subject is controlled by the main subject. These complements are not introduced by *ti*, suggesting they are IPs.<sup>16</sup> They cannot be preceded by *un*:

- (29) *Ta sk'an (\*un) [IPta xbat] li Xun-e.*  
 ASP he.wants (\*ENC) ASP goes DET Xun-ENC  
 'Xun wants to go.'

Third, the left-edge account predicts correctly that *un* cannot separate the focus from what follows it, assuming that the focus functions as specifier of I', as proposed in 6a. Consider 30. Both sentences contain a focussed NP, and both are closed by *un*. The enclitic cannot be moved leftward to directly follow the focus in either sentence (nor can it directly follow the second-position clitic *la*):

- (30) *Vo'ot la chabat un. Vo'on la chikom un.*  
 you CL you.go ENC I CL I.stay ENC  
 'It's you who (it's said) will go.' 'It's I who (it's said) will stay.'  
 Cf. \**Vo'ot la un chabat*, \**vo'ot un la chabat*.

Compare also 10b, in which *tzeb san-antrex* is focussed and is not followed by *un*. Nor can it be. The left-edge account, with  $x = \text{CP}$ , successfully accounts then for the fact that *un* cannot immediately follow the focus, as well as for the fact that it cannot immediately precede non-CP complements.

But setting  $x = \text{CP}$  in 25b also has problems. One is that there are subordinate CPs which cannot be preceded by *un*, namely relative clauses. Relative clauses have the same internal structure as independent clauses, and are optionally introduced by an element that plausibly functions as complementizer, namely *li*, the proximate determiner, or *ti*, the distal determiner. Yet *un* cannot attach to the left edge of a relative clause:

- (31) *Istukiik la [li na (\*un)*  
 they.destroyed CL DET house (\*ENC)  
 [<sub>CP</sub>(*li*) *jmeltzanojtikotik xa ox-e*].  
 (COMP) we.built CL CL-ENC  
 'They destroyed the house that we had built.'
- (32) *Te ista [ti jol vitz ya'el (\*un) [<sub>CP</sub>ti bu la*  
 there he.reached DET top hill seems (\*ENC) COMP where CL  
*sk'an ta=xnaki]] ti jch'ul totik un-e.*  
 he.wants he.lives DET our.holy father ENC-ENC  
 'There our holy father reached the hill-top it seems where he wanted to live.'

A second problem for the idea that *un* attaches to the left of a CP is that *un* cannot occur in absolute sentence-initial position. This is easily solved, since *un* forms a prosodic unit with something on its own left. The absence of anything

<sup>16</sup> This surmise is further supported below; cf. n. 18. The verb *k'an* can also take a CP complement, introduced by *ti*. The analysis of these structures and their relation to the IP complement structure in 29 remains to be worked out.

<i>un</i> possible	<i>un</i> impossible
S-finally	S-initially
S-internally:	S-internally:
before adverbial clause	before relative clause
before CP complement to	before other complement types
verbs of cognition	
after S-initial adverbial	
following the topic	following the focus

TABLE 2. Distribution of *un*

to cliticize onto would rule out the sentence. A more serious problem, though, is that *un* regularly occurs in absolute final position, i.e. paragraph-finally or text-finally. In such cases, there is nothing to the right of *un* for *un* to select. The hypothesis, then, that *un* selects or attaches to a syntactic constituent is problematic. The only possible value for *x* in 25 is CP, but neither right attachment nor left attachment to CP is satisfactory. (I will consider, and reject, another possible syntactic characterization of the distribution of *un* below.) Table 2 summarizes the facts about the distribution of *un*.

Let us now consider setting *x* equal to some prosodic constituent. This has in its favor the fact that the positions in which *un* occurs DO coincide with an intonational phrase boundary. Phonetically this is marked by the possibility of a significant pause, as well as phrase-final contour. Phrase-final contour is marked by stress on the final syllable of the phrase, and a noticeable rise or fall in pitch. A rise indicates that the speaker is in the middle of a 'paragraph', while a fall indicates the end of a 'paragraph'. Both pause and phrase-final contour are characteristic of all the positions in which *un* occurs. On these grounds alone, it is plausible to posit that *un* attaches to the right edge of an intonational phrase (INTP), i.e. to set *x* equal to IntP in 25a, and to posit that *un* selects for no syntactic constituent at all. To show that this account is really preferable to the syntactic one, however, we need to provide an algorithm for mapping s-structure onto IntPs. And such an algorithm is in any case a prerequisite if we are to draw any conclusions about the syntax of topic and focus from the distribution of *un*. I turn to this in the next section.

**3.3.2. INTONATIONAL PHRASE ALGORITHM.** A simple algorithm is possible if we adopt Selkirk's 1986 theory about the relation between s-structure and prosodic structure. Selkirk proposes that prosodic constituents at and above the level of the word can be formed from s-structure by reference to one edge—left or right—of constituents of designated types, where constituents are designated only by reference to position in the Xbar hierarchy,  $X^0$ ,  $X^{\max}$  (= XP), and possibly  $X^{\text{head}}$ . The algorithm for Tzotzil intonational phrases can be stated very simply if we follow Hale & Selkirk 1987 in allowing reference to one additional relation—also present in s-structure—namely, government.

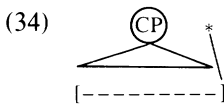
(33) TZOTZIL INTONATIONAL PHRASE ALGORITHM:

$]_{X^{\max}}$ ,  $X^{\max}$  ungoverned.

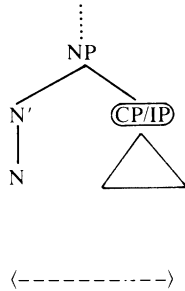


The interpretation of 33 is that the right edges of Tzotzil IntPs correspond to the right edges of uncontrolled maximal projections.<sup>17</sup>

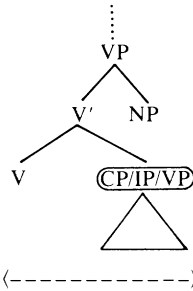
Consider first simple clauses. In a simple clause all maximal projections are governed except for the root CP. Hence 33 picks out the right edge of that CP. That edge corresponds to the right edge of an IntP which will extend leftwards until reaching the next right edge picked out by 33 or the beginning of the sentence. This is represented in 34, where the asterisk marks a right edge picked out by the algorithm. The algorithm in 33 correctly subsumes all of this sentence into a single IntP. Consider next relative clauses and complements to verbs other than those of communication and cognition. We saw above that *un* cannot precede either relative clauses or verb complements of this type; cf. 31–32 and 27–29. That is, neither structure defines a separate IntP. Characteristic structures are given in 35.



(35) a. Relative Clause:



b. Complement:

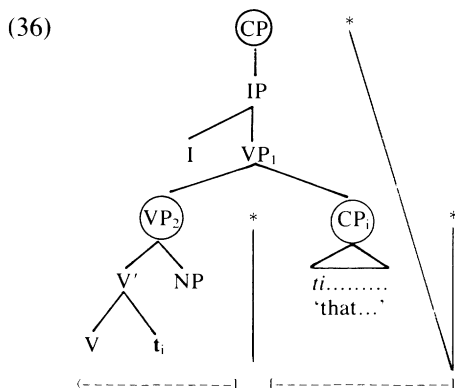


Neither of the circled structures in 35 satisfies the algorithm in 33. The CP corresponding to a relative clause, as in 35a, is governed by the head noun. And the maximal projection corresponding to a verb complement, as in 35b, whether it is VP, IP, or CP, is governed by the verb. Hence, the algorithm in 33 will correctly subsume relative clauses and verb complements into some higher-level IntP.

This seems to raise a problem, though, for the complements to verbs of communication and cognition. If these are in the position of other verb complements, they will not correspond to separate IntPs, yet we have seen that they must. Looking back at examples 21–23, however, we find that these complements are NOT in the ‘canonical’ position for direct objects. In all of these examples the CP is extraposed to the right, beyond the subject in 21–22 (recall that Tzotzil is VOS) and beyond the indirect object in 23 (the direct object

<sup>17</sup> This algorithm is almost identical to the algorithm that Hale & Selkirk (1987) propose for Papago, differing only in that they distinguish government by a lexical category from government by a functional one. The Papago algorithm picks out those  $X^{\max}$  which are not lexically governed (i.e. those which are uncontrolled plus those which are functionally governed).

ordinarily precedes the indirect object in Tzotzil; cf. Aissen 1987:Ch. 7). Extraposition of these complements appears to be obligatory: examples without extraposition are rejected by speakers, and no text examples have been found.<sup>18</sup> Following Chomsky 1986, I assume that, when a phrase extraposes, it adjoins to the maximal projection from which it is moved. The effect is represented in 36.



The new VP (VP<sub>1</sub>) is governed in 36 (by I[nfl]), but the original VP (VP<sub>2</sub>) is not, since a maximal projection intervenes between it and its potential governor, Infl. Thus, the algorithm in 33 picks out the right edge of VP<sub>2</sub> as the right edge of an IntP, leaving the extraposed CP to constitute a separate IntP. We correctly predict, then, that *un* can precede extraposed complements to verbs of communication and cognition. Sentence-final adverbial clauses can also form separate IntPs, suggesting that, when they do, they have a structure essentially like that of extraposed complements, as in 36. The position of the matrix subject in examples like 37 provides independent evidence that adverbial complements extrapose:

- (37) *Ip to ox li Xun un-e [k'alal lilok'otkotik-e].*  
 sick CL CL DET Xun ENC-ENC when we.left-ENC  
 'Xun was sick when we left.'

In contrast to complement CPs, however, extraposition of adverbial CPs is optional, as shown by the position of the subject in 38.

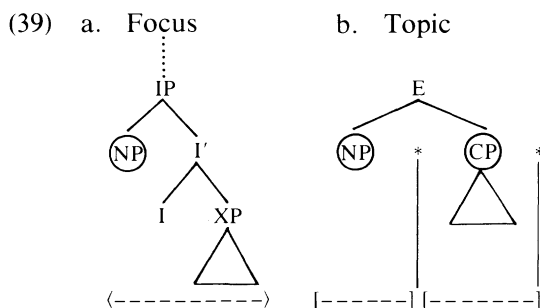
- (38) *Ip to ox (\*un) [k'alal lilok'otkotik] li Xun-e.*  
 sick CL CL (\*ENC) when we.left DET Xun-ENC  
 'Xun was sick when we left.'

In 38, the adverbial clause is governed by the main predicate (*ip* 'sick') and should thus be part of the IntP corresponding to the main clause. That this is

<sup>18</sup> A possible explanation is that CPs cannot bear Case, and thus cannot occur in Case-marked positions (cf. Stowell 1981). Consistent with this is the fact that extraposition of adverbial phrases in Tzotzil is optional (as shown below), for these are not generated in Case-marked positions. Note that the complement to *k'an* in 29 is not extraposed, further evidence that the complement is not a CP but an IP.

so is shown by the fact that *un* cannot precede the adverbial clause when it is not extraposed.

What about topic and focus? Recall that only topics form separate IntPs. The structures proposed in 6 above yield exactly the desired results. As specifier of I', the focus is governed by Infl. Accordingly, its right edge fails to satisfy 33 and the focus is incorporated into a higher-level IntP.<sup>19</sup> This is represented in 39a. In contrast, the topic is not governed (39b), with the result that its right edge does define the right edge of an IntP, leaving what follows to be subsumed into a separate IntP. Note that this result would not follow if the topic were specifier of C', for it would then be governed, exactly as the focus is governed.



This leaves only the case of S-initial adverbial clauses, which constitute separate IntPs (cf. 18a). A priori, there are two possible positions: specifier of C' or external topic position. Specifier of C' makes the wrong prediction, while external topic position makes the right prediction, for the reasons just given. Fortunately, there is independent reason to reject the specifier of C' account. The reason is that S-initial adverbial phrases can precede the topic, as in the following spontaneously-produced example:

- (40) *Ti k'alal iyal tan-e, li vo'on-e, ja = o batemon ...*  
 DET when fell ash-ENC DET I-ENC then I.had.gone  
 'When the ash fell, I had gone ...'

If topics are outside CP, then S-initial adverbial clauses must be as well.

These results seem reasonable. We have posited a simple algorithm that correctly maps s-structures onto IntPs. This makes possible a simple account of the distribution of *un*—one in which *un* attaches to the right edge of a constituent, in this case a prosodic constituent. This result is consistent with Inkelas's 1989 claim that all clitics have a prosodic subcategorization. Inkelas provides examples of clitics that attach to the phonological word and the phonological phrase; *un* is a clitic that attaches to an IntP.<sup>20</sup> Given the mapping algorithm, the distribution of *un* also supports the structures proposed for both

<sup>19</sup> The difference between Papago and Tzotzil is precisely that in Papago specifiers to the functional categories constitute separate IntPs, while in Tzotzil they do not.

<sup>20</sup> In Dooley's typology of nonpronominal clitics, *un* would be a 'spacer', a kind of audible pause that functions to 'indicate discontinuity in the information structure' (1990:478).

focus and topic in Tzotzil, in particular the claim that the topic is external to the top CP, while the focus is inside CP.

This account assigns no syntactic category to *un* and states its distribution without reference to any syntactic constituent. The question arises, then, of how *un* is introduced into syntactic structures—e.g., what PS rule sanctions it? What node dominates it? I suggest that *un* is not in any syntactic representation of the sentence at all, but is only in the prosodic representation. Since *un* contributes nothing to the meaning of the sentence and is optional, keeping it out of syntactic structure appears to have no ill-effects, and it has the advantage of not raising the question of what PS rule introduces it, or what syntactic node dominates it, questions that seem to have no satisfactory answers.

We can also now shed some light on the enclitic *-e*, which was cited earlier as one of the diagnostics distinguishing topics and foci. Like *un*, *-e* is an IntP clitic. Hence, *-e* can immediately follow the topic, but not the focus, because only the right edge of the topic corresponds to the right edge of an IntP boundary.<sup>21</sup>

An important question arises at this point. Since the algorithm for the IntP is stated in purely syntactic terms, one might reasonably ask why the distribution of *un* cannot be stated directly in terms of ungoverned maximal projection. That is, why not say that *un* attaches to the right edge of an ungoverned maximal projection? This may work for *un*, but it will not work for the clitic to be discussed in the next section. The properties of the two are similar enough to cast doubt on an analysis in which the distribution of *un* is defined syntactically.

**3.3.3. INTONATIONAL PHRASE ENCLITIC—JAKALTEK AN.** Jakalteq, a fairly close relative of Tzotzil, has an enclitic *an*, whose distribution is described in detail, and in syntactic terms, in Craig 1977. Jakalteq is spoken in the department of Huehuetenango, Guatemala. In the dialect described by Craig (that of Jakaltenango), *an* occurs in precisely the same range of positions as Tzotzil *un*, suggesting that it too is an IntP clitic and further that Jakalteq and Tzotzil employ the same algorithm for deriving the IntP. Craig is silent about the prosodic character of this enclitic, but Day (1973) calls *an* a ‘sentence clitic’ which occurs ‘only before contour’ (p. 56), where ‘contour’ refers to a set of pitch patterns that occur at certain syntactic boundaries. Thus the distribution of *an*, like that of *un*, is plausibly determined by prosodic structure. In addition to the boundary condition, *an* (glossed ‘1st’ = ‘first person’) has a licensing con-

<sup>21</sup> One difference between *un* and *-e*, though, is that *-e* always occurs after the topic, while *un* is optional. We can come close to an explanation for this. The clitic *-e* occurs only when it is preceded in the same IntP by one of a small number of ‘licensors’. The main licensors are the definite determiners *ti*, *li*, *i*, and *taj*, the complementizers *k'al(al)* ‘when’ and *mi* ‘if’ (when it introduces a conditional clause), and several adverbs: *lavi* ‘today’, *li* ‘here’, and *yo* ‘place where’. The presence of *-e* when licensed is strongly preferred: speakers reject examples in which it is absent, but such examples occur occasionally in texts. Our (near) explanation now goes like this: since the topic almost always contains a definite determiner, it will almost always contain *-e*. The problem is that, even when the topic does not contain a determiner (n. 11), it is closed by *-e*. It may be that the topic construction itself licenses *-e*, perhaps by virtue of its inherent definiteness.

dition which requires that it be preceded by a first-person pronoun (in any grammatical function). The licensing condition provides another kind of argument that these clitics attach to a prosodic constituent, not a syntactic one.

Note first that Jakaltek is a VSO language. Further, it has a set of noun classifiers that can occur without the head noun in a pronominal function. The examples in 41 illustrate this:<sup>22</sup>

- (41) a. *S-maq naj Pel ix Malin.*  
 E3-hit CLS Peter CLS Mary  
 'Peter hit Mary.'  
 b. *S-maq naj ix.*  
 E3-hit he her  
 'He hit her.'

The classifiers *naj/ix* are for males/females who are not relatives of the speaker. I will treat Jakaltek as underlyingly VOS, with a late rule that attaches the subject to the immediate right of the verb (along lines proposed in Chung 1990).<sup>23</sup> The examples in 42, from Craig (1977:11), show focus of a transitive subject and object, respectively. The focus may be optionally preceded by a clefting particle *ha'* (*ha'* is obligatory if the focus is a personal pronoun). (The original site of the focus is indicated here and in several later examples by underlining, rather than by a coindexed trace.)

- (42) a. *Ha' naj x-maq-ni \_\_\_\_\_ ix.*  
 CLEFT he ASP-hit-FOC she  
 'It's he that hit her.'  
 b. *Ha' ix s-maq naj \_\_\_\_\_.*  
 CLEFT she E3-hit he  
 'It's she that he hit.'

Notice that the verb in 42a bears no ergative prefix and is suffixed with *ni*, glossed FOC. Many Mayan languages, including Jakaltek, employ a special focus

<sup>22</sup> All Jakaltek examples are from Craig 1977. The orthography has been changed to conform to that proposed by the Academia de las lenguas mayas de Guatemala (1988). The following values hold for Jakaltek: *nh* represents a velar nasal, *tx* a voiceless palatal affricate (retroflex), *x* a voiceless palatal fricative (retroflex), *xh* a voiceless palatal fricative (not retroflex), *q* a voiceless postvelar stop, *j* a voiceless postvelar fricative, and *h* a voiceless glottal fricative.

<sup>23</sup> The reason for this is that VSO languages cannot be analyzed as underlyingly VSO in the framework I am adopting. In particular, if O is the complement of V and S is the specifier of V', then the rules in ex. 1 will not generate VSO order in underlying structure (= d-structure). VSO languages must have some other order at d-structure. There are two proposals in the literature: one derives them from SVO languages, with movement of the verb to the left (see Emonds 1985). This is the proposal of Chung & McCloskey 1987 for Modern Irish, for example; see also McCloskey 1991. The other derives them from VOS languages with movement of the subject to the left (this is Chung's 1990 proposal for Chamorro). I assume the latter because Jakaltek is closely related to VOS languages (recall that most Mayan languages are VOS) and itself derives from what was probably a VOS language (Proto-Mayan). Leftward movement of the subject will yield the flat VSO structure that Woolford 1991 claims to be required for Jakaltek.

verb form when the subject of a transitive verb is focussed, questioned, or relativized (see Craig 1977 for details on Jakalteq).<sup>24</sup>

Topics are illustrated in 43a–b. (from Craig 1977:12).

- (43) a. *Naj Pel s-maq naj ix.*  
 CLS Peter E3-hit he she  
 ‘Peter, he hit her.’  
 b. *Ix Malin s-maq naj Pel ix.*  
 CLS Mary E3-hit CLS Peter she  
 ‘Mary, Peter hit her.’

Topics are distinguished from foci by three features: the topic is not preceded by the clefting particle *ha'*, the focus verb form is not used, even when the topic corresponds to a transitive subject (as in 43a), and a pronoun coreferential with the topic occurs in the position from which the topic would be moved, under a movement analysis (though we are rejecting a movement analysis). A pronoun never occurs in the position from which the focus is moved (compare 42a–b with 43a–b). Jakalteq topics function very much like those of Tzotzil, signalling that the referent is a NEW topic (Datz 1980).

With this background, consider *an*. Like *un*, *an* is optional. In simple clauses it occurs sentence-finally. (The licenser, or its inflection, is bold-faced in the following examples, which are from Craig 1977:278).

- (44) a. *Xk-in to hawatut an.*  
 ASP-A1 go your.house 1st  
 ‘I went to your house.’  
 b. *Xk-in hawil tx'onhb'al an.*  
 ASP-A1 you.see market 1st  
 ‘You saw me in the market.’

These examples and subsequent ones show that *an* can be licensed by the subject of an intransitive clause (44a), the direct object of a transitive clause (44b), the subject of a transitive clause (45), and possessors (48). As in Tzotzil, *an* can occur immediately before a sentence-final adverbial clause (45; Craig 1977:280) and immediately after a sentence-initial one (46; Craig 1977:281):

- (45) *Lanhan hin-tx'ahni xil = qape an [yet xkach = huli].*  
 ASP E1-wash clothes 1st when you.came  
 ‘I was washing clothes when you came.’  
 (46) [*Masanto hayin xk-in awi*] *an xul naj Hose.*  
 not.until I ASP-A1 scream 1st came CLS Joseph  
 ‘It was not until I screamed that Joseph came.’

<sup>24</sup> It is a general property of focus verbs in Mayan that they can carry only absolutive affixes, not ergative ones. Thus, focus verbs are morphologically intransitive. Their syntax is less clear because the absolutive affix sometimes crossreferences the subject of its clause and sometimes the object, depending on the person of subject and object. There is a substantial literature on focus verbs in Mayan, the main issue being whether the clauses containing them are syntactically transitive or intransitive. Literature on the transitivity of focus verbs includes Smith-Stark 1978, Craig 1979, Aissen 1980, Ayres 1983, and Dayley 1990. See Trechsel 1982, Larsen 1987, 1988, and Davies & Sam-Colop 1990 for a variety of accounts of focus verbs in K'iche'.

Also like Tzotzil, Jakalteq has several types of complement clauses. Complements to verbs of cognition are clearly CPs: they are introduced by a complementizer and have all the internal structure of independent clauses. The clitic *an* precedes such complements when it is licensed in the main clause:

- (47) *X-w-al tet naj an* [*chub'il ch'ahtoj naj swi'* = *te'* = *nhah*].  
 ASP-EI-say to him 1st that climb.up he roof  
 'I told him to climb on the roof.' [Craig:281]

Jakalteq also has aspectless complements, selected by verbs of perception, among others. Again, I assume these are VP complements. In contrast to 47, *an* cannot separate an aspectless complement from its governing verb even if it is licensed in the main clause. It can only occur sentence-finally:

- (48) *Xil w-anab' (\*an)* [*hawek' yul kaya*]<sub>VP</sub> *an*.  
 saw my-sister 1st you.go.by in street 1st  
 'My sister saw you go by in the street.' [Craig:279]

Nor can *an* occur immediately before a relative clause, even when a potential licenser precedes:

- (49) *W-ohtaj naj (\*an)* [*xul ewi*] *an*.  
 EI-know he 1st came yesterday 1st  
 'I know the man who came yesterday.' [Craig:279]

Before going further, let me sketch an account of these facts. It is essentially the same as the one developed for Tzotzil *un*. Assume that *an* attaches to the right edge of an IntP which contains a first-person element, as in 50, and assume further that Jakalteq has the same IntP algorithm as Tzotzil.

- (50) *an*, [...[1st person]...]IntP —

Then a simple CP constitutes a single IntP (because every maximal projection in it except the top CP is governed), predicting the possibility of *an* sentence-finally, as in 44a–b. Aspectless complements and relative clauses are governed, by the head verb and noun, respectively, of their maximal projections. No maximal projection, and therefore no IntP boundary, separates them from their governors. Thus, we predict that *an* cannot be positioned in front of either an aspectless complement or a relative clause, as illustrated in 48–49. What about CP complements to verbs of communication and cognition? As in Tzotzil, these had better not occupy the same structural position as aspectless complements, since they are treated differently by the IntP algorithm. And in fact Craig argues, for reasons completely unrelated to those under discussion here, that such complements obligatorily extrapose in Jakalteq. Thus there is a contrast in the position of direct objects of such verbs depending on whether they are clausal or not. Note the relative position of the direct and indirect objects in 51–52:

- (51) *Xal naj squmal ix tet anma*.  
 he.said he her.criticism her to people  
 'He said criticisms of her to people.' [Craig:247]

- (52) *Xal naj tet anma [chub'il xil naj ix]<sub>CP</sub>.*  
 he.said he to people that he.saw he her  
 'He said to people that he saw her.' [Craig:247]

Craig cites 53 (1977:248) to show that a sentential complement of this type must follow all sentence-level adverbs:

- (53) *Xal naj tet anma yul parke ewi*  
 said he to people in park yesterday  
*[chub'il chim huluij naj presidente konhob']<sub>CP</sub>.*  
 that may come the president village  
 'He said to the people yesterday in the park that the president may come to the village.'

Assuming as before that extraposed constituents adjoin to the maximal projection from which they are extraposed, an ungoverned VP node will separate the extraposed clause from what precedes it (see 36), yielding the right edge of an IntP in that position via the IntP algorithm. Again, we have to assume that sentence-final adverbial clauses can occur in the same structural position as extraposed complements to get the same IntP structure.

What about topics and focus? Craig points out that the distribution of *an* distinguishes topic and foci, with *an* occurring immediately after a topic that contains a first-person pronoun (54), but not after a focus (55).

- (54) *W-uxhtaj an [sloq ho' no' cheh k'ej'inh tu'] (\*an).*  
 my-brother 1st he.bought he CLS horse black that 1st  
 'My brother, he bought that black horse.' [Craig:280]
- (55) [*W-uxhtaj (\*an) x-loq-ni \_\_\_ hune' no' cheh k'ej'inh tu'] an.*  
 my-brother 1st ASP-buy-FOC a CLS horse black that 1st  
 'It's my brother who bought that black horse.' [Craig:279]

Ex. 54 must involve topicalization, because the topic is 'resumed' by a co-referential pronoun *ho'* (the pronoun for male relatives of the speaker), and because the verb is not in its focus form, despite the fact that the topic corresponds to a transitive subject. Ex. 55 must involve focus, because the verb is in the focus form, and because there is no overt pronoun corresponding to *wuxhtaj*. The distribution of *an* is exactly what we expect if the focus is governed and the topic is not, as 6 entails. The right edge of the topic phrase defines the right edge of an IntP and is thus a possible place for *an*, while the right edge of the focus does not.

So far we have simply shown that Jakalteq *an* has exactly the same distribution as Tzotzil *un*, ignoring the first-person licensing condition. Let us turn now to that condition and what it can tell us. Sentence 47 above shows that *an* can precede a CP complement when it is licensed in the main clause. In fact, this is the only possible position for *an* in 47; in particular, *an* cannot occur at the right edge of the complement clause. However, if *an* is licensed in the complement, then its only possible position is at the right edge of the



complement clause:

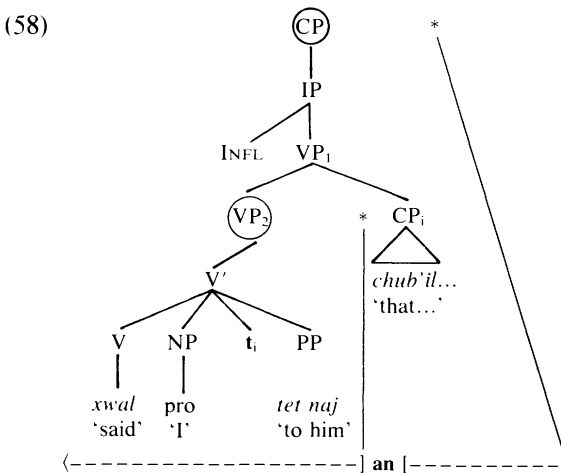
- (56) *Xal naj [chub'il x'apni hin mam] an.*  
 said he that arrived my father 1st  
 'He said that my father had arrived.' [Craig:282]

Under the prosodic account, the contrast between 47 and 56 is easily characterized: the licensing condition must be satisfied within the prosodic domain that *an* selects, i.e. within the IntP to which *an* attaches. Each of these two sentences contains two IntPs, and in each sentence *an* attaches to that IntP which contains its licenser.

Consider now the syntactic account mentioned at the end of §3.3.2., in which Tzotzil *un* attaches to the right edge of an ungoverned maximal projection. In fact, *un* can attach to the right edge of any ungoverned maximal projection (and only to these) because it has no licensing condition. But this is not true of Jakalteq *an*, which requires a preceding first-person pronoun. Consider then this statement of the distribution of *an*:

- (57) The clitic *an* attaches to the right edge of an ungoverned maximal projection containing a first-person pronoun.

As stated, 57 predicts two possible positions for *an* in 47, because the first-person pronoun in that example is contained in two ungoverned maximal projections, one corresponding to the root CP and one corresponding to VP<sub>2</sub>. This is represented in 58, where the two projections are circled. In fact, though, *an* can attach only to the right edge of VP<sub>2</sub>, not to the right edge of the root CP. To make 57 work, it must be complicated further, restricting *an* to the SMALLEST ungoverned maximal projection containing a first-person pronoun. But notice now that this added complication is devised to solve a problem which cannot arise in the prosodic account. The first-person pronoun is contained only in one IntP, and this is necessary because IntPs are nonoverlapping and non-nesting (assuming the 'strict layer hypothesis' of Selkirk 1984:26). While an element can be simultaneously in several syntactic phrases, it can be only in

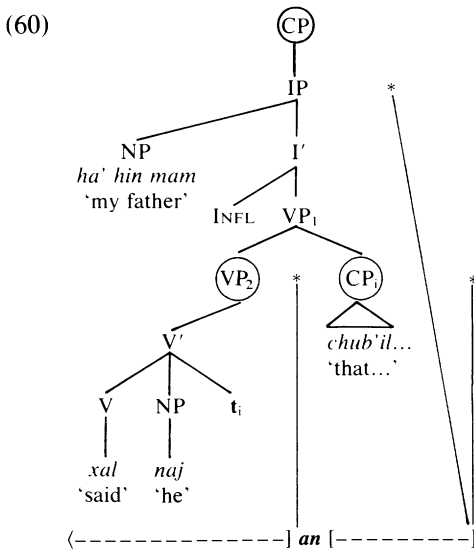


a single IntP. In the absence of some reason to believe that every clitic must attach to a syntactically defined domain, these facts clearly favor the prosodic account for *an*, since the problems raised by the syntactic account are necessarily avoided in it.

One other example will show further that the syntactic account is untenable. Consider 59, in which an NP containing a first-person pronoun is focussed out of an embedded CP:

- (59) *Ha' hin mam xal naj an chub'il x'apni* \_\_\_\_.  
 CLEFT my father he.said he 1st that arrived  
 'It's my father that he said had arrived.'

In 59 the licenser is contained in the focus, which is preposed into specifier of I' position. The clitic *an* occurs between the main-clause subject and the complement CP from which the focus was moved. Ex. 59 has the s-structure in 60 (the IntP structure is also indicated).



As 60 shows, 59 contains two IntPs. The first one, which corresponds to *ha' hin mam xal naj*, includes the focus (*ha' hin mam* 'my father'), since the focus is governed by Infl and therefore does not define its own IntP. It does not include the complement clause, since this is extraposed and forms its own IntP. Since the first IntP contains a first-person pronoun and the second does not, the prosodic account correctly predicts that *an* may attach only to the right edge of the first. Note that this prosodic constituent corresponds to no syntactic constituent at all. What about the syntactic account? The smallest ungoverned maximal projection containing a first-person pronoun in 60 is the root CP. Even revised, then, 57 predicts (wrongly) that *an* will occur only at the end of the entire sentence. Thus, even this version of the syntactic account makes the wrong prediction. Nor is there any obvious way to revise the syntactic account further to make it adequate. I conclude, therefore, that the fact that IntPs in

Tzotzil and Jakaltek can be simply defined in terms of 'ungoverned maximal projection' does not mean that the distribution of clitics which attach to the edges of IntPs can be stated directly in terms of 'ungoverned maximal projection'.<sup>25</sup>

To conclude: the topic in Tzotzil and Jakaltek is separated from what follows it by an IntP boundary, while the focus is not. We have developed a simple but explicit algorithm for deriving IntP structure from s-structure, one that succeeds in accounting for the distribution of IntP-final clitics in both languages. One consequence of this algorithm is that it supports the syntax of external topics and foci proposed in 6. The topic must be in an ungoverned position, which it is if it is outside of CP. In contrast, the focus must be governed. As specifier of I', it is governed. It would also be governed if it occurred in specifier of C', but I am reserving this position for internal topics, to be discussed in §5.

#### BASE-GENERATION OF EXTERNAL TOPICS

4. The claim that Tzotzil and Jakaltek topics are generated under the root node E explains several facts about the syntax of external topics in these languages. First, it explains why Tzotzil topics do not occur in embedded clauses. Speakers reject the (b) versions in 61–62, and no examples of embedded topics have been found in texts.<sup>26</sup>

- (61) a. *Liyalbe li Xun-e ti taxtal li Petul-e.*  
 he.told.me DET Xun-ENC COMP comes DET Petul-ENC  
 'Xun told me that Petul was coming.'
- b. \**Liyalbe li Xun-e ti a li Petul(-e) taxtal(-e).*  
 he.told.me DET Xun-ENC COMP TOP DET Petul(-ENC) comes(-ENC)
- (62) a. *Xvinaj ti taxtal li Petul-e.*  
 appears COMP comes DET Petul-ENC  
 'It appears that Petul is coming.'
- b. \**Xvinaj ti a li Petul(-e) taxtal-e.*  
 appears COMP TOP DET Petul(-ENC) comes-ENC

Second, a variety of evidence points to the conclusion that the topic is simply prefixed to a fully well-formed root CP, subject only to the requirement that

<sup>25</sup> I assume that *an*, like *un*, is not present in the syntactic representation of the sentence at all, but only in the prosodic representation. Since the distribution of *an* requires a first-person pronoun in the same IntP, this entails that at least some of the grammatical information associated with terminals be present. It does not require information about syntactic phrasing.

<sup>26</sup> Craig 1977 contains neither discussion nor examples of embedded topics in Jakaltek. I have found one example in Datz's Jakaltek texts. The main verb is the verb of speaking ('it is said that these women, long ago they used to bathe men'). Hence it may be that complements to Jakaltek verbs of speaking can have external topics, i.e. can select what I termed 'E' earlier; if this approach is correct, apparently no Tzotzil verbs select E. Ross (1967:234) noted the general exclusion of the English construction (his 'left dislocation') from embedded contexts, but also observed that it was possible in the complement to 'say'. Cinque (1990:Ch. 2.2.) notes the possibility of 'left dislocation' only in the complements to verbs of propositional attitude.

that CP be 'about' the topic. This evidence is not compatible with an analysis in which Tzotzil and Jakaltek topics are moved to their surface position or are base-generated in place and required to bind a pronominal element (i.e. a resumptive pronoun). If the specifier of C' position is always filled by an element that is either moved there or is base-generated and required to bind a resumptive pronoun, then external topics in Tzotzil and Jakaltek cannot occupy specifier of C' position.

One prediction of this account is that, if the topic is 'linked' to a position in the following CP, that position will be filled by a pronoun, not a trace (which could only be produced by movement). In Jakaltek, this is clearly true, for the predicted pronouns are overt (43a–b, 54). Such pronouns never occur in focus structures (42a–b, 55, 59). The reason is presumably that the focus moves, leaving behind a trace. Hence, Jakaltek does have (null) traces, but these do not characterize topic structures. Tzotzil is a pro-drop language, so we would not expect to find (and we do not find) overt pronouns in topic structures. However, even in Tzotzil it is possible to show that the null element which is coindexed with the topic is a pronoun, not a trace (see Aissen 1987:Ch. 9 for the relevant facts).

A second prediction is that the topic can be 'linked' to an element in an island. The reason is that this 'linkage' consists simply in the coreference relation between a pronoun and its antecedent (the topic), and coreference is not subject to island conditions. I have no relevant data from Jakaltek, but examples 63–64 show that in Tzotzil the topic can be coreferential with a (null) pronoun inside a relative clause or indirect question:<sup>27</sup>

(63) *A li Xun-e, ilekub li antz ispoxta-e.*  
 TOP DET Xun-ENC became.well DET woman he.treated-ENC  
 'Xun, the woman he treated became well.'

(64) *A li Maruch-e, sna'ojik buch'u imajon.*  
 TOP DET Maruch-ENC they.know who beat  
 'Maruch, they know who beat her.'

This is not true of the focus, which cannot be linked to a position inside a relative clause or indirect question:

(65) \**Xun<sub>j</sub> la ilekub [li antz<sub>i</sub> [ispoxta t<sub>i</sub> t<sub>j</sub>]]-e.*  
 Xun CL became.well DET woman he.treated -ENC  
 ('The woman that XUN treated became well.')

Cf. *Ilekub li antz ispoxta Xun-e.*  
 'The woman Xun treated got well.'

<sup>27</sup> One of the two Tzotzil speakers mentioned in the starred footnote did not like examples 63 and 64. If my analysis of Tzotzil topics is right, the problem must be a pragmatic or functional one. One possibility is that the topics of 63–64 are linked to pronouns in embedded clauses, while the function of discourse topics is better served if they are linked to syntactically more prominent positions, e.g. main-clause subject or object. This account would attribute the ill-formedness of 63–64 and 65–66 to entirely different principles and is consistent with the fact that these examples had a sharply different status for the speaker in question, with 63–64 judged intelligible and 65–66 unintelligible.

- (66) \**Maruch<sub>3</sub> la sna'ojik* [buch'u<sub>i</sub> imajon t<sub>j</sub> t<sub>i</sub>].  
 Maruch CL they.know who beat  
 ('They know who beat MARUCH.')
- Cf. *Sna'ojik buch'u imajon li Maruche*.  
 'They know who beat Maruch.'

If island constraints are constraints on the relation between a moved element and its trace, as they are generally assumed to be (cf. Ross 1967, Chomsky 1977, Rizzi 1990, McCloskey 1990), then the ill-formedness of 65–66 is evidence that the focus moves to its surface position and binds a trace in the position from which it moved.

A third prediction is that there will be cases in which the topic is not linked, via coreference or binding, to ANY element in the following CP. Note first the following examples, in which there appears to be no syntactic connection at all between the topic and an element in the following clause. Such examples establish the 'setting' for the following assertion. Example 67 is from Tzotzil (OCK 354) and 68 is from Jakalteq (Craig 1977:280):

- (67) A *li Ninab Atz'am-e, lek to ox la atz'am ti vo'ne*.  
 TOP DET Ninab Atz'am-ENC good CL CL CL salt DET once  
 'Salt Spring, the salt used to be good (there) once.'
- (68) *Watut an chuhuj qinh hekal*.  
 my.home 1st will.happen fiesta tomorrow  
 'My house there will be a fiesta (there) tomorrow.'

IntP clitics in 67 and 68 (Tzotzil *-e*, Jakalteq *an*) show that we are dealing here with topics, not foci. We might try to 'regularize' these by positing a (null) 'setting' variable that could be bound by the topic. But other kinds of examples show that the topic cannot be required to bind a variable. (These examples are all from Tzotzil; I do not know whether analogous examples are possible in Jakalteq, but would predict that they are.)

For one thing, the topic can be properly included in the reference of some nominal in CP. The Tzotzil sentence in 69 is an example, where the topic is a singular pronoun and is properly included in the reference of the (null) plural pronoun in the sister CP (69 is a textual example, but my Tzotzil consultants found it impeccable):

- (69) A *li vo'ote che'e, ta j-chi'in jbatik! xi la*.  
 TOP DET YOU-ENC then ASP A1-accompany each.other said CL  
 "'As for you, we'll go together,'" he said.' [OCK 60]

The topic *li vo'ote* 'you' bears no syntactic relation in the clause—both subject and direct object are first-person plural (inclusive). Thus, the topic cannot be moved from the clause, since there is no second-person singular pronoun in that clause. Nor can the topic be said to 'bind' a variable that is 'expressed' through the first-person plural pronoun, unless a bound pronoun can differ in its referential properties from the element that binds it. However, 69 seems compatible with the view that the topic is simply prefixed to a well-formed sentence, one which is 'about' the topic.

Further evidence that Tzotzil topics cannot be required to bind an element in the following clause comes from narrative containing direct discourse in which the topic and what follows can actually represent the speech of two different speakers. The topic can name the speaker or hearer in the subsequent direct discourse:

- (70) a. Long ago when Salinas was formed, the Virgin arrived there. A man saw her ...  
 b. A *la ti vinik-e*, *K'u chapas, krem, k'usi chasa'*  
 TOP CL DET man-ENC what you.do boy what you.seek  
*li' to-e?' xi la jch'ul me'tik.*  
 here CL-ENC said CL our.holy mother  
 'As for the man, "What are you doing, son? What are you looking for here?" asked the Virgin.' [OCK 197]

The topic in 70 is part of the narrator's speech, while what follows represents the speech of the Virgin. Clearly the topic cannot be moved to its surface position. And the possibility of a binding relation between the topic *ti vinike* and the second-person pronoun in the following CP seems out of the question, since the two are really in different utterances.

These examples show that the relation between the topic and what follows is far looser than what would be possible under a movement analysis or a binding analysis. Reinhart 1982 suggests that topics are a signal to the listener to access his or her mental file on the individual in question, and then to add to that file the information given in the following clause. This function seems appropriate for the external topics of Tzotzil and Jakalteq and corresponds iconically to the proposed syntactic structure.

#### TOPIC AND FOCUS IN Tz'UTUJIL

**5.1. PARALLELISMS WITH TZOTZIL AND JAKALTEK.** The syntax of topic and focus structures in Tz'utujil is parallel to that of Tzotzil and Jakalteq in a number of ways; however, there are significant differences. I will discuss the parallelisms first and then turn to the differences. What follows is based on Dayley's 1985 description of Tz'utujil, a language spoken around the southern and western shores of Lake Atitlán in Guatemala.

As in Tzotzil, there is a position before the predicate in Tz'utujil for focussed elements, as in 71 (Dayley:308) and 72 (Dayley:350). When a transitive subject is focussed, as in 72, the focus verb must be used (Dayley:1985):

- (71) *Ja k'atan n-uu-na' Aa Toor.*  
 the heat ASP-E3-feel youth Salvador  
 'It's the heat that Salvador feels.'  
 (72) *Jar iixoq x-ch'ey-ow-i jar aachi.*  
 the woman ASP-hit-FOC-IV the man  
 'The woman was the one who hit the man.'

There is another position before that one which Dayley calls a topic position.<sup>28</sup> Ex. 73 (Dayley 309) shows subject focus (with a focus verb) and object topicalization; 74 (Dayley 308) shows object focus and subject topicalization:

- (73) *Ja tzyaq ch'ooyaa' x-ee-tij-ow-i.*  
 the clothes rats ASP-A3pl-eat-FOC-IV  
 'Rats were the ones who ate the clothes.'
- (74) *Ja gáarsa cheqe ch'uu' n-ee-ruu-tij.*  
 the heron only fish ASP-A3pl-E3-eat  
 'It's only fish that the heron eats.'

The order topic-focus is consistent with a structure in which the focus functions as specifier of I' and the topic is external to the top CP.

Two other facts—the position of negation and the position of the interrogative particle—are also consistent with this structure. As in Tzotzil, the negative particle (*ma*) occupies a position between the topic and the focus. In sentences with V...S order, *ma* is sentence-initial (a particle *ta*, glossed IRREAL, sometimes co-occurs with *ma*; Dayley 1985:254ff.):

- (75) *Ma ti-b'e jar Aa Lu'.*  
 NEG ASP-go the youth Pedro  
 'Pedro isn't going/won't go.' [Dayley:321]

Ex. 76 (Dayley:322) shows that *ma* precedes the focus (note the focus semantics and the focus verb); 77 (Dayley:321) shows that it follows the topic (note the absence of both focus semantics and the focus verb form):

- (76) *Ma ch'ooy ta x-tij-ow-i ja kéeso.*  
 NEG rat IRREAL ASP-eat-FOC-IV the cheese  
 'It wasn't a rat that ate the cheese.'
- (77) *Ja ch'ooy ma x-uu-tij ta ja kéeso.*  
 the rat NEG ASP-E3-eat IRREAL the cheese  
 'The rat didn't eat the cheese.'

These facts too are compatible with the structures of 3 and 6: the negative element is adjoined to IP; focussed elements move to specifier of I', and the topic is external to the top CP.

<sup>28</sup> There is an association between topic position and subjects which is strong enough that Dayley sometimes refers to this position as a subject position. But the position is not restricted to subjects. There are at least two sentence types in which nonsubjects occur clause-initially (and are not focussed). One is in cases of 'OSV' order, where the subject is focussed (see also 73):

- (i) *Jar iixoq jun aachi x-ch'ey-ow-i.*  
 DET woman a man ASP-hit-FOC-IV  
 'The woman, it was a man who hit her.' [Dayley 309]

The other is in existential sentences, when these express possession. The possessor is often sentence-initial and not associated with focus semantics.

- (ii) *Inin k'o npaq.*  
 I exist my.money  
 'I have money.' [Dayley 316]

I assume, then, that this clause-initial position is not a 'subject' position, but a position for some sort of topic. Subjects probably occur in this position far more frequently than other constituents because of the tendency for topic and subject to coincide.

Also as in Tzotzil, the interrogative particle (*la*) occupies a position between the topic and the focus. *La* occurs sentence-initially in sentences with VS order:

- (78) *La x-war-i ja ch'uuch'?*  
 Q ASP-sleep-IV the baby  
 'Did the baby sleep?' [Dayley:330]

Ex. 79 (Dayley:331) shows that *la* precedes the focus (note the interpretation and the focus verb),<sup>29</sup> while 80 (Dayley:330) shows that it follows the topic (note the interpretation and the absence of the focus verb).

- (79) *La Aa Teeko x-ch'ey-o Aa Li'p?*  
 Q youth Diego ASP-hit-FOC youth Felipe  
 'Was it Diego who hit Felipe?'  
 (80) *Aa Teeko la x-uu-ch'ey Aa Li'p?*  
 youth Diego Q ASP-E3-hit youth Felipe  
 'Did Diego hit Felipe?'

These facts are consistent with an analysis in which the Q marker is a complementizer (though in Tz'utujil *la* does not introduce embedded questions), in which focussed elements move to specifier of I', and in which topics are external to the top CP.

**5.2. DIFFERENCES FROM TZOTZIL AND JAKALTEK.** However, there are a number of differences between Tz'utujil topics and those of Tzotzil and Jakaltek. First, there is no significant pause separating Tz'utujil topics from the following clause (Jon Dayley, personal communication, 1990).<sup>30</sup> Second, Tz'utujil topics do occur in embedded CPs, as exemplified in 81–82. That the bold-faced NPs are topics and not foci is shown by the absence of focus semantics, the absence of focus verb forms, and the position of the negation in 82.<sup>31</sup>

- (81) *Ja Ta Mari'y n-uu-ch'ob'*  
 the Miss María ASP-E3-think  
*chi jar Aa Xwaan x-uu-ch'ey Aa Teeko.*  
 that the youth Juan ASP-E3-hit youth Diego  
 'María thinks that Juan hit Diego.' [Dayley:399]

<sup>29</sup> As pointed out earlier with respect to Tzotzil, the presupposition of the focus construction persists in a Y/N question. It is the assertion that is questioned in 79.

<sup>30</sup> There is another variety of sentence-initial NP that is separated from the rest of the sentence by pause. These NPs incorporate one of the particles *k'aa(r)* or *k'ii(r)*, which indicate that the NP is a switched, hence contrastive, topic:

- (i) [after talking about various peoples who have come to settle on and take over San Juan lands ...]  
*Ja k'ür oojoj oq ajtinaamit, majun qaxiin.*  
 the we A1pl one.of.town nothing ours  
 'With respect to us who are from town, nothing is ours.' [Dayley 258]  
 (ii) *Ja k'aar aachi, n-b'e najt naqaaj ...*  
 the man ASP-go far near  
 'As for the man, he goes far and near ...' [Dayley 228]

These NPs appear to have the same function and syntax as external topics in Tzotzil and Jakaltek.

<sup>31</sup> Tz'utujil allows embedded topics in a wider range of contexts than those mentioned in n. 26. Dayley's examples include topics in the complements to verbs translating 'know', 'say', 'believe', 'tell NP that', and 'be true that', as well as in the protasis of a conditional.



- (82) *Aa Xwaan n-0-b'ij chi Ta Mari'y ma t-r-aa'jo'.*  
 youth Juan ASP-E3-say that Miss Maria NEG ASP-E3-want  
 'Juan says that María doesn't want it.' [Dayley:235]

Both the absence of pause and the possibility of embedded topics suggest that Tz'utujil topics are not external to CP, but internal.<sup>32</sup> This internal position could be specifier of C' or adjoined to IP. Both positions would predict the possibility of embedded topics. The absence of pause requires an analysis of IntPs in Tz'utujil, which I cannot provide, but that absence is likely to be more compatible with an analysis of Tz'utujil topics as internal than external.

The position for sentential adverbs in Tz'utujil may provide an argument that the topic is in the position of specifier of C' rather than adjoined to IP. A common position for Tz'utujil sentential adverbs is between the topic and the rest of the sentence; crucially, they do not precede the topic:

- (83) a. *Ja nata' ooxij nb'e K'oqol Keej.*  
 the my.father in.3.days goes Masatenango  
 'In three days, my father is going to Masatenango.' [Dayley:275]  
 b. *Inin oojeer in ajch'a'ool.*  
 I before A1 fighter  
 'I used to be a fighter.' [Dayley:303]

Such adverbs apparently precede the focus. Compare 84 (Dayley: 385), with focus semantics and the focus verb, with 83b.

- (84) *Oojeer ixoqii' n-ee-b'an-ow-i.*  
 before women ASP-A3PL-do-FOC-IV  
 'Before it was the women who did it.'

These sentential adverbs are plausibly adjoined to IP, accounting for the fact that they precede the focus. If topics occupy specifier position of C', then the invariant order topic-adverb is predicted. If topics too were adjoined to IP, then some other mechanism would be needed to rule out the order adverb-topic. Hence I conclude tentatively that Tz'utujil topics occupy specifier position of C'.<sup>33</sup>

Finally, the structural differences between Tzotzil and Tz'utujil topics may be related to certain pragmatic differences. Recall that Tzotzil and Jakalteq topics are used to signal that some identifiable participant is the new topic. In Tz'utujil, however, an NP whose referent is already established as topic can occur in topic position. The following text starts, 'A long time ago there was a man whose daughter was in a dance', and it continues (Shaw 1971:495):<sup>34</sup>

- (85) a. *Ja k'a rme'al x-u-koj pa xajoj xin Tukun*  
 the PT his.daughter ASP-E3-enter in dance of Tecun  
 'He entered his daughter in the dance of Tecun'

<sup>32</sup> Tz'utujil lacks IntP clitics that attach to NPs, clitics like *un* and *an*, which could help establish major syntactic boundaries.

<sup>33</sup> One problem with this account is that it predicts that the complementizer *chi* should follow the internal topic, not precede it, as in 81–82. This problem is not unique to Tz'utujil. See Rizzi & Roberts (1989: 21–22), who propose that C can take a CP complement; see also Diesing 1990. I will not attempt to resolve this here.

<sup>34</sup> Tz'utujil has a distinction between long and short vowels which is not represented in this text.

- b. *y ja rme'al x-ok-i Malincha.*  
 and the his.daughter ASP-play-IV Malincha  
 'and the daughter played the part of the Malincha.'

Line 85a establishes the daughter as new topic, using the particle *ka'(ar)* mentioned in n. 30. But an NP referring to the daughter is subject of line 85b, and that NP too is in topic position. Apparently, topic NPs in Tz'utujil need not refer to new or switch topics, but can refer to the CONTINUING topic in a span of discourse.

A consequence of this difference in the way topics function is that third-person personal pronouns are routine in Tz'utujil, but rare in Jakalteq (and nonoccurring in Tzotzil, which has no overt third-person personal pronouns). Third-person personal pronouns will make poor new or switch topics because they are usually not informative enough to pick out a participant (as new topic). And, while they make fine continuing topics, this is not the function of Tzotzil and Jakalteq topics. Tzotzil lacks overt third-person personal pronouns altogether, so the absence of such topics may not tell us much. But Jakalteq does have overt third-person pronouns (the classifiers discussed earlier), and these generally do not function as topics either. Craig claims that third-person pronouns cannot be topics at all (1977:12), but the texts cited in Datz 1980 show that they can be, as long as the antecedent is very close—close enough to be unambiguously accessed by the pronoun.<sup>35</sup> The situation in Tz'utujil is different; Dayley's examples include many third-person pronominal topics, as in 86 (Dayley 386), and the Tz'utujil texts in Shaw 1971 show such topics in narrative context.

- (86) *Jaa' eskopéeta x-0-k' aq-b'eej ja chikop.*<sup>36</sup>  
 he shotgun ASP-E3-shot-with the animal  
 'It was a shotgun that he shot the animal with.'

I have associated the function of Tzotzil topics with their structural position: the topic phrase, sister to the top CP, instructs the speaker to access the mental file on that individual. The fact that Tz'utujil topics are internal would be explained if external topics are ALWAYS associated with this call-up function.<sup>37</sup> Whether so tight a connection between form and function can be maintained is not clear, but it is plausible.<sup>38</sup>

The proposal, then, that the topics of Tzotzil/Jakalteq and those of Tz'utujil

<sup>35</sup> It seems plausible that pronominal switch topics cannot be elicited in isolation (since the referent would never be identifiable), and that may be why Craig's consultants rejected her examples.

<sup>36</sup> In 86, *eskopéeta* 'shotgun' is focussed.

<sup>37</sup> The idea that the function of left-dislocation constructions is to introduce a new topic is clear in Gundel 1977, Rodman 1974, and Keenan & Schieffelin 1976, all of which focus on English, and in Givón 1983 ('Introduction'), which takes a crosslinguistic perspective. See Prince 1984 for critical discussion.

<sup>38</sup> I am not suggesting the reverse, i.e. that switch or new topics are always left-dislocated. There are other ways to signal new topics, and internal topic position might be one in some languages. Thomas Larsen (personal communication, 1991) suggests that K'iché topics have the function I am associating with external topics in Tzotzil (i.e. new/switch topics) but the syntax of Tz'utujil topics (i.e. internal topics).

are structurally different in the way I have suggested may explain a variety of differences between them. The difference in function follows from the fact (if it is a fact) that external topic position is associated only with new/switch topics, while internal topic position may be associated with other functions, including continuing topic. The fact that third-person pronominal topics are common in Tz'utujil, but not in Jakaltek, follows from the difference in function. The prosodic differences (pause after Tzotzil/Jakaltek topics, none after Tz'utujil internal topics) should follow from the structural differences. And the fact that Tz'utujil has embedded topics, while Jakaltek and Tzotzil do not, follows from the fact that internal topics are internal to CP, and thus there is nothing to exclude them from complement clauses, while external topics are introduced only under E.<sup>39</sup>

#### CONCLUSION

6. This analysis posits three positions before the predicate in which NPs can occur: external topic, internal topic, and focus position. Most (all?) Mayan languages appear to make use of the focus position, as defined here. Some languages, e.g. Tz'utujil, allow both internal and external topics, while others, e.g. Jakaltek and Tzotzil, allow only external topics. What accounts for this difference is a question to which I have no answer at present.

The view that Mayan languages are 'basically' verb-initial is reflected here in the structure of the small clause, XP in 3. In that domain, the smallest domain containing the predicate and the subject, the predicate precedes the subject. This follows from the general principle that specifiers to lexical categories occur on the right. As for deviations from the 'basic' pattern, we can certainly put aside the case of external topics. They are positioned outside the (maximal) clause, and fall entirely outside the scope of any principles of word order that depend on relations defined in terms of Xbar theory. Internal topics and foci ARE positioned by a principle that depends on Xbar theory (specifiers of the functional projections occur to the left of their heads), but they are also outside the minimal clause (XP in 3).

Finally, the conclusion that external topics lie outside the structures generated by the Xbar schemata has interesting crosslinguistic support. In examining the crosslinguistic relation between basic word-order type and the position of the topic, Herring 1990 concludes that, while the position of continuing topics does correlate with word-order type, that of new/switch topics does not, with the latter occurring sentence-initially regardless of the word-order type of the language. If it is true in general that continuing topics occur

<sup>39</sup> The proposal for Tz'utujil makes a number of other predictions, which are not resolved, as far as I can tell, by the discussion or examples in Dayley. These include: (i) (internal) Tz'utujil topics should always be bound to a syntactic position in the following clause. We should not find syntactically unconnected topics like those of Tzotzil and Jakaltek (67–68). (ii) If Tz'utujil has non-CP complements, they should not admit topics. There are a number of complement types in Tz'utujil that probably are not CPs, but IPs or VPs. Examples with overt subjects all show the subject in postverbal position, compatible with this prediction. (iii) If Tz'utujil has external topics (n. 30), these should potentially co-occur with internal topics (if the functions of internal and external topics can be disassociated). No relevant Tz'utujil examples are cited in Dayley.

in specifier of  $C'$ , or in any specifier position really, we should expect SOME correlation with basic word order (even if partial), since language-particular word-order principles will be stated in terms of the general relations defined by Xbar theory, and thus will apply to specifiers. If switch topics are introduced by the rule for the root symbol, E, however, they will fall outside any general word-order principles, assuming still that these are generally stated in terms of the relations defined by Xbar theory. Indeed, Herring's observations suggest that particular languages do not order switch topics and the sister CP at all, for if they did, we would find crosslinguistic variation. A functional explanation for the order seems eminently appropriate: if external topic structures are a signal to the listener to open a mental file on the participant in question in order to add to that file the information contained in the sister CP, it will be maximally efficient for speakers to open the file first and then process the information relevant to it (Li & Thompson 1976 make a similar suggestion; Herring suggests a different functional explanation). While such commonsensical functional explanations are often overridden by more narrowly linguistic principles, the point here is that there are no general (Xbar-theoretic) word-order principles to compete with the functional principle.

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