

# WORD ORDER AND MARKEDNESS IN KAQCHIKEL

George Aaron Broadwell

University at Albany, State University of New York

Proceedings of the LFG00 Conference

University of California, Berkeley

Miriam Butt and Tracy Holloway King (Editors)

2000

CSLI Publications

<http://csli-publications.stanford.edu/>

## 1 Introduction<sup>1</sup>

Most Kaqchikel sentences show the possibility of two word orders; one in which the subject is initial, and another in which the verb is initial:

---

<sup>1</sup> Kaqchikel is a Mayan language spoken by about half a million people in Guatemala. This paper reports on the dialect of Patzicía as spoken by Alberto Esquit Choy. The paper largely uses the conventions of the national orthography, in which <x> = a voiceless alveopalatal sibilant (English *sh*), <tz> = a voiceless dental affricate, <ä> = schwa, <q> is a uvular stop and apostrophe = glottal stop (following a vowel) or glottalization (following a consonant). Kaqchikel dialects differ in the number of phonemic vowels. Although the national orthography represents ten distinct vowels, the Patzicía dialect has six (*a, ä, e, i, o, u*) and I write only those vowels here.

Glosses use the following abbreviations: abs = absolutive, af = actor focus, cl = personal classifier (markers of the age and sex of human referents), com = completive aspect, erg = ergative, inc = incomplete aspect, p = plural, pass = passive, s = singular. The tableaux use the following additional abbreviations: def = definite, indef = indefinite, neg = negative, non-su = non-subject, obv = obviative, prox = proximate, psor = possessor, psum = possessum, subj = subject.

I thank Judith Aissen, David Mora Marín, and Timothy Smith for their suggestions on the analysis of Kaqchikel. Special thanks to Alberto Esquit Choy, who not only provided all the Kaqchikel data, but also contributed cogent suggestions for this analysis.

- 1) X-u-b'a        ri tz'i'        ri me's.  
     com-3sErg-bite    the dog        the cat

‘The dog bit the cat.’

- 2) Ri tz'i' x-u-b'a        ri me's.  
     the dog com-3sErg-bite the cat

‘The dog bit the cat.’

The claim of this paper is that SVO order is a signal of *markedness* in Kaqchikel, and that this descriptive generalization can be captured in a theoretical framework that represents markedness through optimality theory (Aissen 1999).

## 2 Unmarked orders

The unmarked order for a Kaqchikel sentence is verb-initial, but the ordering principles for the noun phrases that follow are somewhat surprising. If a transitive verb is followed by two NPs with equal degrees of definiteness, then either order is grammatical and the sentence is ambiguous.

- 3) X-r-oqotaj        ri tz'i'        ri me's.  
     com-3sErg-chase the dog        the cat

‘The dog chased the cat.’

‘The cat chased the dog.’

- 4) X-r-oqotaj        ri me's        ri tz'i'        .  
     com-3sErg-chase the cat        the dog

‘The dog chased the cat.’

‘The cat chased the dog.’

If one of the NPs is definite and the other is indefinite, then a.) the definite NP must follow the indefinite (a strong preference) and b.) the definite is interpreted as the subject (an inviolable rule).

- 5) X-r-oqotaj      jun me's      ri tz'i'.  
     com-3sErg-chase a cat      the dog

'The dog chased a cat.'      1:68  
   \* 'A cat chased the dog.'

- 6) ?\*X-r-oqotaj      ri tz'i'      jun me's.  
     com-3sErg-chase the dog      a cat

There is also a clear but violable preference for proper nouns to follow common nouns:

- 7) X-u-loq'      ri wä'y      Maria.  
     com-3sErg-buy the tortilla      Maria

'Maria bought the tortillas.'

? X-u-loq'      Maria      ri wä'y.  
     com-3sErg-buy      Maria      the tortilla

If two proper nouns follow the verb, the sentence is ambiguous:

- 8) X-r-oqotaj      ri xta Maria ri a Juan  
     com-3sErg-chase the cl Maria the cl Juan

'Maria chased Juan.'  
   'Juan chased Maria.'

The focus of this paper, however, is not the principles that determine order in verb-initial sentences, but the alternation between V-initial and SVO.

### 3      Obligatory SVO order

There are two contexts in which SVO order is obligatory: 1) with indefinite subjects, and 2) when the possessor of the subject is antecedent to a following pronoun.

It is important to qualify this claim, however, so that it applies only to subjects of transitive clauses with 3<sup>rd</sup> person objects. Subject-initial order in these cases is not obligatory for intransitive clauses, or for transitive clauses with 1<sup>st</sup> or 2<sup>nd</sup> person objects.

#### 3.1      Indefinite subjects

Indefinite subjects of transitive verbs cannot be postverbal.

- 9) X-u-b'a        jun tz'i'    ri a Juan.  
     com-3sErg-bite a dog     the cl Juan

\*‘A dog bit John’/ ‘John bit a dog.’

Instead, they must appear in preverbal position. When they do, they trigger ACTOR FOCUS morphology on the verb.<sup>2</sup>

- 10) Jun tz'i' x-b'a'-o        ri a Juan.  
     a dog com-bite-AF        the cl Juan

‘A dog bit Juan.’

- 11) \*? Jun tz'i' x-u-b'a'        ri a Juan.  
     a dog com-3sErg-bite        the cl Juan

(11) is ungrammatical because the actor focus morpheme has not been used.

However, this restriction on indefinite subjects only holds for transitive clauses with third person objects. If the clause is intransitive or transitive with a local object, then a postverbal indefinite subject is grammatical.

- 12) Ni-b'a'on    jun tz'i'.  
     inc-bark a dog

‘A dog is barking.’

- 13) X-i-ru-b'a'        jun tz'i' (rin).  
     com-1sAbs-3sErg-bite a dog (me)

‘A dog bit me.’

Preverbal subjects are also possible in this situation. When the clause is transitive, fronting the subject results in actor focus morphology.

<sup>2</sup> There is an established Mayanist tradition of calling this morpheme the (agentive) antipassive. However, Smith-Stark (1978), Aissen (1999) and others have shown that this is not an appropriate analysis in many Mayan languages. Therefore I follow Aissen (1999) in calling this morphology ‘actor focus’

- 14) Jun tz'i' ni-b'a'on.  
 a dog con-bark  
 ‘A dog is barking.’
- 15) Jun tz'i' x-i-b'a'-o (rin).  
 a dog com-1sAbs-bite-AF (me)  
 ‘A dog bit me.’

### 3.2 Possessor antecedents

If the possessor of a transitive subject is the antecedent of some following pronoun, then it cannot appear postverbally.

- 16) N-u-kanoj r-ixjayil a Manuel rija'.  
 con-3sErg-look:for 3sErg-wife cl Manuel s/he

\*’Manuel’s<sub>i</sub> wife is looking for him<sub>i</sub>.<sup>3</sup>

But the same sentence is grammatical if the subject is preverbal:

- 17) R-ixjayil a Manuel n-u-kanoj rija'.  
 3sErg-wife cl Manuel inc-3sErg-look:for s/he  
 ‘Manuel’s<sub>i</sub> wife is looking for him<sub>i,j</sub>.’

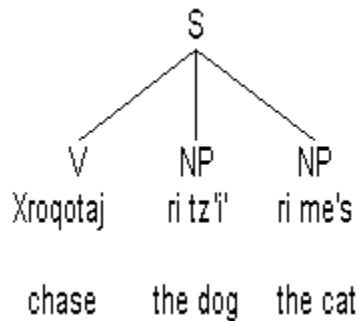
These two rather disparate conditions – indefinite transitive subjects and transitive subjects whose possessors are antecedents of a following pronoun both induce a shift from V-initial to SVO order. In the following sections, I will outline an approach under which this effect can be captured.

## 4 S and IP in Kaqchikel

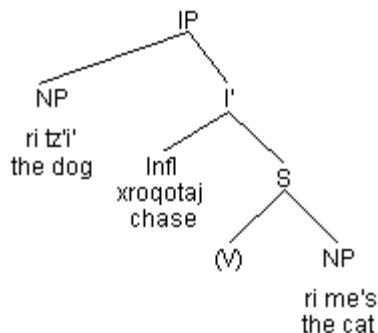
I will assume that the verb-initial and SVO orders in Kaqchikel correspond to syntactic structures like the ones shown in figures (1) and (2). (1) shows a flat, non-endocentric S, while

<sup>3</sup> However, this string is grammatical with possible readings as ‘S/he is looking for Manuel’s wife.’ or ‘Manuel’s<sub>i</sub> wife is looking for him<sub>j</sub>.’ or ‘S/he (e.g. his mother/father) is looking for a wife for Manuel.’

(2) shows a phrase headed by Infl.



**Figure 1** Non-endocentric structure



**Figure 2** Endocentric clause structure

The difference between these two structures is supported by data from adverb placement.

For the verb-initial structure, a temporal adverb like *iwir* ‘yesterday’ may appear at the beginning or end of the S, but not in other places:<sup>4</sup>

---

<sup>4</sup> My consultant finds final adverbs to be somewhat odd, but possibly acceptable in some contexts.

Broadwell -- Kaqchikel word order

- 18) Iwir x-r-oqotaj ri tz'i' ri me's.  
yesterday com-3sErg-chase the dog the cat

'Yesterday the dog chased the cat.'<sup>5</sup>

- \*X-r-oqotaj iwir ri tz'i' ri me's.  
\*X-r-oqotaj ri tz'i' iwir ri me's.  
?X-r-oqotaj ri tz'i' ri me's iwir

- \*V Adv S O  
\*V S Adv O  
?V S O Adv

However, possibilities for adverb placement are notably different in the SVO order:

- 19) Iwir ri tz'i' x-r-oqotaj ri me's.  
yesterday the dog com-3sErg-chase the cat

- Ri tz'i' iwir x-r-oqotaj ri me's.  
Ri tz'i' x-r-oqotaj iwir ri me's.  
? Ri tz'i' x-r-oqotaj ri me's iwir.

- S Adv V O  
S V Adv O  
? S V O Adv

We can account for the distribution of temporal adverbs with the following statement:

- 20) Adverb placement

Temporal adverbs are (left-)adjoined to S or an extended projection of S.

Thus Kaqchikel has two options for the syntactic structure of a clause: it may project a minimal, non-endocentric S or a more elaborated, endocentric IP. Since the IP involves more structure, it is the more marked of the two.

## 5 Towards an explanation

We can understand the obligatory nature of SVO order in these two cases by appealing to notions of markedness, following work by Aissen (1999), Donahue (1999), Lee (2000) and others.

### 5.1 Indefinite subjects

In the case of indefinite subjects, we would like to posit a constraint which penalizes indefinite subjects. However, recall that SVO is only obligatory for subjects of transitive clauses with third person objects. So a constraint like \*Subj/Indef is too broad. One possible move is to

---

<sup>5</sup> Also available is the reading 'The cat chased the dog', which I will ignore for the moment.

conjoin \*Subj/Indef and \*Obj/3. However, the problem with this solution is that \*Subj/Indef & \*Obj/3 will need to dominate \*Subj/Indef & \*Obj/Local in order for this to work. But Aissen (1999) has shown that there is good reason to think that \*Obj/Local universally outranks \*Obj/3. So a solution along these lines would require rejecting the well-documented tendency of local person to be more marked as objects than third persons.

Instead I will rely on an approach using the notion of obviation (Aissen 1997). I will assume that within an obviation span containing two third person nominals, one nominal (the proximate) is ranked higher and the other (the obviative) is ranked lower.<sup>6</sup> In Algonquian languages where the notion of obviation is explicitly marked in the morphology, the proximate nominal is generally the one that is more central and topical, though notions of speaker empathy play a role as well. I will assume that there is no obligatory assignment of proximate and obviative in an intransitive main clause, since obviation measures the relative centrality of third person nominals.

There are two alignments with obviation that are relevant to the account here: 1) the alignment of obviation and grammatical relation and 2) the alignment of obviation and definiteness.

The scales involved are as follows:

21) Subj > Non-Su

Prox > Obv

Def > Indef

The harmonic alignments, and the corresponding constraints are shown below:

Harmonic Alignment

Subj/Prox > Subj/Obv  
Non-Su/Obv > Non-Su/Prox

Prox/Def > Prox/Indef  
Obv/Indef > Obv/Def

Constraints

\*Subj/Obv >> \*Subj/Prox  
\*Non-Su/Prox >> \*Non-Su/Obv  
  
\*Prox/Indef >> \*Prox/Def  
\*Obv/Def >> \*Obv/Indef

The two constraints that will play the most important role in the account here are \*Non-Su/Prox and \*Prox/Indef. Both make sense from the viewpoint of discourse. It is well known that

<sup>6</sup> An obviation span contains at most one proximate, but any number of obviatives. So if the span contains three third person nominals, one will be proximate and the other two will be obviatives.

subjects are an important locus of topic continuity cross-linguistically, and the constraint \*Non-Su/Prox says that a sentence with a topical/central non-subject is marked. Similarly, definiteness correlates highly with topicality. All things being equal, definite NPs are more topical than indefinite NPs.<sup>7</sup>

As Aissen (1999) shows, conjunction with a constraint  $*\emptyset$ , which penalizes zero exponence, gives us a way to model the fact that marked combinations of features typically require some special solution. In the Kaqchikel case, the special solution is to characterize the verb as an INFL and build extra syntactic structure. To differentiate this solution from others (such as case marking), we can call this constraint  $*\emptyset_{\text{Infl}}$ .

We want to rank the constraint \*Prox/Indef &  $*\emptyset_{\text{Infl}}$  and the constraint \*Non-Su/Prox &  $*\emptyset_{\text{Infl}}$  higher than the constraint \*STRUC, which penalizes additional structure. For indefinite subjects of transitive verbs with third person objects, this yields a tableau like the following:

| <b>PRED</b> 'chase(x,y)'<br><b>GF</b> [ <b>PRED</b> 'dog' ]<br><b>DEF</b> -<br><b>GF</b> [ <b>PRED</b> 'John' ] y | [Spec, FP]<br>= DF | *Prox/Indef<br>& $*\emptyset_{\text{Infl}}$ | *Non-Su<br>/Prox &<br>$*\emptyset_{\text{Infl}}$ | *STRUC |
|---|--------------------|---|--|--------|
| a. [ <sub>s</sub> Chased a dog (PROX) John (OBV)]   |                    | *!  |  |        |
| b. [ <sub>s</sub> Chased a dog (OBV) John (PROX)]   |                    |   | *!   |        |
| --> c. [ <sub>IP</sub> A dog (PROX) chased John (OBV)]  |                    |   |  | *      |
| → d. [ <sub>IP</sub> A dog (OBV) chased John (PROX)]  |                    |   |  | *      |
| e. [ <sub>IP</sub> John (PROX) chased a dog (OBV)]  | *!                 |   |  |        |
| f. [ <sub>IP</sub> John (OBV) chased a dog ( PROX)]   | *!                 |   |  |        |

<sup>7</sup> Du Bois (1987) has shown that indefinite transitive subjects are quite rare in free discourse in a number of languages. He proposes the Given A constraint, which favors sentences in which a transitive subject (an A, using the terminology of Dixon), has previously introduced in discourse. The approach pursued here draws on Du Bois's essential insight, but does not state the constraint directly between grammatical relations and definiteness for the reasons explained in the text.

The constraint [Spec, FP] = DF comes from Bresnan (1998:21), and is a general constraint on c-structure to f-structure correspondence. Since SUBJ is one of the discourse functions, it may appear in the specifier position of a phrase headed by a functional category. An OBJ may not appear in this position (unless it bears some additional DF).

I assume that in the SVO order, the initial subject may be either proximate or obviative, depending on the larger discourse context.

## 5.2 Possessor antecedents

Recall the following contrast:

- 22) N-u-kanoj              r-ixjayil    a Manuel rija'.  
      inc-3sErg-look:for 3sErg-wife cl Manuel s/he

\*'Manuel's<sub>i</sub> wife is looking for him<sub>i</sub>.'

- 22) R-ixjayil    a Manuel n-u-kanoj              rija'.  
      3sErg-wife cl Manuel inc-3sErg-look:for        s/he

'Manuel's<sub>i</sub> wife is looking for him<sub>i,j</sub>'

I will follow Aissen's (1997) approach to the problem of possessor antecedents, though I will formulate it in a slightly different manner. The relevant scale for possessors is Possessor > Possessum.<sup>8</sup> When aligned with the Proximate > Obviative scale this leads to the harmonic alignments Psor/Prox > Psor/Obv and Psum/Obv > Psum/Prox. Inverted, these give us the constraints \*Psor/Obv >> \*Psor/Prox and \*Psum/Prox >> \*Psum/Obv.

Assuming that pronouns must have the same obviation value as their antecedents, then we have the following tableau:

---

<sup>8</sup> For the sake of clarity, I abbreviate possessor as Psor and possessum as Psum

|  | *Psor/Obv<br>& *Ø <sub>Infl</sub> | *Non-Su/Prox<br>& *Ø <sub>Infl</sub> | *STRUC |
|--|-----------------------------------|--------------------------------------|--------|
| [ <sub>s</sub> Seeks Manuel <sub>i</sub> 's (Prox) wife (Obv) him <sub>i</sub> (Prox)].    |                                   | !*                                   |        |
| [ <sub>s</sub> Seeks Manuel <sub>i</sub> 's (Obv) wife (Prox) him <sub>i</sub> (Obv)].     | !*                                |                                      |        |
| → [ <sub>IP</sub> Manuel <sub>i</sub> 's (Prox) wife (Obv) seeks him <sub>i</sub> (Prox)]. |                                   |                                      | *      |
| → [ <sub>IP</sub> Manuel <sub>i</sub> 's (Obv) wife (Prox) seeks him <sub>i</sub> (Obv)].  |                                   |                                      | *      |

Once again, we end up with a situation in which the initial subject may be either proximate or obviative depending on the larger discourse context. In Kaqchikel, this seems compatible with the evidence, since there is no overt marking of obviation.

In Algonquian languages, the possessor is never proximate. It is not obvious how to achieve this result for Kaqchikel. We could, of course, add a constraint \*Psum/Prox & Ø<sub>Infl</sub>. But the last candidate in this tableau will not violate this constraint, since it does signal its markedness through characterizing the main verb as Infl.<sup>9</sup>

## 6 The passive

Aissen (1997) has shown that in Tzotzil possessor antecedents are also regarded as marked. However, in that language, the markedness is resolved by use of the passive, rather than a distinctive word order.

- 24) \*Ta s-sa'      *pro<sub>i</sub> y-ajnil li Manvel-e<sub>i</sub>.*  
                   icp A3-seek him A3-wife the Manuel-enc

'Manuel<sub>i</sub>'s wife is looking for him<sub>i</sub>.'

<sup>9</sup> This may signal a larger conceptual problem: How many violations of markedness constraints can one structure license? Will characterizing the verb as INFL be enough to overcome a whole series of markedness violations?

Furthermore, if a language has more than one signal of markedness (e.g. passive in some cases; word order in other cases; morphology in still other cases) then the conjunction of markedness constraints with \*Ø becomes increasing complex, and would seem to require \*STRUC<sub>Voice</sub>, \*STRUC<sub>Infl</sub>, \*STRUC<sub>Case</sub>, and so on.

- 25) Ta sa'-at      yu'un y-ajnil   li Manvel-e.  
 icp seek-PASS by    A3-wife the Manuel-ENC

'Manuel<sub>i</sub> was sought by his<sub>i</sub> wife.' (Aissen 1997:771-2)

In Kaqchikel, the passive is in fact available as a solution to both the indefinite subject and the possessor antecedent problems. Kaqchikel has two passives, which I will call the ROOT PASSIVE and the SECOND PASSIVE.<sup>10</sup> The root passive is formed by adding /-x/ to end of the verb root and/or changing the tenseness of last vowel of the root.

- 26) X-kanox      a Manuel      r-oma'   ri   r-ixjayil.      root passive  
 com-seek:PASS cl Manuel 3sErg-by det 3sErg-wife

'Manuel<sub>i</sub> was sought by his<sub>i</sub> wife.'

The second passive is formed by using third person plural ergative agreement with the active verb stem:<sup>11</sup>

- 27) X-ki-kanoj      a Manuel      r-oma'   ri r-ixjayil.      second passive  
 com-3pErg-seek cl Manuel 3sErg-by the 3sErg-wife

'Manuel<sub>i</sub> was sought by his<sub>i</sub> wife.'

The following sentences show that both are also available as solutions to the problem of indefinite subjects:

<sup>10</sup> My consultant finds these two passives to be synonymous, and both passives are available for the entire range of transitive verbs I have checked so far. Nevertheless, I suspect there are some differences in their use, which I hope to clarify in future work. For current purposes, however, both are available as a solution to the problem raised by possessor antecedents.

<sup>11</sup> The second passive seems to have originated historically with impersonal subject clauses, such as 'They were looking for John', accounting for the third person plural agreement on the verb. However, in modern Kaqchikel, neither the passive subject nor the agent in the by-phrase need be plural. This gives the appearance of an agreement mismatch, so that an example like (29) seems to say literally 'They were looking for Manuel by his wife.'

- 28) X-oqotäx        ri achin r-oma'    jun tz'i'.                      root passive  
       com-chase:PASS the man 3sErg-by a dog

‘The man was chased by a dog.’

- 29) X-k-oqotaj        ri achin    r-oma'    jun tz'i'.                      second passive  
       com-3pErg-chase the man 3sErg-by a dog

‘The man was chased by a dog.’

Despite the availability of a passive solution to the markedness problems, my consultant almost never volunteers passive translations for these sentences.

The reason, I believe, lies in the discourse function of the passive in Kaqchikel. A detailed examination of the use of voice in Kaqchikel has not yet been carried out, but my initial impression is that both Kaqchikel passives are used in a manner somewhat like the English passive – they occur when the patient is highly topical and the agent is largely detopicalized. (Cf. Zavala (1997) for a similar account of the Akateko passive.)

We can capture the restricted nature of the passive in Kaqchikel along the same lines suggested by Aissen (1999). That is, we employ the constraints \*Su/x, which penalizes subjects which are not discourse prominent, and \*Su/Pat, which penalizes patient subjects, with the ranking \*Su/x >> \*Su/Pat. This will result in a situation where passive only occurs when the patient is more discourse prominent than the agent.

## 7 Non-obligatory SVO

The evidence considered so far indicates that SVO is a marked word order for Kaqchikel. But what about the alternation between V-initial and SVO order in sentences like the following?

- 30) X-u-b'a        ri    tz'i'        ri me's.  
       com-3sErg-bite the dog        the cat

‘The dog bit the cat.’

- 31) Ri tz'i' x-u-b'a        ri me's.  
       the dog com-3sErg-bite the cat

‘The dog bit the cat.’

Since the constraint \*STRUC will penalize the SVO order, why is it possible in the lack of markedness?

The answer seems to involve the larger discourse structure of Kaqchikel. A study of topicality and word order in Kaqchikel is still in progress, but a preliminary generalization is the following:

- 32) Subjects that function as continuing topics appear preverbally.  
Subjects that do not function as continuing topics appear postverbally.

This would suggest that the [Spec, IP] position may be associated with a discourse function like [-new, +prom] (cf. Choi 1999). This discourse function should not be obligatory, however, since indefinite subjects and subjects with possessor antecedents obligatorily appear in this position, regardless of their function.

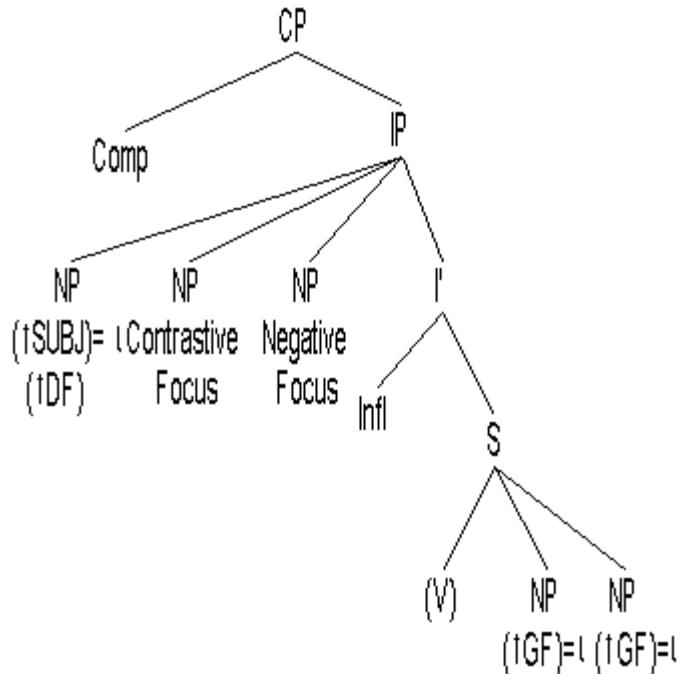
## 8 References

- Aissen, Judith. 1992. Topic and focus in Mayan. *Language* 68:43-80.
- Aissen, Judith. 1997. On the syntax of obviation. *Language* 73:705-750.
- Aissen, Judith. 1999. Agent choice and inverse in Tzotzil. *Language* 75:451-485.
- Aissen, Judith. 1999. Markedness and subject choice in optimality theory. *Natural language and linguistic theory* 17:673-711.
- Bresnan, Joan. 1998. Optimal syntax. to appear in Joost Dekkers, Frank van der Leeuw, and Jeroen van de Weijer. *Optimality theory: Phonology, syntax and acquisition*. Oxford: Oxford University Press.
- Choi, Hye-Won. 1999. *Optimizing structure in context: Scrambling and information structure*. Stanford: CSLI Publications.
- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Donahue, Cathryn. 1999. Optimizing Fore case and word order. ms. Stanford University.  
(Available at <http://www-csli.stanford.edu/~donohue/>)
- Du Bois, John. 1987. The discourse basis of ergativity. *Language* 63:805-855.
- Lee, Hanjung. 2000. Markedness and word order freezing. ms. Stanford University. (Available at <http://www-ot.stanford.edu/ot/>)
- Smith-Stark, Thomas. 1978. The Mayan antipassive: Some facts and fictions. *Papers in Mayan linguistics*, ed. by Nora England, pp 169-87. Columbia, MO: University of Missouri.
- Woolford, Ellen. 1991. VP-internal subjects in VSO and nonconfigurational languages. *Linguistic Inquiry* 22:503-540.
- Zavala, Roberto. 1997. Functional analysis of Akatek voice constructions. *International Journal of American Linguistics* 63:439-74.

## 9 Appendix 1 — Other preverbal positions

There are several preverbal positions in Kaqchikel, in addition to the [Spec, IP] position..

The following figure shows the overall clause structure that I posit for Kaqchikel:



**Figure 3** Kaqchikel clause structure

### 9.1 Topic and Comp

The preverbal position for subjects found in Kaqchikel is comparable to what has been called topic position in other Mayan languages. Aissen (1992) has argued that topics in Tzotzil occupy a position which is adjoined to CP, while topics in Tzutujil are in [Spec, CP].

It is not clear to me whether it is correct to call this position Topic in Kaqchikel, since certain kinds of subjects must appear here, whether they are topical in discourse or not. However, it is clear that the Kaqchikel preverbal subject position is lower than Comp, since it follows the complementizer:

- 33) Rin man w-etaman ta [<sub>CP</sub> wä [<sub>IP</sub> ri tz'i' x-roqotaj                         ri achin]].  
 I neg 1sErg-know neg if the dog com-3sErg-chase the man

‘I don’t know if the dog chased the man.’

- 34) A Manuel x-u-b'ij chwe' [<sub>CP</sub> chi [<sub>IP</sub> ri tz'i' x-u-b'a' ri a Ramon]].  
 cl Manuel com-3sErg-tell to:me that the dog com-3sErg-bite the cl Ramon

‘Manuel told me that the dog bit the man.’

The fact that preverbal subject follows the complementizer, shows that such subjects must be in a position like [Spec, IP].

## 9.2 Negative foci

Negated noun phrases (which are marked by *man*) must appear in the NegFoc position. When the negated NP is a transitive subject, the verb must appear in the actor focus form.

- 35) Man jun wä'y x-u-tij ri a Juan. [negation of object]  
 not one tortilla com-3sErg-eat the cl Juan

‘Juan ate no tortillas.’

- 36) \*X-u-tij man jun wä'y ri a Juan. [object in situ]  
 com-3sErg-eat not one tortilla the cl Juan

(Juan ate no tortillas.)

- 37) Man jun ni-xajo'. [negation of intransitive subject]  
 not one con-dance

‘Nobody is dancing.’

- 38) \*Ni-xajo' man jun. [intransitive subject in situ]  
 con-dance not one

- 39) Man jun x-tij-o' ri wä'y. [negation of transitive subject]  
 not one com-eat-af the tortilla.

‘Nobody ate the tortilla.’ 1:78

- 40) \*X-tij-o' man jun ri wä'y. /\* X-u-tij man jun ri wä'y.  
 com-eat-AF neg one the tortilla com-3sErg-eat not one the tortilla

(Nobody ate the tortilla.)

[transitive subject in situ]

### 9.3 Contrastive focus

Preceding the negative focus position is the contrastive focus position, generally used in a context where some other alternative is denied. If the contrastively focussed item is a transitive subject, the actor focus verb form is used.

- 41) Ja ri wä'y x-u-loq' Maria. [contrastive object]  
 foc the tortilla com-3sErg-buy Maria

'It was the tortillas that Mary bought.'

- 42) Ja ri a Juan x-tij-o/\*x-u-tij wä'y. [contrastive transitive subject]  
 foc the cl Juan com-eat-af tortilla

'It was Juan who ate the tortilla.'

- 43) Ja ri tetata' x-wär. [contrastive intransitive subject]  
 foc the old:man com-sleep

'It was the old man who slept.' (RKC 91)

We can tell the relative order from sentences that contain both sorts of foci.

- 44) Ja ri a Ramón man jun wä'y x-u-tij.  
 con the cl Ramon neg one tortilla com-3sErg-eat

'It was Ramón who ate no tortillas.' 1:82

The opposite order is ungrammatical.

- 45) \*Man jun wä'y ja ri a Ramón x-u-tij.  
 neg one tortilla con the cl Ramon com-3sErg-eat

\*(It was Ramón who ate no tortillas.)

In sentences with multiple foci, it is the closest focus that determines whether the actor focus form is used. For example, in (41), the plain form of the verb is used because the negative focus is an object. In a sentence with multiple foci, if the negative focus is a transitive subject then the actor focus form will be used:

- 46) Ja ri wä'y man jun achi x-tij-o.  
con the tortilla not one person com-eat-AF

'It's the tortillas that nobody ate.'

#### 9.4 Preverbal subjects

Preverbal subjects appear before both kinds of foci:

- 47) Ri nu-tz'i' ja ri a Juan x-u-b'a.  
the 1sErg-dog foc the cl Juan com-3sErg-bite

'It was Juan that my dog bit.'

- 48) Ri a Juan man jun wä'y x-u-tij.  
the cl Juan not one tortilla com-3sErg-eat

'Juan didn't eat any tortillas.'

Note that when transitive subjects appear in topic position they do not trigger actor focus morphology:

- 49) Ri xta Maria x-u-loq' ri q'or.  
the cl Maria com-3sErg-buy the atole

'Maria bought the atole.'

#### 9.5 Ordering principles

On the assumption that the two kinds of foci represent new information, it is possible to describe the order of the various elements in [Spec, IP] position with two simple ordering constraints: [-new] < [+new] and [-neg] < [+neg]. The first of these constraints is familiar as NEW from Choi (1999:97). The second is novel to this account.

### 10 Appendix 2 – Inanimate subjects

Aissen (1997) showed that in Tzotzil, inanimate transitive subjects are also marked and require the passive. In Kaqchikel, however, SVO order is not obligatory in such cases.

- 50) Ri kä'r x-u-yawa'risaj      ri w-ixjayil.  
the fish com-3sErg-make:sick the 1sErg-wife

‘The fish made my wife sick.’ 1:42

- 51) X-u-yawa'risaj      ri kä'r      ri w-ixjayil.  
com-3sErg-make:sick the fish the 1sErg-wife

‘My wife made the fish sick.’

‘The fish made my wife sick.’

- 52) Ri aq'on      x-u-k'achojrisaj      ri a Juan.  
the medicine com-3sErg-make:well the cl Juan

‘The medicine made John well.’

- 53) X-u-k'achojrisaj      ri aq'on      ri a Juan.  
com-3sErg-make:well the medicine the cl Juan

‘Juan fixed the medicine.’

‘The medicine cured Juan.’

This seems to show that a constraint like \*Subj/Inan &  $\emptyset_{\text{Infl}}$  must be ranked lower than \*STRUC in Kaqchikel.