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K'ICHE' AND THE STRUCTURE OF ANTIPASSIVE

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Verb agreement in the K'iche' agentive voice appears to deviate from the general ergative/absolutive system that K'iche' shares with other Mayan languages. This has led some to treat agreement in the agentive construction as falling outside the scope of the regular agreement system. It has also led to differing views regarding the appropriate syntactic representation of the agentive construction with respect to final transitivity vs. intransitivity. In this article we examine facts relevant to these issues and propose that the agentive voice is a detransitivizing antipassive construction. Recognition of this has the following consequences: (i) we can state a unified condition for the antipassive morphology, and (ii) we demonstrate that this nonregular agreement can be treated as a special case of the general K'iche' agreement system by adopting a lateral feature-passing analysis of the type proposed in Aissen 1987a. The proposed analysis also provides empirical justification for a heretofore somewhat weakly motivated claim of Relational Grammar, Postal's (1977) demotion analysis of antipassive.*

INTRODUCTION

1. This paper has one primary goal: to propose a coherent analysis that provides for K'iche' both a unified rule of verb agreement and a single generalization for the distribution of one antipassive marker, *-w*. While this is an apparently modest goal, it is one that, as far as we know, has not yet been achieved in the literature on K'iche'. More importantly, an analysis that successfully achieves this goal proves to have interesting ramifications for linguistic theory, bearing in particular on Postal's (1977) demotion analysis of antipassive and Aissen's (1987a) recent proposals on verb agreement. Further, the analysis bears on whether or not the agentive (or focus) antipassive is syntactically finally transitive or intransitive in K'iche', an issue of some debate in Mayan linguistics.

Our proposal, carried out within the framework of Relational Grammar, meets the criterion set out above. Crucial aspects of the analysis are the incorporation of Postal's demotion analysis of antipassive and Aissen's construct of lateral feature-passing. An analysis incorporating the demotion analysis of antipassive necessarily treats antipassive as syntactically (finally) intransitive; therefore, we contend that the agentive antipassive in K'iche' is intransitive in the final level of syntactic representation.

In order to make clear what issues are involved here, we will begin by presenting the two K'iche' grammatical phenomena to be accounted for and identifying the theoretical issues involved.

* The spelling 'K'iche'' rather than the more familiar 'Quiche' reflects the reformed spelling system recently proposed by the Mayan Languages Academy. This spelling system is used throughout for the K'iche' data. We would like to thank Judith Aissen, Stan Dubinsky, Nora England, Paul Postal, and Frank Trechsel for helpful and engaging comments of earlier drafts of this work. Any errors or omissions are the responsibility of the authors.

THE LANGUAGE PROBLEMS TO BE SOLVED

2.1. NONREGULAR AGREEMENT IN K'ICHE'. Of the two K'iche' constructions often referred to as antipassive, one, the focus (or agentive) voice antipassive (hereafter ANTIPASSIVE),¹ shows a peculiar agreement pattern not found elsewhere in the language. The data in 1 and 2 illustrate this nonregular agreement.²

(1) *In x-in-il-o-w le achi.*

I ASP-1ABS-see-THV-AP the man
'I saw the man.'

(2) *Le achi x-in-il-o-w in.*

the man ASP-1ABS-see-THV-AP me
'The man saw me.'

Exx. 1 and 2 show that in the antipassive, when one argument is first-person singular (1SG) and the other third-person singular (3SG), the verb always takes the 1SG absolutive agreement marker, *in*, regardless of the arguments' thematic relations. In 1, *in* 'I' is the experiencer and *le achi* 'the man' is the patient, as reflected in the translation. Conversely, in 2 *le achi* is the experiencer and *in* the patient. Similar facts are illustrated in 3 and 4, in which the second-person singular is an agent in 3 but a patient in 4.³

(3) *La at x-at-kuna-n le ajkun?*

Q you ASP-2ABS-cure-AP the doctor
'Was it you who cured the doctor?'

(4) *La are' le ajkun x-at-kuna-n-ik?*

Q FOC the doctor ASP-2ABS-cure-AP-IN.SUF
'Was it the doctor who cured you?'

This agreement pattern deviates from the usual system, in which final transitive subjects are crossreferenced by ergative affixes while final direct objects

¹ This construction has been variously referred to as 'focus antipassive' (Larsen 1987, Dayley 1985), 'agentive voice' (Smith-Stark 1978), and 'voice 5' (Mondloch 1978). It contrasts with the 'absolutive antipassive', which we discuss briefly in §2.2.

² The data represent the so-called six-vowel dialect of K'iche', in which vowel length is not phonemic. Except where noted, the data reflect the grammaticality and orthographic judgments of the second author; at times, they may be at variance with some previous work. When citing examples from other sources, vowel length is marked by a double vowel. We use the following abbreviations in the morphemic glosses for the K'iche' data: ABS = absolutive, AP = antipassive marker, ASP = aspect marker, DS = derivational suffix, ERG = ergative, FOC = focus marker, GEN = genitive, HON = honorific, IN.SUF = intransitive final suffix, INSTR = instrument or instrument advancement marker, Q = question particle, P = preposition, PASS = passive marker, PL = plural, PROG = progressive, R = retreat marker, SG = singular, THV = thematic vowel, TR.SUF = transitive final suffix.

³ There are two antipassive markers in K'iche' which vary according to the form of the verb stem: *-w* is used with root transitive verbs (RTV) and *-n* is used with derived transitive verbs (DTV). We take up the issue of morphology in more detail in §2.2.

and intransitive subjects are crossreferenced by absolutive affixes.⁴ The regular case is illustrated in 5–8.

(5) *X-at-r-il le achi.*

ASP-2ABS-3ERG-see the man

'The man saw you.'

(6) *X-∅-aw-il le achi.*⁵

ASP-3ABS-2ERG-see the man

'You saw the man.'

(7) *X-at-atin-ik.*

ASP-2ABS-bathe-IN.SUF

'You took a bath.'

(8) *X-∅-atin le achi.*⁶

ASP-3ABS-bathe the man

'The man took a bath.'

The data in 5–8 confirm that, as in many Mayan languages, simple nonembedded clauses show a typical ergative/absolutive system for crossreferencing subjects and direct objects.

The agreement pattern in the antipassives in 1–4 might appear to undermine attempts at a unified agreement rule for K'iche', as essentially concluded by Norman & Campbell (1978). They propose that the usual K'iche' agreement rule is suspended in this construction: 'verb agreement is controlled not by syntactic relations of NPs but by their position on the [participant] hierarchy' (Norman & Campbell 1978:150). Thus, the first problem is set: can verb agreement in antipassive clauses be unified with the agreement rule at work elsewhere in the language?

2.2. ANTIPASSIVE MORPHOLOGY IN K'ICHE'. The K'iche' grammatical system includes a number of different voices (see Mondloch 1978 for details). Each of these voices (excluding the active voice) triggers a distinctive suffix in the verbal complex of a clause. In this section we consider the morphology associated with antipassives.

As stated above, within K'iche' in particular, and within Mayan languages as a group, generally two types of antipassive constructions have been identified (cf. Smith-Stark 1978 and Craig 1979 for general discussion of Mayan antipassives). Following work of Silverstein (1976) and Heath (1976), these constructions have been labelled 'antipassive' because normally transitive verbs take on characteristics of intransitives, yet the agent or actor retains its

⁴ Mayanists use the labels 'Set A' and 'Set B' for what we call the ergative and absolutive affixes, respectively, in part because the Set A affixes are also used to mark possession. Inasmuch as our interest in them here is strictly with verb agreement, we use the labels 'ergative' and 'absolutive' for ease of exposition.

⁵ We follow Mayanist tradition and indicate the unmarked third-person singular absolutive affix as ∅.

⁶ The intransitive final suffix *-ik* occurs on intransitive verbs only when the verb occurs phrase-finally. Thus, while it appears in 7, it is absent in 8. See Kaufman 1986 and Larsen 1988 for discussion.

subject properties. The first of the K'iche' antipassives is the agentive or focus antipassive exemplified in §2.1. In this construction the agent (or actor) must be extracted, i.e., it must be focused (as in 9), questioned (as in 10), or relativized (as in 11). In each, the agent OBLIGATORILY precedes the verb.

- (9) *Le achi x-in-il-o-w in.*
 the man ASP-1ABS-see-THV-AP me
 'The man saw me.'
- (10) *Jachin x-in-il-o-w in?*
 who ASP-1ABS-see-THV-AP me
 'Who saw me?'
- (11) *le achi le x-in-il-o-w in*
 the man the ASP-1ABS-see-THV-AP me
 'the man that saw me'

The agentive antipassive contrasts with the K'iche' absolutive antipassive, in which there is no necessary extraction of the agent and the patient is generally unrealized or nonreferential. Examples are given in 12 (from Mondloch 1981) and 13 (from Trechsel 1982).

- (12) *K-ee-q'ojom-a-n lee alab'oom.*
 ASP-3PL.ABS-play-THV-AP the boys
 'The boys play (a musical instrument [marimba]).'
- (13) *K-ee-b'ixa-n lee ak'al-aab' pa ja.*
 ASP-3PL.ABS-sing-AP the child-PL in house
 'The children sing indoors.'

In 12 and 13 the logical object is not overt; a prototypical object is assumed ('marimba' in 12 and 'song' in 13). Only the agent of the action is crossreferenced on the verb.

In addition to the differences in required extraction and agreement phenomena, the two constructions differ in voice marking. As we have seen, the agentive antipassive takes the suffix *-w* with a root transitive verb (RTV) and *-n* with a derived transitive verb (DTV).⁷ Henceforth, we will refer to this as AP morphology. AP morphology contrasts in a subtle way with the morphology that marks the absolutive voice. This contrast is more clearly illustrated with another construction that takes the same morphology as the absolutive voice. These other clauses contrast with the agentive antipassives in 1–4 and 9–11 in that the patient takes 'dative' morphology, signalled by the preposition *chi* plus the possessed genitive relational noun, *e(ch)*.⁸ This clause type is illustrated in 14 and 15, counterparts of 2 and 4, respectively.⁹

⁷ Essentially, RTVs are monosyllabic CVC verbs, and derived transitive verbs have polysyllabic roots. Cf. Mondloch 1981 for further discussion.

⁸ RELATIONAL NOUN is a term used by Mayanists to denote a set of obligatorily-possessed noun stems that signal nonnuclear term grammatical relations of nominals (or, alternatively, thematic roles of nominals bearing nonnuclear term relations). The nominal that bears the grammatical relation acts as the possessor of the relational noun and is crossreferenced by the appropriate morpheme from the set of ergative agreement markers. Thus, in 14, the indirect object 'I' is realized by the 1ERG morpheme, *w*, affixed to the genitive relational noun *e*.

⁹ Sam-Colop 1988 analyzes these clauses as instances of 2–3 retreat, constructions in which the

- (14) *Le achi x-Ø-il-o-n ch-w-e.*
 the man ASP-3ABS-see-THV-R P-1ERG-GEN
 'The man saw me.'
- (15) *La are' le ajkun x-Ø-kuna-n ch-aw-e?*
 Q FOC the doctor ASP-3ABS-cure-R P-2ERG-GEN
 'Was it the doctor who cured you?'

The voice morphology in these RETREAT clauses differs subtly from that in the antipassive—in the retreat clauses it is INVARIANTLY *-n*. With DTVs such as *kuna* 'cure' in 15, the suffix is not distinct from the antipassive suffix in 3 and 4. However, with RTVs such as *il* 'see', the antipassive has the reflex *-w*, as in 1 and 2, while the retreat construction is marked by *-n*, as in 14.

The distinction between antipassive morphology and retreat morphology is thus slight but nonetheless significant. For example, substituting antipassive morphology for retreat morphology in 14 renders the clause ungrammatical:

- (16) **Le achi x-Ø-il-o-w ch-w-e.*
 the man ASP-3ABS-see-THV-AP P-1ERG-GEN
 (The man saw me.)

Likewise, substituting retreat morphology in the antipassive clause in 2 results in an ungrammatical string.

- (17) **Le achi x-in-il-o-n in.*
 the man ASP-1ABS-see-THV-R me
 (The man saw me.)

Thus, in addition to the presence or absence of prepositional marking on the patient and the regular vs. nonregular agreement, the antipassive and retreat suffixes are crucially controlled. Importantly, the absolutive voice construction in 12 and 13 also takes what we are calling retreat morphology.¹⁰

The AP morphology shows up in another construction as well. Some transitive roots can optionally occur as intransitives with the patient surfacing as the sole overt argument in the surface construction. Sentences 18 and 19 illustrate this.

patient demotes from direct object (2) to indirect object (3); R in the morphemic glosses stands for 'retreat'. Although the sentences in 14 and 15 have the logical subject focused, the logical subject of the retreat clauses need not be extracted, just as in the absolutive voice. Thus, the following are fully grammatical ((ii) is taken from Trechsel 1982).

- (i) *K-Ø-to'b'-a-n ri ak'al ch-e ri u-nan.*
 ASP-3ABS-help-THV-R the child P-GEN the 3ERG-mother
 'The child helps his mother.'
- (ii) *K-Ø-loq'o-n lee in-taat ch-w-ee.*
 ASP-3ABS-love-R the 1ERG-father P-1ERG-GEN
 'My father loves me.'

¹⁰ We speculate that the absolutive voice is simply a variant of the 2–3 retreat structure in which the logical object is unrealized. This sets up a very interesting contrast between K'iche' and Q'eqchi' (K'ekchi). Berinstein 1985 motivates an analysis of Q'eqchi' in which the agentive construction is 2–3 retreat and the absolutive construction has the type of relational structure that we will motivate for the K'iche' agentive construction. Thus if our analysis is correct and Berinstein's analysis of Q'eqchi' is correct, the two languages have the same syntactic structures but use them in the opposite way.

- (18) *La k-e-tij-o-w le raqantix?*
 Q ASP-3PL.ABS-eat-THV-AP the elephants
 'Are elephants eaten?'
- (19) *X-Ø-raqi-n le pupuj.*
 ASP-3ABS-break-AP the balloon
 'The balloon exploded.'

In 18 *tij* 'eat', an RTV, is marked with the *-w* antipassive marker, and in 19 *raqi* 'explode', a DTV, takes the *-n* antipassive marker. These clauses are not passives and do not have a passive meaning. They have been variously described as 'pseudopassives' (Mondloch 1981), 'inactives' (Norman & Campbell 1978), and 'middles' (Smith-Stark 1978). They contrast with true passives, in which the patient is also the final subject but which take the passive voice marker *-x* if DTV (as in 20) and no special morphology if RTV (21).¹¹

- (20) *X-Ø-raqi-x le pupuj.*
 ASP-3ABS-explode-PASS the balloon
 'The balloon was exploded.'
- (21) *Je, le raqantix k-e-tij-ik.*
 yes the elephant ASP-3PL.ABS-eat-IN.SUF
 'Yes, elephants are eaten.'

Here, then, is the other morphological phenomenon to be explained: Why do antipassives and 'inactives' take the same voice morphology?

In his brief discussion of these K'iche' phenomena, Smith-Stark (1978:172) essentially sets up the problems that we wish to address in this paper:

'First, why should certain verbs formed like antipassives have middle meaning? Second, why should the subject of the antipassive form agree with the patient instead of the agent? Third, there is no obvious explanation of why the antipassive should include agent promotion functions.'

In what follows, we propose an analysis that focuses on Smith-Stark's questions, providing a unified solution.

'REGULAR' K'ICHE' VERB AGREEMENT

3. Within the framework of Relational Grammar, one can posit an informal verb agreement rule (for all but the antipassive construction) as:

- (22) K'ICHE' VERB AGREEMENT: Final nuclear terms (i.e. 1 and 2) trigger person and number agreement affixes on the verb bearing the predicate relation in that final stratum.

Accompanying 22 will be a morphological realization statement along the lines of 23:

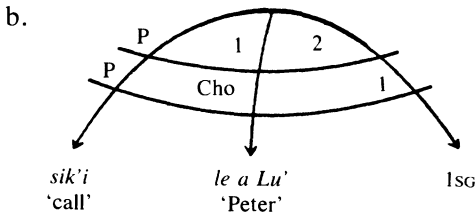
¹¹ The difference between the inactive and passive constructions is dramatically illustrated by the fact that, while the passive can take an expressed agent (i), the inactive cannot (ii).

- (i) *La k-e-tij le raqantix k-umal le winaq?*
 Q ASP-3PL.ABS-eat the elephants 3PL.ERG-by the people
 'Are elephants eaten by the people?'
- (ii) **La k-e-tij-o-w le raqantix k-umal le winaq?*
 Q ASP-3PL.ABS-eat-THV-AP the elephants 3PL.ERG-by the people
 (Are elephants eaten by the people?)

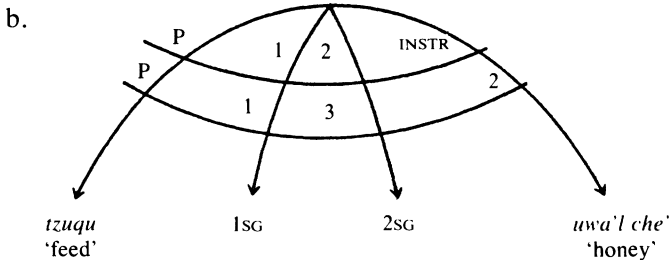
- (23) VERB AGREEMENT MORPHOLOGY: Agreement controllers that are final ergatives are crossreferenced by ergative (Set A) affixes and those that are final absolutes by absolutive (Set B) affixes.¹²

The statements in 22 and 23 account for the agreement facts in 5–8 inasmuch as these are single-stratum structures in an RG representation. The need to specify FINAL nuclear terms as relevant to the K'iche' agreement rule is evident from the passive (24) and instrumental advancement (25) constructions in the language.

- (24) a. *X-in-sik'i-x r-umal le a Lu'.*
 ASP-1ABS-call-PASS 3ERG-by the Peter
 'I was called by Peter.'



- (25) a. *Uwa'l che' x-Ø-in-tzuqu-b'e-j aw-e.*
 honey ASP-3ABS-1ERG-feed-INSTR-DS 2ERG-GEN
 'I fed you with honey.'



In the passive 24, the 1SG argument controls agreement as the final 1, which is morphologically realized as *in* '1ABS' since the passive is finally intransitive. In the instrumental advancement construction 25, *uwa'l che* 'honey' has advanced to 2 from its initial instrument relation and controls '3ABS' agreement on the verb. The initial 2 has demoted to 3 and can no longer control agreement in this clause.¹³

The agreement facts in 24 and 25 show that the arguments that control agreement in the regular case must be FINAL nuclear terms; INITIAL termhood is not relevant either to agreement controllers or to the form of the agreement affix.

¹² ERGATIVE and ABSOLUTIVE are defined relations in Relational Grammar which essentially correspond to traditional notions of 'ergative' and 'absolutive'. However, RG defines these relations relative to a particular stratum; so, for example, an element that is ergative in an initial transitive stratum will be absolutive in a later, intransitive stratum. For formal definitions see Postal 1977.

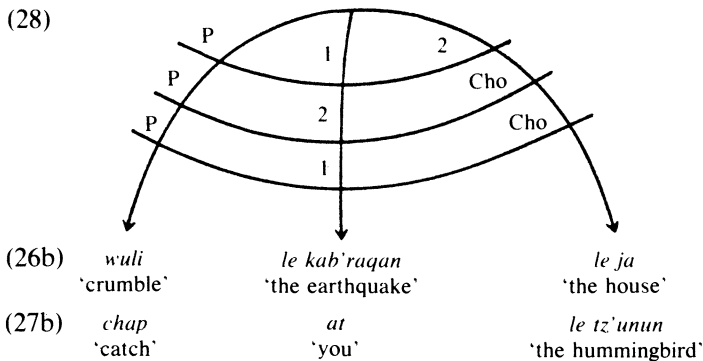
¹³ For more on the instrumental advancement construction, see Norman 1978a and Sam-Colop 1988.

THE AGENTIVE VOICE AS AN ANTIPASSIVE

4. Antipassive is generally recognized cross-theoretically as a detransitivizing phenomenon in which the canonical subject (prototypically an agent) of a transitive predicate remains the subject and the canonical direct object (prototypically a patient) loses its objective properties.¹⁴ Depending on the theoretical framework, antipassivization is taken to be either syntactic or lexical. The clauses in 26a,b and 27a,b are active/antipassive pairs.

- (26) a. *Le kab'raqan x-∅-u-wuli-j le ja.*
 the earthquake ASP-3ABS-3ERG-crumble-DS the house
 'The earthquake crumbled the house.'
- b. *Le kab'raqan x-∅-wuli-n le ja.*
 the earthquake ASP-3ABS-crumble-AP the house
 'The earthquake crumbled the house.'
- (27) a. *La x-∅-a-chap le tz'unun?*
 Q ASP-3ABS-2ERG-catch the hummingbird
 'Did you catch the hummingbird?'
- b. *La at x-at-chap-o-w le tz'unun?*
 Q you ASP-2ABS-catch-THV-AP the hummingbird
 'Was it you who caught the hummingbird?'

If we assume a simple transitive structure for 26a and 27a and an antipassive structure for 26b and 27b, the agreement patterns follow from the rules in 22 and 23. The subjects of the transitive clauses, *le kab'raqan* 'the earthquake' and 2SG, are each crossreferenced by ergative affixes, *u* '3ERG' and *a* '2ERG', respectively. There is 3ABS agreement, \emptyset , with each of the direct objects. If one provisionally assigns the antipassive structure in 28 to 26b and 27b, the



¹⁴ Taking a functional perspective, Heath 1976 outlines a number of functions that a detransitivizing rule of antipassive may fulfill. The most obvious one fitting the case of the K'iche' agentive antipassive is that of 'agent promotion', i.e. making the agent accessible to some syntactic construction, such as extraction. If one maintained that absolutes but not ergatives were available for extraction, the functional load of the agentive construction might be explicable. For example, Berinstein 1985 takes such a position with respect to 2-3 retreat in Q'eqchi'. We address the issue of what elements may be extracted in K'iche' below.

absolutive agreement of the subjects follows straightforwardly.¹⁵ As reflected in 28, the antipassive is a finally intransitive structure, and the subject, *le kab'raqan* 'the earthquake' in 26b and *at* 'you' in 27b, is a final absolutive. Therefore, the absolutive agreement morphology in these clauses is expected.

The final intransitivity of the agentive voice also seems indicated in the choice of the final verbal suffix. When the clause is finally transitive, the verb may take the plain transitive final suffix *-o/-u* (the shape of which is phonologically conditioned), as shown in 29 and 30.

- (29) *X-Ø-in-kem-o.*
 ASP-3ABS-1ERG-waive-TR.SUF
 'I waived it.'
- (30) *Jasche x-Ø-a-pus-u?*
 why ASP-3ABS-2ERG-split-TR.SUF
 'Why did you split it?'

As seen in previous data, in finally intransitive constructions, verbs take the intransitive final suffix *-ik* phrase-finally, as in 31b.

- (31) a. *X-Ø-atin le achi.*
 ASP-3ABS-bathe the man
 'The man took a bath.'
- b. *Le achi x-Ø-atin-ik*
 the man ASP-3ABS-bathe-IN.SUF
 'The man took a bath.'

In the antipassive, if the verb occurs phrase-finally, only the intransitive final suffix can occur (32a); if one attempts to use the transitive final suffix, the clause is rendered ungrammatical (32b).

- (32) a. *Are' le kab'raqan x-Ø-wuli-n-ik.*
 FOC the earthquake ASP-3ABS-crumble-AP-IN.SUF
 'It was the earthquake that crumbled it.'
- b. **Are' le kab'raqan x-Ø-wuli-n-o.*
 FOC the earthquake ASP-3ABS-crumble-AP-TR.SUF
 (It was the earthquake that crumbled it.)

The occurrence of the intransitive final suffix in 32a and the impossibility of the transitive final suffix in 32b provide additional evidence for the final intransitivity of antipassives, as reflected in the structure in 28.

AN ALTERNATIVE VIEW OF TRANSITIVITY

5. The view that the agentive antipassive is syntactically finally intransitive is not uncontroversial. Mayan languages show varying degrees of morphological and syntactic transitivity associated with parallel constructions. Craig (1979) has argued that the Jakalteke agentive construction is syntactically transitive—only the verb agreement would appear to signal final intransitivity.

¹⁵ The middle stratum, in which the initial 1 has demoted to 2, is provisionally adopted here following Postal's hypothesis. Nothing that we are proposing in this section depends on the existence of this stratum. We present positive evidence for it in §6.

Ayres (1983) has proposed that in Ixil the agentive antipassive is syntactically transitive, the construction exhibiting morphological characteristics of both transitive and intransitive constructions. Within the literature on K'iche', both points of view have been expounded; Mondloch 1978 and Smith-Stark 1978 take the position that the construction is syntactically intransitive, and Larsen 1988 takes the construction to be finally transitive.¹⁶

Regardless of the analysis adopted for the antipassive, in some cases the agreement cannot be accounted for simply by the general agreement rules 22 and 23 that are at work elsewhere in the language. The problem is then to determine what else is necessary to account for the agreement facts in this construction.

A number of proposals have been made, each of which posits a construction-specific agreement rule. Norman & Campbell (1978) propose that, in the antipassive, agreement is determined along a participant hierarchy that they give as the following:

- (33) 1st person, 2nd person > 3rd person plural > 3rd person singular

This proposal adequately accounts for the agreement facts. In the antipassive, at least one of the arguments must be 3rd person (singular or plural); therefore, 1st and 2nd persons can share a place on the hierarchy. We have seen in 1–4 that 1st and 2nd person are marked regardless of final grammatical relations when the other argument is 3SG. The data in 34–36 further illustrate the viability of Norman & Campbell's proposal.

- (34) a. *In x-in-il-o-w le ak'al-ab'.*
 I ASP-1ABS-see-THV-AP the child-PL
 'I saw the children.'
- b. *E are' le ak'al-ab' x-in-il-o-w in.*
 PL FOC the child-PL ASP-1ABS-see-THV-AP me
 'It is the children who saw me.'
- (35) a. *At x-at-riq-o-w ri ak'al-ab'.*
 YOU ASP-2ABS-find-THV-AP the child-PL
 'You found the children.'
- b. *E are' ri ak'al-ab' x-at-riq-o-w at.*
 PL FOC the child-PL ASP-2ABS-find-THV-AP you
 'It is the children who found you.'
- (36) a. *Ri ak'al-ab' x-e-tzuq-u-w ri a Lu'.*
 the child-PL ASP-3PL.ABS-feed-THV-AP the Peter
 'The children fed Peter.'
- b. *Ri a Lu' x-e-tzuq-u-w ri ak'al-ab.*
 the Peter ASP-3PL.ABS-feed-THV-AP the child-PL
 'Peter fed the children.'

In 34 one argument is first singular and the other third plural, but first-person agreement is marked regardless of the thematic roles of the arguments; in 34a

¹⁶ Aissen 1980 cites Norman 1978b and Trechsel 1979, both of which are unpublished and unavailable to us, as supporting the transitive analysis in K'iche'.

the experiencer is 1st singular and the patient 3rd plural, while in 34b the experiencer is 3rd plural and the patient 1st singular. Thus, as reflected in Norman & Campbell's hierarchy, 1st person outranks 3rd plural. Ex. 35 provides parallel evidence that 2nd person outranks 3rd plural, and 36 provides evidence that 3rd plural outranks 3rd singular.

Smith-Stark (1978) has countered the Norman & Campbell proposal with a phonological-weight proposal. There are 2nd-person honorific forms, *lal* 'HON.SG' and *alaq* 'HON.PL', that take no overt crossreferencing on the verb. In the antipassive, they pattern with the 3rd-person singular. Thus, we find the following data:

- (37) a. *In x-in-kuna-n ala q.*
 I ASP-1ABS-cure-AP HON.PL
 'I am the one who cured you (PL, HON).'
- b. *Lal x-e-riq-o-w le ak'al-ab'.*
 HON.SG ASP-3PL.ABS-find-THV-AP the child-PL
 'You (HON) found the children.'
- c. *Alaq x-∅-riq-o-w le ak'al.*
 HON.PL ASP-3ABS-find-THV-AP the child
 'You (PL, HON) found the child.'

Arguing on the basis that the \emptyset -marked 2nd-person honorific should be grouped with the 3SG and not the 1st and 2nd persons on the Norman & Campbell hierarchy, Smith-Stark suggests that the agreement morphology is selected on the basis of the number of segments in the agreement affix. The 1SG, 1PL, 2SG, and 2PL absolutive affixes, *in*, *uj*, *at*, and *ix*, respectively, are all of the form VC, while the 3PL absolutive is *e*. Thus he proposes the following hierarchy:

- (38) VC > V > \emptyset

Again, this is adequate to describe the facts but it seems less motivated than a participant hierarchy. Since the honorific forms are never crossreferenced by agreement affixes, they are best analyzed as falling outside the agreement system altogether. In addition, participant and animacy hierarchies of the type proposed by Norman & Campbell have also been proposed to account for a variety of phenomena in a number of languages (cf. Frishberg 1972, Allen & Frantz 1983), while it is difficult to find analogues of the Smith-Stark phonological-weight hierarchy for morphosyntactic phenomena.

In neither proposal is the issue of final syntactic transitivity or intransitivity of antipassives immediately important. In both cases a special agreement rule must be proposed for the antipassive construction, and in both cases it is suggested that reference to grammatical relations is suspended in the determination of agreement for the antipassive construction. If the agreement rule for antipassive is indeed special, then nothing crucial rests on the analysis of these clauses as having finally transitive or intransitive syntactic structures. It should also be noted that in both cases one is left without a unified agreement rule for K'iche'. We return to the issue of verb agreement in §7.

As stated above, Craig (1979) has argued for the transitive analysis of the agentive construction in Jakalteq. Despite the fact that there is a single ab-

solutive agreement affix on the verb and a marker reminiscent of antipassive morphology, Craig argues convincingly that the construction is not antipassive but is simply the extraction of the ergative argument with concomitant deletion (or suppression) of ergative agreement.¹⁷ Aissen (1980) suggests that a similar analysis might work for K'iche', inasmuch as the final 1 of the antipassive is obligatorily extracted.

However, relativization facts concerning ergatives cast some doubt on the transitive analysis of the agentive construction for K'iche'. In the majority dialect of K'iche',¹⁸ nearly any argument can be relativized. In K'iche' the relative clause follows its head and is introduced by one of the determiners *le* or *ri*. If the final absolutive is relativized, there is no resumptive element in the relative clause, as in 39 and 40.

(39) *ri achi* [*ri x-Ø-u-kuna-j* *ri a Lu'*]
 the man the ASP-3ABS-3ERG-cure-DS the Peter
 'the man whom Peter cured'

(40) *le uwa'l che'* [*le x-Ø-in-tzuqu-b'e-j* *aw-e*]
 the honey the ASP-3ABS-1ERG-feed-INSTR-DS 2ERG-GEN
 'the honey (with) which I fed you'

In 39 the final 2, *ri achi* 'the man', has been relativized. In 40, an instrument-2 advancement clause, the final 2, *le uwa'l che'* 'the honey', has been relativized. In each case, there is no resumptive element in the relative clause. However, when 3s and obliques are relativized, a resumptive element must occur in the relative clause to ensure grammaticality:

(41) *le achi* [*le x-Ø-in-ya'* *le wuj* *(*ch-e*)]
 the man the ASP-3ABS-1ERG-give the book P-GEN
 'the man that I gave the book to'

(42) *ri ali* [*ri uchachal b'e k-Ø-a-kuna-b'e-j* *(*r-e*)]
 the girl the verbena ASP-3ABS-2ERG-cure-INSTR-DS 3ERG-GEN
 'the girl whom you cure with verbena (medicinal plant)'

(43) *ri ak'al* [*ri tajin k-in-kuna-n* *(*ch-e*)]
 the boy the PROG ASP-1ABS-cure-R P-GEN
 'the boy whom I am curing'

(44) *le tinimit* [*le k-in-chakun* *(*wi*)]
 the town the ASP-1ABS-work LOC
 'the town in which I work'

In 41 the 3, *le achi* 'the man', has been relativized and the dative element for third person singular, *ch-e*, occurs in the relative clause. In 42 the initial 2-final 3 of the instrumental advancement construction, *ri ali* 'the girl', has been rela-

¹⁷ In the Jakalteq agentive construction the verb takes the suffix *-n*, which is analyzed as an antipassive voice marker in other Mayan languages. However, Craig shows that, rather than marking antipassive, *-n* occurs only on transitive verbs in complex sentences, which include not only ergative extractions but also coördination constructions and aspectless complement clauses—neither of which involves deletion of ergative morphology.

¹⁸ Larsen 1988 and Sam-Colop 1988 report that some speakers of K'iche' apparently allow final ergatives to be extracted. Thus, our comments here are relevant only to the 'majority' dialect.

tivized, and the relevant relational noun *r-e* must occur in the relative clause. In 43 the initial 2-final 3 of a 2-3 retreat construction, *ri ak'al* 'the boy', has been relativized; again the relevant relational noun must occur in the relative clause. Finally, in 44, *le tinimit* 'the town' has been relativized, and a resumptive locative particle *wi* obligatorily occurs in the relative clause.

The only element that seems inaccessible to relativization is a passive agent. Ex. 45 shows that the final 1 of a passive may be relativized, and 46 shows that the initial 1 of a passive may not be relativized even if the agentive relational noun, *r-umal*, occurs in the relative clause.

(45) *ri ala* [*ri x-Ø-kuna-x* *r-umal le ajkun*]
 the child the ASP-3ABS-cure-PASS 3ERG-by the doctor
 'the child that was cured by the doctor'

(46) **le ajkun* [*le x-Ø-kuna-x* *ri ala (r-umal)*]
 the doctor the ASP-3ABS-cure-PASS the child 3ERG-by
 (the doctor that the child was cured by)

Given the previous data, the illformedness of 46 presents a curious hole in the paradigm of K'iche' relativization possibilities. One might attempt to attribute the ungrammaticality of 46 and relative clauses like it to the fact that the function of the passive voice is to foreground the patient and demote the agent. But this explanation might be questioned in light of relative clauses such as 42. In 42, an instrument-2 advancement construction, *uchachal b'e* 'verbena' has advanced to bear the 2 relation, presumably to foreground this element in the clause. However, the demoted argument, *ri ali* 'the girl', has been relativized. If one takes the function of the demoted arguments in passive and instrument-2 advancement to be parallel, then a functional explanation for the nonrelativizability of the passive agent in terms of its being a demoted argument is challenged.

Regardless of the status of such a functional interpretation, we would like to suggest that ergative arguments that never bear the absolutive relation simply cannot be relativized in K'iche'.¹⁹ If this is the case, we can at once account for the ungrammaticality of 46, and we can also account for Smith-Stark's observation that the K'iche' antipassive appears to have an 'agent-promotion function'. From a functional perspective, the agentive antipassive makes the agent accessible to relativization (and extraction in general) by making it an absolutive. (In fact, Mondloch 1981 and Larsen 1987 both posit that the agentive antipassive has just this function.) It has often been proposed that a function of relation-changing structures is to make an element accessible to some other construction.

This explanation for the K'iche' relativization facts is, of course, possible only under the finally-intransitive analysis of the agentive antipassive construction. We now turn to the issue of the AP morpheme, which also bears crucially on the viability of the transitive analysis.

¹⁹ Berinstein (1985:111) proposes a very similar constraint on extraction in Q'eqchi'. However, under Berinstein's analysis final ergatives in Q'eqchi' can be extracted.

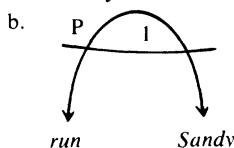
TOWARD A UNIFIED ANALYSIS OF AP MORPHOLOGY

6. In this section we make a proposal for a unified condition for triggering the AP morphology that is characteristic of antipassive. The unified statement depends crucially on adopting Postal's demotion analysis of antipassives.

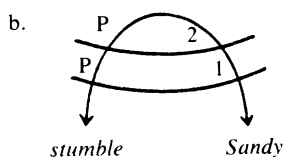
6.1. INACTIVES AND THE UNACCUSATIVE HYPOTHESIS. In §2.2 we briefly described the single-argument construction with AP morphology; for convenience we follow Norman & Campbell and refer to this construction as 'inactive'. In inactives, the object of a semantically transitive predicate is used in a syntactically intransitive construction with no implied agent. In addition to the different voice morphology, it is the lack of implied agent that sets the inactives apart from agentless passives. We propose to analyze inactives as unaccusatives.

Perlmutter (1978) and Perlmutter & Postal (1984) have proposed that initially intransitive structures can be distinguished in terms of whether the initial stratum contains a 1-arc but no 2-arc (UNERGATIVE) or a 2-arc but no 1-arc (UNACCUSATIVE). The English sentences in 47 and 48 illustrate an unergative and an unaccusative, respectively.

(47) a. *Sandy ran.*



(48) a. *Sandy stumbled.*



The proposal that a structure may be initially unaccusative, the Unaccusative Hypothesis, has received support from a wide variety of languages. (Cf. Dubinsky & Rosen 1987 for references.)

In discussing unaccusatives crosslinguistically, Rosen (1984) notes that particular predicates in specific languages may occur in structures with different initial configurations. Of special relevance here, she hypothesizes that some predicates may show an alternation between an initially transitive structure and an initially unaccusative structure. For instance, in Italian the predicate *aumentare* 'to increase' can be used transitively (ex. 49a) or intransitively (49b).

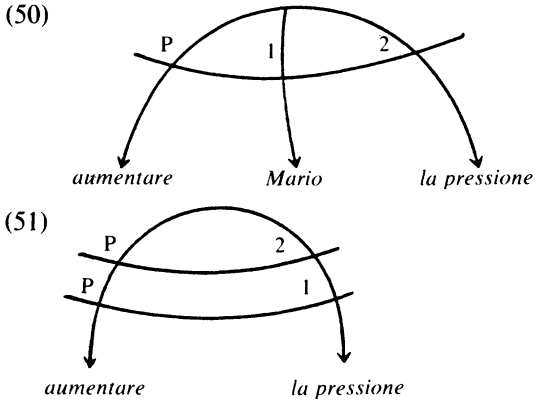
(49) a. *Mario ha aumentato la pressione.*

Mario has increased.MASC.SG the pressure
'Mario increased the pressure.'

b. *La pressione è aumentata.*

the pressure is increased.FEM.SG
'The pressure increased.'

Rosen demonstrates that many grammatical phenomena in Italian can be explained if 49a is assigned the simple transitive structure in 50 and 49b the unaccusative structure in 51.



Rosen 1988 proposes that the facts in 49–51 can be captured by assigning *aumentare* (and other verbs like it) a variable grammatical valence (the grammatical relations required in the initial stratum of a structure in which the predicate occurs). That is, *aumentare* requires that there be a 2 in its initial stratum (i.e., it requires a patient argument that maps onto an initial 2-arc) and optionally allows an initial 1 (i.e., it optionally allows an agent argument in addition to the patient argument). This information is schematically represented in 52.²⁰

(52) *aumentare* [(1) 2]

When the optional 1 is selected, an initially transitive structure, such as 50, is determined. When the option of not taking the 1 is exercised, an initially unaccusative structure is determined, as in 51.

Rosen 1984 suggests such an analysis for Sanskrit. Rosen cites examples such as 53:

- (53) a. *Devadattaḥ kusulam bhinatti.*
 D.NOM pot.ACC breaks
 ‘Devadatta breaks the grain pot.’
- b. *Kusulo bhidyate.*
 pot.NOM breaks.MIDDLE
 ‘The grain pot is breaking.’
 ‘The grain pot is being broken.’

In Sanskrit, *bhinatti/bhidyate* is among the set of bivalent verbs in which the sole argument of the intransitive corresponds to the initial 2 of the transitive. Example 53b, the intransitive, is ambiguous; it has an agentless passive meaning and a distinct ‘nonactive’ meaning. Rosen proposes that one can account for the fact that the nonactive and passive constructions share the *ya* morphology

²⁰ Davies & Dubinsky 1988 presents a more comprehensive proposal regarding the representation of lexical information within the framework of Relational Grammar.

by assigning an unaccusative structure to the nonactive clause and positing that *ya* marks 2–1 advancement in a clause. Analyses in this spirit have been proposed to capture lexical facts in a variety of languages, including Albanian (Hubbard 1985), English, Tzotzil (Aissen 1987b), and others. In some languages the unaccusative shares morphology with some other syntactic constructions, and in others it does not.²¹

We propose that K'iche' contains a small number of bivalent verbs that exhibit the same structural properties as described above for Italian and Sanskrit. Examples of active transitive/inactive pairs follow.

- (54) a. *Le q'aq' x-Ø-u-raqi-j le pupuj.*
 the heat ASP-3ABS-3ERG-break-DS the balloon
 'The heat broke the balloon.'
 b. *X-Ø-raqi-n le pupuj.*
 ASP-3ABS-break-AP the balloon
 'The balloon exploded.'
- (55) a. *Le tz'i' x-e-u-tij le alaj taq ak'.*
 the dog ASP-3PL.ABS-3ERG-eat the little PL chicken
 'The dog ate the chicks.'
 b. *La k-e-tij-o-w le alaj taq ak'?*
 Q ASP-3PL.ABS-eat-THV-AP the little PL chicken
 'Are chicks eaten?'
- (56) a. *Le kab'raqan x-Ø-u-wuli-j le ja.*
 the earthquake ASP-3ABS-3ERG-crumble-DS the house
 'The earthquake crumbled the house.'
 b. *X-Ø-wuli-n le ja.*
 ASP-3ABS-crumble-AP the house
 'The house crumbled.'

Exx. 54b, 55b, and 56b are morphologically identical to antipassive sentences containing the same predicates (57–59):

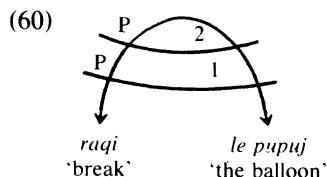
²¹ One language which parallels Sanskrit but which has distinct verbal morphology for transitive, unaccusative, and passive is Javanese. The verb *pecah* 'break' takes an obligatory initial 2 patient and an optional initial 1 agent. Examples (i)a–c illustrate transitive, passive, and unaccusative constructions.

- (i) a. *Musa mecah kendi né.*
 Musa ACT.break jar the
 'Musa broke the jar.'
 b. *Kendi né di-pecah (Musa).*
 jar the PASS-break Musa
 'The jar was broken (by Musa).'
 c. *Kendi né pecah.*
 jar the break
 'The jar broke.'

Interestingly, the verb 'break' in many languages seems to have the same possibilities for bivalency. It is true for Italian (Rosen 1984), Albanian (Hubbard 1985), English, and others. As we show below in ex. 54, it seems also to be true for K'iche'.

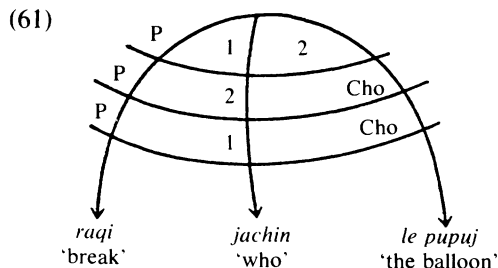
- (57) *Jachin x-Ø-raqi-n le pupuj?*
 who ASP-3ABS-break-AP the balloon
 'Who broke the balloon?'
- (58) *Jachin k-e-tij-o-w le alaj taq ak'?*
 who ASP-3PL.ABS-eat-THV-AP the little PL chicken
 'Who eats/eat the chicks?'²²
- (59) *Le kab'raqan x-Ø-wuli-n le ja.*
 the earthquake ASP-3ABS-crumble-AP the house
 'The earthquake crumbled the house.'

The 'b' sentences in 54–56 are not open to an antipassive analysis, however. For one thing, there are clear semantic differences. For another, the patient arguments in the inactive clauses are extractable (i.e., they can be relativized, focused, and questioned), whereas the patient arguments in the antipassive clauses are not. We analyze the inactive clauses in 54b, 55b, and 56b as initially and finally intransitive, while the antipassive clauses in 57–59 are initially transitive and finally intransitive. To capture the fact that these predicates can be used in initially transitive structures and initially intransitive structures, and to capture the fact that it is the patient of the transitive predicate that surfaces as the sole argument of the intransitive construction, we analyze the inactives as unaccusatives. Thus, 54b, 55b, and 56b would share the structure in 60.



In the following section we show that adopting the unaccusative analysis of inactives together with the demotion analysis of antipassives permits a unified account of the antipassive morphology.

6.2. AP MORPHOLOGY AS A REFLEX OF UNACCUSSATIVE ADVANCEMENT. Granting an unaccusative analysis for K'iche' inactives, we are now in a position to propose that what we have been calling AP morphology is actually a reflex of Unaccusative Advancement, i.e. 2–1 advancement from an intransitive stratum. Under the demotion analysis of antipassive proposed by Postal (1977), the antipassive in 57 would have the structure in 61.



²² The sentence in 58 is ambiguous because the 3PL.ABS marker *e* may be crossreferencing either the agent or the patient argument.

In 61 the initial 1, *jachin* 'who', demotes to 2 in the second stratum, c_2 . Stratum c_2 is an unaccusative stratum. The advancement of *jachin* from 2 to 1 in stratum c_3 is an instance of Unaccusative Advancement. Thus the structure in 61 shares two important elements with that in 60: (i) the predicate is a transitive stem, and (ii) the structure contains Unaccusative Advancement. It is these two conditions which, we claim, trigger the AP morphology on the verb.

Unaccusative Advancement is crucially different from 2–1 advancement in passives. As shown in the structure for the passive in 24b (and proposed in Perlmutter & Postal 1977), passive contains 2–1 advancement from a transitive stratum. Thus, the reflex of passive is explicably different from the reflex of Unaccusative Advancement discussed here. We therefore propose the following informal morphological rule for K'iche'.

- (62) AP MORPHOLOGY: If a clause contains Unaccusative Advancement, then the verb of that clause takes the suffix *-w* if it is RTV and *-n* if it is DTV.²³

The account proposed here depends on the adoption of the demotion analysis of antipassive. Without the demotion analysis of antipassive this generalization could not be obtained. Inasmuch as analyses taking the antipassive to be finally transitive (cf. §5) are incompatible with the demotion analysis, these transitive analyses will be unable to capture the generalization regarding AP morphology. Therefore, to the extent that our proposed analysis captures a significant generalization in K'iche', the analysis provides empirical support for Postal's demotion analysis of antipassive.

6.3. THE ANTIPASSIVE/2–3 RETREAT CONSTRUCTION. There is a further clause type that provides support for the viability of our analysis and for our claim that it is superior to analyses that take the K'iche' antipassive as finally transitive. This construction exhibits some antipassive properties—the initial 1 is focused and the verb takes the AP suffix. However, there are two important differences; the initial 2 is marked by the genitive, and the initial 2 is never crossreferenced on the verb. This is illustrated in 63 and 64 (from Mondloch 1981).²⁴

- (63) *Ix x-ix-yoq'-o-w r-ee lee achi.*
 you ASP-2PL.ABS-mock-THV-AP 3ERG-GEN the man
 'You are the ones who mocked the man.'
- (64) *At x-at-kuna-n q-ee.*
 you ASP-2ABS-cure-AP 1PL.ERG-GEN
 'You cured us.'

This construction type is important because it provides a further instance of

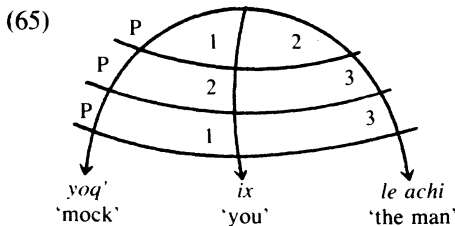
²³ This can be stated somewhat more formally as in (i):

(i) If a clause contains an arc A of the form $[2(a,b)(c_x c_i)]$ and an arc B $[1(a,b)(c_{i+} c_y)]$ and contains no arc C $[1(d,b)(c_z c_i)]$, then the verb *v* heading arc $[P(v,b)(c_i c_r)]$ takes the suffix *-w* if it is RTV and *-n* if it is DTV.

²⁴ Frank Trechsel informs us that in the dialect of K'iche' he has studied ANY agentive antipassive clause may alternatively occur in what we are calling antipassive/2–3 retreat—that is, with genitive marking of the initial 2 and crossreferencing of the subject only.

the AP marker, yet differs in crucial details from the previous constructions we have considered. In particular, it lacks the two morphological properties that have led some to consider antipassive finally transitive—agreement with the initial 2 and lack of special marking on the initial 2. Therefore, there is presumably no evidence that would lead to a finally transitive analysis of this construction. At the same time, it takes AP morphology. How can these diverse facts be incorporated into a single analysis?

Sam-Colop (1988) has proposed that this construction combines two structures in the language productively, antipassive and 2–3 retreat, so that 63 has the structure in 65.



Structure 65 accounts for the relevant facts. First, final 3s never determine agreement in K'iche', so the lack of agreement with the initial 2 is explained. Second, 2s that retreat to 3 under the influence of some other revaluation (here the antipassive demotion of the initial 1 to 2) are marked with the genitive (cf. instrumental advancement in 25 and arguments in Sam-Colop 1988).²⁵ This marking contrasts with that of all other 3s, namely, initial 3s and 3s that demote directly. Third, the final 1 is referenced by an absolutive agreement marker since the structure is finally intransitive. Fourth, the AP morphology is accounted for by the proposed condition 62 inasmuch as the structure in 65 contains Unaccusative Advancement. Thus, recognition of the structure in 65 allows one to capture a generalization regarding AP morphology that would otherwise be unavailable.

Perhaps the most important problem facing a transitive analysis (an analysis that takes the agentive antipassive to be syntactically finally transitive) is the lack of a unified statement for AP morphology of the type in 62. Clearly, an account like 62 is unavailable in a transitive treatment of the agentive construction. What alternatives are available? One might attempt to link AP morphology to a transitive verb's losing its slot for ergative agreement morphology. As stated above, Craig (1979) has proposed for Jakalteq that, when the ergative argument is extracted, ergative morphology is lost, i.e. deleted or suppressed. The claim would then be that when ergative agreement is unavailable to a transitive verb—through deletion, suppression, or change in syntactic structure—AP morphology occurs. This proposal fails because such an account will be unable to distinguish cases where AP morphology is desired from cases where passive or 2–3 retreat morphology is called for, other cases in which

²⁵ Instrument-2 Advancement inducing the existing 2 to retreat to 3 has been proposed for Pokomam (Perlmutter & Postal 1983, based on Smith-Stark 1976) and Kinyarwanda (Perlmutter & Postal 1983, Perlmutter 1987).

transitive verbs lose the ability to take ergative morphology. Nor is there any obvious way to link AP morphology to extraction of the ergative. First, no extraction is necessary for AP morphology with unaccusatives, let alone extraction of an ergative. Second, initial ergatives (which are final absolutes) in 2–3 retreat structures can be extracted without triggering AP morphology; instead, retreat morphology is triggered. And third, the antipassive/2–3 retreat clauses are demonstrably finally intransitive; in these clauses an initial ergative/final absolute is extracted and the result is AP morphology. Thus, it appears that the AP morphology cannot be tied to extraction of initial or final ergatives, or in fact to extraction at all. It therefore remains unclear what type of statement governing the occurrence of AP morphology is available except for a construction-by-construction cataloguing, and an important generalization within K'iche' is unavailable. The transitive analysis, then, fails to meet a primary goal set out at the beginning of this paper.

Recognizing both the antipassive and antipassive/2–3 retreat structures can also provide a generalization regarding the obligatory extraction of the initial subjects of these structures. The AP structure in 61 and the AP/2–3 retreat structure in 65 share the property of demotion of the initial 1 to 2. We therefore propose that it is precisely this configuration of arcs that conditions the obligatory extraction of the initial 1. This is parallel to Berinstein's 1985 proposal that 2–3 retreat conditions obligatory extraction in Q'eqchi'.

We will henceforth assume that K'iche' antipassive has the 1–2 demotion, finally intransitive structure in 61, and we now return to the issue of accounting for nonregular agreement in the antipassive.

'REGULARIZING' K'ICHE' AGREEMENT

7. The Norman & Campbell proposal for agreement in the antipassive adequately describes the agreement facts in K'iche'. However, their proposal requires two separate agreement rules for K'iche', one of which is construction-specific. The account does not explain why the antipassive construction should have its own agreement system, or why the proposed hierarchy is limited to agreement in this construction and does not apply to the general agreement rule or to any other construction type, say passive or instrumental advancement. In addition, once the demotion analysis of antipassive discussed above is adopted, incorporating the Norman & Campbell analysis would violate a strong universal proposed by Aissen (1987a) in recent work on agreement. In this section we show that, by adopting a feature-passing account of these agreement facts, one can maintain Aissen's proposed universal and provide a unified rule of verb agreement for K'iche'.

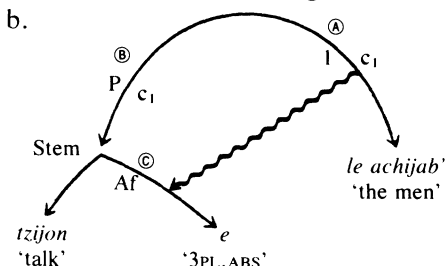
7.1. AISSSEN'S NOMINAL AGREEMENT LAW. Working in the framework of Arc Pair Grammar (APG), Aissen (1987a) has proposed that all agreement controllers must head arcs with a term R-sign (1, 2, or 3) in the final stratum of the clause in which they control agreement. She formalizes this proposal in the Nominal Agreement Law, stated in 66.

(66) **NOMINAL AGREEMENT LAW:** If a nominal arc *A* sponsors an agreement arc supported by *B* then:

- (i) *A* is a final term arc;
- (ii) and *B* is a final P arc;
- (iii) and *A* and *B* are neighbors.

To correctly interpret the Nominal Agreement Law, some discussion is necessary. Aissen proposes that agreement on a predicate heads a distinct arc, an **AGREEMENT ARC**, labelled AF[fix], which is **SUPPORTED BY** (i.e. a dependent of) a P[predicate] arc. Additionally, the agreement controller is technically an **ARC**, and it is the features (person, number, gender, etc.) of the nominal heading the arc that are realized on the head of the agreement arc. The controller arc and the agreement arc are related by the **SPONSOR** relation, a primitive relation holding between arcs in a network. Thus, disregarding the aspectual morpheme *k-*, we can represent the agreement in the simple clause in 67a as in 67b.

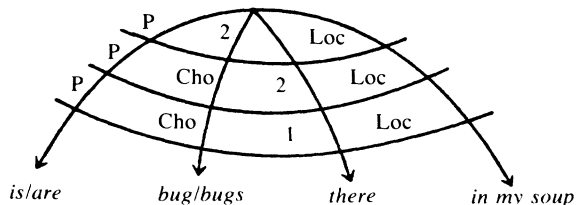
(67) a. *K-e-tzijon le achij-ab'*.
 ASP-3PL.ABS-talk the man-PL
 'The men are talking.'



The 1-arc headed by *le achijab'* 'the men', arc A, is the nominal arc sponsoring the agreement arc, C, headed by *e*, the 3PL absolute marker. The configuration in 67b satisfies all the conditions of the Nominal Agreement Law since (i) nominal arc A is a final term arc, (ii) arc B, which supports agreement arc C, is a final P-arc, and (iii) A and B are neighbors, that is, dependents of the same (clause) node. Aissen proposes that this representation of agreement is valid for all languages.

The Nominal Agreement Law alone is sufficient to constrain agreement controllers in the vast majority of cases that one finds in natural languages. However, Aissen notes that there are a number of *prima facie* counterexamples to this universal, cases she refers to as 'nonregular' agreement. A familiar example comes from English:

- (68) a. *There is a bug in my soup.*
 b. *There are bugs in my soup.*
 c.



Although *there* is the final subject and *bug/bugs* a final nonterm, verb agreement is determined by *bug/bugs*. If the arc headed by *bug/bugs* were taken to be the agreement controller in 68, this would be a counterexample to the Nominal Agreement Law. Aissen proposes that the agreement controller in 68 is actually the nominal arc headed by the dummy element *there* and that the features of the nominals *bug/bugs* are passed to the dummy element, which as head of a final term arc can sponsor the relevant agreement arc supported by the P arc.

The inherent person and number features of *bug/bugs* are passed to the dummy *there* by what Aissen refers to as LATERAL FEATURE PASSING, which is distinct from feature passing that involves a dependent and a dominating node. Aissen proposes that lateral feature passing is constrained to instances in which the grammatical relation of one nominal is assumed by another, i.e. (in APG terms) when the arc headed by one nominal is OVERRUN by the arc headed by some other nominal.²⁶ Aissen formulates the following condition as a universal law:

- (69) LATERAL FEATURE PASSING LAW: Let *a* and *b* be heads of nominal arcs, where neither *a* nor *b* is a dependent (of a dependent (of a dependent ...)) of the other. Then if *a* passes its features to *b*, *a* heads an arc which is overrun by one headed by *b*.

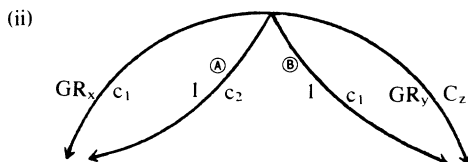
The situation in 68 satisfies Aissen's proposed law. In 68, the 2-arc headed by *bug/bugs* is overrun by the 2-arc headed by *there*. Thus, the inherent person and number features of *bug/bugs* may be passed to the dummy nominal *there*. As head of a legitimate English controller arc in 68c, a final 1-arc, the final 1-arc headed by *there* may sponsor agreement on the predicate *be*, the features realized being its features 'acquired' from *bug/bugs*. As Aissen notes, feature passing in English must be restricted to cases in which *there* overruns some arc.

Aissen examines verb agreement in Georgian (Caucasian), Q'eqchi' (Mayan), Southern Tiwa (Tanoan), and Tzotzil (Mayan), and shows that each case of nonregular agreement in these languages involves a construction in which unexpected agreement features are the inherent features of a nominal whose grammatical relation is assumed by a nominal that is a legitimate agreement controller in the given language. Thus, by incorporating lateral feature passing (and the analyses it assumes), it is possible to maintain the Nominal Agreement Law, a natural crosslinguistic constraint on agreement controllers.

²⁶ In APG, OVERRUN is a relation holding between arcs, defined as in (i):

- (i) *A* overruns *B* if and only if:
 a. *A* and *B* have the same term R-sign, and
 b. *A*'s first coördinate index is +1 of *B*'s last coördinate index.

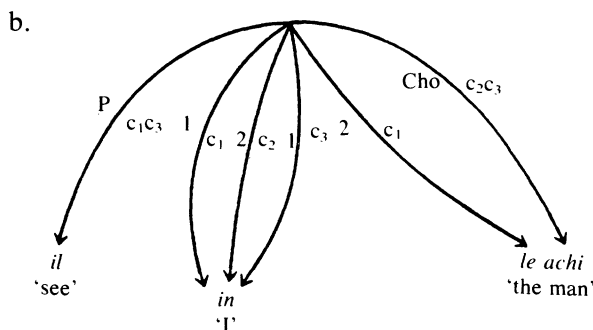
In (ii), *A* overruns *B* since *A* and *B* have the same term R-sign (here 1) and *A*'s first index, c_2 , is +1 of *B*'s last index, c_1 .



We now return to the K'iche' antipassive and show that agreement in this construction can be subsumed under the general rule of verb agreement formulated in §3.

7.2. LATERAL FEATURE PASSING AND K'ICHE' AGREEMENT. Following arguments in §§4 and 6, the antipassive in 70a would have the relational network (RN) representation in 70b.

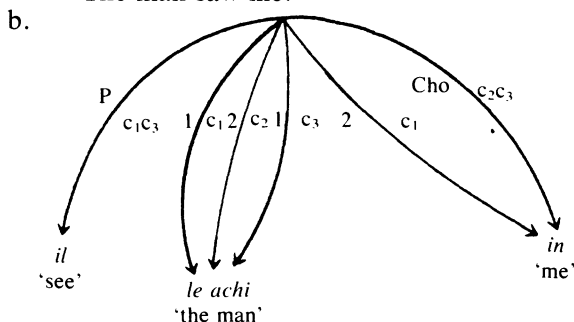
- (70) a. *In x-in-il-o-w le achi.*
 I ASP-1ABS-see-THV-AP the man
 'I saw the man.'



In RN 70b, the initial 1, *in* 'I', demotes to 2 in the c_2 stratum, putting the initial 2, *le achi* 'the man', en chômage. Note that in the c_2 stratum the 2-arc headed by *in* overruns the 2-arc headed by *le achi*. Thus, although the agreement in 70 is accounted for by the K'iche' agreement rules in 22 and 23, the environment exists in the antipassive structure for lateral feature passing.

Now consider a clause with nonregular agreement, that is, a clause in which the initial 2 of the antipassive appears to control agreement.

- (71) a. *Le achi x-in-il-o-w in.*
 the man ASP-1ABS-see-THV-AP me
 'The man saw me.'

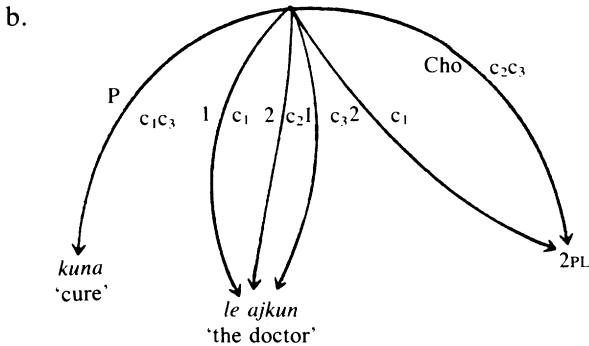


The nonregular agreement in 71 can be 'regularized' by adopting a lateral feature passing analysis. Since the 2-arc headed by *in* '1SG' is overrun by the 2-arc headed by *le achi* 'the man', it may pass its inherent person and number features to *achi*. *Achi* then has two sets of features—its inherent features, 3SG, and its acquired features, 1SG. Since the 1SG features are at the head of a

legitimate K'iche' controller arc, the final 1-arc, these features can be realized on the verb as an agreement arc sponsored by that controller arc. Thus, the nonregular agreement in 71 can be taken as a special case of regular K'iche' agreement, in which a final 1-arc controls agreement but acquired features rather than inherent features of the nominal head are realized.

This feature-passing analysis can account for much of the nonregular agreement found in the K'iche' antipassive. For example, in 72 the initial 2 is 2PL and the initial 1 3SG (*le ajkun* 'the doctor'), and the agreement on the predicate is *ix* '2PL.ABS'. The 2PL initial 2 passes its features to the 3SG initial 1 when it demotes to 2 in the c_2 stratum, and these acquired features are realized when the final 1-arc sponsors the agreement arc for the clause.

- (72) a. *La are' le ajkun x-ix-kuna-n-ik?*
 Q FOC the doctor ASP-2PL.ABS-cure-AP-IN.SUFF
 'Was it the doctor who cured you?'



However, comparing 70 and 71, it is obvious that acquired features are not always realized in place of inherent features. In 70 the inherent features of the head of the final 1-arc, *in* 'I', are realized in agreement, while in 71 the acquired 1SG features of the 3SG head of the final 1-arc are realized. Thus, there must be some statement in the grammar of K'iche' for determining when inherent features vs. acquired features are marked on the verb. This is where a hierarchy of the type proposed by Norman & Campbell becomes relevant. We propose the morphological rule in 73 to account for these facts.

- (73) When the head of an agreement controller arc has both inherent and acquired features, the highest-ranking set of features on the hierarchy non-3rd > 3rd plural > 3rd singular is referenced on the verb.

Condition 73 will account for the agreement facts noted above as well as for those in clauses such as 74, in which the head of the final 1-arc has both 2SG and 3PL features.

- (74) a. *La at x-at-chap-o-w ri ak'al-ab' nab'e?*
 Q you ASP-2ABS-grab-THV-AP the child-PL first
 'Was it you who grabbed the children first?'
- b. *La e are' ri ak'al-ab' x-at-chap-o-w at nab'e?*
 Q PL FOC the child-PL ASP-2ABS-grab-THV-AP you first
 'Was it the children who grabbed you first?'

As noted above for English and as noted by Aissen for the other languages that she examined, lateral feature passing may not apply across the board in all constructions in which some nominal assumes the grammatical relation of another. Specifically, in K'iche', lateral feature passing is restricted to the antipassive construction. There is no evidence for lateral feature passing in the passive (ex. 24) or the instrumental advancement (ex. 25) construction. One feature of the antipassive is that it is the only K'iche' construction in which an initial 2-arc is overrun in a chômage-inducing revaluation.²⁷ We therefore propose 75 as a condition on lateral feature passing.

- (75) CONDITION ON LATERAL FEATURE PASSING (K'ICHE'): A nominal *a* may laterally pass its features to a nominal *b* if and only if *a* heads a 2-arc overrun by an arc headed by *b* and that overrun induces chômage.

The inclusion of the condition that the overrun induce chômage also removes the antipassive/2-3 retreat construction discussed in §6.3 from the scope of 75. Recall that in that construction the overrun induces the demotion of the 2 to 3 rather than to chômeur. Thus, our proposal accounts for the absence of nonregular agreement in that construction.

K'ICHE' AND THE DEMOTION ANALYSIS OF ANTIPASSIVE

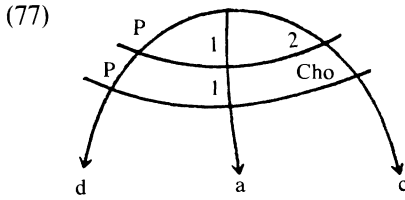
8. The analysis presented here for K'iche' AP morphology and nonregular agreement crucially rests on Postal's demotion analysis of antipassive. To the extent that our analysis captures significant and correct generalizations about K'iche' grammar, it provides important empirical evidence for the demotion analysis of antipassive, a heretofore weakly motivated claim of Relational Grammar. In proposing the demotion analysis of antipassive, that in which the initial 1 demotes to 2 and then advances to 1, Postal 1977 offered evidence for the initial transitivity and final intransitivity of antipassive but provided no support for the direct-object status of the final 1. This demotion of the initial 1 was included solely to conform to the Motivated Chômage Law (Perlmutter & Postal 1977), an important universal designed to constrain tightly the occurrence of chômeurs; this law is stated informally in 76.

- (76) MOTIVATED CHÔMAGE LAW: If a clause contains a nominal *a* heading an arc with the term R-sign *n* in a stratum c_i and a Cho arc in a stratum c_{i+1} , then there must be a nominal *b* that heads an arc with R-sign *n* in c_{i+1} , where all arcs have the same tail.

Informally, the Motivated Chômage Law restricts Cho arcs so that they can be headed only by nominals that head overrun arcs. In an antipassive, the demotion to 2 reconciles the chômage of the initial 2 with this law.

In essence, Postal proposed the demotion analysis to avoid a 'spontaneous chômage' analysis of antipassive, which would have the schematic representation in 77.

²⁷ A chômage-inducing revaluation is one in which an element heading an overrun arc demotes to chômeur. This is to be distinguished from a revaluation that induces the nominal heading the overrun arc to revalue to a distinct term relation, as in K'iche' instrumental advancement (ex. 25).



In 77, nominal *c* simply assumes the *chômeur* relation, without any other nominal assuming its grammatical relation. Thus the Cho arc in 77 is disallowed by the Motivated Chômeage Law.

Until now, the only available evidence that the 1 of an antipassive bears the 2-relation came from a limited set of verbs in Choctaw (Davies 1984).²⁸ The K'iche' facts, however, provide additional motivation. Under the 'spontaneous chômeage' analysis in 77, the initial 2-arc is NOT overrun by any other arc. Thus, the environment for lateral feature passing is never present. A feature-passing analysis is therefore not possible in such a structure. One must then retreat to a Norman & Campbell type of analysis for K'iche' verb agreement. Additionally, the generalization regarding AP morphology would be unavailable to an analysis that took 77 as the proper structure for K'iche' antipassive—the antipassive constructions and the inactives would share no structural properties.

CONCLUSION

9. The analysis of the K'iche' agentive construction outlined here meets the criterion set out at the beginning of the paper: it provides a unified analysis of both verb agreement and AP morphological facts. It subsumes a great range of K'iche' data and construction types. Key elements in the analysis include Postal's demotion analysis of antipassive and Aissen's formal proposals regarding agreement phenomena. To the extent that the analysis is successful in capturing significant generalizations about K'iche', it provides support for these theoretical constructs and also underscores the predictive power of a theory that incorporates the *chômeur* relation as constrained by the Motivated Chômeage Law.

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²⁸ In recent work, Williams 1989 has proposed an analysis of Soninke (West Africa) that depends on the 1–2 demotion structure of antipassive.

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