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PRECOCIOUS PASSIVES (AND ANTIPASSIVES) IN K'ICHE' MAYAN*

Clifton Pye and Pedro Quixtan Poz
The University of Kansas

The passive construction in English has received much attention during the development of syntactic theory. This is hardly surprising given the way passives change the mapping between semantic roles (agent/patient) and syntactic relations (subject/object) in English. It is the premiere example of the fact that syntactic relations are not isomorphic with any single semantic role. The relation-changing feature of passives has also meant that studies of the acquisition of active and passive sentences could potentially determine the extent to which children initially base their grammars on semantic or syntactic categories and relations. Unfortunately, theoretical interest in the acquisition of passives is not matched by parental enthusiasm in providing examples of passive sentences to children learning English. Researchers have had to devise techniques for teaching passives to English-speaking children to see what they could do. Their results reflect both the capacity of children to acquire passives and refinements in the techniques used to elicit responses from young children. There are languages, though, where passive constructions appear fairly frequently in everyday conversation and where children are exposed to passive sentences from birth (cf. Demuth 1988, Savasir 1983, Suzman 1985). Acquisition studies in such languages may provide new insights into children's capacity for learning grammatical structure.

I have been studying the acquisition of the Mayan language K'iche' for some time now. K'iche' is spoken by close to one million people living in the Western Highland region of Guatemala. Sentences in various voices appear in K'iche' speech to children, although active voice sentences do predominate. In this paper I will present the morphology of voice marking in K'iche' together with data from samples of spontaneous speech and comprehension tests. I will also discuss the implications of the K'iche' results for current accounts of the acquisition of passives.

1. K'iche' Voice Morphology

1.1. Active voice

Two features determine the form of K'iche' verbs in the active voice: transitivity and derivation. Root transitive and intransitive verbs are monosyllabic while derived transitive verbs are polysyllabic and end in a vowel. The general form of these verbs and some examples are shown below[1]:

Aspect-Absolutive-Ergative-Root-Termination

Root	k	-	at	-	inw	-	il	-	oh
Transitive	INCOMP		2A		1E		see		TERM

'I see you.'

Root	k	-	at	-			kam	-	ik
Intransitive	INCOMP		2A				die		TERM

'You are dying.'

Derived	k	-	at	-	in	-	q'alu	-	j
Transitive	INCOMP		2A		1E		hug		TERM

'I hug you.'

The cross-reference markers are obligatory on both transitive and intransitive verbs. An ergative set of person markers is used to indicate the subject of transitive verbs while an absolutive set of person markers indicates the object of transitive verbs and the subject of intransitive verbs (cf. Pye 1980). The final suffix on the verbs is the termination marker. The form of the termination marker depends on whether the verb is transitive or intransitive, root transitive or derived transitive, and in clause-medial or clause-final position. Thus, the termination marker serves as a key indicator of a verb's transitivity. The termination marker on root transitive verbs in deleted when the verb appears in clause-medial position while the termination marker on intransitive verbs is replaced by /-a/ in clause-medial position (cf. Pye 1983).

Word order is extremely flexible in K'iche'; adults use a variety of different orders to emphasize different constituents in the sentence. Sentences with overt NPs for both subject and object are extremely rare. Adult speakers primarily depend upon the cross-reference markers on the verbs to indicate the subject and object. My count of word orders in a K'iche' text (Norman 1976) showed that only 23 clauses with transitive verbs (15%) contain overt subject and object NPs (Pye 1985). Subject-Verb-Object (SVO) is the most frequent order (12 clauses); VSO and OVS orders were used only half as frequently (5 clauses each).

There are good reasons to consider the basic word order of K'iche' to be VOS despite its low frequency in texts. Other word orders emphasize some constituent in the sentence, usually by means of special topic or focus markers, and are often accompanied by changes in verb morphology (cf. Mondloch 1978b). Larsen (1988) expanded on unpublished arguments of William Norman to argue that K'iche' has a basic VOS word order. Larsen observes that SVO and OVS ordered sentences can be attributed to focus and topicalization whereas VSO clauses may reflect heavy-NP shift and restrictions on independent pronoun placement. Moreover, it is possible to derive the SVO, OVS and VSO word orders by plausible mechanisms (focus, heavy-NP shift, etc.) whereas there is no obvious way of deriving a VOS word order. I would add to Larsen's arguments the observation that the rule of pronoun drop would be most likely to occur in basic nonemphatic sentences. This would explain why the basic VOS word order pattern is also the least frequent in texts. The VOS order turns out to be more

frequent in speech to children (13 of 32 clauses in a sample of mothers' speech containing overt subject and object NPs). The other word order patterns occurred less frequently (SVO - 9 clauses; VSO - 3 clauses; OVS - 6 clauses).

1.2. Passive voice

K'iche' has two distinct forms of the passive voice. Passive1 adds an intransitivizing marker /-x/ to derived (vowel-initial, polysyllabic) transitive verbs and lengthens the vowel of some root (monosyllabic) transitive verbs. The resulting verb only contains an absolutive cross-reference marker (indicating the semantic patient), and takes the intransitive forms of the Termination, e.g.

k-in-tzuku-x-ik
INCOMP-1A-look_for-P1-TERM

'I am looked for.'

k-at-ch'a:y-ik
INCOMP-2A-hit.P1-TERM

'You are hit.'

Passive1 allows the agent to be expressed obliquely in a phrase headed by the relational noun *-uma:l* (similar to prepositions), e.g.

x-in-ch'a:y r-uma:l le: al Mari7y
COMP-1A-hit.P1 3E-cause the FAM Mari7y

'I was hit by Mary.'

Passive1 does not permit 1st or 2nd person agents to be expressed obliquely in this fashion.

Passive2 adds the intransitivizing marker /-taj/ to both root and derived transitive verbs. The resulting verb contains only an absolutive cross-reference marker indicating the semantic patient, and takes intransitive Termination forms, e.g.

k-at-tzuku-taj-ik
INCOMP-2A-look_for-P2-TERM

'You are looked for.'

x-in-ch'ay-taj-ik
COMP-1A-hit-P2-TERM

'I got hit.'

There is a subtle semantic distinction between the two passives. Passive2 emphasizes the resulting state of the patient or the

successful completion of the action. It also allows the demoted agent to be expressed in an oblique phrase headed by the relational noun *-uma:l*. First and second person agents may appear in this phrase with Passive2, e.g.

x-in-ch'ay-taj aw-uma:l
COMP-1A-hit-P2 2E-cause

'I got hit by you.'

1.3. Antipassive

Antipassive constructions provide a means of emphasizing the role of the transitive subject (semantic agent). In an antipassive the transitive object (semantic patient) may appear in an oblique position or remain unexpressed. K'iche' also has two distinct antipassive constructions. The Focus Antipassive adds the intransitivizing suffix /-ow/ to root monosyllabic transitive verbs and /-n/ to derived (vowel-initial, polysyllabic) transitive verbs, e.g.

k-in-tzuku-n-ik
INCOMP-1A-look_for-FA-TERM

'I look for.'

k-at-ch'ay-ow-ik
INCOMP-2A-hit-FA-TERM

'You hit.'

The Focus Antipassive emphasizes the agent of the action. The verb becomes intransitive, agreeing with the semantic agent and taking the intransitive Termination. The Focus Antipassive is obligatory when the agent is advanced by Question formation, Relative clauses, or Focus constructions, e.g.

jachin x-0-loq'-ow le: wah
who COMP-3A-buy-FA the bread

'Who bought the bread?'

x-0-animaj b'i-k le: kumatz (lee) x-0-kam-sa-n
COMP-3A-flee away-TERM the snake (that) COMP-3A-die-CAUSE-FA

le: achih
the man

'The snake which killed the man ran away.'

The Focus Antipassive must have a subject or object in the 3rd person in its underlying form. Cross-reference marking in Focus Antipassive verbs follows the person hierarchy: 1,2 > 3 pl. > 3 sing. That is, if

one of the participants is a first or second person singular or third person plural, the Focus Antipassive verb will indicate that actor, regardless of whether or not it is the semantic agent (cf. Larsen 1987, Pye 1989). Thus, the first examples I used to illustrate the Focus Antipassive are actually ambiguous, e.g.

k-in-tzuku-n-ik

'I look for him.' or 'He looks for me.'

k-at-ch'ay-ow-ik

'You hit her.' or 'She hit you.'

The Absolutive voice emphasizes the verb's action. It adds the intransitivizer /-an/ to root transitive verbs and /-n/ to derived transitive verbs (so that the Absolutive form of derived transitive verbs is the same as the Focus Antipassive), e.g.

k-in-ch'aj-an-ik
INCOMP-1A-wash-ABS-TERM

'I wash.' or 'I wash myself.'

k-at-tzuku-n-ik
INCOMP-2A-look_for-ABS-TERM

'You look for.'

The resulting verb always marks the semantic agent and takes the intransitive termination. The semantic patient may be expressed in an oblique phrase headed by the relational noun *chi-e:(ch)*, e.g.

x-0-ch'ay-an le: achih chi-e: le: ixoq
COMP-3A-hit-ABS the man at-POSS the woman

'The man was hitting on the woman.'

The Focus Antipassives and Absolutive Antipassives of derived transitive verbs can be distinguished even though they both have the same form (the -/n/ suffix). This is because the Focus Antipassive is used to focus on the subject of the verb in conjunction with the movement of the subject NP to preverbal position. Focus Antipassive sentences are ungrammatical if the subject remains in a position following the verb. In contrast the Absolutive antipassive construction focuses on the verb's action and does not require subject NP movement. Thus, if the sentence is acceptable with a postverbal subject NP then it contains a verb in the Absolutive rather than the Focus Antipassive.

2. Theoretical Digression

Antipassive constructions are regarded as the hallmark of ergative languages, and it is no accident that they appear in K'iche'. However, the presence of both passive and antipassive constructions in the same language has interesting implications for theoretical accounts of language acquisition. Consider the effect these constructions have upon the links between semantic roles and syntactic relations. The canonical links between semantic roles and syntactic relations should be defined by sentences in the active voice. The K'iche' passive does not actually involve crossed linkages due to the unmarked word order for active sentences. Thus, if canonical linking rules are defined with respect to the unmarked word order of sentences in the active voice, a simple factor of surface word order should play a significant role in determining the relative ease of passive acquisition across languages. In comparison, the Absolutive antipassive construction in K'iche' requires crossed linkages, so it should be acquired later than the active and passive voices.

Active:	xch'ay	le: ixoq	le: achih	
	hit	the woman	the man	
Syntactic Relations	Object	Subject		
Semantic Roles	Patient	Agent		
Passive1:	xch'a:y	le: ixoq	ruma:l	le: achih
	hit.P1	the woman	by	the man
Syntactic Relations	Subject	Oblique		
Semantic Roles	Patient	Agent		
Absolutive:	xch'ayan	le: achi	che:	le: ixoq
	hit.ABS	the man	at	the woman
Syntactic Relations	Subject	Oblique		
Semantic Roles	Patient	Agent		

Other theoretical approaches would not do any better at predicting the relative difficulty of acquiring active, passive and antipassive constructions. GB accounts of the passive, for example, revolve around the externalization of the patient's é-role (Chomsky 1981). This becomes possible in passive sentences because the agent's é-role is absorbed by the passive morpheme and the verb no longer assigns Case to the object position. However, this framework

does not provide any insights into antipassive constructions which on the surface would seem to involve the same principles of é-role absorption and Case assignment. The theory does not explain why the passive morpheme absorbs the agent's é-role while the antipassive morpheme absorbs the patient's. Moreover the framework leads to the similar predictions about the relative difficulty of acquiring passive and antipassive structures. Borer & Wexler (1987), to cite one example in this framework, propose that verbal passives are absent in English-speaking children's early speech essentially because they require NP-movement (argument-chain formation). Verbal antipassives, however, do not entail NP-movement. Thus, their theory would predict K'iche' children should acquire active and antipassive sentences equally easily, and both should appear before passives.

3. Voice forms in K'iche' children's spontaneous utterances

Although the overwhelming majority of children's utterances are in the active voice, they begin using the other voices when they are 2 years old. My data comes from recordings of children's conversations that I made in the course of my dissertation research. Some examples from three of the children I studied are shown in the appendix. Evidently, the children are able to produce a variety of different verbs in different voices. There does not appear to be any difference in the time at which the children first produced passive and antipassive sentences. They also used many of these verbs in the active voice, an indication that they had not learned just another intransitive verb, but were aware of the alternation between the different voices. Nonactional verbs such as 'say', 'forget', 'cure', 'buy', 'write', 'scare', and 'hear' also show up in the children's early conversations. These also seem to be mostly truncated passives, although there are several full passives in the children's data.

These data can best be compared with data on passives in English published in an article by Pinker, Lebeaux & Frost (1987). The K'iche' and English production data are summarized below:

English (from Pinker, Lebeaux & Frost 1987)

Children	Ages	MLU	Hours Recorded	No. of Passives
Adam	2;3-4;11	2.00-5.20	110	72
Eve	1;6-2;3	1.50-4.26	40	10
Sarah	2;3-5;1	1.74-4.10	139	32
Allison	1;5-2;10	1.73	4	2

K'iche'

				Passives	Antipassives
Al Tiya:n	2;1-2;10	1.07-3.30	16	7	17
Al Cha:y	2;9-3;6	1.57-4.31	24	62	17
A Carlos	3;0-3;10	1.59-3.69	20	49	21

The English data is somewhat exaggerated. Pinker et al. state that they used a very "liberal" definition for passives that included both adjectives (*named*, *crowded*, *mixed up*) and possible cases of the simple past tense ('It's stopped in the sky'). In contrast the K'iche' data is an underestimate. I have not been able to thoroughly review my transcripts. Still the K'iche' children probably produce sentences in a nonactive voice 8 times as often as the English children.

4. Comprehension testing

While the production data suggests that K'iche' children can produce nonactive verb forms at an early age, it does not show that they are able to process the nonactive morphology grammatically. They might instead be using limited scope formulae to produce nonactive verb forms in semantically-restricted contexts. Thus, some experimental procedure is necessary in order to evaluate the productivity of the children's nonactive voice forms.

I devised and carried out two experiments to test K'iche' children's comprehension of sentences in the active, passive (Passive1) and Focus Antipassive voices. I also wanted to see if it made any difference whether the verbs were actional or nonactional in Maratsos et al. (1983) terms. I put together two lists of verbs to test:

Actional		Nonactional	
puyi:j	'push'	xib'i:j	'scare'
q'alu:j	'hug'	il	'see'
ch'ay	'hit'	siq	'smell'
ti7	'bite'	tarane:j	'follow'
eqa:j	'carry'	tzuku:j	'look for'
t'op	'peck'	sik'i:j	'call'
esa:j	'take out'	iye'j	'wait for'
chap	'grab'	riq	'find'
riq'	'lick'	k'ol	'guard'

Operationally, I defined a verb as actional if the two participants were necessarily touching. I tried to balance the number of monosyllabic and polysyllabic verbs in each set, the number of vowel-initial verb stems, and the general phonological characteristics of each set.

Experiment 1 was a picture identification task using sentences in the active and passive voices. I drew a picture illustrating each action on a cardboard card roughly 4x6 inches. I used a variety of animals as agents and patients to insure that animacy could not be used as a cue for subject. My K'iche' associate, Pedro Quixtan Poz, let me know when my concept of a particular action did not match his. I discovered such things as K'iche' chickens peck heads - not tails,

and while cats find rats under baskets, rats find cats in baskets. Some example sentences are shown below:

The rat pushed the chicken.
The rat scared the chicken.
The chicken pushed the rat.
The chicken scared the rat.

The turkey sees the rabbit.
The turkey hugs the rabbit.
The rabbit sees the turkey.
The rabbit hugs the turkey.

We began each session with pictures of a horse, a cow and a pig. We named each animal for the child and then asked the child to point to one or another of the pictures. None of the subjects had any difficulty in this phase of the task.

We then presented each set of 3 cards to the children in different orders and in different arrangements from left to right. There were 36 sets in all (18 verbs x 2 voices). Two of the pictures in the set depicted the same action, but with the actors reversed. The third picture showed a different action, but had the same actors. We pointed out the animals in each picture and made sure the child knew their names. We then asked the child to identify the picture showing the chicken pushing the rat in the active voice, using a verb subject object word order[2]. More specifically, we would say to each child, "Where is the chicken pushing the rat? Can you show us? The chicken pushing the rat. Show us." In the passive test we asked each child, "Where is the chicken being pushed by the rat? Can you show us? The chicken being pushed by the rat. Show us."

I was in Guatemala six weeks to design the experiments and test children. Our results for the 4 and 5-year-olds are shown in the following table, which also shows the results from Maratsos et al. for English:

K'iche' Fours and Fives, Chance = .333 correct

Active (n=7)		Passive1 (n=10)	
Actional	Nonactional	Actional	Nonactional
.333 (p=.997)	.306 (p=.498)	.467 (p=.036)	.443 (p=.066)

English Maratsos, Fox, Becker, & Chalkley 1983, Chance = .50 correct

Active (n=38)		Passive (n=38)	
Actional	Mental	Actional	Mental
.89 (p < .001)	.88 (p < .001)	.67 (p=.001)	.40 not significant

There are a score of methodological differences between the two studies that make direct comparison impossible. I used different sets of verbs and I didn't reject any subjects, no matter how poorly they might be doing on the picture identification task. Nevertheless these results suggest some interesting differences between the two groups of children. English-speaking children have no trouble responding to sentences in the active voice, whereas the K'iche' children responded at chance levels to these sentences. English-speaking children have trouble interpreting passive sentences with mental verbs whereas there is no statistical difference between the K'iche' children's response to passive sentences with actional and nonactional verbs. The data on individual verbs shows that the nonactional verbs were not clustered at the bottom of the response scores, but were interspersed with the actional verbs. K'iche' children were as likely to interpret a passive sentence with *see* correctly as they were a sentence with *push*. Thus, I would argue that comprehension testing shows two surprising findings for the K'iche' children: 1. They do not comprehend sentences in the active voice, and 2. They comprehend passive sentences with nonactional verbs almost as well as they comprehend passives with actional verbs.

The results for K'iche' sentences in the active voice reveal the effect language structure can have on experiments. Active voice sentences with two third person participants are ambiguous in the adult language. Mondloch (1978b) reviews the grammatical devices K'iche' speakers use to avoid just the sentences I used in the active voice experiment. Prominent among the devices are alternations in voice. A passive or antipassive sentence distinguishes two third person participants by using an agreement marker on the verb for only one of the participants. The experimental condition happened to be the one context in which the structure of K'iche' favors responses to sentences in the passive voice. We found that three adult subjects showed the same response pattern that the children, responding

randomly to the sentences in the active voice, but correctly to sentences in the passive voice.

We asked the children another question in Experiment 1 as an additional check of their knowledge of the voice morphemes. Once the subject had selected a picture in the first part of the test we would remove the other cards from the table and ask the child "Who is Xing?" using the Focus Antipassive voice. In K'iche', the only difference between a question about the agent and a question about the patient is the voice suffix on the verb. Compare for example:

Passive1	Jachin e: xpuyixik?	"Who was being pushed?"
Focus Antipassive	Jachin e: xpuyanik?	"Who was pushing?"
Passive1	Jachin e: ki:lik?	"Who is being seen?"
Focus Antipassive	Jachin e: kilowik?	"Who is seeing?"

If the children did not understand questions using the Focus Antipassive they should have pointed at random to either of the two animals on the card. The results from this segment of the experiment are shown below.

K'iche' Fours and Fives, Chance = .50 correct

Focus Antipassive (n=17)

Actional	Nonactional
.726	.795
(p <.025)	(p <.005)

These results again suggest that K'iche' children have worked out the grammatical function of the voice morphology by the age of four or five. There was not a statistical difference between the responses to the Focus Antipassive sentences with actional and nonactional verbs.

5. Conclusion

Putting together the experimental and naturalistic data it seems K'iche' children begin producing passive and antipassive sentences around two years of age. They produce and comprehend passive and antipassive sentences equally well with actional and nonactional verbs. There does not seem to be any significant developmental difference between the passive and antipassive constructions or the use of these devices with actional and nonactional verbs. A picture-identification task suggests that K'iche' children can comprehend passive and antipassive sentences in a controlled experimental setting by the age of four or five years. The few three-year-old children that we tested with the picture identification task responded randomly. It is difficult to tell whether this result was due to their reliance on nonlinguistic cues to process passive and antipassive sentences or the cultural impropriety of this type of task

for a K'iche' three-year-old. These results are all the more remarkable in that they come from children who have not been watching Sesame Street or reading books all their lives. Additional studies using an object manipulation task may further refine the actual time at which K'iche' children can use these inflections grammatically.

In what sense are the K'iche' children precocious users of passive and antipassive constructions? First, K'iche' children use nonactive sentences much more frequently than their English-speaking counterparts in daily conversation. This result suggests that there is nothing about the structure of nonactive sentences that makes them inherently more difficult for children to produce. Children's production of nonactive sentences clearly reflects the frequency of nonactive sentences in the adult language. If the adult language requires nonactive sentences for particular pragmatic or discourse functions then children acquiring the language will use nonactive sentences in these contexts. Languages in which nonactive sentences predominate (as claimed for some Indonesian and Australian Aboriginal languages) should have learners who produce nonactive sentences earlier than active sentences.

Such a result would contradict many current theories of language acquisition. Any theory that hypotheses an inherent asymmetry between active and nonactive structures would be contradicted by such data. Children may have the ability to compute thematic relations directly from nonactive sentences rather than first transforming such sentences into active sentences in some manner. Any theory that hypotheses a 'canonical' link between thematic roles and grammatical relations will be falsified by such data. Children's ability to use the positive evidence around them is much more robust than we yet realize. What remains unexplained is how children arrive at the knowledge that a particular morpheme indicates a verb is in a particular nonactive voice.

Secondly, the K'iche' children are precocious in demonstrating a symmetry between their acquisition of the passive and antipassive voices. This symmetry directly contradicts acquisition theories which appeal to canonical linking rules or NP-movement to explain the late acquisition of passives in English. Acquisition theory must take into consideration the existence of languages like K'iche' which contain both passive and antipassive structures in order to address the full range of voice change in human languages.

Finally, the K'iche' children are precocious in their production and comprehension of nonactional verbs in nonactive voices. Again the explanation may lie in the structure of the adult language. The results from children learning English show that the children discriminate between two sets of verbs. We do not know whether the basis for this distinction is one of action versus nonaction, active versus stative or some other yet unknown dimension (Brown 1973:321 mentions a voluntary-involuntary distinction). The nonactional verbs in K'iche', however, are every bit as active as their actional

counterparts. It is grammatical in K'iche' but ungrammatical in English to use the progressive aspect and imperative mood with transitive verbs referring to such things as *want*, *see*, and *feel*. This suggests that the trouble English-speaking children have in interpreting passive forms of these verbs reflects their hesitancy to cross a distinction that plays such a prominent role other grammatical contexts in the adult language. If this is, in fact, the explanation for the English result, it is an extremely interesting example of children's willingness to overgeneralize a distinction beyond its appropriate domain of application.

Notes

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[1]All K'iche' words are shown in a practical orthography developed by the Proyecto Linguistico Francisco Marroquin (Kaufman 1976) with a single exception: the use of <'> rather than <7> for the glottal stop. The other orthographic symbols have their standard IPA values except: <tz> = /ts/, <ch> = /tʃ/, <b'> = /b/, <tz'> = /ts'/, <ch'> = /tʃ'/, <x> = /ʃ/, <j> = /x/. I use the colon <:> to indicate long vowels. I have also used the following morphological abbreviations: COMP = completive aspect, INCOMP = incompletive aspect, 3A = third person singular absolutive person marker (what Mayanists refer to as 'set B'), 1E = first person singular ergative person marker (or 'set A'), CAUSE = causative, P1 = the simple passive, P2 = the completive passive, FA = the Focus Antipassive, ABS = the Absolutive Antipassive, TERM = a clause-final termination marker, POSS = relational noun indicating possession, FAM = the familiar marker.

[2]My associate originally claimed that a Verb Subject Object word order was appropriate for this type of picture identification task. The results from children and adults indicated that a Verb Noun Noun word order is actually ambiguous in this context with two third person NPs referring to animate participants. The comprehension results are the same whatever word order is assumed to hold for sentences in the active voice.

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Appendix

Al Tiya:n (2;1-2;10):

T3	tiyonik in	Absolutive	'bite'
T4	atzin (kattze7nik)	Absolutive	'laugh'
T7	nik (katoq'opinik)	Absolutive	'peck'
T8	t'enik (kaxet'onik)	Absolutive	
T9	pa7ch (xpachik)	Passive1	'smash'
	7anik (xa:nik)	Passive1	'do'
	utin (kasutin)	Absolutive	'spin'
T10	b'i:x (xb'i:x)	Passive1	'say'
	pojonik (xpoqowik)	Focus	'boil'
T11	pax (xpa:x)	Passive1	'smash'
	sachik (xesachik)	Passive1	'forget'
	xik (xti:xik) 2x	Passive1	'spill'
	sutin (kasutin)	Absolutive	'spin'
T12	jonik (katzijonik)	Absolutive	'talk'
T13	chupik (xchu:pik)	Passive1	'blow out'
	toq'opinik (xtoq'opinik)	Absolutive	'peck'
	q'upinik (xqupinik)	Absolutive	'cut'
T14	paqinik (xpaq'inik)	Absolutive	
	t'ub'inik (xt'ub'inik)	Absolutive	
	raminik (xraminik) 2x	Absolutive	'rip'
	ketzijunik (ketzijonik)	Absolutive	'talk'
	qupin (xqupin)	Absolutive	'cut'
T15	njan (kayajan)	Absolutive	'scold'
	ch'ayan (katch'ayan)	Absolutive	'hit'

Al Cha:y (2;9-3;6)

R1	xutin (kasutinik)		Absolutive	'spin'
R2	kachaku'un (kachakun)		Absolutive	'work'
	pan (katz'ib'anik)		Absolutive	'write'
R3	no Lin loq' (xloq'owik)		Focus	'buy'
R4	pax we:ch (xsipax) 2x		Passive1	'give'
R5	wixtaj nah (wiyextaj) 2x		Emphatic	'wait'
	yox taj (kayox)		Passive1	
	cha:p uj ma:l (xujcha:p)		Passive1	'grab'
	ti:j ma:l chi (xti:j rumal)		Passive1	'eat'
R6	wextaj nah (wiyextaj) 3x		Emphatic	'wait'
	lo:q' Xela (xlo:q')		Passive1	'buy'
	jan a Xa7n (kayajan) 3x		Absolutive	'scold'
R7	jan tat in (kayajan)		Absolutive	'scold'
	no loq'tajik (xloq'atajik)		Passive2	'buy'
R8	b'i:x ak' (xb'i:x)		Passive1	'said'
	no chu:p chik (xchu:p)		Passive1	'put out'
	no ah xik (kab'ixik)		Passive1	'said'
R9	k'an pin (xq'opinik)		Absolutive	
	kup, kupi:j (xq'upix)	*	Passive1	'cut'
	k'up jalom (xq'upix)		Passive1	'cut'
	mer ti:j ab' ali7 (xti:j)		Passive1	'eat'
R10	mera chi kaloq' (kaloq'ik)		Passive1	'buy'
	luk ya:j, ya:j Juan (xya:j)		Passive1	'scold'
	tzilik tah (xutzirik)		Passive1	'cure'
	no chi:t wach tukut (xch'i:t)		Passive1	'scratch'
	ya: luk' manena (xya:)		Passive1	'give'
	no mi:ch' uwi:7 (xmi:ch')		Passive1	'pull'
R11	lo:q' wach (xlo:q')		Passive1	'buy'
R12	no awuxik mich' (kamich'on)		Absolutive	'pull'
	ch'akanik (xinch'akanik) 3x		Absolutive	'win'
	tijtaj chi jun mal xirwel (xtijtaj)		Passive2	'eat'
R13	e mal cho (x'e: ruma:l)		Active with *-uma:l*	

A Carlos (3;0-3;9)

C1	tijtajik (xtijtajik)	Passive2	'eat'
	n kunax taj (kinkunax)	Passive1	'cure'
C2	chu:pik (xchu:pik)	Passive1	'blow out'
	lok'owik (xloq'owik)	Focus	'buy'
C3	tz'en (katz'enik)	Absolutive	'laugh'
C4	innimanik (kintz'i:b'anik)	Absolutive	'write'
	exowih (xyowik)	Focus	'give'
C5	usutin (kasutinik)	Absolutive	'spin'
C6	pa:x (xpa:x)	Passive1	'smash'
C7	chapik (xcha:pik) 2x	Passive1	'catch'
	sokotaj (xsokotaj taj)	Passive2	'wound'
	chupix (xchupix)	Passive1	
	yajan (katyajan)	Absolutive	'scold'
	t'i:sik (kat'i:sik)	Passive1	'sew'
	ka:yik (xch'a:yik)	Passive1	'hit'

	jatanik (xjat'ixik)	Passive1	'tie'
C8	cha:pik (xcha:p) 2x	Passive1	'catch'
	at a7ayowik (xatyowik) 2x	Focus	'give'
	tixik (katixik)	Passive1	'spill'
	xib'inik (kaxib'inik)	Absolutive	'scare'
	sutinik (kasutinik) 2x	Absolutive	'spin'
	towik (xtowik)	Focus	'hear'
	ti7ik (xti7ik)	Passive1	'bite'
	chu:p (xchu:p) 3x	Passive1	'blow out'
	ka7appisik (kapisik)	Passive1	'wrap'
	elaq'axik (xelaq'axik)	Passive1	'steal'