

# CASES OF LEXICAL COMPLEMENTIZERS IN CUZCO QUECHUA AND THE THEORY OF COMP\*

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0. Since Bresnan (1970), it has been assumed that COMP was a single node under S', and that WH movement was a substitution transformation. Since, as Grimshaw (1975) showed, in Old English 'wh + that' was an acceptable sequence, the substitution transformation had to be replaced by an adjunction transformation (Chomsky and Lasnik (1977)), and it was henceforth assumed that the occurrence in Modern English of only one element in COMP could be accounted for by a filter combined with free deletion in COMP. The purpose of this paper is to challenge these analyses in the light of evidence for the claim made by Lefebvre and Muysken (1978) that COMP cannot be a single node under S' and to suggest a revision of some aspects of the theory of COMP. It will be shown that an SOV language, Quechua, sometimes considered not to have lexical complementizers, does in fact present cases of lexical complementizers. These occur in sentence-final position, thus being separated from the sentence-initial WH words by the entire S. In this paper, these facts are described and discussed in the light of current theories in linguistics.

In Cuzco Quechua we find sentences interpretable as relative clauses, complement clauses, conditional clauses, and temporal clauses ending with a čay element which has one of the following forms: čay + αCASE, čayta, čayqa as in (1). These lexical items are morphologically related to the deictic pronoun and determiner čay 'that'; in the sentences of (1), however, it is very difficult to assign them a precise gloss.

- (1) a. warmi hamu-ša-n čay, {pay-mi} rima-nqa  
           woman come-PR-3 {čay-mi}   
                                   {she-AF}   
                                   {this one-AF} speak-3FU

'The woman who is coming will speak'

- b. q<sup>h</sup>atu ris-qa-ni čay(ta), čay-mi mama-y-ta p<sup>h</sup>iñałi-n  
    market go-PA-1                   this-AF mother-1-AC make angry-3

'The fact that I went to the market made my mother angry'

- c. warmi-ta riku-ni čayqa, pay-mi rima-wa-nqa  
    woman see-1                   she-AF speak-1-3FU

{If}   
 {When} I see the woman, she will talk to me' or

'The woman I'll see will talk to me'

In these three sentences, the čay element is the last element of the clause interpreted as a subordinate clause. It receives a falling intonational contour, and is followed by a pause. In the sentences occurring with a čay element, the verb is marked for tense and is not nominalized (pace the suggestion that nominalization is the general rule for Quechua embedded clauses (Costa, 1972)).

In this paper I will address the following questions: what is the status of these čay elements? How do they relate the sentence in which they occur to the matrix clause? I will argue that these lexical items are lexical complementizers filling a morphosyntactic position on S' having to do with TENSE and CASE.

The paper is organized as follows. Section 1 presents certain preliminary theoretical notions. Section 2 describes the internal structure of the sentences occurring with a final čay element. In section 3, I discuss the syntactic status of the čay elements. A rule of case agreement relating the čay elements to a coreferential pronoun in the matrix clause is formulated in section 4. In section 5, I discuss the implications of lexicalized versus non-lexicalized positions on S' for the grammar of Quechua.

## 1. Preliminaries

### 1.1 Theoretical assumptions

I will assume a restricted version of the X' theory where every major category (N, A and V) has a three-level X''' structure. As in Muysken (1978) and Lefebvre and Dubuisson (1978), I will assume that both derivational and inflectional morphology is generated by word formation rules, rather than phrase structure rules.<sup>1</sup> Given this lexicalist approach, I will assume that the relationship between morphology and syntax is redefined in terms of morphological control. In this view, inflectional affixes (e.g. tense, case) control non-lexicalized abstract morphosyntactic positions on the X''' level.<sup>2</sup> I will assume that any rule of the grammar is bounded by the maximal projection of a phrase, but that on the X''' level, there are morphosyntactic positions which allow the possibility of relating something inside the X''' to something outside of it (cf. van Riemsdijk (1978)). Since for sentences, the X''' level corresponds to S', the morphosyntactic positions on S' correspond roughly to what was called COMP in Lefebvre and Muysken (1978).

### 1.2 A theory of COMP for Quechua

Quechua is often said to be a language with no lexical complementizers (such as English that). Lefebvre and Muysken (1978)

nonetheless postulated the existence of COMP in Quechua, realized as two morphosyntactic positions (TENSE and PERSON) on the S' level, in addition to an initial WH position. These two positions, not lexically encoded, were shown to be controlled by tense (nominalizer) and person suffixes on the embedded verb, and to relate elements within embedded Ss to elements in matrix clauses. These two morphosyntactic positions were conceived of as being generated to the right of S since the suffixes which they control appear to the right of embedded clauses. The base rule they suggest is as in (2):

(2) S' → [WH] S [±TENSE] [PERSON]

While the WH and the T positions are easily motivated, it is difficult to maintain a PERSON node on S' on the basis of the facts presented by Lefebvre and Muysken (1978). The facts are the following: in Quechua, as in Spanish, the object of an infinitival verb may be marked on a higher verb.<sup>3</sup> The sentences of (3) exemplify this.

- (3) a. maqa-y-ta muna-wa-n  
hit-1-AC want-1-3  
'he wants to hit me'
- b. maqa- wa- y-ta muna-n  
hit-1- 1N-AC want-3  
'he wants to hit me'
- c. maqa-wa-y-ta muna-wa-n  
hit-1-1N-AC want-1-3  
'he wants to hit me'

For this reason, it was claimed that a morphosyntactic position PERSON was called for on S' which allows for interpretation of the complement of a lower verb from a higher verb. The problem with this analysis lies in the fact that while the morphosyntactic positions on S' were considered to be positions that are controlled by inflectional morphemes and which allowed one to relate an element within S to an element outside of it in tensed sentences, the facts brought to justify a PERSON position on S' involve only infinitival clauses. There are other facts, however, which justify a morphosyntactic position involving interpretation of person outside of a tensed clause. On the one hand, in conditional/temporal subordinate clauses using the subordinator *-qti-*, the subject of the subordinate and the matrix clause have to be interpreted as distinct; on the other hand, in subordinate clauses using the subordinator *-spa-*, the subject of both clauses has to be the same. A position on S' is thus called for which will allow for interpretation of person out of those embedded clauses. The morphosyntactic position on S' will have to reflect the fact that person information concerns only the subject, that is, whether the subject of the embedded clause is coreferential with a NP

in the higher clause. In Lefebvre and Muysken (1980), a position [ $\pm$ PROXIMATE] (replacing the former [PERSON] position) is suggested to account for these facts. In this paper, I will assume such a position and revise base rule (2) as (2').

$$(2') \quad S' \rightarrow [WH] \ S \ [\pm TENSE] \ [\pm PROXIMATE]$$

In addition to the [ $\pm$ TENSE] and [ $\pm$ PROXIMATE] morphosyntactic positions to the right of S, a morphosyntactic position CASE seems to be called for which relates a case-marked nominalized clause to the matrix verb. Examples of case-marked embedded nominalized verbs are found in (4).

- (4) a. *warmi hamu-sqa-n-ta riku-ni*  
           woman come-NOM-3-AC see-1  
           'I see that the woman is coming'
- b. *warmi hamu-q-ta riku-ni*  
           woman come-AG-AC see-1  
           'I see the woman who comes'

I will thus adopt a S' expansion rule of type (2'').<sup>5</sup>

$$(2'') \quad S' \rightarrow [WH] \ S \ [\pm TENSE] \ [\pm PROX] \ [\alpha CASE].$$

It is this CASE position as well as the TENSE position which will be shown to be relevant to the analysis of the occurrences of čay found in the sentences of (1). Whether the TENSE position is lexicalized or not will be shown to affect the [ $\pm$ PROXIMATE] position.

In addition to (2''), I will assume base rule (5a) which specified a TOPIC position at the beginning or at the end of S, and (5b) as the expansion of S. In (5b), there are sentence-initial and sentence-final positions for adverbial clauses (temporal or conditional).

- (5) a.  $S'' \rightarrow (TOP/FOC) \ S' \ (TOP/FOC)$
- b.  $S \rightarrow (S') \ Adv \ NP \ VP \ AUX \ (S')$

In section 4, we will argue that embedded clauses containing a tensed verb and a čay element are also base-generated in this position.

## 2. Description of data

In this section, we will consider the internal structure of the sentences occurring with a final čay element in various embedded

constructions (relative clauses, complement clauses, embedded questions and conditional/temporal sentences). Sentences occurring with čay + αCASE, čayta and čayqa will be discussed in turn.

## 2.1 čay + αCASE

The sentences occurring with a čay + αCASE to be discussed below have a relative clause interpretation and the following characteristics:

(i) They contain a tensed verb rather than a nominalized verb. Nominalized verbs are case-marked and the case they carry *may* have the whole embedded sentence as their scope.<sup>6</sup> Tensed verbs are unmarked for case, since elements marked for case must bear the feature [+N] which is not the case for verbs unless they are nominalized (see Muysken (1980b)). Furthermore, the case of the subordinate clause is marked on čay, which occurs at the end of the subordinate clause. The čay element is not part of the matrix since it is separated from it by a pause. These facts are illustrated in (6). The (a) version of (6) contains a relative clause with a čay element, contrasting with the (b) version exemplifying the nominalized version of that sentence.

- (6) a. warmi hamu-ša-n čay, pay-mi rima-nqa  
           woman come-PR-3       she-AF speak-3FU  
           'The woman who is coming will speak'
- b. warmi hamu-ša-q rima-nqa  
           woman come-PR-AG speak-3FU  
           'The woman who is coming will speak'

(ii) čay + αCASE clauses are linked to a coreferential NP in the matrix clause. This NP is either a personal pronoun or a deictic pronoun. The čay element which ends the relative clause carries the same case as that of the coreferential NP. In (7) both čay and pay carry no overt case, thus being interpreted as nominative, while in (8) both čay and pay carry the comitative case -wan. If the cases did not match, the sentences would be ungrammatical.

- (7) warmi hamu-ša-n čay, pay-mi rima-nqa  
       woman come-PR-3       she-AF speak-3FU  
       'The woman who is coming will speak'
- (8) warmi hamu-ša-n čay-wan, pay-wan-mi rima-saq  
       woman come-PR-3 WI,       she-WI-AF speak-1FU  
       'I will speak with the woman who is coming'

The fact that the understood head of the relativized NP in the matrix clause is filled by a pronoun together with the fact that a pause follows the čay element occurring with the subordinate clause, instead

of preceding it, speaks for the claim made in (i) that the čay element is not part of the matrix. Kendall (1974) reports on similar facts for Yavapai. Her analysis, however, is quite different from ours; she suggests a rule which will move what she refers to as the 'demonstrative element', out of its clause to the end of the clause interpretable as the relative clause. This analysis is not borne out by the Quechua data.

(iii). In surface structure, čay + αCASE clauses are not found embedded inside the NP that they modify. Rather, they are adjoined to S before the subject. In (9a) the surface order TOPIC, S', NP, NP, VERB is possible, while in (9b) the surface order TOPIC, NP S', NP VERB is not grammatical.

- (9) a. paqarin-qa warmi hamu-ša-n čay-wan, Juanča pay-wan-mi  
tomorrow-TO woman come-PR-3 WI Juan she-WI-AF  
rima-nqa  
speak-3FU  
'Tomorrow, Juan will speak with the woman who is coming'
- b. \*paqarin-qa, Juanča, warmi hamu-ša-n čay-wan, pay-wan-mi  
rima-n-qa

Note that in (10), in which the subordinate clause has a nominalized verb, embedding of the RC is possible.

- (10) paqarin-qa Juanča hamu-ša-q warmi-wan rima-nqa  
tomorrow-TO Juan come-PR-AG woman-WI speak-3FU  
'Tomorrow, Juan will speak with the woman who is coming'

(iv). These čay elements only occur in tensed clauses. They do not occur with infinitival complement clauses, as shown in the ungrammaticality of (11).

- (11) \*qilqi-y čay-pi, manan-n čay-pi ka-n-ču  
write-IN LO NEG-AF that-LO be-3-AF  
'There is nowhere to write'

(v). Finally, čay + αCASE is obligatory in the relative clause, as shown in (12).

- (12) warmi hamu-ša-n {čay-mi}, pay-mi rima-nqa  
woman come-PR-3 AF she-AF speak-3FU  
'The woman who is coming will speak'

Summarizing: čay + αCASE clauses may be interpreted as relative clauses. The čay element appears to be related to both tense (since

it does not occur in [-TENSE] clauses) and CASE (since it carries the case of a coreferential NP in the matrix clause).

Most of the characteristics listed for the clauses containing čay + αCASE also apply to clauses containing čayta and čayqa elements. I shall now turn to the description of data containing these two čay elements.

## 2.2 čayta

Sentences containing a čayta element are interpreted as complement clauses or as indirect questions. They have the same characteristics as the čay + αCASE clauses.

(i). They contain a tensed verb as opposed to a nominalized verb. Nominalized verbs are case-marked in complement clauses, always as accusative case since these sentences are always the direct objects of the verb of the matrix clause. In the former structure the tensed verb is not marked for case, as it is a [-N] element and the case of the subordinate clause is marked on the čay element, which then appears as čay-ta (that + ACCUSATIVE). čayta occurs as the last element of the subordinate clause and is followed by a pause. (13) contrasts a complement clause ending with a lexical complementizer and a nominalized complement clause.

- (13) a. *warmi hamu-ša-n čayta, čay-ta-puni riku-ni*  
           woman come-PR-3 \_\_\_\_\_, that-AC-AF see-1  
           'I see that a woman is coming'
- b. *warmi hamu-ša-sqa-n-ta riku-ni*  
       woman come-PR-NOM-3-AC see-1  
       'I see that a woman is coming'

(14) gives the same contrast for indirect questions. Note the co-occurrence of a WH and a čay element within the same sentence.

- (14) a. *mana-n riqsi-ni-ču čay-ta, may-pi-n Juanča*  
           not-AF know-1-AF that-AC where-L0-AF Juan  
           *wasi-n-ta ruwa-ra-n čayta*  
           house-3-AC build-PA-3 AC  
           'I do not know where Juan built his house'.
- b. *mana-n riqsi-ni-ču čay-ta, may-pi-n Juanča*  
           not-AF know-1-AF that-AC where-L0-AF Juan  
           *wasi-n ruwa-sqa-n-ta*  
           house-3 build-NOM-3-AC

(ii). They are linked to a coreferential NP in the matrix clause. In the case of complement clauses and indirect questions, this coreferential NP is filled by a 'it' pronoun such as in (13a). The čay element that ends the complement clause is marked for accusative case thus agreeing in case with the coreferential pronoun in the matrix clause. Note here the similarity between the complement clauses and the relative clauses.

(iii). In surface structure the clauses containing the complement clause with a čayta element are not embedded inside the VP but rather are adjoined to S before the subject, just as in relative clauses of the same type. In (15a) the order TOPIC, S', NP, VP is correct while in (b) the order TOPIC, NP, S', VP is incorrect:

- (15) a. qayna-qa, kay warmi qusa-n-ta  
yesterday-T0 this woman husband-3-AC

maqa-ra-n čay-ta, Killku mana yača-ra-n-ču  
kill-PA-3 Killku NEG know-PA-3-AF

'Yesterday, Killku did not know that this woman had killed her husband'

- b. \*qayna-qa, Killku, kay warmi qusa-n-ta maqa-ra-n čayta,  
mana yača-ra-n-ču

(iv). čayta occurs only in [+T] clauses. It does not occur with infinitival complement clauses as shown by the ungrammaticality of (16b).

- (16) a. Juan miku-y-ta muna-n  
Juan eat-NOM-AC want-3  
'Juan wants to eat'

- b. \*mikuy čatya, Juan mu-na-n

(v). Finally, čayta is obligatory in the subordinate clause, as shown in (17).

- (17) Killku-qa, kay warmi qusa-n-ta maqa-ra-n {čay ta}  
Killku-T0, this woman husband-3-AC kill-PA-3 {\*∅}

mana yača-ra-n-ču  
NEG know-PA-3-AF

'Killku did not know that this woman had killed her husband'.



The examples seen so far for complement clauses all involve sentences containing complement clauses in the object position. Consider (18a), which contains a subject clause and in which the čay element is in the nominative case.

- (18) a. warmi hamu-ša-n čay, čay-mi p<sup>h</sup>iñači-wa-n  
 woman come-PR-3 , that-AF make-angry-1-3  
 'The fact that this woman is coming is making me angry'.

One informant says that čayta is also a possible surface form for the čay element occurring with subject clauses. Consider the following sentence:

- (18) b. q<sup>h</sup>atu ri-sqa-ni {čayta} , čay-mi mama-y-ta  
 market go-PAST-1 COMP that-PART mother-1-CASE  
 p<sup>h</sup>iña-či-n  
 make angry-3  
 'The fact that I went to the market made my mother angry'.

Here, it is clear that čayta is not analyzable as čay + ACCUSATIVE since subject clauses are incompatible with accusative case. I therefore consider this occurrence of čayta as an unanalyzable basic form which will never be overtly marked for case, thus being interpretable as nominative, since it occurs in subject clauses. An obvious explanation comes to mind as to why the accusative form of čay has come to be a form of the čay element in subject clauses; it may very well be due to association with the form of čay in object complement clauses and indirect questions, which is always čayta, since these clauses are direct objects of the verb of the matrix clause.

From the data described so far, the čay/čayta element occurring in clauses interpretable as complement clauses and indirect questions has the same behavior as the čay + αCASE and the clauses in which it occurs share the same characteristics as the relative clauses described above. Let us now turn to the last case of lexical čay elements: the čayqa case.

### 2.3 čayqa

čayqa, traceable to čay + ØCASE + qa (TOPIC), is now perceived as an unanalyzable word, since the clause that contains it does not necessarily occur in topic position: the latter may be filled by the topic of the matrix clause co-occurring with the čayqa clause. čayqa clauses may have two readings: a basic reading which is conditional or temporal, and a secondary reading as a relative clause. These two readings are exemplified in (19a).

- (19) a. warmi-ta riku-ni čayqa, pay-mi rima-wa-nqa  
 woman-AC see-1 , she-AF speak-1-3FU

'The woman will talk to me if/when I see her' --or,  
 'The woman I saw will talk to me'

The čayqa clauses contain a tensed verb as opposed to a subordinator suffix. Contrast (19a) and (19b); (19a) contains a tensed verb and a čay element, čayqa, contrasting with (19b) containing a subordinator suffix and no čay element.

- (19) b. warmi riku-qti-y-mi, rima-wa-nqa  
 woman see-SUB-1-AF speak-1-3FU  
 'If I see the woman she will talk to me'

The major difference between the relative and the conditional/temporal reading is that for the relative reading to be possible there has to be an element interpretable as a head in the matrix. Hale (1975:302) has analyzed similar cases in Walbiri in terms of NP and T relative interpretation, respectively. With the relative clause reading, the čayqa strategy seems to be restricted to cases where the understood head of the relative clause is the subject of the matrix verb. With a temporal/conditional reading, čayqa is not associated with case, only with tense.

Other than that, the čayqa clauses have the same characteristics as the other clauses containing a čay element: in surface structure they are adjoined to S, and they occur in pre-subject position. čayqa is obligatory, as shown by the ungrammaticality of (20).

- (20) \*warmi-ta riku-ni čayqa, pay-mi rima-wa-nqa  
 woman-AC see-1 she-AF speak-1-3FUT  
 'The woman I saw will talk to me'  
 'The woman will talk to me if/when I see her'.

#### 2.4 Summary of the characteristics of clauses containing a čay element.

Before concluding this section on the characteristics of embedded clauses occurring with a čay element, let me stress the fact that all these sentences are S' as opposed to S''. Two arguments speak against a S'' analysis for the sentences occurring with a čay element. First, they cannot have a topic of their own as shown by the ungrammaticality of the sentences of (21), and second, unlike S'' structures, they cannot occur alone as shown in (22), which shows that the čay elements only occur with non-root sentences.

- (21) a. \*warmi-qa hamu-ša-n čay-wan, pay-wan-mi rima-saq  
 woman-T0 come-PR-3 WI , she-WI-AF speak-1 FUT  
 'I will speak with the woman who is coming'.
- b. \*warmi-qa hamu-ša-n čay-ta, čay-ta-puni riku-ni  
 woman-T0 come-PR-3 AC , this-AC-AF see-1  
 'I see that the woman is coming'.
- c. \*warmi-ta-qa riku-ni čayqa, pay-mi rima-wa-nqa  
 woman-AC-T0 see-1 she-AF speak-1-3FU  
 'If I see the woman, she will talk to me'.
- (22) a. \*warmi hamu-ša-n čay-wan  
 b. \*warmi hamušan čayta  
 c. \*warmita rikuni čayqa

The characteristics of the subordinate clauses containing a čay element are summarized on chart 1:

characteristics of the clauses with which the <u>čay</u> element occurs	<u>čay</u> + αCASE	<u>čay-ta</u>	<u>čayqa</u>
i. verb is tensed	+	+	+
<u>čay</u> element carries case	+	+	- (+ with RC reading)
ii. co-referential NP in matrix	+	+	+
iii. the clause is obligatorily adjoined to S in surface structure	+	+	+
iv. <u>čay</u> element occurs only in [+T] sentences	+	+	+
v. <u>čay</u> element deletable	-	-	-
vi. the sentence occurring with the <u>čay</u> element is a S'	+	+	+

Chart 1. Characteristics of the clauses with which the čay element occurs.

In the next two sections I will discuss the syntactic status of these čay elements and suggest an analysis to account for the data presented here.

### 3. The čay elements as complementizers

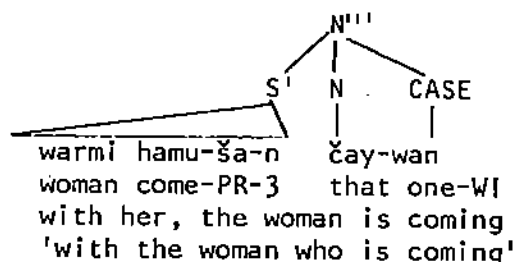
In this section I study the syntactic status of the čay elements occurring with a sentence. I consider two possible analyses:

- a) the čay element is outside of the S' with which it occurs.
- b) the čay element is inside the S' with which it occurs.

I will argue against a) and speak in favor of b), and suggest that the čay element is the sentence-final complementizer of the S' with which it occurs.

Following hypothesis a)--that the čay element is outside of the S' with which it occurs--we could suggest that (23) is an appropriate structure for the sentences under discussion. In that structure, the čay element is analyzed as the head of an NP containing the subordinate clauses as extraposed S's on the N''' level.

(23)



Many arguments speak against such an analysis. First, if the čay element were the head of the NP it should be able to be marked for plural (-kuna) just as for all pronouns (both deictic and personal); this is not possible however as shown in (24).

- (24) warmi-kuna hamu-ša-nku čay $\left\{\begin{array}{l} \text{-kuna} \\ \text{-}\emptyset \end{array}\right\}$ -wan, pay-kuna-wan-mi  
 woman-PL come-PR-3PL  $\left\{\begin{array}{l} \text{PL} \\ \text{S} \end{array}\right\}$  -WI, she-PL WI-AF  
 rima-saq  
 speak-1FU

Second, if the čay element here were the head of NP we could not explain why it can only be found with tensed embedded sentences. Third, the čay element occurring in conditional/temporal sentences, čayqa, cannot be defined by the feature [+N]. If we wish for a unified analysis for all the occurrences of a čay element with a sentence, structure (23) cannot be the correct one.

For all these reasons, I reject structure (23) as a possible structure for sentences occurring with a čay element. It follows that the čay element must be part of the S' with which it occurs. I suggest that it fills a morphosyntactic position on the S' level and that therefore the čay element is the COMP of that S'.

The suggestion that the čay element is the COMP of the sentences with which it occurs is supported by the properties of these elements, properties that they share with elements that are considered to be complementizers in other languages such as English or French. First, the čay elements, like that or que complementizers, do not occur in root sentences but only in embedded clauses. Second, the čay elements, like that or que, are related to tense since they occur only in tensed clauses. The fact that the čay elements are not deletable but that and que complementizers are deletable is probably due to the fact that they carry the additional feature, case. Thus čayqa is no more deletable than English 'if'. Aside from the complementizer properties that the čay elements have, recall that the reanalysis of deictic elements as complementizers is a widespread phenomenon. In this respect, the case of English that documented by Bever and Langendoen (1972) and the case of the deictic la in Haitian reanalyzed as a sentence determiner (Lefebvre 1980) are cases in point. The peculiarity of the čay elements in comparison with the well-known complementizers is their association with CASE in relative clauses, complement-clauses and indirect questions. I shall now turn to the discussion of this aspect of čay elements as complementizers.

Given base rule (2'') (of section 1), which of the two positions TENSE or CASE is lexicalized by the čay elements?

(2'') S' → [WH] S [±TENSE] [±PROX] [αCASE]

Since [+T] is the feature that applies to all three cases discussed here, which is not the case for CASE (e.g., čayqa has nothing to do with case), I suggest analyzing čay as a [+T] complementizer filling the tense node. Since it bears the feature [+N], it can carry case; this will occur only in cases where the S' it determines predicates over an NP, that is, in relative clauses as well as in complement clauses and indirect questions, but not in conditional/temporal clauses. Since case markers are generated by word formation rules rather than by phrase structure rules (see Muysken (1980b)), čay + αCASE will be generated in the tense position together with its case marker. In agreement with the theory of morphological control, the case position will be controlled by the case found on the complementizer.

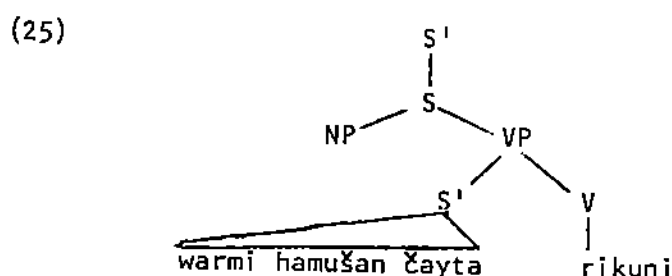
If my analysis is correct, it follows that COMP cannot be a single node on S', the WH position being sentence-initial and the TENSE position being sentence-final.

There remain two aspects of the data to be accounted for. How is case assigned to the embedded clause, and how do we insure that the case found on the čay element of the subordinate clause matches the case of the coreferential pronoun in the matrix? Before formulating such a rule, however, the position of the embedded clause with respect to the constituents of the matrix clause needs to be discussed. The next section will show how the čay element relates the subordinate clause to the matrix.

#### 4. A rule of CASE agreement in Quechua

In section 1, it was shown that the embedded clauses discussed in this paper are adjoined to S in surface structure (see (9) and (15)), rather than being embedded within NP or VP. The question arises whether their surface position corresponds to their base position or whether these sentences are generated within NP or VP and then adjoined to S. This question needs to be answered in order for the case assignment and/or agreement rule to be correctly formulated. I will argue that the embedded clauses are generated in their surface position and that therefore the rule which will account for the case found on the čay element needs to be formulated as an agreement rule. No case assignment rule is needed.

I shall consider three possible base positions for the embedded clauses. A first hypothetical structure is represented in (25). In this structure the embedded clause (complement clause, indirect question) is generated within VP as a S' complement of the verb.



This structure must be rejected because it does not account for the presence of a pronoun in the matrix as in (13a), repeated here as (26) for convenience.

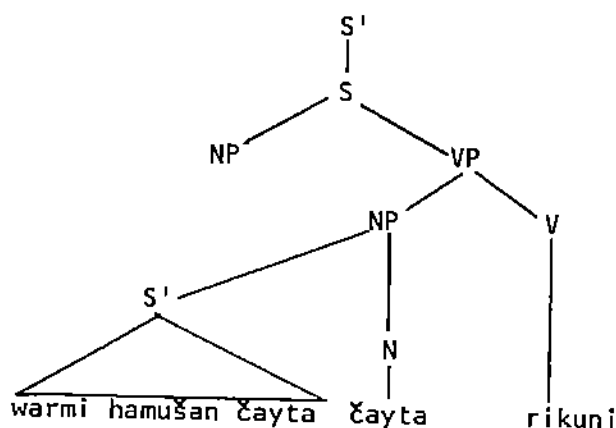
- (26) warmi hamu-ša-n čayta, čay-ta-puni riku-ni  
 woman come-PR-3 , that-AC-AF see-I  
 'I see that a woman is coming'

A way around this argument against structure (25) would be to postulate a rule which moves the embedded S' to an extraposed

position leaving a čay pronoun behind. This would allow us to account for the presence of the čay pronoun in the matrix. This analysis does not hold however, for if it were correct there would be no way to account for the possibility of finding -puni on the second čayta but not on the first one.

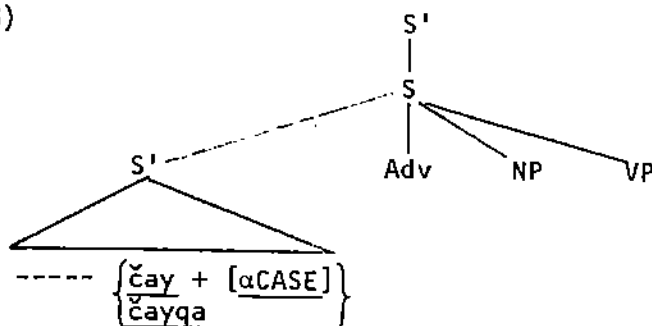
A second hypothetical structure, which would account for (26) (as well as for relative clauses) is represented by (27) in which the subordinate clause is embedded within an NP, the head of which is the matrix pronoun.

(27)



If this structure is in fact the basic structure, we will need to account for the fact that embedded clauses are never found in surface structure in this position, by means of a rule of extraposition of the embedded S', which will adjoin it to S. There is one major advantage to a solution of this type. The rule which will account for case matching between the čay element of the embedded clause and the pronoun of the matrix could be formulated locally. Many arguments speak against such a solution however. First, no non-nominalized clauses appear in this position in surface structure. Second, structure (27) does not account for the substantial syntactic similarity which exists between conditionals and relative clauses (cf. the čayqa clauses.). Thus (27) is surely not the correct basic structure for the embedded sentences ending with a čay element. I suggest, therefore, that the sentences under study in this paper are base-generated in their surface position, and that (28) is the basic structure for these sentences.

(28)



Having shown that the extraposed S's are base-generated in their surface position, I now turn to the discussion of their link with the matrix sentence. Such an analysis should account for the fact that some occurrences of čay (čay + αCASE) must have case, while others (čayqa with the conditional/temporal reading) do not have case, but appear to be related to tense only.

Two facts have to be accounted for in the case of  $\bar{X}_{ay} + \alpha\text{CASE}$ : first, it is obligatorily related to a coreferential NP in the matrix. This holds for relative clauses, sentential subject and object clauses and for indirect questions. Second, there is agreement between the case carried by  $\bar{X}_{ay}$  and the case of the coreferential NPs in the matrix. Since the S' sentences adjoined to S cannot be assigned case because they are not in the domain of anything assigning case, the facts of case for the extraposed S' will have to be formulated in terms of an agreement rule with the coreferential NP and not in terms of a case assignment rule.

The rule can thus be formulated as follows:

- (29) 
$$\begin{array}{c} \left[ \begin{array}{c} \left[ \begin{array}{c} \left[ \text{NP}_i \right] \\ \text{S}'\text{S} \end{array} \right] \\ \text{S} \end{array} \right] \text{case} \quad \dots \quad \text{NP}_i + \text{case} \end{array}$$

Condition: for S' to be interpreted as predicating over NP, it needs to contain an NP coreferential with it, and to be non-distinct in case.

Since adverbial clauses (S + čayqa) are not linked to an NP, the agreement in case condition plays no role. However, if there is an NP in the matrix, interpretable as coreferential with it, it will be possible to interpret the adverbial clause as a relative clause; this is exemplified by the possible interpretation of adverbial (S + čayqa) as a RC.<sup>8</sup> As čayqa is not marked for case, the surface output will be compatible with rule (29), the relative clause interpretation of a čayqa clause being possible only for relativized NPs that are subject of the matrix clause (thus



nominative case realized as zero). Of course, we have to assume here that nominative case, marked  $\emptyset$ , is non-distinct from the absence of case.

Summarizing this section: the čay elements, complementizers of the base-generated extraposed clauses, relate these to the matrix clause. For an S' to be interpreted as predicating over an NP, it must contain an NP coreferential with it and to be non-distinct for case. Note here that this agreement rule is of particular interest as it is the only example of case agreement reported on so far for Quechua.<sup>9</sup>

5. Implications of lexicalized versus non-lexicalized positions on S' for the grammar of Quechua.

The embedded constructions studied in this paper, those containing a tensed verb and a čay element, were shown to parallel embedded clauses containing no čay element but a nominalized verb or a verb carrying a subordinator suffix. For example, relative clause (30b) is the nominalized version of tensed (30a).

- (30) a. warmi hamu-ša-n čay, pay-mi rima-nqa  
           woman come-PR-3 COMP she-AF speak-3FU  
           'The woman who is coming will speak'
- b. warmi hamu-ša-q rima-nqa  
           woman come-PR-AG speak-3FU  
           'The woman who is coming will speak'

Similarly, conditional/temporal čayqa clause in (31a) alternates with (31b), which contains a subordinator suffix.

- (31) a. warmi-ta riku-ni čayqa, pay-mi rima-wa-nqa  
           woman-AC see-1 COMP she-AF speak-1-3FU  
           'The woman will talk to me if/when I see her'
- b. warmi riku-qti-y-mi, rima-wa-nqa  
           woman see-SUB-1-AF speak-1-3FU  
           'If I see the woman she will talk to me'

It thus appears that Quechua offers two possibilities for embedding a sentence: a tensed verb and a lexical complementizer, or a verb inflected for a nominalizing/subordinator suffix and no complementizer. In the former case, the morphosyntactic positions on S' are lexicalized by a čay element; in the latter case, the morphosyntactic positions on S' are not lexicalized but controlled by the suffixes attached to the verb. In this section I will address

myself to the following question: what are the differences involved between lexicalized positions and non-lexicalized positions controlled by NOM/SUB suffixes? There are two kinds of differences involved: functional and structural differences. They will be discussed in turn.

From a functional point of view, the tensed čay embedded clauses are less restricted than the SUB/NOM embedded clauses. As mentioned in section 1, conditional/temporal clauses encoded by means of the subordinators -qti and -spa are quite restricted. On the one hand, in the -qti clauses the subjects of both the subordinate and the matrix must be different; on the other hand, in the -spa clauses, the subjects of both clauses have to be the same. Given this restriction, the subordination strategy provides no grammatical output for expressing a conditional clause, the subject of which is coreferential with that of the matrix clause (e.g. 'If I am finished with my work, I will be able to go'), nor for expressing a temporal clause the subject of which is different from that of the matrix (e.g. 'When John will be finished with his work I will be able to start mine'). Embedded clauses formed with a tensed verb and čayqa complementizer are not restricted in this way. They provide a Quechua grammatical output for the above English sentences. Similarly, in relative clauses made with the nominalization strategy, there is a distinction between relative clauses from subject position and relative clauses from other positions (see Lefebvre and Muysken 1980). With the strategy described here, where a tensed verb and čay + αCASE is used, there is a single structure for all positions that can be relativized from. Thus, from a functional point of view, embedded clauses formed with a tensed verb and a čay element are less restricted than the NOM/SUB embedded clauses.

The functional difference between the two types of embedded clauses under discussion is reflected structurally in the number of positions needed on S' to account for the internal structure of each type of clause. In section 1, base rule (2'') (repeated here as (32)), was argued for, containing three morphosyntactic positions to the right of S. The reader will recall that [±PROX] specifies whether the subject of the embedded clause needs to be coreferential with a NP in the matrix.

(32) S' → [WH] S [±TENSE] [±PROX] [αCASE]

These three positions are necessary for embedded clauses containing NOM/SUB suffixes. For embedded clauses with a tensed verb and a čay element, the [±PROX] position appears to be unnecessary, since this construction presents no restrictions related to the subject. Base rule (33) would thus be sufficient for these sentences.

(33) S' → [WH] S [±TENSE] [αCASE]

Embedded clauses constructed with a tensed verb and a lexical complementizer thus appear to require a base rule which is simpler than embedded clauses constructed with a NOM/SUB suffix and no lexical complementizer. If the number of positions on the X''' level (here S') is in fact a valid criterion for establishing a scale of markedness, as suggested by van Riemsdijk (1978), it would appear that the construction: tensed verb + lexical complementizer, is less marked than the construction relying on nominalizer/subordinator suffixes to encode embedded clauses.

### Summary

This paper proposes an analysis of Quechua embedded sentences containing a tensed verb and a sentence-final čay element. These embedded clauses were shown to encode relative clauses, indirect questions, complement clauses and conditional/temporal clauses. It was argued that the čay element was the complementizer of these embedded clauses lexicalizing the TENSE position on S'; the čay element was shown to have the peculiarity of carrying a case marker corresponding to the function of a coreferential NP in the matrix clause, thus making it necessary for the grammar of Quechua to include a CASE position on S' as well as a case agreement rule between the embedded S and its coreferential NP in the matrix. The construction tensed verb+complementizer was contrasted with an alternate construction, encoding embedded clauses by means of nominalizing or subordinator suffixes on the verb, leaving the COMP position non-lexicalized on S'. The latter was shown to be functionally more restricted than the former and to require a position on S' ([±PROX]) not necessary in the former case. The data analyzed here disprove the assumptions that COMP must be a single node under S' and that elements delete freely in COMP. The Quechua data also provide an interesting case for studying the relationship that exists between the structure of the lexicon and the base rules.

### NOTES

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List of abbreviations

AC	:	accusative
AF	:	independent suffix
AG	:	agentive
FU	:	future
IN	:	infinitive
LO	:	locative
SUB	:	subordinator
NOM	:	nominalizer
PA	:	past
PL	:	plural
RC	:	relative clause
PR	:	progressive
TO	:	topic marker
WI	:	comitative
1	:	first person
2	:	second person
3	:	third person

<sup>1</sup>Muysken (1978) provides arguments for the claim that in Quechua, independent suffixes constitute the only class of suffixes that are generated by phrase structure rules.

<sup>2</sup>The theory of morphological control is due to Muysken (in preparation).

<sup>3</sup>These facts have been described in Muysken (1980a).

<sup>4</sup>This position is shown to be needed for interpretation of relative clauses made out of subject position in Lefebvre and Muysken (1980).

<sup>5</sup>For a thorough analysis of case in Quechua, see Muysken (1980b), who argues that a CASE position is needed for all values of X and suggests the following base rule for Quechua  
 $X''' \rightarrow X'' \text{ CASE}$

<sup>6</sup>For a full description and analysis of the data on case in relative clauses, see Lefebvre and Muysken (1980).

<sup>7</sup>Note that the version of (12) containing no çay element is a possible sentence; it has the structure of two coordinate sentences and it is not analyzable as an embedded sentence and a matrix clause.

<sup>8</sup>Weber (1978) mentions that some -spa and -qti clauses may be interpreted as relative clauses as well.

<sup>9</sup>In Muysken (1976) a few cases were mentioned of right extraposed nominalized relative clauses, which agreed in case with their head.

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