

RAISING AS MOVE CASE*

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0. INTRODUCTION

In most recent work in generative grammar, the focus has been shifted from the study of constructions to the search for the principles of core grammar. In Chomsky (1981) a number of subsystems of such principles are discussed as part of the Government-Binding theory (GB). There, a basic principle of grammar is formulated: the Projection Principle. This principle and others, defined in the various subsystems of core grammar interact at different levels of representation (D-Structure, S-Structure, Phonological Representation and Logical Form) to constrain the output of possible grammars.

Different types of Movement of Constituents are analyzed as the instantiations of a very general rule of "move α ", 'move anything to anywhere'. The particular restrictions we find on movement are due to the interaction of the Projection Principle with other components of the grammar.

In particular languages we find instantions of 'move α ' such as 'move NP' and 'move wh', again with specific characteristics. Particularly, a crucial distinction is made between rules moving elements to A-position and to \bar{A} -positions. Here we will analyze movement rules in Quechua¹, arguing that all processes of movement are instances of a general rule of 'Move Case'. The argument will center around the constructions: "Subject to Object Raising", "Wh-fronting", "Passive Formation".

In Quechua we find NPs in S-Structure in the domain of a matrix verb and functioning syntactically like matrix objects while receiving a thematic role within the embedded clause. We will refer to this phenomenon as 'raising' without specifying as for now the kind of rule it involves. The phenomenon of raising as it is defined here is exemplified in (1):

- (1) mariya xwancha-q-ta -n_i muna-n e_i platanu ranti-mu-na-n-ta
 Maria Juan GEN AC AF want 3 banana buy NOM 3 AC
 'Maria wants John to buy bananas'

In the above sentence the subject of the embedded verb occurs before the matrix verb and is marked for accusative Case as if it were the object of the main verb; in addition it carries the affirmative validator, which would be impossible if it were part of the embedded clause.

These facts have been described within the EST framework by Cole and Hermon (1979 and 1981) as cases of Subject-to-Object Raising achieved by a NP movement rule. In addition to leaving many problems unresolved, a topic to which we return below, their analysis is in no way compatible with the Government-Binding theory as it violates its central principles. Here, we will propose an analysis for the facts of Raising as they occur in

the Cuzco dialect of Quechua, in which the raising facts do not violate any of the central principles of the Government-Binding theory. Indeed our analysis of the Quechua facts in terms of a rule 'Move CASE' which, we show, shares the basic properties of 'Move Wh' such as described in Chomsky (1977), sheds light on the complex facts of Quechua and contributes to the refinement of some aspects of the GB theory, namely Case Theory, Theta theory and Binding theory.

A second set of facts involves unbounded Wh-movement. Again, as with raising, genitive Wh-subjects are marked accusative when they are fronted to a higher clause:

- (2) pi-qa-ta-n_i muna-nki e_i platanu ranti-mu- na-n-ta
 who GE AC AF want 2 banana buy NOM 3 Ac
 'Who do you want to buy bananas'

We will analyze these cases as involving both 'raising' as in (1) and movement within a clause to a Wh-position.

The third type of configuration is one of a stative-like passive, involving 'raising' to the subject position of a copular matrix clause:

- (3) noqa xwancha-q maqa-sqa-n ka-ni
 I Juan GE hit NOM 3 be 1
 'I have been hit by Juan'

We will argue that this configuration falls under 'move Case' as well, involving a \emptyset objective Case marked object moving to the nominative position.

The unified analysis we present involves movement to non-thematic positions (Wh-positions, non-thematic positions in the VP, non-thematic subject positions), but with respect to the A / \bar{A} distinction (Chomsky, 1981; Aoun, 1982) no clear results obtain. We will explore the hypothesis that the A / \bar{A} distinction is inoperative in the main body of this paper, and then discuss the consequences for our analysis of a maintenance of that distinction in section 4.1. The final analysis that we propose, however, is one in which Case positions are analyzed, at some level of representation (e.g. in the Case tree), as \bar{A} positions, and that it is that level which is operant for the Binding theory in Quechua.

0.1. *The Government-Binding theory and the different Movement rules*

In this section we summarize the theories which constitute the sub-systems of core grammar and show how they exclude Subject-to-Object Raising in English and how they deal with Wh-movement and Passive-like Raising to Subject constructions.

The Binding theory defines the distribution of referring expressions (anaphors, pronouns, and names). It distinguishes between two types of binding: argument binding (A-binding) and non-argument binding (\bar{A} -binding). With argument binding, the antecedent occupies an A position: [NP, S] or [NP, VP]. With non-argument binding, the antecedent occupies an \bar{A} position: COMP, a Clitic position, an adjunct-position, etc.

The Government theory defines the relation between the head of a construction and categories dependent on it. It includes a principle determining the possibility of occurrence of empty categories: the Empty Category Principle (ECP), which stipulates that empty categories must be properly governed. The Theta theory is concerned with the assignment of thematic roles; the central element of this theory is the Theta Criterion which stipulates that i) each argument bears a Theta-role, ii) each argument bears only one Theta-role, iii) each Theta-role must be assigned to an argument and iv) each Theta-role is assigned to only one argument. In this theory, Theta marking is linked to subcategorization in such a way that each subcategorized complement position is a Theta position. It follows from the Theta Criterion that Movement Rules are restricted in such a way that they must be initially from a position in D-structure to which a Theta-role is assigned to a non-Theta-position (Chomsky, 1981: 59). Otherwise a moved element could receive two Theta-roles, which was excluded by ii) above.

Case theory deals with abstract Case assignment and its morphological realization. The basic principle of this theory is the Case Filter which stipulates that all lexical NPs and variables should be marked for Case or be an element of a chain with Case (Chomsky, 1981: 175, 334).

In addition to these theories, a basic principle of core grammar is formulated in the Projection Principle. This principle stipulates i) that subcategorization entails Theta marking, ii) that all syntactic representations are projections of the thematic structure indicated in the lexicon, and iii) that categories and positions must be Theta marked in the same way at all syntactic levels (Chomsky, 1981: 29, 39). The principles defined in the various subsystems of grammar interact at various levels of representation (D-Structure, S-structure, Phonological Representation and Logical Form) to constrain the outputs of possible grammars.

Within the Government-Binding framework, a rule of Raising from Subject-to-Object of the type proposed for English by Postal (1972) is excluded simultaneously by several of the various theories summarized above. It is excluded by the Theta theory because it would violate the uniqueness principle of the Theta-criterion, the raised NP being doubly Theta marked at S-Structure and at LF, once in the lower clause (as subject) and once in the upper clause (as object). Because the raised NP would be doubly Theta marked, Raising would also violate the Pro-

jection Principle. Raising from Subject-to-Object would also violate the ECP. According to this principle the subject position of the embedded clause raised out of would have to be properly governed; in the raising configuration, however, there is no proper governor for that position.

In the GB framework Raising in English is thus restricted to Subject-to-Subject raising which is lexically triggered by a small category of verbs, raising verbs such as 'seem'. Raising verbs do not assign a Theta-role to their subject so that an NP raised to this position does not receive a Theta-role from the upper verb and is thus Theta marked only once in accordance with the Theta Criterion. Raising verbs also have the lexical property of triggering S' deletion in such a way that they can govern the trace in the subject position of the resulting infinitival complement. Moreover, these verbs are not Case assigners so that they can govern the trace of the raised NP without assigning it a Case. The trace of the raised NP being governed without being Case marked is a trace of NP.

In the light of this discussion, the question we will attempt to resolve in this paper is the following: assuming that the general framework of the GB theory summarized here is correct, how can we account for the raising facts of Quechua?

Wh-movement in the GB-framework is seen as movement to an \bar{A} position, COMP, leaving behind a Case-marked empty position, which is interpreted as a variable, locally bound by the element in the \bar{A} position.

The English passive is seen as an instance of NP-movement, as binding by an NP in an A position (non-thematic subject) of a caseless, empty position, which is interpreted as an anaphor. Passive morphology on the verb both absorbs the case of the object, and the Theta-rol assigned to the subject position normally. The latter becomes non-thematic and a landing-site for NP-movement. In case of NP-movement across a clause boundary, the intervening subject position is always part of the same A-chain:

- (1) John_i seems [t_i to have been killed t_i]

We will see that in Quechua 'raising to subject' does not conform to the configuration sketched here.

0.2. Overview of the analysis of Raising as 'Move CASE'

As mentioned before, in this paper we argue that raising, Wh-movement across clause boundaries and passive-like raising to a subject position are best analysed as instances of a rule "Move CASE", which is an instantiation of the more general rule "move α ". A COMP-like CASE position on S', independently motivated, will be shown to serve as an escape hatch for raising. Our Move CASE rule, we will argue, shares the characteristics of

Move Wh such as described in Chomsky (1977) rather than of Move NP; indeed the trace of the raised element will be shown to be \bar{A} bound, a fact from which it will follow that the trace of the raised element is a variable rather than a trace of NP. Our analysis will thus show that raising in Quechua involves \bar{A} -binding or M-binding² (binding from a non-argument position) while in English it involves A-binding (binding from an argument position). Our data also provide strong evidence for the separation of Case-assignment and Theta-role assignment in Quechua.

Indeed, any number of elements in a VP, including time and manner adverbs, can be marked for accusative Case. Moreover, we show that the main verb assigns accusative Case to elements passing through the subordinate CASE position thus providing evidence for Case assignment into COMP, so that raised NPs, while being assigned only one Theta-role, can have double Case, one assigned in the subordinate clause, one by the matrix verb. Case assignment will thus be shown not to follow from the Theta-theory as is proposed in Chomsky (1981, ch. 6).

Raising in the data configuration that we are presenting is not limited to a specific grammatical function (such as Object), and does not involve movement to a Theta-position. The analysis in terms of move CASE explains why all raising verbs are Case-marking verbs, and why there can be double Case-marking without Case-clash: only one of the Cases is related to a Theta-role. Thus within our analysis, the raising facts do not violate any of the central principles of the Government-Binding theory and the problems created by Cole and Hermon's analysis are solved.

Furthermore, our analysis shows that all the phenomena which produce variation in word order at S-structure are cases of raising defined as Move CASE. Finally, we tie our analysis of the raising facts of Quechua to the more general phenomenon of nonconfigurality.

The paper is organized in the following way: Section 1 deals with the cluster of facts roughly describable as raising to the matrix VP. In section 2 we analyze Wh-movement and compare it with raising to the matrix, arguing that it involves the same phenomenon in cases of Wh-movement across a clause-boundary. In section 3 we discuss passive-like raising to subject cases, and in section 4 we present some alternative analyses, discuss some problems for our analysis, and present the rule of move-CASE in the more general perspective of non-configurality.

1. RAISING

This first part of the paper is dedicated to the study of raising. In 1.1. we give arguments for raising and in 1.2 we specify all the facts that must be accounted for by our analysis. Section 1.3 provides an analysis for the

facts of raising; section 1.3.1 contains the rules of Case assignment in Quechua with particular reference to Case assignment in raising constructions involving double Case marking; sections 1.3.2 and 1.3.3 deal with Case assignment into COMP; section 1.3.4 discusses the rule of raising as Move CASE; finally, in section 1.3.5 Case assignment and Theta assignment are compared and discussed in the light of the raising data. The first part of the paper ends with a discussion of Cole and Hermon's analysis of Raising from Subject to Object in the light of the analysis presented in this paper (1.4).

1.1. *Arguments for raising*

In this section we bring arguments for a raising analysis of the phenomenon under study, presenting arguments showing that the raised NP is indeed outside of its clause. Second in the light of the Quechua data we discuss the major proposals suggested in the literature to account for raising, in order to characterize from the beginning of the paper the type of rule that raising will involve.

1.1.1. *The NPs under study are outside of their clause*

There are three major arguments in favor of a raising analysis for the facts being studied in this paper.

First, the position of the NP. In (1a) the object of the embedded verb *platanu* occurs in its basic position before the embedded verb, while in (1b) *platanu* occurs out of its clause in the domain of the main verb.

- (1) a. mariyacha muna-n [xwancha-q *platanu*-Ø ranti-na-n-ta]
 Maria want 3 Juan GEN banana buy NOM 3 AC
 'Maria wants Juan to buy bananas'
 b. mariyacha *platanu*-ta_i muna-n [xwancha-q e_i ranti-na-n-ta]
 Maria banana AC want 3 Juan GEN buy NOM 3 AC
 'Maria wants Juan to buy bananas'

Second, inflection for Case of the NP under study. Here, two cases are to be distinguished. Let us consider first the object of the embedded verb in a non-raised position as in (1a) and in a raised position as in (1b). In (1a) where the object of the embedded verb occurs in an embedded clause, the subject of which is in the genitive Case, it cannot bear accusative Case *-ta*³, while in (1b) where the object of the embedded verb is in the domain of the main verb, it has to bear accusative Case. Let us now consider the subject of the embedded verb in a non-raised position as in (2a) and in a raised position as in (2b).

- (2) a. mariyacha muna-n [xwancha-q platanu ranti-na-n-ta]
 Maria want 3 Juan GEN banana buy SUB 3 AC
 'Maria wants Juan to buy bananas'
 b. mariyacha xwancha-q-ta_i muna-n [e_i platanu ranti-na-n-ta]
 Maria Juan GEN AC want 3 banana buy SUB 3 AC
 'Maria wants Juan to buy bananas'

In (2a) *xwancha-q*, the subject of the embedded verb occurs in the genitive Case⁴ while in (2b) *xwancha-ta*, which is still interpreted as the subject of the embedded verb, is also marked for accusative Case *-ta* as if it were the direct object of the main verb. The distribution of accusative Case on the object and subject NPs respectively cannot receive an explanation unless raising is postulated.

Third, the presence of the validator on the NP under study. Compare (3a) and (3b).

- (3) a. mariyacha platanu-ta-*n_i* muna-n [xwancha-q e_i ranti-na-n-ta]
 Maria banana AC AF want 3 Juan-GEN buy SUB 3 AC
 'Maria wants Juan to buy bananas'
 b. *mariyacha muna-n [xwancha-q platanu-*n* ranti-na-n-ta]

In (3a) the validator may occur on *platanu* as it is outside of the embedded clause and in the domain of the main verb; this is not possible when the object of the embedded verb remains inside of its clause as shown by the ungrammaticality of (3b). Therefore the presence of the validational marker on *platanu* in (3a) is a strong argument for raising.

In the above examples, we have assumed that the raised NP corresponds to an empty position in the embedded clause. We now turn to the justification of this assumption.

1.1.2 Raising creates an empty position in the embedded sentence

Several proposals have been made in the literature in order to account for elements occurring in S-Structure outside of the clause in which they receive a Θ -role, the major ones being the following:

- 1) the Merger/Projection proposal allowing for scrambling of words (Hale, 1979; Nash, 1980; Van Riemsdijk, 1980);
 - 2) The Movement/Coindexation proposal (in particular Chomsky, 1977).
- Here we bring arguments showing that the Quechua data reported on in this paper support the Movement/Coindexation proposal rather than the other one. The point at stake opposing the two analyses is whether there is an empty position (either trace of movement rule or base generated empty position coindexed with the raised element, both having the same effect) in the embedded clause corresponding to the displaced NP or not. The

latter analysis involves such a position, the former proposals don't. Given this distinction there are three strong arguments in favor of a Movement/Coindexation analysis on the basis of our Quechua data.

First, the double Case marking on the NP under study. When the subject of the embedded clause is being removed out of its clause, it carries two Case markers: the first one is assigned by the embedded verb and the second one is assigned by the main verb. Thus, in (4) the subject of the embedded verb, *xwancha*, is marked both for genitive Case as it is the subject of the embedded verb and for accusative Case because it occurs in the domain of the main verb.

- (4) mariyacha xwancha -q- ta_i muna-n [_i platanu ranti-na-n-ta]
 Maria Juan GEN AC want 3 _i banana buy SUB 3 AC
 'Maria wants Juan to buy bananas'

Since genitive is assigned structurally to a sister of N', thus in the domain of the NP (at the N'' level, see section 3.1. for details) of which it is interpreted to be a constituent, an empty position corresponding to the raised NP is necessary for genitive Case to be assigned. If we assume a Case checking rule in LF at the moment when the possessor phrase is associated with the empty position in the source noun phrase or an assignment rule operating in deep structure before raising takes place in the movement analysis, there is no problem to account for structural Case. Double Case marking on the raised NP cannot be easily explained within the Merger/Projection proposals and constitute an argument in favor of a Movement/Coindexation analysis.

A second argument in favor of a Movement/Coindexation analysis has to do with person marking in the embedded clause as a result of agreement between the nominalized verb and its subject⁵. In the embedded clause of sentence (4) the nominalized verb *rantinanta* bears a 3rd person marker *-n-* resulting from an agreement rule between a head and its subject. The agreement rule is in general formulated structurally as holding between the head and a constituent on the X'' here N'' level. If in the embedded clause there were no empty position corresponding to the raised NP, as is advocated by the tenants of the Merger/Projection proposal, it is not clear how the agreement rule, which is essentially local, would operate⁶.

Concluding: the facts related to double Case marking on the raised NP and to subject-verb agreement constitute arguments for saying that raising creates an empty position in the embedded sentence. The Quechua data on raising as discussed so far thus provide strong arguments for the Movement/Coindexation proposal over the Merger/Projection proposal. For further discussion on that topic see Muysken (1982).

1.2. Further facts about raising

In this section we describe the facts related to raising: first from the point of view of the raised elements, second, from the point of view of the raising verbs.

In Cuzco Quechua raising may occur out of any position from an embedded clause. Examples (1b) and (2b) of section 1.1.1 showed a raised object and a raised subject respectively.

Here, in (1) the locative is raised:

- (1) mariyacha *merkadu-pi* muna-n [xosecha -q platanu ranti-na-n-ta]
 Maria market LO want 3 Jose GEN banana buy NOM 3 AC
 'Maria wants Jose to buy bananas in the market'

In (2) the NP marked for benefactive Case is raised:

- (2) mariyacha *pedru-paq* muna-n [xosecha -q platanu merkadu-pi
 Maria Pedro BEN want 3 Jose GEN banana market LO
 ranti-na-n-ta]
 buy NOM 3 AC
 'Maria wants Jose to buy bananas for Pedro in the market'

More than one element may be raised out of an embedded clause, as shown in (3)⁷.

- (3) mariyacha xosecha-q-ta platanu-ta merkadu-pi muna-n
 Maria Jose GEN AC banana AC market LO want 3
 [ranti-na-n-ta]
 buy NOM 3 AC
 'Maria wants Jose to buy bananas in the market'

Another characteristic of raising in Cuzco Quechua is that it includes any type of potentially Case marked element, therefore adverbs and quantifiers as well as nouns, thus any element bearing the feature [+N], as candidates for raising. In (4) the adverb *paqarin* 'tomorrow' is raised:

- (4) mariyacha lima ri-na-yki-ta muna-n *paqarin-ta*
 Maria Lima go NOM 2 AC want 3 tomorrow AC
 'Maria wants you to go to Lima tomorrow'

and in (5) it is the quantifier *hayk'a* 'how many', that is raised:

- (5) *hayk'a-ta mariyacha muna-n xosecha-q platanu ranti-na-n-ta*
 how many AC Maria want 3 José GEN bananas buy NOM 3 AC
 'How many bananas does Maria want José to buy?'

Raising occurs optionally out of nominalized embedded clauses (those containing a nominalized verb bearing a nominalizing suffix *-sqa-* 'action realized' or *-na-* 'action not realized') as exemplified in (1)-(5). The nominalized embedded clauses out of which raising may occur can either have the internal structure of a N''' (with a subject occurring in the genitive (case) or the internal structure of a V''' (with a subject occurring in the nominative Case). Raising cannot occur, however, out of subordinate clauses that are not embedded; indeed, in Quechua, there is a initial/final position on S, as represented in base rule (6), which is the position for adverbial clauses (temporal or conditional) and for subordinate clauses containing a lexical complementizer and an inflected verb for tense⁸.

- (6) $S \rightarrow (S') \text{ Adv NP VP AUX } (S')$

The non-embedded subordinate clauses, filling these sentential positions on S constitute islands and no rule, including raising, can take anything out of them.

It is not possible to raise elements out of an embedded clause in the domain of a matrix verb which already has an other object than its sentential complement. The agrammaticality of sentence (7) where there is a raised element in the domain of the main verb, in addition to the object of that verb 'Pedrumán', compared with the grammaticality of (7a), illustrates this fact.

- (7) a. *mariyacha-n pedru-man willa-n xosecha-qpa platanu*
 Maria VA Pedro to tell 3 Jose GEN bananas
ranti-na-n-ta
 buy NOM 3 AC
 'Maria tells Pedro that Jose will buy bananas'
- b. **mariyacha-n pedru-man xosecha-qpa-ta willa-n platanu*
 Maria AF Pedro to Jose GEN AC tell 3 bananas
ranti-na-n-ta
 buy NOM 3 AC
 'Maria tells Pedro that Jose will buy bananas'

Our analysis should provide an explanation for this fact.

Let us now turn to the raising verbs. It appears from our data that, unlike English, raising in Quechua is not a lexical property of some transitive

verbs. In fact, raising may occur with any verb which is a CASE assigner, e.g. *rikuy* 'see', *munay* 'want', *yachay* 'know', *willay* 'tell', *watupakuy* 'whisper', *qhaway* 'look', *uyay* 'hear', *tapuy* 'ask', *yuyay* 'remember', etc. Verbs of movement, e.g. *riy* 'go', *hamuy* 'come' are not raising verbs because they are not Case-assigners.

In Cuzco Quechua as well as in Imbabura Quechua (as mentioned but not explained in Cole and Hermon, 1981), the verb *niy* 'say' is not a raising verb. Why is it that *niy* does not allow raising in its environment? For Cuzco Quechua, and presumably for other dialects as well, the answer to this question relies on the fact that the verb *niy* is not an embedding verb, unlike its English counterpart 'say'.

Summarising the facts: in Cuzco Quechua, raising may occur out of any position from an embedded subordinate clause; any number of Case marked element may be raised within the same sentence with the restriction for some speakers that they do not include both the subject and the object at the same time. Raising may occur with any verb which is a case assigner providing that it is also an embedding verb, which excludes *niy* 'to say' for Quechua, and that it does not have arguments of its own. We now turn to the analysis of the facts described in sections 1.1 and 1.2.

1.3. Analysis

In this section we propose an analysis for the facts of raising described so far. The following questions need to be answered:

- i) how does Case marking operate with respect to the elements involved?
- ii) where is Case assigned to the raised elements: in COMP or in matrix clause?
- iii) what is the categorial and the grammatical status of the elements involved in raising?
- iv) why is it that only maximal projections can be raised?
- v) what type of rule is raising in Quechua?
- vi) what is the landing site for raised elements?
- vii) what kind of trace does it leave behind?
- viii) what is the relationship between Case assignment and Theta-role assignment?

This section, in which we discuss these questions, is organized in the following way: First in 1.3.1, we propose general rules which account for Case assignment; in section 1.3.2 and 1.3.3 we discuss the question of where Case is assigned to the raised NP. In section 1.3.4 we formulate the rule of raising in Quechua and discuss each of its components; section 1.3.5 is dedicated to the discussion of dissymmetries between Case assignment and Theta-role assignment.

1.3.1. Case assignment

In this section we propose an analysis which will account for the distribution of Case marking on the NPs under study. We formulate

general rules which will account for how Case is assigned in Quechua.

The distribution of Case on NPs involved in raising is as follows. When the Case assigned to the raised element is nominative, it only receives matrix Case (accusative) overtly; when it is genitive, it receives genitive and accusative; when it is accusative, it overtly receives only one accusative; when it is oblique, it only receives oblique:

	<i>embedded</i>	<i>raised</i>	
(1) nominative	\emptyset	-ta	nominative + objective
genitive	-q(pa)	-q(pa)-ta	genitive + objective
objective	-ta/ \emptyset	-ta	objective
oblique	obl.	obl.	oblique

We will assume the following Case assignment rules (for a detailed analysis see Lefebvre and Muysken, forthcoming).

- (2) a. Agreement assigns subjective Case
Subjective Case is spelled out \emptyset / [_{-N} —]
-q / [_{+N} —]
- b. V assigns objective Case
Objective is spelled out -ta / [_{-N} —]
 \emptyset / [_{+N} —]
- c. Assuming that objective Case is always assigned structurally, we will say that certain verbs subcategorize for *-man* with animate (goal) objects or for *-manta* with animate (source) objects.

Given these Case assignment rules we may explain the configuration of Case in (1) by assuming the Case features of (3) ('ass. V' is "assigned by the verb" and 'ass. Agr.' is "assigned by agreement").

- (3) nominative: +ass. Agr., -ass. V
genitive : +ass. Agr., -ass. V
objective : -ass. Agr., +ass. V (structurally)
oblique : -ass. Agr., +ass. V (through subcategorization)

The Case features system expresses the parallelism between nominative and genitive: both are assigned by Agreement, while oblique and objective are parallel in that they can be assigned by the verb. Given these features, the combinations in (1) are explicable: when genitive (*-qpa*) with the features (+ass. Agr., -ass. V) is raised, it receives the feature (+ass. V) and becomes *-qpa-ta* with the feature combination (+ass. Agr., +ass. V). The accusative or objective Case is \emptyset or *-ta*, with the feature specification (-assN, +assV). When raised it is marked for *-ta* and (-assN,

+assV)⁹. The oblique Cases are (-ass.Agr., +assV) and remain that, since (+assV) would just have to be specified redundantly again. Raising thus implies the extra specification for the Case features of the higher assignment domain. This assignment domain will always be V', in the Case of raising, since embedded clauses can only occur in the V' (=VP).

In the Government-Binding framework (see in particular Chomsky, 1981) Case is assigned in deep structure if inherent (e.g. oblique), or in surface structure if structural (e.g. nominative, accusative, genitive). The data presented here, specially those on double Case marking, force us to revise the locus of assignment of Case, for if structural Case is assigned at the level of surface structure it is not possible to account for double Case marking in Quechua. Our data speak in favor of a general rule of Case assignment unspecified as for where it applies:

- (4) Assign Case whenever the structural description is met

Freidin and Babby (in prep.) also show the necessity for such a formulation for the rule of Case assignment, on independent grounds.

There remains one important problem to be solved in order for Case assignment to be accounted for and it is the question of where exterior Case is assigned to the raised NP. There are two hypothetical possibilities as to where exterior Case is assigned to the raised NP: A first hypothetical analysis is to locate Case reassignment at landing site at the level of S-Structure. A more principled solution, the one we would like to argue for in this paper, is that Case is assigned to the raised element at the moment it passes through a COMP-like position of the source constituent. Before arguing for case reassignment in COMP (3.3.) we argue for a COMP-like position on the X''' level, including the S' level.

1.3.2. A COMP-like CASE position on S' and other values of X at the three-bar level

There are several independent arguments in favor of a COMP-like CASE position on S' in a base rule of type (5).

- (5) $S' \rightarrow \dots S [\pm T] [\alpha \text{ CASE}]$

The first two arguments are also arguments in favor of a COMP-like CASE position on the three-bar level for other values of X.

The first argument relies on the theory of morphological control (Muysken, 1980) which claims that morphological material bearing grammatical information, such as TENSE, CASE, etc., controls corresponding abstract positions on the X''' level. Thus in the following example the Case morpheme *-ta* occurring on the head of the object noun phrase

controls an abstract CASE position on the N''' level of that noun phrase:

- (6) chay-ta muna-ni
this AC want 1
'I want this'

Similarly, in (7) where the verb has a sentential complement, the head of that complement – the nominalized verb *milkuy* 'eat' – is marked for accusative case *-ta*, controlling an abstract position on the V''' ($=S'$) level.

- (7) miku-y-ta muna-ni
eat NOM AC want 1
'I want to eat'

If the theory of morphological control is to hold generally as stated, we need a COMP-like CASE position.

The second argument has to do with boundedness. In Lefebvre and Muysken (1978), a theory of S' constraining semantic interpretation was suggested which had the effect of not allowing the interpretation of anything inside of X''' to something outside of it without reference to the X''' level. A CASE position is called for on the S' level in order to relate a Case-marked nominalized clause to a matrix verb. Indeed, as shown by the numerous examples given so far (in sections 1.1 and 1.2) embedded sentential complements are being assigned objective Case by the matrix verb; that Case is realized by the suffix *-ta* occurring on the head of the embedded S' : the nominalized verb. Thus in sentence (8) the Case of the embedded clause can be related to the matrix verb through the COMP-like CASE position on S' .

A third argument for an abstract CASE position on S' is drawn from the complex data of Quechua relative clauses (see Lefebvre and Muysken, 1982). Consider a sentence such as (8) (= (57) in Lefebvre and Muysken, 1982):

- (8) riku-sqa- y warma-ta hamu-nqa
see NOM 1 girl AC come 3FU
'The girl I saw will come'

In this sentence the head of the relative clause *warma* is not in its basic position, which is in fact to the left of the embedded verb rather than to the right of it as it occurs in (9). Then in what position is *warma*? *Warma* cannot be said to occupy the subject position of the matrix clause because, if it were, the accusative *-ta* that it bears would not be explainable and this for at least two reasons. In Quechua there is no reported case of subjects

bearing accusative Case¹⁰; subjects take either nominative case (if they occur in a V''' configuration) or genitive case (if they occur in a N''' configuration). Moreover, the verb *hamuy* 'come' does not assign accusative case and therefore the case on *warma* cannot be related to that verb. The *-ta* case on *warma* in RC (9) thus has to be related to the embedded verb. On the basis of these facts, in Lefebvre and Muysken (1982), we argued that *warma-ta* occupies a position on the S' level of the RC, position that must contain a Case feature. This position we argue is the CASE position on the S' level.

Finally, a fourth argument in favor of a CASE position on S' is that, as is argued in Lefebvre (1980), Quechua has a number of case marked lexical complementizers occurring at the S' level. (9) exemplifies this fact.

- (9) mariacha muna-n xosecha platanu-ta ranti-nqa chay-ta
 Maria want 3 Jose banana AC buy 3FU COMP AC
 'Maria wants Jose to buy bananas'

This fact constitutes a strong argument in favour of a CASE position on S'. Thus there are four independent arguments in favour of a CASE position on S': one is drawn from the theory of morphological control, another one from the theory of boundedness; a third argument relies on the complex data of relative clauses in Quechua and a fourth one on the very fact that there are case marked complementizers in Quechua. In 1.3.4. we will argue that CASE, as a morphosyntactic position on S', functions as an escape hatch for raising in the same way as the Wh-COMP position does for unbounded WH movement in other languages. First we argue that this CASE position on the X''' level is the locus for Case re-assignment to the raised NP.

1.3.3. Arguments for Case assignment into COMP

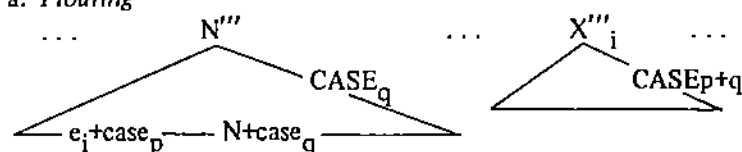
In this section we argue that Case is assigned to the raised NP at the X''' level when it passes through the COMP-like CASE position, rather than being assigned to the raised NP at landing site in the upper clause (for a discussion on the landing site of raising, see section 1.3.4.). In arguing for this analysis we have to rely on data drawn from quantifier float, a type of raising, for it is not possible to argue this point with data derived from raising out of clauses.

The contrast between sentences (10a) and (10b) illustrates the phenomenon of quantifier float in Quechua.

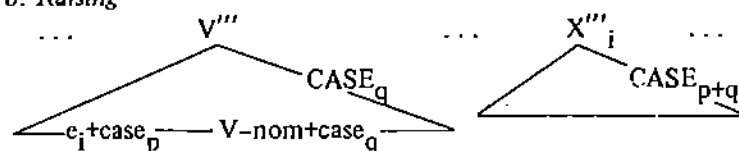
- (10) a. pi- qpa ususi- n- ta riku-nki
 who GEN daughter3 AC see 2
 'Who did you see the daughter of?'
 b. pi- qpa- ta ususi- n- ta riku-nki

In (10b) the floated quantifier *pi-qa-ta* is marked for accusative Case while in (10a) where it is in its basic position it is unmarked for accusative Case. Like in the raising configuration, the floated element is doubly marked for Case; it receives a first Case assigned to it on the basis of its original position – here genitive Case as it is the specifier of a nominal – and a second Case which is the same Case as the Case of the head of the constituent it is floated out of – here accusative. The configuration for floating is as in (11a) which is quite similar to that of raising, represented in (11b). We can collapse these two trees into one configuration by leaving the lexical category unspecified as in (11c):

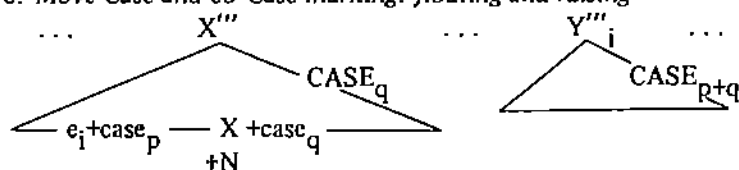
(11) a. *Floating*



b. *Raising*



c. *Move Case and co-Case marking: floating and raising*



How can we insure that the raised and floated elements will appear in the same Case assignment domain as their source constituent? One way is to leave the landing site free, and to invoke a Case association rule as in Van Riemsdijk (1980) which is the only way to link the floated or raised element and its source. The Case association rule works only when the Case specifications for the two constituents are identical, and this, of course, can only be the case when the two constituents are in the same association domain. In this proposal, the floated or raised element receives its exterior Case at the level of S-structure, when it has landed. This solution works fine for floating out of nominative or objective constituents, since these Cases are assigned structurally, i.e. indiscriminately to all elements in the relevant domain. Exterior Case is assigned to the raised or floated element just as it was assigned to the source: all elements in the

domain receive this Case marking unless specified otherwise. It is problematic for floating out of dative noun phrases, however, as in (12):

- (12) runa - man kallpa - yuq - man qulqi - ta qu - ni
 man DAT strength with DAT money AC give I
 'I give the money to the strong man'

Assuming the Case assignment rules suggested in 1.3.1 to be correct, dative Case, expressed with *-man*, is not assigned structurally, but rather lexically as a property of the verb 'give', specified as assigning 'dative'.

In (12) then, we would expect the floated element to be assigned objective Case if it were assigned Case structurally in its landing site, which is not the correct result. Now, we have two alternatives. One is to assume that dative can be assigned several times, as long as the elements involved have the same Theta-role with respect to the verb. This would give us the right result, but it may not be the case that all floated and raised elements have the same Theta-role with respect to the matrix verb. In fact, with raising elements this is never the case: the raised element simply never has a Theta-role with respect to the matrix verb, and there are cases of floated possessor phrases, where we do not find the same Theta-role appearing either. If we say that floating or raising is movement to a non-Theta position (as is suggested in 3.4.) this option is out in any case. If we say however that Case is assigned to the raised or floated element the moment it passes through the CASE position on the X''' level of the source constituent, the correct results obtain for the distribution of Case. Since here dative is assigned (in the cases of (12) and comparable structures), the raised or floated constituent will receive dative as well.

We assume this solution to be the correct analysis of Case reassignment for both quantifier float and raising across syntactic categories and we will say that for both raising and floating Case is assigned to the moved element when passing through the COMP-like CASE position on the X''' level. Case assignment into COMP has been suggested in the literature in order to account for specific problems of Case assignment (e.g. Kayne, 1980; Chomsky, 1981; Groos and Van Riemsdijk, 1981). Our analysis brings strong support in favor of the proposal that Case can be assigned into COMP. The contribution of our analysis to such a proposal is even greater given the wide range of phenomena than Case assignment into COMP accounts for in Quechua: Case on raised NPs, on floated quantifiers and, as we will argue, all other NPs found outside of their clause. In later discussions, we will refer to Case reassignment when passing through COMP simply as co-Case marking.

1.3.4. *Raising as Move CASE*

We have seen that the raised elements receive their case while passing through a COMP-like CASE position on the X''' level. In this section we discuss the components of the rule by means of which raising is effected. We take up the discussion from three points of view: First, we discuss the type of rule that accounts for raising in Quechua; second we discuss the status of the empty category corresponding to the raised NP in the embedded clause, as it was shown in section 1.2. that raised NPs correspond to an empty position in the embedded clause. Third we will discuss what the landing site for raised elements is: do raised NPs pile up into COMP where they receive Case from the matrix verb or do they land in the matrix clause itself after passing through the COMP-like CASE position functioning as an escape hatch? In conclusion we discuss the predictions of the analysis we propose.

We propose that the facts of raising in Quechua are best accounted for by a rule of the type Move α in which α is CASE, such as represented in (13).

(13) Move α , α = CASE

According to this rule, any Case-marked element¹¹ of the embedded clause can be raised into the domain of the main verb, through the COMP-like CASE position on X''' functioning as an escape hatch for raising. The raised element is assigned Case by the main verb governing the COMP. The COMP-like CASE position here is not a Theta position and our rule of Move α expresses the configuration defined in Chomsky for Move α , that is to say:

(14) " α locally binds β and is not in a Theta position" (Chomsky 1981: 59)

Moreover, we can say that the CASE feature in the formulation of our rule is of the same type as the Wh feature in Chomsky's formulation of Move α : "Move α can move α to COMP only if it contains the feature [+Wh]" (p. 118), such as represented in (15).

(15) Move α , α = Wh

Thus our rule (13) is formally comparable to rule (15).¹²

The rule so formulated makes the right predictions for Quechua. First, it insures that only elements which can be marked for Case, thus [+N] elements are allowed to raise, which is in fact the case. Second, it accounts for the fact that embedded verbs, even though they are nominalized, thus

bearing the feature [+N], will never be raised. Indeed, our rule predicts that only maximal projections can be raised, Case being a feature of maximal projections. This insures that heads alone, hence nominalized verbs, cannot be raised.

Our rule of Move α also shares the basic characteristic of Move α : it leaves a gap (Chomsky 1977), as was shown in section 1.2. Let us now examine the characteristics of that gap for the raising data. Is that gap a trace of NP or a variable? Chomsky distinguishes between traces of NP and variables mainly on the basis of the type of binding involved. Variables are \bar{A} bound by an operator in COMP while traces of NPs are A or argument bound. This major distinction between traces of NPs and variables come in a cluster with other internal properties that distinguish them. Variables are Case marked because they occur in Case assignment positions while NP traces are not Case marked because they do not occur in Case assignment positions. Variables bear a Theta-role; while NP traces, on the other hand, bear no Theta-role.

If we look at the Quechua data in the light of these distinctive features, we are led to the conclusion that the empty category created by Raising in Quechua is a variable. Indeed, it is \bar{A} bound, i.e. bound by an operator in COMP; the empty category created by Raising is Case marked as it occurs in a Case marking position (e.g. in subject position, which is assigned genitive Case); finally, it bears a Theta role; it was shown in sections 1 and 2 that the raised elements receive their Theta-role from the embedded verb, not from the upper verb, and this Theta-role is born by the variable that the raised NP binds. So in Quechua, a raised NP leaves a variable behind, not a trace of NP. This fact does not come as a surprise since our raising rule is not formulated as 'Move NP' but rather as 'Move CASE' where, as mentioned earlier, Case is qualitatively similar to the feature 'Wh' in 'Move Wh'.

From the fact that the gap created by raising is a variable rather than a trace of NP we can derive the optionality of the rule Move CASE, as was shown in sections 1 and 2. Indeed, if Raising does not apply, the NP is in a Case marked position, in the same way as its trace, a variable, is in a Case marked position when it is raised. NP movement however is obligatory (e.g. in the case of passive, or raising to subject in English), due to the fact that the contexts in which it can occur are not Case marked positions; hence the NP has to move in order to receive Case, otherwise it will be filtered out by the Case Filter, since the gap it leaves behind, a trace of NP, is not Case marked, which yields the correct results.

Let us now turn to the last component of the Quechua raising rule: the landing site of the raised elements. The GB theory stipulates that Movement/Coindexation rules must be initially from a position in D-structure to which a genuine Theta-role is assigned to a position to which

no Theta-role is assigned. Non-Theta positions are generally on the X''' level, hence S' , and marginally determined by lexical properties (e.g. 'seem' does not assign a Theta-role to its subject). We have shown so far that raised NPs are assigned accusative Case by the matrix verb in the COMP-like CASE position on S' . However we have not discussed the question of whether at S-structure the ultimate landing site for raised elements is CASE or some position in the matrix clause. Here we show that raised elements do not remain in COMP but end up in the matrix clause. From a syntactic point of view, it is clear that the raised elements do not stack into COMP but that they fill positions in the matrix sentence. Consider again sentence (16):

- (16) mariyacha xwancha-q-ta-n; muna-n [S' e_i platanu rantimu-na-n-ta]
 Maria Juan GENAC AF want 3 bananas buy NOM 3 AC
 'Maria wants John to buy bananas'

In (16) the raised NP *xwancha-q-ta* is separated from its own S' by the main verb *muna-n* and therefore cannot be said to be in the COMP-like CASE position of its own S' . Rather, it fills a position in most cases in the VP of the matrix clause¹³. On the basis of word ordering facts, the ultimate landing site for raised NPs at S-structure cannot be said to be the S' -level of the embedded clause, but rather, a position within the matrix VP.

The fact that raised NPs receive their second Case while passing through a CASE position on S' (as was argued earlier) and the fact that they do not remain in this COMP-like CASE position but ultimately land in the matrix clause constitute strong support in favor of an analysis of the CASE position on S' as an escape hatch for raising similar to the WH position which functions as an escape hatch for long Wh Movement in other languages.

As for the landing position of the raised NPs, we will assume that Quechua and maybe other languages, allows for non-Theta positions to be generated in the verbal projection. In this view, Theta positions will constitute a proper subset of the A positions as is the case in English as well where a subject position can be a A position without being a Theta position (e.g. in passive construction, with the verb 'seem', etc.). In Quechua, the raised elements will land in these positions after passing through the COMP-like CASE position where they receive the same Case as the head of the clause they are raised out of, i.e. are co-Case marked with. That raising is movement to a non-Theta position is supported by data from object marking as exemplified by the agrammaticality of (17).

- (17) *pedru yacha - wa - n platanu ranti- sqa- y-ta
 Pedro know I 3 bananas buy NOM I AC
 'Pedro knows me to have bought bananas'

Sentence (17) is ungrammatical because *yacha-* 'know' is marked for first person object *-wa-*, which is not its thematic object, while *yacha-* can only be marked for thematic objects. If the raised elements move to a non-Theta position the agrammaticality of (17) is correctly predicted¹⁴.

Assuming this analysis, the Projection Principle and the Theta Criterion are not violated, the raised NPs bearing only one Theta-role, the one assigned to them by the embedded verb, independently from the position that they occupy at S-structure. This analysis however will allow for S-structure to differ from Logical Form representation more than Chomsky's formulation of the Projection Principle suggests is possible:

"LF representation differs only minimally from S-structure given the projection principle, which furthermore, assigns to the lexicon a central role in determining the nature of syntactic representations at every level" (p. 344)

If our analysis is correct, the consequence is that a distinction needs to be maintained between Case assignment and Theta-role assignment. This latter point will be documented in detail in the next section.

If the analysis we suggest for raising is correct that raising is best accounted for by a rule Move α where α = CASE it is to be expected that the facts of raising in Quechua will conform to the diagnosis of Wh movement found in Chomsky (1977). This prediction is verified: the Quechua facts may be shown to meet most of the diagnostic characteristics of Wh movement. Indeed, i) it leaves a gap, as argued in previous sections; ii) it creates apparent violations of subadjacency, the propositional island and specified subject conditions¹⁵ iii) since NPs have a COMP-like CASE position in Quechua Move CASE should not observe the CNPC. Nonetheless, it is the case that raising out of a N''' configuration is not possible when there is a relative clause, while it is possible out of N''' configurations when they are complement clauses, even though as surface strings they are identical; this fact is exemplified by the contrast in grammaticality between (18) and (19):

- (18) a. *yacha - ni* [N''' *runa - q ri - na - n - ta*]
 know I man GEN go NOM 3 AC
 'I know that the man will go'
- b. *runa - q - ta_i yacha - ni* [N''' *e_i ri - na - n - ta*]
 man GEN AC know I go NOM 3 AC

- (19) a. *riqsi - ni* [_{N'''} [_{S'} *runa ri - sha -- q - ta*]]
 know I man go DUR AG AC
 'I know the man who is going'
 b. **runa - ta_i riqsi - ni* [[_{e_i} *ri - sha - q - ta*]]
 man AC know I go DUR AG AC

These facts are not due to a violation of CNPC but rather to impossibility for the matrix verb of assigning Case to a raising NP in the CASE position of a *S'* contained within an NP¹⁶, or to subadjacency facts, which may amount to the same thing. iv) there is apparent violation of the Wh-Island Constraint, since raising out of a clause containing a Wh element yields grammatical results as in (20):

- (20) *pi - qpa - ta - n platanu - ta pedru - paq muna - nki ranti -*
 who GEN AC AF banana AC Pedro BEN want 2 buy
na - n - ta
 NOM 3 AC
 'Who do you want to buy bananas for Pedro?'

Since the raised elements do not move through a Wh-position, but rather through a CASE position, apparent violations of the Wh-Island Constraint are to be expected and this fact does not constitute a counter-example to the compatibility of the Quechua raising phenomena with the diagnostic features of Wh-movement. We will return in section 4.2 to the question of how multiple raising is possible out of the same clause.

Finally, Raising exhibits a property of Wh-Movement found in many languages: something similar to successive Wh-Movement, which we will refer to as successive CASE-Movement. Sentences (21) exemplifies this fact:

- (21) *pi - pqa - ta - n_i muna - nki* [_{e_i} *llank'aqmasi - n hamu -*
 who GEN AC VAL want 2 colleague 3 come
na - n - ta]
 NOM 3 AC
 'You want that the colleague of whom will come?'

In (21) the quantifier *pi-qpa* 'who GEN' is first floated out of its NP through the COMP-like CASE position on N''' where it receives nominative Case. Then it is raised out of its clause through the COMP-like CASE position on *S'* where it receives accusative Case. In (21) Move CASE has thus applied twice¹⁷.

Summarizing: In this section we studied the various components of the rule by means of which raising is effected in Quechua. We suggested a

rule Move CASE which has the effect of allowing Case marked, therefore [+N], elements of a lower clause to be raised out of it through a COMP-like CASE position functioning as an escape hatch, to a non-Theta position postulated to be in the matrix VP. We showed that the rule Move CASE has the formal properties of Move α and more specifically of Move Wh on the following grounds: the feature CASE is formally equivalent to the feature Wh; both involve A' binding thus leaving a gap which is a variable rather than a trace of NP; Move CASE observes the diagnostic features of Wh Movement; there are cases of successive Move CASE similar to successive Wh Movement. Our analysis accounts for the fact that only [+N] elements can be raised, and that only maximal projections can be raised; it also accounts for the fact that raising is optional. Finally, it reveals a dissymmetry between Case and Theta assignment which we discuss in more detail in our next section (1.3.5). In section 4.2. we explore a more abstract version of the solution presented in this section.

1.3.5. Dissymmetry between Case Assignment and Theta role assignment

It is clear by now that the Quechua data show that there is dissymmetry between Case assignment and Theta-role assignment. If this dissymmetry exists in English (e.g. in passive construction, in the case of raising to subject and in the case of exceptional Case-marking. See Chomsky 1981) as a marginal phenomenon, in Quechua it appears to be the general rule that Case assignment and Theta-role assignment operate independently from each other. This fact challenges Chomsky's conclusion that "The Case Filter follows, *in toto*, from the Theta Criterion". In this section, we document in detail the dissymmetry between Case assignment and Theta-role assignment.

A first point of dissymmetry between Case assignment and Theta-role assignment in Quechua are Cases where a verb assigns a Case to an NP without assigning it a Theta-role. The Cases of raising reported on so far are a Case in point, where the matrix verb assigns accusative Case to the raised NP without assigning it a Theta-role. This fact is an instantiation of a more general fact of Quechua that verbs assign Case to any elements in their domain, without necessarily assigning them a Theta-role. In (22) the time adverb *paqarin* 'tomorrow', the manner adverb *allin* 'well', receive accusative *-ta* Case from the verb *ruway* 'do', because they are in the domain of that verb. It cannot be said, however, that *ruway* assigns a Theta-role to these adverbs.

- (22) *paqarin-ta allin-ta chay-ta ruwa-nki*
 tomorrow AC well AC this AC do 2
 'Tomorrow you will do this well'

It thus appears that in Quechua any element in the domain of VP receives the Case feature [+ assigned by V] by a rule of type (23).

$$(23) \quad \text{vp}[\dots X \dots V] \Rightarrow \text{vp}[\dots X \text{ [+assV]} \dots V \dots]$$

These facts suggest that the Case assignment rule in Quechua is much broader than Theta assignment rule which is in accordance with the Theta Criterion. This implies that, among other things, Theta-roles will be assigned only once. In the case of raising, Theta-role was shown to be assigned only once by the embedded verb. This led us to postulate non-Theta positions in the VP in order to account for the surface position of the raised NPs. It thus appears that in Quechua, positions for Case assignment do not necessarily correspond, although they may coincide, to the positions for Theta-role assignment.

The second point of dissymmetry between Theta-role and Case in Quechua has to do with the Uniqueness Criterion. While arguments bear only one Theta-role they may bear more than one Case. Instances of double Case marking reported on earlier (see section 1) are a Case in point.

A third aspect of the dissymmetry between Theta-role assignment and Case assignment is that Theta-roles percolate down to heads, since selectional restrictions are determined by the heads, while Case is a property of maximal projections. In section 1.3.4. we showed that this dissymmetry between Case assignment and Theta-role assignment is manifested in raising in that heads cannot be raised while projections can.

Concluding this section: we have seen that in Quechua there is an important dissymmetry between Case assignment and Theta-role assignment: (i) verbs assign accusative Case to [+N] elements that are in their domain without assigning them a Theta-role, (ii) while arguments may bear two cases, they are always assigned only one Theta-role, (iii) while Theta-role is a property of heads, Case is a property of maximal projections. These facts suggest that the Case Filter does not follow from the Theta Criterion as is suggested in Chomsky (1981: 336).

Summarizing our analysis: in order to account for the facts of raising, we proposed a rule of Case assignment applying at all levels whenever its structural description is met. We argued for a rule of Case assignment into COMP assigning Case to the raised NP at the moment it passes through a COMP-like CASE position. The rule of raising, formulated as Move α where α = CASE, was shown to exhibit the characteristics of Wh-Movement. We argued for non-Theta positions to be generated within the matrix clause as the landing site for raised elements. Finally, we showed that Case assignment and Theta role assignment are not parallel in Quechua. In section 5.1 we explore a more abstract way of analysing the raising data, linking the raising phenomena to non-configurationality. We now turn to

other cases of movement rules in order to study their relationship with raising.

1.4 Cole and Hermon revisited

In two related papers (1979, 1981) Cole and Hermon propose an analysis of the facts of raising in Quechua in terms of Subject-to-Object Raising achieved by a NP-movement rule. Their analysis forces them to reject conditions on islandhood proposed in the theory of Binding (Chomsky 1980), such as NIC and Opacity, and to formulate a new proposal to account for the same facts. Their analysis leads them to the conclusion that "a variety of facts peculiar to the IQ (Imbabura Quechua) show that the explanation for islandhood proposed in "On Binding" - NIC and Opacity - cannot be extended crosslinguistically" and that "conditions like NIC and Opacity should be rejected in favour of an analysis which includes both Subject-to-Object Raising and clause boundedness" (1979: 85). In their 1981 paper they propose modifications to Chomsky's (1980) analysis of islandhood formulated in terms of conditions on binding, by suggesting that Subject-to-Object Raising is an instantiation of a more general NP movement rule and that the Nominative Island Condition must be replaced by a new condition: the Case-Marked-Subject-Island-Condition (CSIC). The CSIC has the property of distinguishing between lexical NPs on the one hand, and PRO and NP movement traces on the other. The CSIC thus predicts that it will be possible to apply NP movement to complement subjects while it will block bound anaphoric relations between complement subjects and antecedents in higher clauses.

The work by Cole and Hermon (1979; 1981), as was mentioned before, provided the original motivation and laid the groundwork for our study of raising phenomena in Cuzco Quechua. Implicitly it will have become clear for those familiar with that work that our analysis is very different from the one they have provided, but here we will explicitly contrast both the data and the analyses, pointing to, in our view, a number of essential shortcomings of their approach, and suggesting where more complete data would be necessary to make the Imbabura Quechua data and the Cuzco Quechua data more comparable.

Of necessity the tone of this section will be largely negative. It should be stressed however that Cole and Hermon have succeeded in raising most of the important issues related to the phenomena under consideration, and as such should be credited.

Raising appears to be much the same phenomenon in both Cuzco Quechua and in Imbabura Quechua. The sentences given by Cole and Hermon to introduce raising in Imbabura Quechua (their sentences (13a) and (13b) here reproduced as (1a) and (1b) respectively), parallel the two contrastive

sentences given for CQ in the introduction to this paper (maintaining their spelling).

- (1) a. Maria-ca cri-n Francisco cay-pi ca-j-ta
 Maria TO believe 3 Francisco this LO be NOM AC
 'Maria believes that Francisco is here'
- b. Maria-ca Francisco-ta cri-n cay-pi ca-j-ta
 Maria TO Francisco AC believe 3 this LO be NOM AC
 'Maria believes Francisco to be here'

Moreover, Cole and Hermon note the same basic arguments as we do for a raising analysis of the (b) data: 1) word order: the subject of the embedded verb is outside of its clause and occurs before the main verb; 2) Case distribution: the subject of the embedded verb is marked accusative *-ta* Case as if it were an object of the main verb; 3) the raised NP may bear the validator which is impossible when it is in its basic position in the embedded sentence. Moreover, if we compare the facts of raising both IQ, as given in Cole and Hermon, and CQ, as described in sections 1 and 2 of this paper, we do not find major differences in the data. Let us systematically compare the facts.

First, while we have shown that raising in Cuzco Quechua is possible out of any position (subject, object, oblique, etc), Cole and Hermon only report cases of raising out of subject position. They mention no negative data however concerning raising out of non subject positions and it might very well be that the two dialects present no difference at all here.

Second, for Cuzco Quechua, it was shown that all [+N] elements (therefore nouns, pronouns, quantifiers, adverbs) were eligible for raising. Cole and Hermon present cases of raised nouns and pronouns; they do not say whether quantifiers and adverbs may raise.

As we noted for Cuzco (cf. section 2) Cole and Hermon also mention that raising does not occur with the verb *niy* 'say' (p. 27,28).

Fourth, in both dialects, raising does not occur when the main verb has a lexical object other than the embedded clause in surface structure (see section 1.2 for CQ; for IQ see Cole and Hermon p. 8).

Fifth, in both dialects, Raising is optional (for CQ see sections 1 and 2 of this paper, for IQ see Cole and Hermon p. 5 sentences (13a) and (b)).

From this comparison there thus appear to be no basic differences between the facts of raising as they occur in Cuzco and Imbabura Quechua respectively. Even if filling the gaps in the Imbabura Quechua data was to bring to light differences between the two dialects, we believe that they would be minor differences which should not lead to two different analyses of the data. The two analyses however are basically different from one another. Let us compare them and see how they each account for the data.

In Cole and Hermon's analysis the facts of 1) are analysed in terms of Subject-to-Object Raising. On the one hand, since no negative data are given for raising out of non subject position, the basic characterisation of the rule as Subject-to-Object is not convincing even for their own data. Furthermore even if it were the case that in Imbabura Quechua raising occurred only out of subject position, the formulation of the rule as Subject-to-Object would not account for the facts of raising out of any positions in Cuzco Quechua.

The characterization of the rule as Raising-to-Object is meant to account for the facts of 4) in terms of structure preservingness: "Move α applies to the complement subject, moving it into the empty NP slot in the matrix clause" (p. 8). It is also proposed as an explanation for the presence of accusative case marker on the raised subject. Following our analysis, structure preservingness is not involved here. On the one hand, a structure preserving position is Theta marked, which implies that elements moved into it would be Theta marked twice. In our analysis however we argued that raised NPs land in non Theta positions; the motivation for this was to make our analysis conform to the uniqueness property of the Theta criterion. If our analysis is correct, it follows that there can be no structure preservingness involved in accounting for the raising data. Another but less principled argument against an explanation of the data in terms of structure preservingness is that in Cuzco Quechua it is impossible to apply raising not only when the main verb has a direct object but also when the main verb has a lexical oblique object (see section 1.2). This fact cannot be explained by structure preservingness and we proposed another explanation to account for the restrictions on raising. Finally, we account for the accusative Case *-ta* marker on the raised NP by a rule of Case assignment into COMP; we showed that a rule which would account for Case assignment to the raised NP within an NP argument position would yield ungrammatical results as far as Case distribution goes (see section 1.3.1).

In Cole and Hermon's analysis, Raising is suggested to be a lexical property of certain verbs, presumably for two reasons: first to put the Quechua data in line with the English data, and second, to account for the fact that Raising does not occur with the verb *nij* 'say'. In our analysis, we show that unlike in English, raising in Quechua is not a lexical property of certain verbs, but that it occurs minimally with all the verbs that are case assigners (see section 1.2). The impossibility for raising to occur in the environment of the verb *nij* is explained by the fact that *nij* appears to have a special verbal status in Cuzco Quechua, and presumably in most Quechua dialects, in that it is not a regular embedding verb (see section 1.2). Another aspect of our analysis which speaks against Raising as being a lexical property of certain verbs has to do with the fact that Quantifier

Float is an instantiation of Raising as shown in section 1.3; Quantifier Float however is in no way linked to lexical properties of verbs. The same holds for the constructions discussed in section 4.

In Cole and Hermon's the formulation of Raising is Move α where $\alpha =$ NP. In formulating the rule like that they want to account for the facts that nouns and pronouns can be raised. This formulation however cannot account for raising of quantifiers and adverbs, thus [+N] elements in Cuzco Quechua and presumably in other dialects of Quechua as well. It does not account for the more general fact that any case marked element can be raised. Their rule Move NP cannot account for successive movement as we have shown is the case for at least Cuzco Quechua. Finally, their formulation of the raising rule cannot account for the fact that Raising is optional. Let us note in passing that optionality of Raising in IQ may be deduced from the data they present (their sentences (13a) and (13b) reproduced as (1) in the beginning of this section), but it is not discussed by them nor explained by their theory. Our analysis in terms of Move CASE allows to account for the fact that all elements that are [+N] therefore Case-marked may be raised, that only maximal projections can be raised and that raising is optional (see our section 3).

Cole and Hermon's rule of Raising formulated as Move NP forces them to say that the trace left behind by raising is a trace of NP; in this respect, IQ data constitute violations of the NIC, the trace of NP being not properly bound at S-Structure. Thus sentences obtained after Raising are grammatical while they should not be because they violate the NIC. Because of this problem, they suggest to reformulate the Nominative Island Constraint (NIC) trying to show that it is not the Nominative case which is at stake in determining the islandhood properties of NPs but rather the notion of subject. They are thus led to successive reformulations of NIC as, first, the Subject Island Constraint (SIC) and second, as the Case Marked Subject Island Constraint (CSIC). We return below to the discussion of their arguments for revising the formulation of the islandhood condition. Suffice to say as for now that in our analysis the problem that Cole and Hermon have with the trace is not a problem, because, since Raising is defined as Move CASE, the traces left by Raising are variables which are bound by a \bar{A} binder. Thus in our analysis, there are no violations of the basic principles of the binding theory.

In Cole and Hermon's analysis, Wh Movement is assumed to be a separate rule from raising; no data are presented however showing that raising and Wh Movement are two distinct phenomena. In our analysis we clearly establish that Wh Movement is in fact an instantiation of Raising. From the data Cole and Hermon present there is reason to believe that their data on Wh Movement would be best explained if looked at as subcases of Raising. Let us look at their analysis in more detail.

Given Wh Movement and Raising as two distinct phenomena, they use extractability by Wh Movement as a diagnostic for subjecthood; the agrammaticality of their sentence (36a), (here (2a)), in which the subject is extracted out of the embedded clause, contrasting with the grammaticality of (36b), here (2b), in which the object is extracted from the embedded clause, is used to argue against the extraction of subjects.

- (2) a. **pi-taj* Maria cri-n aicha- ta micu-shca- ta
 who Q Maria believe 3 meat AC eat NOM AC
 'Who does Maria believe that ate meat?'
 b. *ima- ta-taq* Maria cri-n Jose l micu-shca- ta
 what AC Q Maria believe 3 José eat NOM AC
 'What does Maria believe that José ate?'

"This pattern indicates that complement subjects in contrast to other positions in complement clause may not be extracted by Wh Movement. Thus extractability by Wh Movement constitutes a diagnostic for subjecthood in IQ" (p. 14). If we look at the same data within the framework of our analysis, considering Wh Movement a subcase of Raising, the following predictions obtain: like Cole and Hermon, our analysis predicts that (2a) is agrammatical, not because of a constraint against the extraction of subjects however, but because the extracted subject is not properly Case marked. Our analysis predicts that the extracted subject *pi* should acquire an objective case while passing through COMP, thus yielding (2c).

- (2) c. *pi- ta- taq* Maria cri-n aicha- ta micu-shca- ta
 who AC Q Maria believe 3 meat AC eat NOM AC
 'Who does Maria believe that ate meat?'

This form is indeed a grammatical one in IQ; in fact, it is Cole and Hermon's sentence (20) p. 49, cited there for other reasons. We conclude that our analysis of Wh as Move CASE best explains the IQ data. This being the case, Cole and Hermon lose their diagnostic for subjecthood. Their other diagnostic for subjecthood stating that an accusative desiderative experiencer and an accusative lexical experiencer cannot be extracted by Wh Movement also fails for other reasons. Their example (37) selected to illustrate this point contains the verb *nij* 'say' as the main verb. These sentences cannot be used to illustrate their point because if unbounded Wh Movement is in fact Raising, and that *nij* is not a raising verb, as mentioned earlier, then the examples they selected do not constitute a diagnostic for subjecthood. The problem of "accusative subjects" and their control and coreference properties deserves much further study¹⁸.

2. WH MOVEMENT AND MOVE CASE

Is Wh Movement distinct from Raising or are the facts of Wh Movement in Quechua an instantiation of Move α where α = CASE? This is the question to which we will address ourselves in this section. Before we do so, let us sketch briefly the facts of Wh questions relevant to our analysis.

The list of Wh words in Quechua is as in (1); as can be seen, they do not form a morphological class.

- | | | |
|-----|---------|---------------------|
| (1) | pi | 'who' |
| | ima | 'what' |
| | may | 'where' |
| | imayna | 'how' |
| | hayk'aq | 'when' |
| | hayk'a | 'how much/how many' |
| | mayqin | 'which' |

In Quechua Wh words function exactly like nouns, e.g. they are found in the same position as nouns, they take morphological Case, etc. Wh words may be found in their basic position in the sentence as shown in (2). The most favoured position for Wh words, however, is sentence initial as in (3)²⁰.

- | | | |
|-----|-------------------|--------------------|
| (2) | mariyacha pi-ta-n | riku-ra-n |
| | Maria | who AC AF see PA 3 |
| | 'Maria saw who.' | |
-
- | | | | |
|-----|----------------------|-----------|-----------|
| (3) | pi-ta-n | mariyacha | riku-ra-n |
| | who AC AF | Maria | see PA 3 |
| | 'Who did Maria see.' | | |

There is no stranding of Case markers (nor of postpositions) in Quechua; the Wh word is always Case marked whatever its position might be. In Wh clauses it is the Wh word which bears the validation suffix if there is one in the clause and no other element may bear it. This is due to the fact that Wh words are the elements focused upon in a sentence; consequently they bear the validation markers, which encode focus, among other things.

In embedded questions, the Wh word may be fronted to the beginning of its own clause as in (4), where we assume a Wh-position.

- | | | | | |
|-----|----|-----------------------------------|----------------|---------------|
| (4) | a. | muna-nki pi-qpa | platanu | ranti-na-n-ta |
| | | want 2 | who GEN banana | buy NOM 3 AC |
| | | 'Who do you want to buy bananas?' | | |

- b. muna-nki ima xwan-pa ranti-na-n-ta
 want 2 what Juan GE buy NOM 3 AC
 'What do you want John to buy?'

It can also be found in the initial position of the matrix clause in which case it shares some of the characteristics of raised nouns such as being doubly marked for Case as shown in (5).

- (5) pi-qpa-ta-n muna-nki platanu ranti-na-n-ta
 who GEN AC AF want 2 banana buy NOM 3 AC
 'Who do you want to buy bananas.'

Assuming that the Wh word acquires its second Case marker in the same way as raised elements do, that is while passing through the COMP-like CASE position on S', the question that arises is whether unbounded Wh-Movement phenomena are distinct in any way from raising phenomena. Let us compare systematically the phenomena of unbounded Wh-Movement with those of raising.

1) Unbounded Wh-Movement like raising is possible only with verbs that are Case assigner verbs. Thus, unbounded Wh-Movement is no more possible than raising with verbs of movement as shown in (6), because these verbs do not assign accusative Case.

- (6) a. xwancha ri-n pi riku-q
 Juan go 3 who see NOM
 'Who does John go to see?'
 b. *pi-n xwancha ri-n riku-q
 c. *xwancha pedru-ta-n ri-n riku-q
 Juan Pedro AC AF go 3 see NOM
 'John goes to see Peter'

2) Unbounded Wh-Movement, like raising, is possible only out of embedded sentential complements containing a nominalized verb²¹. Thus unbounded Wh-Movement is not possible out of sentences containing a tensed verb and a lexical complementizer, as shown in (7):

- (7) a. *pi-n/pi-ta-n muna-nki platanu-ta ranti-nqa chay -ta
 whoAF whoAC AF want 2 banana AC buy 3FU COMP AC
 'Who do you want that shall buy bananas'
 b. *ima -ta -n muna-nki mariya ranti-nqa chay-ta
 what AC AF want 2 Maria buy 3FU COMP AC
 'what do you want that Maria shall buy'

Unbounded Wh-Movement out of adverbial clauses is also excluded because these clauses are not embedded but base-generated on the S' level²².

3) Unbounded Wh-Movement, like raising, to a non-Theta position in the VP is impossible for agent phrases in passive clauses, as shown in (8) (cf. section 3):

- (8) a. *pi - qpa nuqa maqa - sqa - n ka - ni
 who GEN I hit NOM 3 be 1
 'By whom have I been hit'
 b. *xwancha - q nuqa maqa - sqa - n ka - ni
 Juan GEN I hit OM 3 be 1
 'By Juan I have been hit'

4) Unbounded Wh-movement and raising are both possible out of perception clauses, as shown in (9a) and (9b), respectively.

- (9) a. ima - ta - n riku - nki pedru - ta suwa - q - ta
 what AC AF see 2 Pedro AC steal AG AC
 'what do you see Pedro steal'
 b. tayta - y - ta - n riku - ni pedru - ta maqa - q - ta
 father 1 AC AF see 1 Pedro AC hit AG AC
 'it is my father that I see that Pedro is beating'

5) Unbounded Wh-Movement, like raising, creates a context for double Case marking. If unbounded Wh-Movement were effected through movement of the Wh-element through the COMP-Wh position on S' there would be no explanation for the presence of -ta accusative Case in addition to the genitive Case in (10) and for the ungrammaticality of (11) where the Wh word only bears one Case marker, the one corresponding to the Case assigned to it in the embedded clause.

- (10) pi - qpa - ta muna - nki platanu ranti - na - n - ta
 who GEN AC want 2 banana buy NOM 3 AC
 'who do you want to buy bananas'

- (11) *pi - qpa muna - nki platanu ranti - na - n - ta

6) Wh-Movement, like raising, is optional, as shown by the grammaticality of (12), where the embedded Wh-word has remained in its basic COMP of S' position²³.

- (12) muna - nki pi - qpa platanu ranti - na - n - ta
 want 2 who GEN banana buy NOM 3 AC
 'you want who to buy bananas'

7) Neither Wh-Movement nor Raising trigger object agreement, since the movement is to non-Theta position and object marking is Theta sensitive in Quechua. Both (13) and (14) are ungrammatical since the main verb bears an object marker referring to a Theta-role assigned by the embedded verb.

- (13) *nuqa-nchis- ta - qa muna- wa- nchis platanu ranti- na-
 I 4 AC TO want 3 - 4 banana buy NOM
 nchis - ta
 pl AC
 'He wants us to buy bananas'

- (14) *mayqin-ni-nchis-ta muna-wa- nchis platanu ranti- na-
 which EV 4 AC want 3 - 4 bananas buy NOM
 nchas - ta
 1pl AC
 'Which one of us does he want to buy bananas?'

It thus appears that unbounded Wh-Movement and Raising cannot be distinguished since they occur and are prohibited by the same class of verbs and in similar environments, since they both create a context for double Case marking, and since both are optional. For these reasons, we conclude that in Quechua unbounded Wh-Movement is an instantiation of Move CASE, like raising. Note, as one of our anonymous reviewers pointed out, that this amounts to saying that the effect of 'unbounded Wh-Movement' is accomplished in three steps:

- (a) movement of the Wh-phrase, as if it were an ordinary Case marked element, from its deep structure position to the CASE position in its clause, as an instance of the rule of Move CASE;
- (b) Movement, through Move CASE, to a position in the matrix clause VP;
- (c) Movement, sensitive to the feature Wh, to the matrix clause initial position.

To be sure, there is a rule of local Wh-fronting, limited to the clause in which the Wh-element is generated. We have to claim that both S and S' are bounding nodes in Quechua, which would block unbounded Wh-Movement without Move CASE, because of Subjacency:

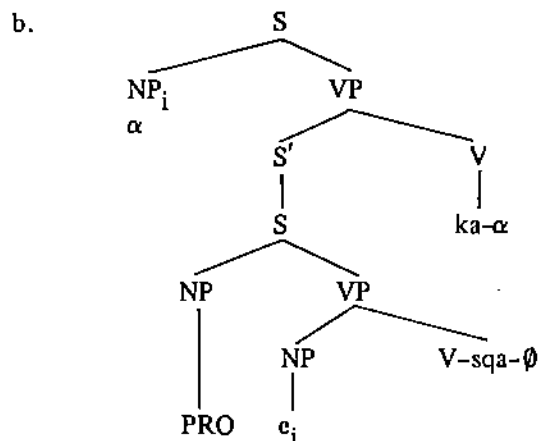
- (15) [S' Wh [S _____ [S' [S _____]]]]

Alternatively, we could claim that the rule by which 'bridge' verbs make Wh-movement out of their complement clause possible in Quechua is in-operant for Wh forms (though the equivalent is operant for Case marked forms).

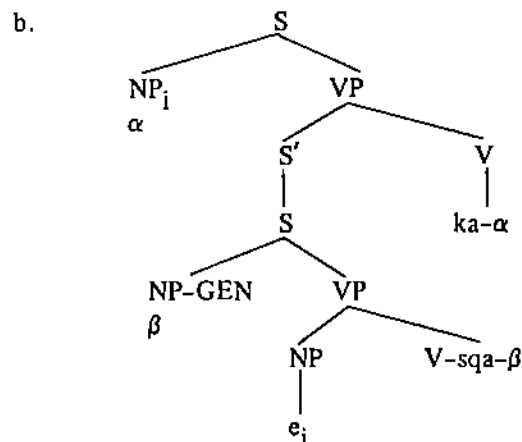
3. PASSIVE

Passives in Cuzco Quechua are clausally complex structures, involving a main verb *kay* 'be' and a subordinate verb marked with the nominalizer *-sqa-* 'definite'. We find both agentless passives, as in (1), and passives with an overt agent, (2).

- (1) a. *suwa - sqa ka - ni*
 rob NOM be 1
 'I have been robbed'



- (2) a. *Arturo - q suwa - sqa - n ka - ni*
 Arthur GEN rob NOM 3 be 1



Leaving aside for the moment the question of the two coindexed noun phrases, the following arguments can be given for the structures in (1b) and (2b)²⁴:

- A. The passivized NP agrees in person and number with the main verb *kay*, and hence is its subject. Elsewhere (Lefebvre and Muysken, in prep.) we have argued that in fact *kay* is always a main verb and never an auxiliary.
- B. Structure (2b) could never be mono-clausal since it contains two different subject agreement markers. In (1) we find a PRO subject, with an arbitrary interpretation, in the subordinate clause, possible because the absence of an Agreement marker leaves the subject position ungoverned.
- C. Non-passivized objects in double object constructions which have undergone passivization can have *-ta* object marking only with difficulty:

- (3) a. [llipin suwa - sqa] ka - ni
 everyt. rob NOM be 1
 'I have been robbed of everything'
 b.?[llipin - ta suwa - sqa] ka - ni
 everyt. AC rob NOM be 1

The absence of *-ta* is allowed only in embedded nominalized clauses.

D. Within the passive clause itself the negation particle *-chu*, which is limited to main clauses, is prohibited:

- (4) *mana askha - ta - chu suwa - sqa (-n) ka - ni
 not much AC NEG rob NOM 3 be 1
 'I have not been robbed of much (by him/her)'

On the other hand, the passive clause as a whole can be negated with *-chu*, which is then in the scope of the main verb:

- (5) mana nishu suwa - sqa - chu ka - ni
 not much rob NOM NEG be 1
 'I have not been robbed very much'
- (6) mana pedru - q suwa - sqa - n - chu ka - ni
 not Peter GEN rob NOM 3 NEG be 1
 'I have not been robbed by Peter'

These sentences show in addition that the embedded passive clause is a constituent.

E. The same conclusion follows from a consideration of ordering possibilities. The passive clause can be fronted as a whole:

- (7) ima yacha - chi - sqa qan ka - nki
 what teach NOM you be 2
 'what have you been taught.'

- (8) pi - qpa suwa - sqa - n - mi ka - ra - n Maria
 who GEN rob NOM 3 AF be PA 3 Mary
 'by whom was Mary robbed'

It can occur to the right of the main verb /ka-/ 'be':

- (9) ka - ni - n askha suwa - sqa
 be 1 AF much rob NOM
 'I have been robbed of a lot'

Arguments A. through E. conclusively demonstrate in our opinion that both agentless passives and passives with an agent are bi-clausal at S-structure, with the passivized element moved into the main clause subject position.

Thus the passive relation in Cuzco Quechua passes a clause boundary, and hence is not local. Neither is it Theta-sensitive, in the sense of Travis & Williams (1982). Consider the pairs (10) and (11), for instance:

- (10) a. noqa qolqe - y suwa - sqa ka - ni
 I money 1 rob NOM be 1
 'I have been robbed of my money'
 b. qolqe - y suwa - sqa ka - n
 money 1 rob NOM be 3
 'my money has been robbed'
- (11) a. qan runa simi yacha - chi - sqa ka - nki
 you Quechua teach NOM be 2
 'you have been taught Quechua'
 b. runa simi yacha - chi - sqa ka - n
 Quechua teach NOM be 3
 'Quechua has been taught'

These two characteristics, non-local and not Theta-sensitive, suggest that in Quechua the passive relation is syntactic rather than lexical. The question then is what kind of syntactic relation is involved. We have suggested in the tree (1b) that the subject of an agentless passive clause is PRO. It is not governed by the person marking of the verb and it has arbitrary reference²⁵.

The trace of the moved constituent is marked for Case, since V + sqa- can assign a Case to its complement (as in ordinary nominalized clauses). If we can defend the claim that the subject of the matrix verb *kay* 'to be' is in a non-Theta position, there is a movement configuration. Can we then

say that Passive in Quechua is an instance of Move CASE? Answering this question involves a number of considerations.

(a) *Case*. The 'raised' element does not receive accusative *-ta* in the matrix clause. Note, however, that the matrix verb here is copular *kay* 'to be', which does not assign accusative, but rather coindexes its complement with its subject, so that the complement receives nominative Case. Hence, following the analysis of raising proposed in section 1, the embedded object must receive nominative Case when it passes through COMP, and hence ends up in the position in the matrix to which nominative is assigned, i.e. the subject position.

For our analysis to work, we have to assume that the Case of the embedded object, \emptyset objective (which in our analysis has the feature (+ass. by V in a nominal context) is compatible with (+ass. by AG in a verbal context) Cf. the discussion in section 1.3.1. That the nominative Case of the passive phrase itself plays an important role is supported by facts of Wh-movement and quantifier float out of passive clauses.

Wh-movement of non-passivized direct objects in double object constructions is not allowed:

- (12) *ima - ta - n noqa suwa - sqa ka - ni
 what AC AF I rob NOM be 1
 'of what I have been robbed'

There is only a reading for (12) which is grammatical when /ima-ta-n/ is interpreted as a complement of the main clause, 'for what ...?' Strangely enough it seems to be possible to Wh-front an oblique phrase out of the embedded clause:

- (13) ima - wan noqa maqa - sqa ka - ni
 what WI I beat NOM be 1
 'what have I been beaten with?'

This is even possible in passives with an agent phrase:

- (14) ima - wan noqa arturo - q maqa - sqa - n ka - ni
 what WI I Arthur GEN beat NOM 3 be 1
 'what have I been beaten with by Arthur?'

The agent-phrase itself cannot be Wh-fronted in passives:

- (15) * $\left\{ \begin{array}{l} \text{pi - qpa - n} \\ \text{pi - qpa} \\ \text{pi - } \end{array} \right\} \left\{ \begin{array}{l} \\ \\ n \end{array} \right\} \text{noqa suwa - sqa - n ka - ni}$

who GEN AF I rob NOM 3 be 1
 'by whom have I been robbed?'

In neither type of passive can we get quantifier float out of the embedded clause; the example given is an agentless construction:

- (16) *qolqe - y (- ta) suwa - sqa ka - ni llipin - ta
 money 1 AC rob NOM be 1 all AC
 'I have been robbed of all my money'

In (12) and (16) accusative Case is incompatible with nominative. In (15) genitive is incompatible with nominative, while in (13) and (14) apparently oblique is compatible with nominative.

(b) *Theta-role*. Subjects of *kay* clauses, it was remarked above, are not assigned an independent Theta-role, so that the raised element does not occupy a thematic position at S-structure. It does occupy an A position, of course.

(c) *Optionality*. Note that, contrary to raising, passive appears to be obligatory: the non-raised direct equivalent of (1) and (2) is ungrammatical:

- (17) *a. (nuqa) suwa - sqa ka -
 me rob NOM be
 *b. Arturo - q (nuqa) suwa - sqa - n ka-
 Arthur GEN me rob NOM 3 be

The matrix verb needs a subject, so in a sense the non-application of passive results in an ECP violation. There are impersonal sentences such as (18), which constitute an equivalent to (17):

- (18) suwa - wa - sqa - n ka - rqa - n
 rob 1ob NOM 3 be PA 3
 'there was the fact that he robbed me'

These cases demonstrate that the obligatoriness of passive 'raising' is due to independent factors, here the ECP.

(d) *Object marking*. Immediately, however, a difference turns up between (18) and (17b) or (2b). In the non-raised case, (18), the nominalized verb is marked for the object, while in the raised cases it is not. Thus we might simply say that object agreement is formulated, or holds, at S-structure, not at D-structure, and that the trace of a first person raised object does not trigger agreement. This is not an attractive option for three reasons. First of all, when a first person or second person object is raised in the

'ordinary' raising constructions discussed in sections 2 and 3 of this paper, it does not agree with the matrix verb:

- (19) *xwancha muna - wa - n ri - na - y - ta
 John want 1ob 3 go NOM 1 AC
 'John wants me to go'

This might be explained by saying that object agreement, unlike Case marking, is not structural in Quechua but rather Theta-sensitive. Only true thematic arguments can agree with the verb as objects. Then a second problem comes up, however. Why would a Theta-sensitive relation hold at S-structure, but not at D-structure, where thematic relations are defined? The third problem is that claiming that traces of object raising do not trigger object agreement creates a curious asymmetry with subject raising, which does leave agreeing traces, of course:

- (20) xwancha - q - ta_i muna - ni e_j ri - na - n - ta
 John GEN ACwant 1 go NOM 3 AC
 'I want John to go'

Neither can we say that subject agreement only holds at D-structure, as is obvious from (1) and (2) of this section, where the element raised to the matrix subject position agrees at S-structure with the matrix verb. In (20) it must be the trace which agrees. The solution to these problems, we claim, is to consider the object markers in Quechua, but not the subject markers, not as elements agreeing with a filled or empty position, but rather as affixes which incorporate a specific Theta-role with a person specification within the verb. Once a verb is marked for a given object marker, it cannot assign a specific Case nor a Theta-role elsewhere. When a pronoun occurs in addition to an object marker on the verb, it generally is marked for Topic, and hence escapes the Theta-Criterion. This is, if one assumes that topics are immune to this requirement, which on the whole seems a reasonable assumption²⁶.

Sentences such as (21) involving both object marking and passive, are ungrammatical then because there is no Theta-marked element possible which can be raised, once the verb is marked for object:

- (21) *suwa - wa - sqa - n ka - ni
 rob 1ob NOM 3 be I
 'I have been robbed (by him)'

Object marking, then, in contrast to subject marking, leads to the absorption of the thematic role and of the Case of the object for which the

verb is subcategorized. We will put the problem aside of what the status of the empty object position is.

Passive, then, is optional (though often made obligatory because of ECP), it constitutes a relation between a non-Theta position and a Case-marked Theta position, it violates the Propositional Island and the Specified Subject Conditions, it involves the marking for Case of the moved element as it goes through the COMP-like CASE position of its clause. In sum, then, it has all the properties of the rule we described as Move CASE.

4. CONCLUSION

4.1 *Summary and discussion*

After our presentation of the principal features of Raising, Wh-movement, and Passive we can now compare these phenomena more systematically. Below we schematically summarize the various options encountered.

(1)

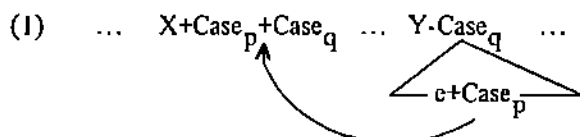
	RAISING	WH-MOVEMENT	PASSIVE
source	a Case-marked position in a finite complement clause	a Case-marked position in a finite complement clause	a Case-marked position in a finite complement clause
landing site	- \bar{A} ? - $\bar{\Theta}$ - [$_{VP}$ ____]	- \bar{A} - $\bar{\Theta}$ - [$_{S'}$ ____ [$_{S}$ ____]	- A - $\bar{\Theta}$ - [NP, S]
Case-marking in source of elements that can be moved	- genitive - oblique - * nominative - objective \emptyset - accusative - <i>ta</i>	- genitive - oblique - * nominative - objective \emptyset - accusative - <i>ta</i>	- * genitive - oblique (can be raised) - * nominative (not ass.) - objective \emptyset - * accusative - <i>ta</i>
Case-marking when in landing site	- gen + acc - oblique - * nom + acc - \emptyset + acc - acc	- gen + acc - oblique - * nom + acc - \emptyset + acc - acc	- * gen + nom - oblique - (not applicable) - \emptyset + nom - * acc + nom

Arguing for a unified analysis of the three types of movement in terms of Move CASE presents two problems. (a) Does the feature system for Case presented in section 1.3.1 explain the asymmetry between Case marking possibilities in Raising and Wh-movement, on the one hand, and in Passive on the other? (b) How do we explain the irrelevance of the A vs. \bar{A} distinction for movement in Quechua?

We will return to the second question in the next section. As to the first question, our feature system goes a long way. Genitive can be combined with accusative because they have opposite specifications, while genitive and nominative do not combine. \emptyset objective combines with nominative, again because they have opposite specifications. We will have to find a separate account for obliques (which can be combined both with nominative and with accusative in our analysis), and for the combinability of accusative with itself.

4.2 Move CASE as a special case of non-configurationality

So far we have studied raising phenomena in Quechua in relative isolation, formulating a rule of Move CASE as a core rule of Quechua grammar. Move CASE moves Case marked elements to non-argument positions, and co-Case marks these elements with their dominating constituent if they are moved outside of that constituent. Schematically:



Here Case_p is assigned to the 'deep structure' or 'thematic' position of an element, and this element is co-Case marked with Case_q when it leaves a constituent marked Case_q. In the standard examples, the constituent out of which an element is moved is a clause marked nominative or accusative Case, as discussed in sections 3 and 4. Here we would like to briefly discuss three other types of movement which could be considered instances of Move CASE: Floating, Scrambling, and Extraposition.

As was shown in section 3.3 Floating is a phenomenon of the same order as Raising, but differs from it in that the constituent out of which movement takes place is a noun phrase, and the element that moves most often is a quantifier, adjective, or other modifying element. For the rest it falls under the configuration (1) in the same way as Raising. Again, we will have to assume that the landing site for Quantifier Float is not an argument position. Examples of Floating include the following:

- (2) a. papa - ta llipin - ta mikhu - ni
 potato AC all AC eat I
 'I eat all the potatoes'
- b. hayk'a - ta muna - nki t'anta - ta
 how much AC want 2 bread AC
 'how much bread do you want'
- c. runa - ta kallpa - yuq - ta riqsi - ni
 man AC strength with AC know I
 'I know a strong man'

In all three examples the moved element is co-Case marked with its Deep Structure dominating constituent.

Scrambling in Quechua could be described as Move CASE without co-Case marking. The latter does not occur since the moved element does not leave its constituent (assuming that Scrambling is defined as such). While in Quechua subordinate clauses the word order is strict in that the verb must occur in clause-final position, in matrix clauses there is considerable liberty, as well as in the pre-verbal positions of subordinate clauses. Although in actual usage the large majority of sentences is SOV, we find post-verbal objects, pre-subject objects, post-verbal subjects, etc. Let us assume that all these deviations from unmarked word order are instances of Move CASE. Given that the landing site of Move CASE is a non-argument position, what makes scrambling possible then is the availability of non-argument positions at various places in the verbal projection. This can be termed the \bar{A} availability option in Universal Grammar. We will return to this option below.

A third type of phenomenon, hitherto considered unrelated, which can be considered as an instance of Move CASE is Extraposition, e.g. of relative clauses. Examples include (3):

- (3) runa - ta riqsi - nki - chu qayñunchay hamu - q - ta
 man AC know 2 Q yesterday come AG AC
 'do you know the man who came yesterday'

Here the relative clause has been extraposed out of the noun phrase of its antecedent, but at the same time it is co-Case marked with that constituent. Again, we will assume that the relative clause is extraposed to a non-argument position, and \bar{A} -binds its trace in the original noun phrase.

It is not possible here to discuss Floating, Scrambling, and Extraposition phenomena in detail. We merely wanted to suggest avenues for analyzing them in the same way as Raising, e.g. as instantiations of Move CASE. Now, we can return to the \bar{A} availability parameter. Languages which are positively specified for this parameter will allow Scrambling,

and if the same language allows for co-Case marking, it will allow for Floating, Raising, and Extraposition as well. Hence the latter possibilities imply Scrambling, but the inverse implication does not hold.

It is tempting to relate the \bar{A} availability parameter to the virtuality parameter as discussed in Vergnaud and Zubizarreta (1980). In this contribution the claim is made that non-configurational languages such as purportedly Japanese have a VP (and hence an asymmetry between subjects and objects) at the level of grammar at which thematic relations are assigned, but that this node is 'invisible' or 'virtual' at the level of representation at which constituent order is defined. At that level, subject and object would be simply sisters. Assume now that this level is relevant for Move CASE as well. Since the configurations on which thematic roles are assigned have become invisible, particularly VP, the positions in the tree become non-argument positions (except for those theta-marked at deep structure). While non-maximal projections can be virtual in these languages, maximal projections cannot.

This is where the co-Case marking parameter comes in. In those languages which are positively specified for co-Case marking, maximal projections become virtual as well. A first approximation of the relevant rule would be:

- (4) A maximal node α is virtual with respect to β iff β is coindexed with α

Co-Case marking is then the way coindexation is realized in Quechua (as well as in Walbiri, for instance, cf. Hale, 1979), but it is conceivable that other formal indexation types could exist as well.

Summarizing, we have tentatively proposed two parameters: \bar{A} availability (which may be reduceable to virtuality) and Coindexation. This gives us four possibilities for languages:

- (5)
- | | | |
|--|---------|--|
| a. (+ \bar{A} availability, + Coindexation): | Quechua | Floating
Raising
Scrambling
Extraposition |
| b. (+ \bar{A} availability, - Coindexation): | | Scrambling |
| c. (- \bar{A} availability, + Coindexation): | | Floating
Extraposition |
| d. (- \bar{A} availability, - Coindexation) | | |

Languages of type (5d) would permit no instances of Move CASE at all, while type (5c) which may include some European languages, would allow for limited movement of non-arguments, e.g. quantifiers and certain

Wh-elements, out of their noun phrases. Possibly these languages will allow Extraposition as well, although the non-argument status of the landing site of Extraposition needs further investigation. Type (5b) languages would allow scrambling of constituents, including arguments, within their dominating clauses, but no movement outside of their clauses, not even of quantifiers, etc. Finally, type (5a) languages will allow all instances of Move CASE described. Here of course there will be an interaction with perceptual and pragmatic factors resulting in the factual sequences commonly produced.

This preceding discussion has brought us to a more general view of Move CASE, encompassing phenomena which have previously been discussed in isolation for the European languages, such as Extraposition and Floating.

The major difference between the phenomenon Move Wh and Move CASE as we have analyzed it is that the COMP through which Wh passes can only have one unique index assigned to it, while co-Case marking (which we have assumed to be a special case of co-indexation) can occur indefinitely many times (as exemplified in section 2). This suggests that the two phenomena of Move Wh and Move CASE are essentially different at a more abstract level, even though they exhibit many similarities as shown in section 3.4. Perhaps the difference is due to the fact that Wh phrases function as quantifiers in Logical Form while raised [+N] elements in general do not. This would predict of course that raised Wh elements would show the same distribution at LF in Quechua as in English, unlike ordinary NPs and the like. To explore this prediction is beyond the scope of this paper.

Postulating the \bar{A} availability parameter provides us with an answer to the question raised in the previous section as to the irrelevance of the A / \bar{A} distinction as well. Given \bar{A} availability, at level at which Move CASE is defined, there is no principled way to distinguish argument and non-argument positions. Crucial is the possibility and type of Case marking that is available. All Case positions are in some sense \bar{A} positions once the structural distinction between argument and non-argument positions has disappeared.

NOTES

1. The data include the judgements of five informants. The judgements are clear except when noted in the paper.
2. The distinction A-bound versus M-bound is due to R. Bok-Bennema (1981) and corresponds to the distinction A-bound versus \bar{A} -bound found in Chomsky (1981).
3. For a short statement of the facts of case distribution on objects of embedded

verbs, see note 9. For a thorough analysis of these facts, see Lefebvre and Muysken (in preparation).

4. Subjects of embedded clauses receive either nominative (\emptyset) or genitive (*-qpa*) case depending on whether they occur in a V''' or in a N''' configuration. For an analysis of nominalizations in Quechua, see Lefebvre and Muysken (in preparation).

5. For a detailed analysis of agreement rules in Cuzco Quechua, see Lefebvre and Dubuisson (1978).

6. As for object marking in the verb, we suggest that the object marker absorbs Case and Theta-role; it thus makes it impossible for an object pronoun to occur in surface structure next to a verb containing an object marker because it would not receive a Theta-role. Thus if (a) is grammatical, (b) is not and hence (c), in which the pronoun *nuqa* has been raised out of its clause is not grammatical either.

- (a) mariya muna- n xwancha- q maqa- na- wa- n- ta
 Maria want 3 Juan GEN beat NOM 1ob 3 AC
 'Maria wants Juan to beat me'
- (b) *mariya muna- n xwancha- q nuqa maqa- na- wa- n- ta
 me
- (c) *mariya nuqa- ta muna- n xwancha- q maqa- na- wa- n- ta
 me AC

In Lefebvre and Dubuisson (1979) it was shown that co-occurrence of an object marker on the verb and a coindexed lexical pronoun in the same clause is only possible if the pronoun is in topic position. We will assume here without further argument that topics are somehow immune from the Theta criterion.

7. The only restriction that there is on the co-occurrence of raised elements out of a given clause is that for some speakers, but not all, it does not seem possible to raise both the subject and the object at the same time. We assume that this is for perceptual reasons.

8. For a detailed analysis of the structure of subordinate clauses in Quechua, see Lefebvre (1980). Base rule (6) in the text corresponds to (5b) in Lefebvre (1980) where this structure is argued for.

9. In nominalized clauses the object of the nominalized verb may be found with a *-ta* accusative marker in some cases; it can, and in some cases it has to be found without an overt case marker. In the latter case we assume that \emptyset Case has been assigned to the element unmarked for Case because of the Case Filter. The mechanism by which Case is assigned to objects of nominalized verbs still needs to be fully accounted for and in this paper we will simply assume that embedded direct objects are marked either \emptyset or *-ta*. For a full analysis of these facts see Lefebvre and Muysken (in preparation).

10. In Hermon (1981) it is claimed that accusative experiencers of certain verbs behave like subjects at LF, but that is irrelevant to the point here.

11. Note here that our rule Move α where α is CASE is formulated as such in order to specify that Case-marked elements can be raised and not to specify the landing site for raised elements, a landing site which could theoretically be a Case position in the main clause. (See footnote 12 for a specification of the latter hypothesis.)

12. CASE would be a morphological characteristic defined by morphosyntactic features in much the same way that [+R] and the Movement rule 'Move R' function in Dutch (Cf. Van Riemsdijk 1978). If, as Van Riemsdijk claims, [\pm R] corresponds at an abstract level to [\pm Locative] we could claim that Move R is a subcase of Move CASE. Suppose that universal grammar specifies a finite list of morphosyntactic features which can be used to define instantiations of Move α .

13. According to R. Bok-Bennema, these [+N] positions may be termed CASE positions. This would make them comparable to clitic or Wh positions which are also \bar{A} positions. A major difference, however, with the latter is that the Case positions we are referring to are not specified by phrase structure rules and that there can be indefinitely many of them.

14. Note here that the equivalent of sentence (18) is grammatical in Cole and Hermon's presentation as far as can be understood from the discussion of their example (16) p. 6.

15. Note here that for some speakers, if raising of the embedded subject is always acceptable when it is in the genitive Case, raising of a nominative subject is only possible when the embedded verb contains a *-na-* nominalizing suffix (- realized) and not when it contains a *-sqa-* nominalizing Suffix (+ realized) as reflected by the following sentences.

- a. pi- qpa- ta- n muna-nki platanu ranti- na- n- ta
 who GEN AC VAL want 2 banana buy NOM 3 AC
 'Who do you want to buy bananas?'
 a' pi Ø- ta- n muna-nki platanu ranti- na- n- ta
 who NO AC VAL
 b. pi- qpa- ta- n ranti- sqa- n- ta
 b' *pi- Ø- ta- n ranti- sqa- n- ta

The explanation for this is not completely clear to us as yet since the same informants accept also the following sentence structurally equivalent to b'.

- c. mariyacha xosecha-Ø- ta riku- n ranti- sqa- n- ta
 Maria José NO AC see 3 buy NOM 3 AC
 'Maria saw that José has bought bananas'

Tentatively, we suggest two possible explanations; first that raising of the genitive subject is preferred because double Case-marking is a sign of co-Case-marking; second because our informants in general did not like sentences containing embedded subjects in the nominative Case. The latter is most acceptable in other dialects of Quechua.

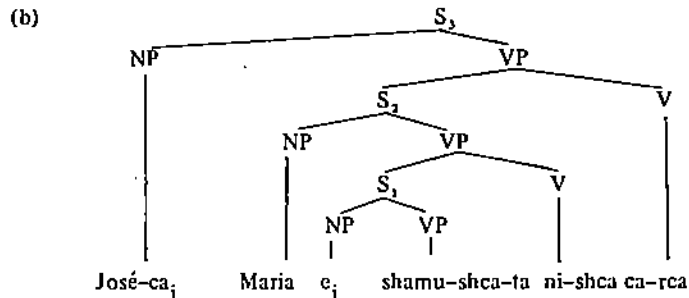
16. This fact constitutes an additional argument in favor of our analysis of relative clauses (Lefebvre and Muysken, 1982) as NPs containing an S' rather than as S's.

17. We lack clear data as to whether this is possible when the complement of the noun in the NP is a noun (e.g. *xwancha-q* 'Juan GEN') instead of a quantifier.

18. A final remark is in order with respect to the passive analysis in Cole and Hermon. It poses a problem for their CSIC since passive (assumed to be a clause-bounded phenomenon) is blocked out of *ni*-clauses, while in fact the prediction would that it is grammatical. Consider their example (68):

- (a) *Juzi-ca Maria Francisco-man ni-shea ca-rca [t cayna shamu-shca-ta]
 José TO Maria Francisco to say NOM be PA yesterday come NOM AC
 'José was said to Francisco by Maria to have come yesterday'

In fact, we will assume in section 3 that passives are clausally complex structures in Quechua, and in our analysis the structure of (a) would be something like (disregarding the fact that the clause is extraposed):



Considering the tree in (b) it is clear that (a) is ungrammatical for at least two reasons, in our analysis. First, since *ni-* is not a proper raising verb, *José* can never move out of S_1 into S_2 . If it did, however, it would be co-Case marked accusative, and then it could not become nominative any more when moving into S_3 , since accusative marking with *-ta* cannot become \emptyset nominative marking.

20. In Cuzco Quechua it does not seem to be possible to form multiple Wh-questions in which more than one Wh word is interpreted as a variable in Logical Form. What is found is rather one Wh word interpreted as a variable in Logical Form and possibly a second Wh element which is interpreted as an indefinite pronoun.

21. Like Raising, unbounded Wh Movement does not occur with the verb *niy* 'say' which does not subcategorize for a nominalized verb.

22. For detailed arguments on this point, see Lefebvre (1980).

23. If Wh Movement is optional, it seems that its application is preferred for non-oblique Cases over oblique Cases; the nominalizing suffix *-sqa-* is more favourable to unbounded Wh Movement than the nominalizing suffix *-na-*.

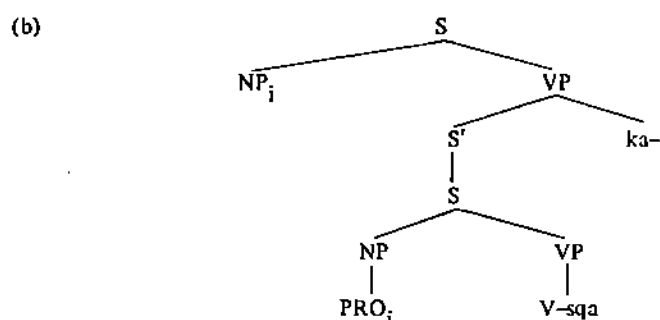
24. Here, as elsewhere, we do not specify the exact categorial (nominal or verbal) status of the clause, being content with calling it S' .

25. Strangely enough, however, it seems that it is sometimes the subject of the passive verb, and not one of its objects, that is raised to the subject position of the higher clause. Consider the following examples, from which it is clear that the semantics of the verb play a role:

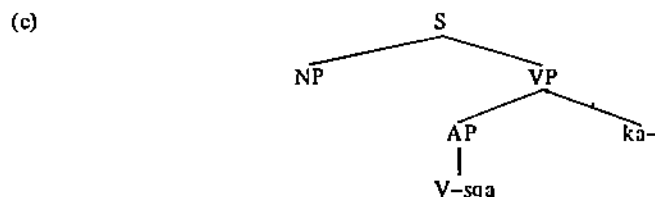
- | | | |
|------|-----------------------------|------------------------------|
| (a.) | a. puri - sqa ka - ni | 'I have been walked on' |
| | walk | *'I have walked' |
| | b. rima - sqa ka - ni | 'I have been talked against' |
| | talk | *'I have talked' |
| | c. puqlla - sqa ka - ni | 'I have been played with' |
| | play | ? 'I have played' |
| | d. maqa - sqa ka - ni | 'I have been beaten' |
| | beat | *'I have beaten' |
| | d.' maqa - na - sqa ka - ni | 'I am in a fight with ...' |
| | beat REC | |
| | e. mikhu - sqa ka - ni | 'I have eaten' |
| | eat | 'I have been eaten' |
| | f. chaya - mu - sqa ka - ni | 'I have arrived here' |
| | arrive CIS | |
| | g. saqsa - sqa ka - ni | 'I am satisfied' |
| | satisfy | |
| | h. puñu - sqa ka - ni | 'I have slept' |
| | sleep | |

- i. uqya - sqa ka - ni 'I have drunk'
 drink

The less agent-like the subject of the embedded verb, it seems from the array in (17), the more easily it can be raised, if indeed these active constructions involve raising. Thus we have a contrast between the absence of Theta-sensitivity with object raising and the sensitivity to the agent status of the embedded subject with subject raising. There are two possible ways in which subject raising may be differentiated in these constructions. One is to assume that we do not in fact have raising in these cases but control. The relevant structure would then be something like:



This structure would be relevant for the active cases of (a); the passive cases would have a structure as sketched before in (b). The alternative would be that these apparent cases of subject raising are really mono-clausal, and that the nominalized verb in these cases is really a sort of adjective expressing a state:



The interpretation of the Theta-grid of the nominalized verb would then be strictly lexical. We will adopt this analysis here, given the fact that nominalized verbs can function attributively as well when they belong to the active group of (a).

26. See also note 6 on object marking in the verb. This does not necessarily imply that they are in Topic position although this may be the case as well.

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