



## **Chain Condition, Ambiguity of Government and Derivational Grammars**

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Chain Condition, Ambiguity of Government  
and Derivational Grammars

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1. Introduction:

Chomsky (1981, 1986a) states the Chain Condition as a fundamental property of Chains and conjectures that it might be derived as a theorem from other principles of Universal Grammar.<sup>1</sup> The Chain Condition given in (1) below takes the uniqueness of theta-roles and Case as the definitive property of Chains.

(1) In a maximal Chain  $C = \{a_1, \dots, a_n\}$ ,  $a_n$  occupies its unique theta position and  $a_i$  its unique Case-marked position.

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<sup>1</sup> Chomsky does not state explicitly whether the Chain Condition should hold for both A and A' Chains. However, he proposes that it may be extended to expletive-argument pairs, wherefore the name CHAIN for the latter. Since the arguments against the Chain Condition we offer in this paper come from both A and A' Chains, the former indeterminacy is irrelevant to our point. However, we do not discuss the property of expletive-argument pairs, since we are doubtful that the parallels between these and movement derived Chains are as exact as Chomsky envisaged. See, among others, Belletti (1988), Davis (1986) and Napoli (1988) for discussion.

### 1.1. Deriving the Chain Condition:

The uniqueness of theta roles for Chains can be made to follow from the Theta Criterion which requires an argument, and therefore, its Chain, to have a unique theta role. Furthermore, since theta roles are assigned to D-structure positions, it follows that the tail of the Chain, namely  $a_n$ , should be the position to which the unique theta role is assigned.

Deriving the uniqueness of Case for Chains is not so easy, however. One way of deriving the Case-uniqueness condition (CUC) on Chains as a theorem of other postulates of UG would be to show that it follows as a consequence of some property of the mechanism underlying Case assignment - that is, **government**. In other words, assuming that government of a structural position is unique, one might be able to deduce the fact that Case assignment, which is determined by government, should also be unique.

A moment's reflection shows that even if one grants the two premises on which this deduction rests - (i) that government is unique, and (ii) that Case assignment involves government, the Chain Condition does not follow. For single-membered Chains, the two premises stated above suffice to guarantee observance of the Chain Condition. The one and only member of the Chain should have only one governor (by the first assumption), and therefore, the Case assigned to it should be uniquely from its governor (by the second assumption).<sup>2</sup> However, for multi-membered Chains, there are as many governors as there are links/positions in Chains, and one needs to further ensure that; (iii) only one of the governors is a Case-assigner and that; (iv) this governor governs the head of the Chain (i.e., that Case assignment is possible only at S-structure) in order to make the deduction complete.<sup>3</sup>

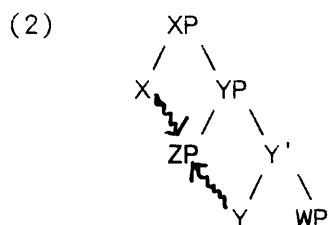
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2. Belletti (1988) states that some governors are capable of assigning more than one Case to their governees, namely, that verb governed objects (in some languages) are systematically assigned both an Inherent (partitive) Case and a Structural (Accusative) Case. While it is true that the Cases on the verbal object are not "unique" in a literal sense in this instance, it is still consistent with the underlying intuition behind the government-theoretic approach to deducing the Chain Condition, namely, that the Case properties of a nominal (position in a nominal Chain) are determined solely by those of its unique governor.

3. This is so on the interpretation of non-head members of Chains as type-identical (and not token-identical) to the head of the Chain. Various facts about Chains, in particular, the availability of "spelling out" non-head links as resumptive pronouns, argue for the type-identical interpretation. More on this later.

1.2. Challenges to the Premises - Two Problems:

The proposal in Chomsky (1986b) regarding the proper formulation of the Minimality Condition (MC) on government relaxes the uniqueness of government for Specifiers. That is, by the "narrower" version of the MC which he adopts, Spec's are open to government both by an external governor (that L-marks the maximal projection immediately dominating it) and also by the internal governor (its own head).<sup>4</sup>



If the uniqueness of Case reduces to the unique government of a given structural position, the prediction is that nominals occupying the Spec position could in principle be assigned more than one Case (that is, if both the external (X above) and internal (Y) governors are potential Case assigners). This is the first kind of problem that we will have to address in trying to assess the correctness of the Chain Condition.

The second kind of problem is more obvious. In recent years, there have been research on various constructions in several languages that show overt evidence for multiple Case-marking on Chains (Harbert 1983, 1989, 1990; Lefebvre and Muysken 1982, 1988; Kayne 1984; Horvath 1986; Kuroda 1983, 1986; Gerdts and Youn 1989; Yoon and Yoon 1990). First, there are instances of Chains (both A' and A Chains - something that makes a trivial defence of the Chain Condition, namely that it holds only of A Chains, impossible to maintain) that exhibit the so-called "Case Stacking" phenomena.

(3) Case Stacking:

Korean: (Gerdts and Youn 89)

a. Chelswu-eykey-ka ton-i manh-ta  
     DAT-NOM money-NOM lot-DECL  
 'Chelswu has a lot of money'

b. i kongcang-eyse-ka pwul-i na-ss-ta

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<sup>4</sup> Assuming, of course, that a head governs and is able to Case-mark its Specifier. Rizzi (1990), among others, proposes that while heads may govern their Specs for Case assignment, they do not govern them for the more restrictive notion of (proper) head-government relevant for the ECP. We come back to this later.

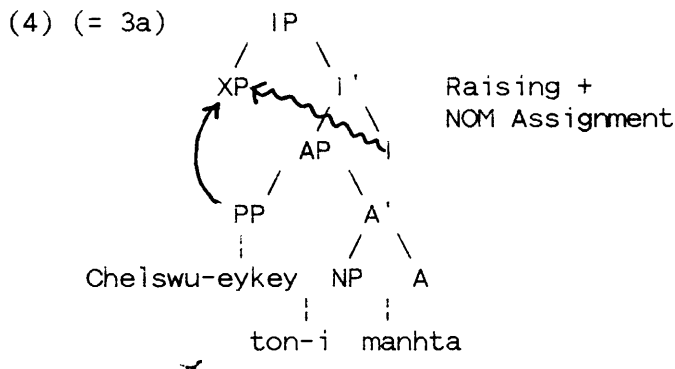
this factory-LOC-NOM fire-NOM break out-PAST-DECL  
 'Fire broke out in this factory'

Cuzco Quechua (Lefebvre and Muysken 1982, 1988)

c. pi-qpa-ta-n muna-nki platanu ranti-mu-na-n-ta  
 who-GEN-ACC-VAL want-2sbj banana buy-CIS-NML-3sbj-acc  
 'Who do you want to buy bananas?'

d. Mariya Xwancha-q-ta-n muna-n platanu ranti-mu-na-n-ta  
 GEN-ACC-VAL want-3sbj " " "  
 'Maria wants Juan to buy bananas'

Gerdt's and Yoon (1989)'s RG analysis of the Korean examples of stacking involve Ascension, which in GB translates into A/NP-movement. Assuming an unaccusative argument structure for these predicates, one can account for the double Case-marking by positing movement from VP/AP-internal position to the Spec of IP, where the nominals can be assigned NOM Case.



Evidence that NP-movement has applied comes from the ability of the doubly Case-marked nominals to undergo ECM which Yoon and Yoon (1990) argue is an instance of A-movement in Korean. In addition, the fact that these nominals passivize is another indication that the movement is A-movement.<sup>5</sup>

(5)

a. ECM  
 John-un [Chelswu-eykey-lul ton-i manhta-ko] mitnun-ta  
 TOP DAT-ACC money-NOM a lot-COMP believes  
 'John believes that Chelswu has a lot of money'

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<sup>5</sup>. ECM and Passive is to the raised nominal in the Spec of IP and not the nominal inside the AP, since the nominal shows a focussed reading, something that is the property of elements of occupying a subject, or Spec of IP, position. In J-M Yoon (forthcoming), evidence is provided that the Spec of IP position is the position of individual level or stative predicates and that the subjects of these predicates are necessarily "focussed".

b. Passive

Chelswu-eykey-ka (John-eyuyhay) [ton-i manhta-ko] mite-ci-nta  
 DAT-NOM by money-NOM alot-COMP believe-PASS  
 'Chelswu is believed to have a lot of money (by John)'

For the Quechua data, Lefebvre and Muysken argue convincingly for movement. A straightforward indication of displacement is the fact that validators, which are limited to matrix constituents, can be placed on the raised/doubly Case-marked nominal.

Although not as striking as overt stacking, the behavior of ECMed nominals in certain languages, and the raised nominals in "Tough" constructions in languages like Korean and Japanese are further examples of Chains with multiple Cases.

(6) ECM Constructions:Korean:

a. John-un [Mary-lul ttokttokhata-ko] mitnun-ta  
 TOP ACC clever-COMP believes  
 'John believes Mary to be clever'

Imbabura Quechua (Cole and Hermon 1981)

b. Maria-ca Francisco-ta cri-n cay-pi ca-j-ta  
 TOP ACC believes-3sbj this-in be-pres-NML-ACC  
 'Maria believes Francisco to be here'

(7) Tough Constructions:Korean:

i chayk-i Chelswu-eykey ilk-ki-ey swipta  
 this book-NOM Chelswu-DAT read-NML-to easy  
 'this book is easy for Chelswu to read'

Japanese:

kono hon-ga Taroo-ni(totte) yomi-yasui  
 this book-NOM DAT read-easy  
 'this book is easy for Taroo to read'

ECM-like constructions in Korean and Imbabura Quechua cannot be analyzed with the mechanism of S-bar deletion (or IP selection), but must involve movement. Cole and Hermon (1981) give extensive arguments for the Raising analysis of ECM in Imbabura and Yoon and Yoon (1990) argue from a variety of reasons that the same must be true in Korean. <sup>6</sup>

Even though only one Case is realized on the surface, there

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<sup>6</sup>. In particular, for Imbabura, facts of pronominal coreference, word order, and validator positioning all point to movement, while pronominal coreference, difference between Scrambling and ECM, and the susceptibility of ECM to embedded clause types (i.e., stage vs. individual nature of the predicate) constitute arguments for movement in ECM constructions in Korean.

is reason to suspect multiple Case assignment in these structures nonetheless. Several considerations point to this conclusion. First, while ECM in English is obligatorily triggered when the embedded INFL lacks Case-assigning features, ECM is optional in Korean and Imbabura. Furthermore, ECM is possible into finite (albeit nominalized in Imbabura) as well as nonfinite clauses. As it is uncontroversial to assume that subjects of finite clauses are assigned NOM Case, the Chain of the ECMed nominal must be doubly Case-marked, especially since in Korean and Japanese, even subjects of nonfinite clauses can be marked NOM.

The same logic applies to Tough Constructions in Japanese and Korean which we analyze as involving A-movement, following Kuroda (1986). Here again, the movement is optional and the launching site of movement is a Case-marked position, being an object position. This leads to the conclusion that the Chain associated with the raised nominal is multiply Case-marked.

The constructions exhibiting "Case Attraction" that Harbert (1983, 1989, 1990) has been studying for a number of years also fall into this category. In these constructions, which typically involve Wh-movement, the Case realized on the moved element is different from that assigned to its trace position. In other words, the Case on the Wh-element is "attracted" to that of a matrix Case-governor.

(8)

Hungarian

a. kiket szeretnel [ ha eljoennenek t ]  
 who-ACC you-would-like if came  
 'Who would you like to come?'

Gothic

b. aksioi [tes eleutherias [hes [kektethe t ] ] ]  
 worthy the freedom-GEN which-GEN you-possess  
 'worthy of the freedom you possess'

English (dialectal)

c. Whom do you think t is honest?

Obviously, a Chain is involved here and the Chain shows double Case-marking. We shall not discuss in detail the issue of why certain Chains cannot overtly bear the multiple Cases assigned to them in the latter two categories. Anyone interested can raise questions during the discussion period.

### 1.3. A Confirmation of Chomsky (1986b)?

The nominals exhibiting multiple Case assignment (overtly or covertly) are all subjects, or those that have passed through a Specifier position in the course of derivation. Prima facie, this

constitutes an attractive confirmation of the proposal in Barriers that ambiguous government is restricted to Spec's, even though they constitute evidence against the Chain Condition of Chomsky (1981, 1986a).

## 2. The Proposal:

We argue in this paper that while there are compelling reasons to give up the Case-uniqueness Condition (CUC) on Chains, the ambiguity of government/Case assignment of Specs allowed by the Barriers system is NOT the reason to do so. In fact, we argue below that Specs are governed by an external governor only when the internal governor is defective. Otherwise, the Spec position is always protected from external government. In other words, government is never ambiguous. This leads to a variable formulation of the notion of Minimality Barrier, along the lines of Rizzi (1990).<sup>7</sup>

### 2.1. Guaranteeing Uniqueness of Government:

Employing Rizzi (1990)'s "Relativized" Minimality approach and restricting ourselves for the purposes of this paper to government of its dependents by a head, we state our proposal of what can be a Minimality Barrier informally below.

#### (9) Relativized Minimality (revised):

X W-governs Y only if there is no Z such that:

- i) Z is a potential W-governor for Y and Z m-commands Y and does not c-command X
- ii) Otherwise, if Z c-commands Y and does not c-command X

Following Rizzi (1990), we assume that a head can govern its dependents for the purposes of both Case-assignment and proper government. We employ the terms Case-(head)-Government and Proper-(head)-Government respectively for the two types. These then exhaust the values for "W" for heads.

$$(10) W_{\text{head}} = \{\text{Case-government, Proper government}\}$$

We can then define Potential W-Government for heads informally as follows:

$$(11)$$

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<sup>7</sup>. In footnote 4 (p.111) and several places throughout the monograph. Contreras (1990) also proposes a variable formulation of the Minimality Barrier. For both of these researchers, the criteria that decides whether a Spec is protected from external governor is the lexical vs. functional nature of the head of a projection. We shall see, however, that this cannot be correct for Korean.



Potential Case-Governor:

Z (a head) is a Potential Case Governor for Y iff:

- Z is a head m-commanding Y, and;
- Z bears a Case assigning feature for Y

Potential Proper-Governor:

Z (a head) is a Potential Proper Governor for Y iff:

- Z is a head c-commanding Y, and;
- Z {N, V, A, P, (Agr), (Comp),...} (subject to crosslinguistic variation)

For Case-government, this implies that only the Spec of a category whose head has Case features to discharge on it will be protected from Case-government by an external head. Otherwise, the Spec is free to be Case-governed by an external head. Complements are always protected from external Case-government even if the head is not a Case-assigner, since they are always under the immediate c-command domain of the head. For Proper Government, since Specs are never properly governed by a head, it will always follow that Spec should be amenable to an external proper governor. This implies that if the external governor of the Spec is not a member of the set of properly governing heads, ECP will be violated. Complements, however, can only rely on the head that selects them to satisfy proper government.

2.2. Case Assignment and Government:

As stated above, we assume that Case is determined by (a species of) government, but we do not accept the stipulation that only the head position of a Chain can be Case-governed. With respect to multiple Case on Chains, we claim that while no single structural position (or link) in a Chain can be ambiguously Case-governed, the Chain as a whole can bear multiple Case, as long as each link is uniquely governed. We illustrate this schematically below:

- (12) a. {  $a_1, \dots, a_n$  }  
           Case(y)           Case(z)  
       b. \*{  $a_1$  }  
           Case(y) Case(z)  
       c. \*{  $a_1, \dots, a_n \dots$  }  
                           Case(y) Case(z)

This means that constructions involving multiple Case-marking:

- (i) Necessarily involve Movement (i.e., the Chain associated with the nominal is multi-membered)
- (ii) Each link is uniquely Case-governed

In the remainder of the paper, we demonstrate that this is correct and that the conception of government/Minimality underlying it is supported on the basis of Case-theoretic evidence.

3. Sundry Evidence:3.1. Case-Stacking/Attraction Constructions:

The Case Stacking/Attraction constructions we examined in section one are all consistent with the new generalizations about Case and Chains. Namely, since all of the constructions involve movement, and the Cases are assigned to different structural positions (or links) of an A or A' Chain, the Chains are of the form (12a), and hence ruled in as legitimate.

3.2. Tough Constructions and "Kuroda's Generalization":

Tough constructions in Korean and Japanese, to the extent that a movement analysis of them is supported, also conforms to the configuration in (12a). Kuroda (1986) notes a difference between Tough constructions and Potential constructions with respect to double Case-marking and states a generalization to the effect that multiple Case assignment is possible only if there is movement, assuming that Tough, but not Potential construction involves movement.

(13)

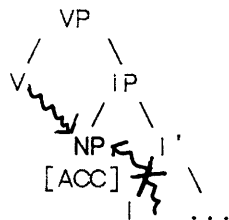
- a. (Masao-ni) kono tosyokan-kara-ga hon-o nusumi-yasui  
       DAT this library-from-NOM book-ACC steal-easy  
 'it is easy (for Masao) to steal books from this library'
- b. \*(Masao-ni) kono tosyokan-kara-ga hon-o nusum-eru  
       DAT this library-from-NOM book-ACC steal-POT  
 'Masao can steal books from this library'

This generalization of Kuroda's is naturally accommodated within our proposal. A nominal cannot be governed ambiguously in situ, but can be governed by distinct governors when movement has displaced it.

3.3. ECM Constructions:

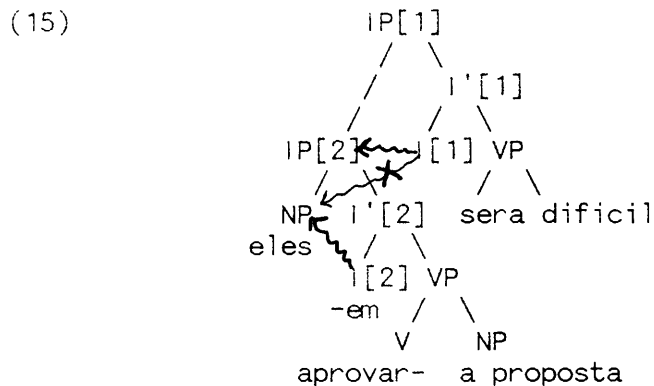
The standard analysis of English ECM constructions (Chomsky 1981, 1986b) is also consistent with our proposal. This analysis posits no movement but assumes direct Case-marking by the matrix verb when IP is selected (As a notational convention, we use straight arrows for movement and wavy arrows to indicate Case-government).

(14)



According to our characterization of Case-(head)-government, the Spec of IP should be amenable to external government only when the internal Case-governor is not specified for Case features. This is exactly the situation in English. Infinitival INFL ("to") lacks Case features, and this is what allows external Case-government.

A minimally contrasting situation can be found in the inflected infinitivals in Portuguese studied by Raposo (1987). Raposo (1987) attributes the appearance of NOM Case on the subject of embedded inflected infinitivals by proposing that when the head of the infinitival IP[2], I[2], is governed by an external governor, I[1], the Case-assigning abilities of the infinitival INFL are "activated", enabling the assignment of NOM Case on the subject.



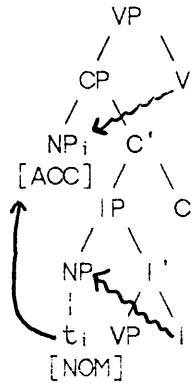
Eles aprovarem a proposta sera dificil  
'they to-approve-Agr the proposal will be difficult'

As Raposo acknowledges (footnote 16, p.95), a potential problem for this analysis is this: If INFL[2] is governed by INFL[1], why is there no agreement between the embedded subject and the matrix INFL? Although Raposo leaves this as an open problem, our proposal provides a simple answer. The difference between English infinitival INFL and the Portuguese one is that the latter but not the former is capable of assigning Case, therefore, the Spec of IP[2] must be Case-governed by the internal governor. The subject NP therefore can only agree with its Case-assigner, namely, I[2].

Languages like Korean, Japanese, and various Quechua languages/dialects allow ECM into both finite and nonfinite clauses. Furthermore, in the former two languages, infinitival INFL is capable of assigning Case, much as in Portuguese. Therefore, if ECM worked as in English and ACC was assigned to the subject nominal in the Spec of IP, a violation of the ban on multiple Case-government will result, since the nominal in Spec of IP is also within the government domain of its internal governor, which has Case-features. Therefore, it is not surprising that ECM in these languages necessarily involves movement, as we saw earlier.

Movement from the Spec of IP position to the Spec of CP position allows the Chain associated with the subject nominal to be uniquely governed at each link, although multiply Case-marked as a whole.

(16) ECM in Quechua, Korean, Japanese



The difference between Korean and Cuzco Quechua with respect to ECM into nominalized clauses also constitutes subtle evidence for our proposals. Both Korean and Cuzco Quechua allow ECM into nominalized clauses whose subjects are marked GEN. However, while Cuzco allows a GEN subject to be marked ACC, the alternation is between a NOM marked subject and a GEN marked subject in Korean.

(17) ECM into Nominalizations

Cuzco Quechua:

Mariya Xwancha-q-ta-n muna-n platanu ranti-mu-na-n-ta  
 GEN-ACC-VAL want-3sbj buy-CIS-NML-3sbj-ACC  
 'Maria wants Juan to buy bananas'

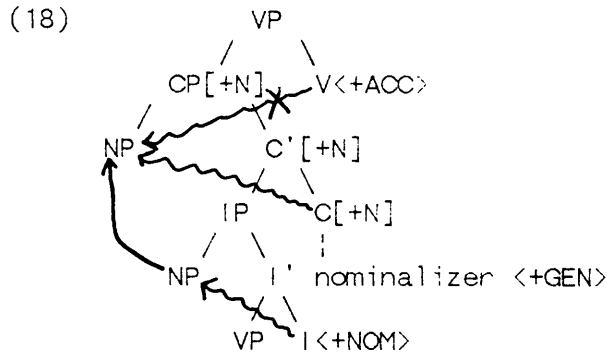
Korean:

Maria-nun [John-uy/ka/\*ul] pwuca-i-m-ul] al-koissta  
 TOP GEN/NOM/ACC rich-COP-NML-ACC know-PROG  
 'Maria knows that John is rich'

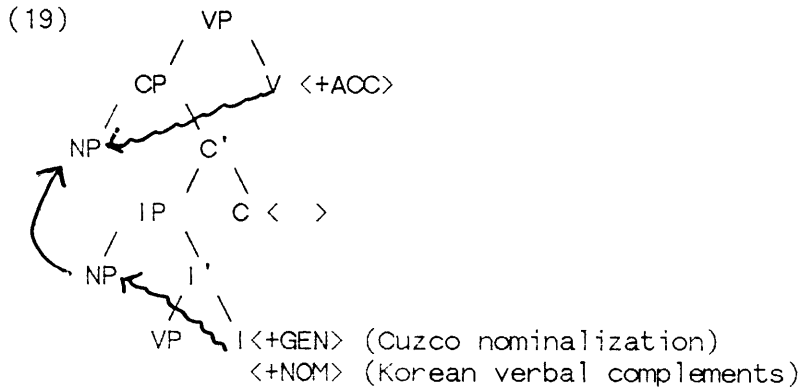
In Yoon and Yoon (1990), we analyzed (17b) as a kind of ECM induced when the nominal Complementizer assign GEN Case to a subject NP moved to its Spec. This means that the Chain associated with the nominal in the Spec of CP is assigned both GEN and NOM Cases. The question that arises is this: Since we know independently that ACC can be assigned to embedded subjects of non-nominalized clauses in Korean, why can't ACC be assigned to the moved subject of nominalized clauses, especially since it is possible in Cuzco?

Again, our proposals provide an answer. The analysis of GEN marking in Korean we defended in Yoon and Yoon (1990) attributes Case-assigning properties to the nominal Comp which assigns GEN Case its own Spec, the Spec of CP. In the Spec of CP position, the nominal is also susceptible to potential government/Case-assignment by the higher V (since Korean V's assign multiple Cases,

explanations based on the need for the nominalized clause to have Case will not work). However, the external governor (V) will not be able to Case-govern the Spec of (the nominal) CP because its head is a Case-marking head.



In verbal complements, however, the Complementizer lacks Case-marking abilities. Under such a situation, a nominal in the Spec of CP could be governed by a matrix verb and be assigned ACC Case. The same is true in Cuzco. Lefebvre and Muysken argue convincingly that GEN is assigned to the subjects of nominalized clauses by a nominalized INFL. If we accept their conclusions, then we naturally predict GEN-ACC combinations to be possible in this language. This is because GEN is assigned to the Spec of IP. When this nominal moves to the Spec of CP, the C does not carry any Case features. Therefore, the matrix V could govern and assign ACC Case to this element.



#### 4. Some Broader Implications:

##### 4.1. Some Putative "Theorems" of the Chain Condition:

So far, we have shown that there is good evidence against Chomsky's formulation of the Chain Condition, and in favor of our conception of Case and government. In work in preparation, we present more evidence for our proposals. However, due to space limitations, we would like to turn to several "consequences" of the

original Chain Condition which have been adopted as useful diagnostics.

#### 4.1.1. Movement as a Last Resort vs. Optional Movement:

The classical analyses of Passive and Raising in English formed the basis of a tenet known informally as "Movement as a Last Resort". This allows movement to be left formally optional, since obligatory movement will always be "triggered". This tenet sits well with the original Chain Condition. If all but the head of a Chain is non-Cased, the Case Filter will "force" movement in the relevant situations, since otherwise the Chain associated with a nominal will lack Case.

If our analysis of ECM and Tough movement as A-movement is correct, one must acknowledge that certain A-movements are optional, in the sense that they are not triggered by Case reasons. This state of affairs contradicts the "Last Resort" explanation for NP/A-movement. However, under our conception of Chains this is not a problem. In fact, the analogous theorem about movement that we deduce is this:

- NP-movement is forced only when non-head links are non-Cased; otherwise, it is optional

This is exactly the case, as we showed above. The A-movements that are optional are all and only those movements not motivated by lack of Case. The optionality of A-movements not motivated by Case also casts doubts on Chomsky (1989)'s recent attempt to limit optionality to just those cases where the two derivations involved would be equally "economical". The derivation with movement is patently more costly than one without as it involves (one or) more derivational steps, and yet both must be admitted.

#### 4.1.2. Burzio's Generalization

Another tenet with some explanatory force which sits well with the original Chain Condition as applied to A-Chains is the so-called "Burzio's Generalization". BG obligates NP movement because, according to it, there is a criss-crossing deficiency of Theta roles and Case. For instance, a complement is without Case if and only if the subject position is without a Theta role. The properties attributed to passive and raising predicates in English accord with BG. If BG is a fundamental aspect of the lexical semantics and syntactic role assigning properties of predicates, it is desirable if this follows from the architecture of UG. For this obvious reason, Chomsky (1981, 1986a) expends considerable effort in trying to show that (at least parts of) BG fall out from other considerations.

According to our conception of the Chain Condition, it still

must be the case that the landing site of movement is a non-Theta position (since we maintain the Theta Criterion). However, it doesn't follow that the launching site of movement is a non-Cased position. The data we examined in this paper plainly shows that the deeper relation presumed to exist between Case and Theta roles that BG expresses is not supported. Therefore, we can conclude that no harm is done to the theory if the "Last Resort" principle and BG are abandoned.

#### 4.2. Wherefore the new "Chain Condition"?:

A central property of government and Case-assignment that has emerged so far is its uniqueness. If this is as fundamental as we think it is, the question naturally arises of WHY government should be unique. We offer the following as an answer.

##### 4.2.1. Multi-domination and Stratal Uniqueness

In our opinion, allowing a single position to be ambiguously governed (or allowing it to show the effects of such government, such as Case-marking) is the equivalent in relational terms of **multi-domination** in P-markers. In a multi-stratal theory like GB, instances of putative multi-domination have been profitably handled out by separating out the multiple (simultaneous) dependencies into different strata (levels) of derivation and assuming that in each strata the dependency is unique. An analogous concept is found in a kindred theory, RG. While graph-theoretic multi-domination is allowed in RG, the **Stratal Uniqueness Law** (Perlmutter and Postal 1983) requires that a nominal bear an unambiguous (primary) grammatical relation vis-a-vis the predicate at any given stratum. Our conception of Chains and the absolute ban on ambiguous government/Case-assignment is a rendition of SUL in GB terms.

##### 4.2.2. Multi vs. Monostratalism and the Notion of Chains:

The generalizations we stated in (12) crucially depend on a **type-identity** interpretation of Chain links, which in plain terms means that the non-head links of a Chain are distinct tokens from the head. However, the Chain Condition of Chomsky (1981, 1986a) is consistent with a **token-identity** interpretation of Chains, since it requires that multi-membered Chains have properties identical to base-generated single-membered Chains. On this interpretation, Chains need not be inherently derivational concepts. However, we showed this to be false and to the extent that our proposals are correct, we can maintain the strict derivational interpretation of Chains and the concept of grammar that embraces multiple levels.

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