RAISING IN NIUEAN[*]

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1. Introduction

Niuean is a Polynesian language of the Tongic subgroup with VSO basic order. It displays a rare Raising phenomenon unpredicted by most constrained theoretical frameworks. In recent years, this phenomenon has received some attention from linguists working in a variety of such frameworks, and each has come to his or her own conclusions regarding the analysis of the constructions I call Niuean Raising. In this paper will be discussed some possible analyses which have been proposed within the Government and Binding framework (Chomsky 1981 and related work). In this discussion, the importance of Niuean Raising for theory and for typology of the world's variety of languages will be seen.

2. A VSO Language and Configurationality

Niuean has VSO word order; it therefore does not have a category VP in its surface structural configuration. In this way it is crucially unlike the SVO languages upon which the Government and Binding Theory was primarily built. The structural definitions for government and command relations, grammatical functions, and all of the principles and conditions which build upon these relationships intimately involve structural configurations containing a VP category. For these languages, the structural definition of government will ensure that a verb will govern its objects, and something higher, outside of the verb phrase, will govern the subject. What kind of analysis is to be taken for languages which appear to have no surface VP?

Several kinds of approaches to this question have emerged. First, Chomksy (1981) suggested that for languages such as Japanese, which have "fairly free" constituent order, grammatical functions (GFs) are arbitrarily assigned to constituents, and then possibly changed via a rule of 'Assume GF'. This analysis suggests that these languages do not ever have a verb phrase constituent, and are thus crucially unlike the so-called configurational languages.

In another type of approach, Chomsky mentions Aoun (1979), who suggests a "discontinuous VP" for Classical Arabic, a VSO language. Chomsky goes on to propose that this abstract VP will be marked via coindexing of its components. Rouveret and Vergnaud (1980) propose an Argument Indexing Convention by which the arguments of a verb and the verb itself will bear identical superscripts, so that their relationship can

be read off the sentence even without the structural configurations present in trees with a VP node.

Others have argued that various 'free' word order and VSO languages are underlyingly configurational, and the surface order is achieved via V-fronting or scrambling rules (Emonds 1979; Kuroda 1983 for Japanese; Saito 1983 for Japanese; and Sproat 1985 for Welsh, to name a few).

Finally, nonconfigurational languages have been proposed to have two structures: one configurationally abstract and one following word order (Chung 1983a,b for Chamorro; Hale 1983 for Warlpiri; Zubizarreta and Vergnaud 1981, etc.).[1]

All of these accounts thus do make use of configurationality at some level at least for strict VSO languages. Following in this vein, in this paper, I will assume that Niuean's strict VSO word order can be interpreted as configurational in some sense. I will use a coindexing mechanism, following Rouveret and Vergnaud (1980), to represent structural relations while preserving surface order. In this way, the verb and its arguments will be co-superscripted; in addition, INFL and the subject will be co-superscripted. I will then assume that the appropriate government relations can be read off the superscripted structure. In section 5.2, I will examine the double-structure approach of Chung (1983a, b) as it applies to Niuean.

3. Niuean Raising: Data and Problem

Niuean has a Raising construction which seems to be problematic for the Government and Binding Theory. Specifically, some matrix verbs in Niuean allow Raising to Subject (and to Object) of complement subjects; this raising can be seen in surface structure by a change in word order. The problematic case is that these verbs allow Raising of complement objects as well. Such raising of objects thus moves an object over the embedded subject, in violation of the Specified Subject Constraint and its successors. Examples (2) and (4) below illustrate Subject to Subject Raising, and example (5) illustrates Object to Subject Raising.[2]

> (1) Maeke [ke nofo a Pita i Tuapa].
>   can   SBJ stay ABS Peter at Tuapa
>   'Peter can stay at Tuapa Village.'

> (2) Maeke a Pita [ke nofo i Tuapa].
>   can ABS Peter SBJ stay at Tuapa
>   'Peter can stay at Tuapa Village.'

(3) To maeke
    FUT can
       [ke lagomatai he ekekafo e   tama e:].
       SBJ help   ERG doctor ABS child this
      'The doctor could help this child.'

(4) To maeke e   ekekafo
    FUT can   ABS doctor
       [ke lagomatai e   tama e:].
       SBJ help   ABS child this
      'The doctor could help this child.'

(5) To maeke e   tama e:
    FUT can   ABS child this
       [ke lagomatai he ekekafo].
       SBJ help   ERG doctor
      'This child could be helped by the doctor.'

I propose the following analysis of these sentences. The Raising sentences (2), (4), and (5), (as well as the non-raised sentences (1) and (3)), will have D-structures like those of (1') and (3') below. In the raising sentences, Move-alpha will then apply, 'Raising' the complement subject or object into matrix subject or object position, leaving a trace. The S-structures of the raised sentences will then look like (2'), (4'), and (5').

(1') Maeke^2 INFL^1
     [ke nofo^4 INFL^3 a Pita^3 i Tuapa^4].

(2') Maeke^2 INFL^1 a Pita$_i^3$
     [ke nofo^4 INFL^3 t_i i Tuapa^4].

(3') To maeke^2 INFL^1
     [ke lagomatai^4 INFL^3 he ekekafo^3 e tama e:^{4}].

(4') To maeke^2 INFL^1 e ekekafo$_i^3$
     [ke lagomatai^4 INFL^3 t_i e tama e:^{4}].

(5') To maeke^2 INFL^1 e tama e: $_i^4$
     [ke lagomatai^4 INFL^3 he kekafo^3 t_i].

Let us look at (5') more closely. The D-structure is like (3'). The complement INFL is coindexed with the subject of the complement, he ekekafo. The complement verb, ke lagomatai, is coindexed with its object, e tama e:. When the complement object raises, it leaves behind a coindexed trace.

The matrix Raising verbs are marked to trigger S'-deletion and Exceptional Case Marking (ECM) of the embedded subject, whether or not Raising occurs. This is necessary because the complement clause is never tensed, and thus the complement INFL will never case mark its subject.[3] This is different from English, in which the complement

INFL is tensed when Raising does not occur, and nontensed precisely when Raising does occur.

Sentences like (5), in which a complement object is raised into matrix subject position, are predicted to be ungrammatical by the Government and Binding theory Conditions on Binding. The GB conditions on Binding rule out certain instances of Move-alpha by giving constraints on allowable surface outputs. These conditions grew in part out of (and are a reworking of) a specific constraint against moving elements other than the subject from an embedded clause while there was an overt subject there: the Specified Subject Condition (Chomsky 1973). It is this condition which is overtly broken in the case of Niuean Raising.

The Binding Theory is given as follows:

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(6)  (I)   Binding Theory (Chomsky 1981, 3.2.3.(12), p. 188)
           A.   An anaphor is bound in its governing category.
           B.   A pronominal is free in its governing category.
           C.   An R-expression is free.

     (II) Governing Category (3.2.3.(70II), p. 211)
           b is a governing category for a if and only if
           b is the minimal category containing a,
           a governor of a, and
           a SUBJECT accessible to a.

     (III)   A SUBJECT is defined as
             "the subject of an infinitive,
             an NP or a small clause,"
             or INFL if it contains AGR (TNS).
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Since the trace left after movement to an NP position is an anaphor, it must be bound by its antecedent within its governing category. In the case of examples (2') and (4'), under an analysis involving S'-deletion, the trace's governor is the subject verb maeke, and the SUBJECT is the matrix INFL. Therefore the governing category is the whole S and the sentences are grammatical. In example (5), however, the governor of the trace is the embedded verb lagomatai, and although there is no TNS in the embedded S, there is a subject, ekekafo, to serve as SUBJECT; therefore the governing category is the embedded S, and this grammatical sentence is predicted to be ungrammatical.

An alternative analysis could propose that the NP which I call raised is base-generated in its place, and that there is a PRO in the position from which I claim the NP moves. This is illustrated in (5'') below.

```
(5'')   To  maeke e    tama e:ᵢ
        FUT can  ABS child this
        [ke  lagomatai he    ekekafo PROᵢ].
        SBJ help      ERG doctor
        'This child could be helped by the doctor.'
```

Seiter (1979) gives four rules which bear against this type of analysis, (an 'Equi NP-Deletion' type analysis) within derivational Relational Grammar, in which he is working. Let us briefly examine these arguments from the perspective of GB.

The first two arguments involve the rules of Case Marking and Verb Agreement. Seiter shows that with a Base-generated account, since Niuean uses Absolutive/Ergative case, some special mechanisms would be necessary to provide the correct case assignment to complement ergative subjects when the direct object has raised; whereas this special mechanism would not be necessary in a Raising account. In addition, special complications would be needed to provide the correct verb agreement for those verbs which take agreement, because even if a plural complement subject has raised, the complement verb will show plural marking in agreement with it; however, the Raising analysis again makes the correct predictions. In GB, case marking is handled in a completely different way: through Abstract Case assignment, and later morphological case assignment at PF. These rules, and a mechanism for Case assignment in an absolutive-ergative language, are discussed below. In any case, a Base-generated account with PRO in the complement clause would still make the correct predictions for case assignment, because of the presence of PRO. Similarly, a Base-generated account could accomodate verb agreement, because the verb would be able to get its agreement from the raised NP through the PRO controlled by the raisee.

The third rule Seiter uses to support a Raising analysis over a Base-generated one is Quantifier Float. In Niuean, the quantifier oti 'all' will normally appear after the noun it modifies, but after optional application of Quantifier Float can appear after the verb, crucially in the same clause. It argues for a Raising analysis over a Base-generated one because the rule can apply to a complement NP before raising, resulting in a raised quantifier-less NP and the quantifier following the complement verb. Here again, however, a GB account is not influenced by this rule because the alternative of Base-generation includes PRO, through which the higher NP could trigger Quantifier Float. Seiter's fourth argument is Instrumental Advancement, a rule he posits for giving instruments direct objecthood, so that they are eligible for rules normally restricted to direct objects (and subjects). This rule is restricted to instruments in transitive clauses with a direct object present. Since this rule can apply in complement clauses with a raised direct object, this provides evidence for Seiter that Instrumental Advancement, like Case Marking, Verb Agreement, and Quantifier Float, must also be able to refer to a raised nominal as at some point part of the complement clause. However, since this is a relation-changing rule and not a movement rule, in GB it would be a base-generated construction itself, not a rule. Therefore its interaction with sentences like (1)-(5) says nothing about their being base-generated or instantiations of Move-NP.

Although the arguments given above are sound arguments for movement over base generation within derivational RG or earlier transformational models, they are not relevant for a GB analysis for the reasons given. However, there is a strong theory-internal argument against a base-generated approach: PRO must be ungoverned, but a PRO in object position for an object-raised sentence will be governed by the verb. The stipulation that PRO be ungoverned is not merely to keep theory-internal mechanisms intact; sentence (7) shows that even though Niuean allows sentences like (5), it doesn't allow PRO in an embedded object position.

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(7) *Kua lali lahi   e   kapitiga haau
    PERF try really ABS friend  your
    [ke  sake e   au PRO].
     SBJ sack ERG I
    'Your friend_i is really trying (to get)
              me to sack him_i.'
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Another alternative analysis would move the raised NP into preverbal position in the embedded clause rather than completely raising it into the matrix clause; within GB this could be considered as movement to COMP. One problem with this analysis is that, while the 'raised' object would be in COMP (under S'), the governing category would be $\underline{S}$, and thus the raised NP would still be outside of its governing category. Assuming some mechanical means of escaping this problem, there still would remain other problems with this analysis, as discussed below.

Seiter argues against this analysis using data which include Quantifier Float, Equi, Relative Clause Possessive Modifiers, and Possessive Preposing in Nominalizations. Quantifier Float was discussed above, with respect to the Base-generated alternative. As well as launching float of quantifiers in complement clauses, a raised NP can float its quantifier to the matrix verb. In the NP-shift analysis against which Seiter is arguing, the shifted NP would have no way to launch quantifier float to the matrix verb, since this rule is clause-bounded, and the quantified NP would belong to the embedded clause even after movement; therefore a Raising-to matrix analysis would be preferable. A movement-to-COMP analysis might suffer the same problem, depending on the particular analysis of Quantifier Float. With a Raising analysis, of course, the triggering of quantifier float is unproblematic.

As for Equi, Seiter shows that a Raised NP can itself be deleted by Equi NP-deletion from a higher clause. This is illustrated in (8).

```
(8) a.  Kamata a   Sione ke fakapuke e   tau lupo.
        begin  ABS John  SBJ fill    ABS PL  bottle
        'John's beginning to fill the bottles.' (Raising)

    b.  Kua  lali a   Sione ke  kamata (*a ia)
        PERF try  ABS John  SBJ begin   ABS he
        ke   fakapuke e   tau lupo.
        SBJ  fill     ABS PL  bottle
        'John has tried to begin filling the bottles.'
        (Equi and Raising)
```

Under a movement-to-COMP analysis, this sentence would imply that controlled PRO can appear in COMP position, and that matrix subject controllers would have to be allowed to control a PRO in an embedded COMP.

As for the other two arguments Seiter gives, Relative Clause Possessive Modifiers, and Possessive Preposing in Nominalizations, these could be analyzed as base-generated

in GB, so that they fall under the same category as Instrumental Advancement above. Within earlier transformational models, these arguments would show that the raising NP must first be in the complement clause, to be engaged in some rule there, and later in the matrix clause, to be engaged in some rule there. However, in GB, if these 'rules' are base-generated constructions, they do not influence the analysis of the raising construction as raising versus movement-to-COMP. Another problem for the movement-to-COMP analysis is the following: if the subject or object NP moved to COMP, then there should be nothing to prevent it from moving via COMP-to-COMP movement to a higher clause, since COMP-to-COMP movement is found for wh-phrases. However, such movement seems to be impossible for raised NPs.[4]

Thus, a Raising analysis is preferable to a Base-generated or an NP-shift analysis for sentences (1)-(5). However, this analysis violates the Binding Theory. How can this problem be solved?

4. SUBJECT Analyses

Sentence (5) is problematic because it is an acceptable sentence which violates the EST Specified Subject Constraint and the GB mechanisms that serve to replace the SSC. Several possible analyses to make this sentence theoretically grammatical in some way mark the embedded subject as not a 'subject' for the purposes of the SSC or Binding Conditions. I will discuss three such approaches in sections 4.1, 4.2, and 4.3.

4.1 ECM and [-SUBJ]

4.1.1 Mechanics

How might the problem posed in the previous section be solved within a GB framework? So far, I have assumed that (a) the Raising is an instantiation of Move-alpha, moving the NP to subject position in the matrix clause, and (b) the problems of defining government for a VSO language can be overcome. I have given reasons above for keeping both of these assumptions intact. There is, however, one further assumption I have made which would be changed in such a way as to make sentence (5) allowable.

I have assumed that the definition of SUBJECT, as given in Chomsky (1981) and reproduced in (6)(III) above, is correct for Niuean. If, however, the embedded subject he ekekafo were not a SUBJECT, then the embedded sentence, having no TNS, would have no SUBJECT at all; thus the governing category for the trace would be the whole sentence and it would be appropriately grammatical. This solution makes predictions concerning other anaphors and pronouns as well, since the notion of 'governing category' might be changed for them too. Before going into these predictions and the data which bears on them, however, I would like to discuss the mechanics of the solution.

In order for the complement subject to not count as a SUBJECT, it needs to be marked in some way as different from other complement subjects. (In the following section I show why this is so; other complement subjects do need to act as SUBJECTs.) One convenient way to mark these as different is through the Case-marking system of the language.

Niuean has absolute and ergative case. Since Chomsky does not give rules for marking morphological absolutive and ergative case, Niuean and other absolutive-ergative languages will need specific rules for this purpose. Chomsky (1981, section 3.2.2, p. 170) does give rules for Abstract Case marking, with a tensed INFL assigning Nominative Case, and a transitive verb assigning Accusative Case (among others); he relegates the assignment of morphological case to PF. Let us assume that abstract Nominative and Accusative Case are assigned in Niuean at D-Structure, and that when an NP moves under move-alpha, it takes its Case with it. A set of morphological case assignment rules at PF will need to include the following:[5]

(9) Morphological Case Assignment
   (i)   Acc NP is ABS
   (ii)   Nom NP is ABS if the clausal verb is intransitive
   (iii) Nom NP is ERG if the clausal verb is transitive[6]

Morphological Case-assignment will thus be produced in the following ways:

(10) (i)   V   INFL   NP
              [+TNS] Nom
                       ↓
                      ABS

     (ii) V   INFL   NP NP
              [+TNS] Nom Acc
                       ↓   ↓
                      ERG ABS

What happens in embedded subjunctive clauses? There are several types of verbs which take _ke_ (SBJ) complements; for the most part these are Raising trigger verbs and Equi trigger verbs. The Raising trigger verbs, as mentioned above, are marked to produce S'-deletion and Exceptional Case marking; they will then Case-mark the subject of a complement clause with abstract Nom Case, and the morphological case rules will apply at PF to separate out the ergatives from the absolutives.[7]

Since this Abstract Case assignment occurs at D-Structure, each NP will have its Case before movement. Niuean has no Passive, so Raising is the only instantiation of Move-NP, and the only case in which special notice must be taken of whether the rules are making the correct predictions. Since the absolutive-ergative assignment is carried out at PF, a raised subject of a transitive clause will be marked ABS because the matrix clause is intransitive; this is in fact what the data shows (see example (11d) below).

The rules of Abstract and Morphological Case assignment given above will accordingly handle Case assignment for the following sentence types:

(11)   a.   V   INFL   [V   INFL   NP]
                       [-TNS] Nom
                                ↓
                               ABS

       b.   V   INFL   NP$_i$ [V   INFL   t$_i$]
                       Nom   [-TNS]
                        ↓
                       ABS

       c.   V   INFL   [V   INFL   NP^1 NP^2]
                       [-TNS] Nom   Acc
                                ↓   ↓
                               ERG   ABS

       d.   V   INFL   NP^1_i [V   INFL   t$_i$ NP^2]
                       Nom   [-TNS]   Acc
                        ↓   ↓
                       ABS   ABS

       e.   V   INFL   NP^2_i [V   INFL   NP^1 t$_i$]
                       Acc   [-TNS] Nom
                        ↓   ↓
                       ABS   ERG

It is important to recall here the differences between Exceptional Case Marking in English and Niuean. In English, the embedded clause is either [+AGR] or [-AGR]; when it is [+AGR], ECM (and therefore Raising) doesn't apply, but when it is [-AGR], ECM (Raising) must apply. In Niuean, these embedded clauses are always [-TNS], and therefore ECM always applies, whether or not raising occurs. Therefore in examples (11a and c) above, the embedded subject received its Case from the matrix verb, even though no movement had occurred.

Now we are ready to see how the Case marking system can differentiate subjects of embedded clauses under Raising verbs from those under other matrix verbs. Since the verb itself must be marked to produce ECM, I propose that the Raising trigger class of verbs is also marked to Case mark its embedded subjects in a special way. In most ways, these subjects will be just like all other subjects, but they will differ in one aspect. A feature specification for Case marking can capture this similarity and this difference: the ECM-marked subjects can be marked [+Nom], to be like the other subjects, and [*], where [*] is some feature by which these subjects are different. What is this special distinction? Whereas most subjects of nontensed clauses qualify as SUBJECTs, I want to claim that [*] subjects are excluded from the definition for SUBJECT. Therefore [*] can be written [-SUBJ]. Other languages might in fact need to use [+SUBJ] on certain NPs, such as datives which function as subjects. [+Nom] will be changed to ABS or ERG at PF in the same way as other Noms. But it is with this mechanism that the proper class of NPs can be specified which need to be excluded in order to account for the data.

The situation proposed at the beginning of this section is now satisfied, and sentence (5) is now accounted for.

4.1.2 Tests

Let us now turn to the predictions which the solution given in section 4.1 makes, and examine the relevant data. If he ekekafo no longer counts as a SUBJECT for the purposes of the Binding Conditions on NP trace, it should not be a SUBJECT for any Binding Condition; in fact, this is how the solution now stands. Since in GBT reciprocals, like NP traces, are anaphors and must be bound in their governing categories then there should be data which will indicate whether or not reciprocals in Raising constructions require an enlarged governing category just as the NP traces do. Similarly, there should be data on pronominals, which must be free in their governing categories; the same governing category should apply for all kinds of Binding within the Raising constructions.

There are two considerations to be made in attempting such tests. First, the constructions used for the test must contain an ECM-verb, a potential binder, an embedded subject (being tested for SUBJECThood), and a potential bindee in the embedded clause separate from the embedded subject. This is displayed in (12).

(12) ECM-Verb Binder [Verb Subject Bindee]

For various reasons (discussed in Lillo-Martin 1983a), the only kind of test available which would explicitly test the question in mind, necessitates that the ECM verb can select both an NP argument and an S complement. The sentences then would have to be something like the following:

(13) a. can I_i [help Pita me_i].
      b. can $they_i$ [help Pita each $other_i$].

The second consideration is that the data are predicted to show a difference between potential binding of anaphors and non-binding of pronouns. However, in Niuean there is no morphological difference between personal and reflexive pronouns. Seiter (1979) cites 'ni:' as a reflexive marker which is optionally used after the personal pronouns to indicate a reflexive or a reciprocal. This is the only distinguishing characteristic for reflexive versus non-reflexive pronominal constructions. However, my informants used ni: indiscriminately, saying that it was a meaningless word which could be attached optionally at the end of any sentence. Their use of ni: did not specify reflexivization, coreference, or any other immediate grammatical function: it could be appended to the object in what would be equivalent to, 'John saw himself', 'John saw him', and even 'John saw Maka'. McEwen (1970), which is a dictionary of Niuean in the style of traditional grammars, says for ni:, "intens. particle (which cannot usually be translated into English)". Therefore, since there are no distinct reflexive pronouns, in my informants' usage there is no way to distinguish reflexive constructions from pronominal ones.

Thus, there is unfortunately no way to distinguish between pronominal and anaphoric constructions with respect to the predictions my analysis makes. (See Lillo-

Martin 1983a for more discussion of possible tests of this analysis and why they cannot apply.)

Reciprocal constructions use, in addition to the optional ni:, a reciprocal marker on the verb: fe- -aki. This would then give us a way to test at least for reciprocal marking within a binding environment. However, reciprocally-marked verbs are not allowed in the template of (12). The reciprocal verb is always plural and must agree with a plural subject immediately following it. Thus, in neither reflexive nor reciprocal constructions is a perfectly appropriate test available.

4.2 Anaphoric Domains

The rules and mechanisms given above present a solution which works. It proposes a general modification of the Government and Binding theory which is not unreasonable: a parameterization of the definition of SUBJECT. With this modification, languages may choose to some extent what is and is not included in determining governing categories (that is, which NPs are and are not SUBJECTs). However, the solution is somewhat ad hoc. Only those subjects which are embedded under Raising trigger verbs are excluded from SUBJECThood. It would be nice to have a more general stipulation of SUBJECTs.

Anderson (1982) has suggested that for Icelandic, although the governing category for anaphors is as defined above by Chomsky, for pronouns only subjects of tensed clauses are relevant for the choice of the binding category, which he calls 'Anaphoric Domains'. Let us compare Anderson's anaphoric domain with Chomsky's governing category. In Chomsky's system, INFL, when the clause is [+ TNS], determines the governing category (that is, INFL is the SUBJECT), and the syntactic subject only determines the governing category when the clause is [-TNS]. The differences between these two suggestions are as follows: 1) Anderson makes the subject of a [+ TNS] clause determine the governing category, whereas Chomsky makes the [+ TNS] itself do so; thus Chomsky says a [+ TNS] clause will determine a governing category even if there is no lexically filled subject; and 2) Anderson shows that Icelandic does not use subjects of any nontensed clauses to determine anaphoric domains. For our current purposes, the first difference is irrelevant, since we are concerned here with [-TNS] clauses having subjects. The second factor, however, is worth investigating. It would be worthwhile to attempt to use this more general definition for SUBJECThood with Niuean as well. Unfortunately, however, there are sentences in Niuean which bear against this alternative. For example, in (14), a pronoun is in a complement clause and its antecedent is in the matrix clause which does not contain a raising trigger ECM verb.

(14) Kua lali lahi e kapitiga haau
      PERF try really ABS friend   your
      [ke sake e au a ia].
      SBJ sack ERG I ABS him
      'Your friend_i is really trying to get me to sack him_i.'

In this sentence, the embedded subject e au must count as a SUBJECT so that the governing category of the pronoun is the complement sentence, since pronouns must be free in their governing categories. If only subjects of tensed clauses were relevant for

determining governing categories, then the governing category for the pronoun in (14) would be the whole sentence, and this grammatical sentence would be predicted to be ungrammatical.

It looks as though adopting a solution for Niuean like Anerson's for Icelandic would not work. However, it is significant to note the similarity between the changes necessitated by each language. It seems as though the definition for SUBJECT includes at least [+TNS INFL] (or subjects of [+TNS] clauses), and languages may in addition choose all (English), some (Niuean), or no (Icelandic) subjects of nontensed clauses to be included as well. Just as languages differ in their definitions of non-finiteness, then, languages differ in the size of their governing categorie· for certain types of constructions. I am claiming that this difference can be simply captured by a variation in the definition of SUBJECT.

4.3 Prepositions

Cook (1984) claims that Samoan, a language related to Niuean, also exhibits raising of complement objects over specified complement subjects, although Samoan only raises to object position, whereas Niuean raises to subject and object positions. The relevant data from Samoan are given below (Cook 1984, p. 4).

```
(15)  a.  'Ou te mana'o e   opo e   le tama le teine.
          I   UNS want  UNS hug ERG the boy  the girl
          'I want the boy to hug the girl.'

      b.  'Ou te mana'o 'i le tama e   opo le teine.
          I   UNS want  OBL the boy UNS hug the girl
          'I want the boy to hug the girl.'

      c.  'Ou te mana'o 'i le teine e   opo e   le  tama.
          I   UNS want  OBL the girl UNS hug ERG the boy
          'I want the girl to be hugged by the boy.'
```

Cook presents data like that given in Section 3 of this paper to argue that (15b) and (15c) are truly Raising rather than some other kind of construction. He then proposes an analysis which, like the one given in 4.1, widens the governing category for the embedded object trace by making the complement subject in (15c) not count as a SUBJECT. However, he proposes that this can be done by claiming that the ergative marker on the embedded subject is a preposition. Cook gives arguments from the distribution of pronouns and anaphors, possessive pronouns, quantifier float, and possessor marking that NPs marked with the ergative marker, e, do not act like regular transitive subjects. He argues that if these were analyzed as prepositional phrases, then the non-subject-like results will follow. Cook concedes however, that this analysis will still need to make reference to the governing verb (as in the ECM analysis), as there are some matrix verbs which allow only subjects to raise.

Cook also provides some historical support for his analysis of the ergative marker e as a preposition. He cites Chung's (1978) Passive-to-Ergative hypothesis, which claims that

> Proto-Polynesian had a rule of Passive and that the passive agent marker was the reflex of the Samoan/Niuean ergative marker. Proto Polynesian passive was reanalyzed as an ergative construction; hence the present-day ergative marker e/he was a preposition in Proto Polynesian. (Chung 1978: 297, cited in Cook 1984: 19)

Cook then claims that Samoan (and Niuean) allows Raising where other languages don't because of this historical change; so that subjects marked with ergative e (he) still act in some ways like prepositional phrases, including non-SUBJECThood.

Although this historical step may hold, note that under my analysis there is no need to actually call the subject phrase prepositional. Since some special marking by the ECM verb needs to be made anyway, this feature [-SUBJ] can account for all of the ways in which ECM subjects are unlike regular subjects. Cook gives no data which would show that the subjects are acting strictly like PP's; rather his data shows that these subjects are not acting like regular subjects and a PP analysis would account for this. In fact, a [-SUBJ] analysis would too.

5. Other Alternatives

5.1 Contextual Definitions

The analyses presented in section 4 all begin with the assumption that the INFL in the subjunctive complements in (1)-(5) are [-Tense] and therefore incapable of assigning Case to the subject position or of being a SUBJECT. These analyses must then posit an Exceptional Case Marking treatment for all clauses embedded under a raising trigger verb.

An alternative analysis presented by Levin and Massam (1984) starts off with a different set of assumptions regarding the subjunctive clauses. First of all, they assume that the [-Tense] subjunctive has a tense marking, and therefore is a SUBJECT and assigns Case to an embedded subject.[8]Thus, under this analysis, ECM is not required in Niuean Raising or potentially-raising structures.

The second difference in Levin and Massam's proposal involves the use of contextual definitions of empty categories, as discussed by Chomsky (1982). Under this assumption, a personal pronoun coreferential to an antecedent can be contextually defined as an anaphor if and only if it is bound within its governing category. Levin and Massam note that in Niuean, lexical pronouns and anaphors are ambiguous (except for the possible distinguishing use of ni:, as discussed above). Therefore, contextual definition can be said to apply in the case of lexical pronouns and anaphors. Levin and Massam then extend contextual definition to traces in the Raising construction. They find that the NP trace of object raising is not bound in its governing category; and thus they conclude that it is pronominal. The governing category for the NP trace of a raised subject will also be the embedded clause for Levin and Massam, since they assume that

the subjunctive INFL is a governor and a SUBJECT. Thus, the subject trace is also a pronominal.

This analysis does not have to use Exceptional Case Marking at all for Niuean. However, it does make an implicit prediction that any language without an overt pronominal/anaphor distinction would allow Raising of object. This does not seem to be true, as only Niuean (and perhaps Samoan) is an attested case, although other languages do obscure the pronominal/anaphor distinction (including Chamorro, as discussed below). Furthermore, the concept of contextual definitions for empty categories may need to be abandoned on independent grounds.

5.2 Flat versus Configurational Structures

One final alternative analysis for Niuean Raising is discussed in Lillo-Martin (1983b), based on Chung's research on Chamorro, another VSO language. Chung (1983b) gives an analysis of Chamorro designed to "explicate one apparent difference between VSO languages and configurational languages". This difference, Chung asserts, is "the absence in VSO languages of the sort of object-subject asymmetries that ought to follow from the Empty Category Principle." She goes on to demonstrate how Chamorro, a VSO language, can be analyzed by positing co-existing S-structure configurations: one flat, for the purposes of satisfying the ECP (and following surface word order); and one with an abstract VP, for the government necessary for the Case and Binding Theories (see also Chung 1982, 1983a). Chung goes on to claim that VSO languages as a class show the lack of special restrictions on subjects as opposed to objects which is captured in the flat structure for ECP restrictions.

As Chung (1983b) claims, Niuean also does not show object-subject asymmetries in extractions monitered by the ECP. Both short and long extraction occurs freely from subject and object positions (objects including direct objects, obliques, goals, indirect objects, middle objects, and benefactives) as illustrated for long extraction of subject and direct object in (16) below (Seiter 1979:112, his (67a) and (67b)).

(16) a. Ko   e   heigoa ka tala age ki a   Pule
          PRED ABS what? FUT tell DIR3 to PERS Pule
             ke ta   mai?
             SBJ bring DIR1
          'What$_i$ will we tell Pule to bring t_i here?'

      b. Ko   hai ne fakalata a   Stan
          PRED who? NFT think   ABS Stan
             kua fakatau tuai e   falaoa?
             PERF buy   PERF ABS bread
          'Who$_i$ does Stan think t_i bought the bread?'

Furthermore, both subjects and objects can be extracted in relative clauses. (Seiter 1979:97 (19a) and 99 (27a), mentioned by Chung 1983b:41 fn. 7.)
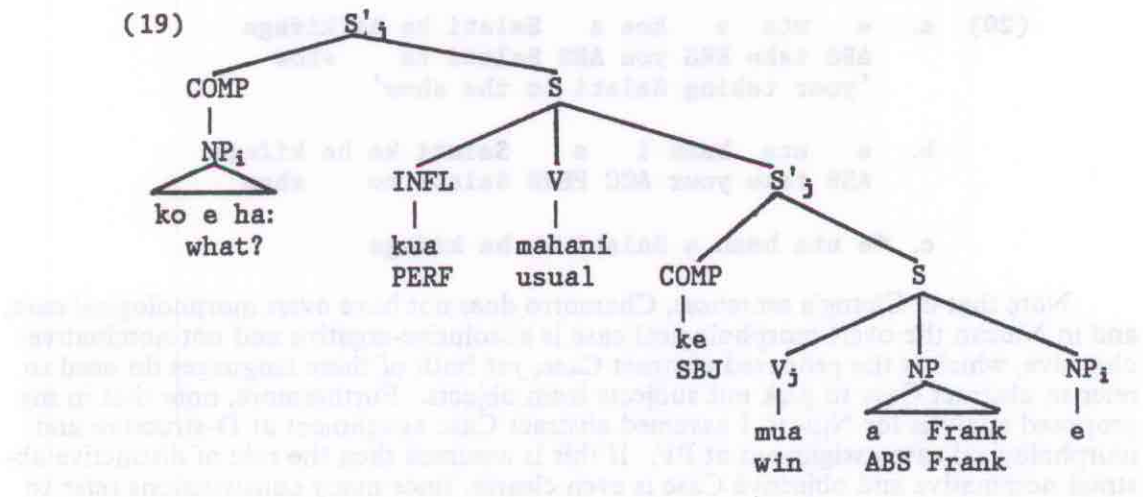
(17) a. e fifine [ne fakalata a Stan
    ABS woman NFT think   ABS Stan
     kua fakatau tai e   falaoa]
    PERF buy   PERF ABS bread
    'The woman who Stan thinks bought the bread'

   b. e tohi [ka lata ke age e   mautolu
    ABS book FUT   right SBJ give ERG wePL,EX
    ke he tehina haau]
    to   brother your
    'the book which it will be right for us
    to give to your brother'

And the elicited sentence below shows extraction from a sentential subject.

(18) Ko e ha: kua mahani ke mua a   Frank
    what?   PERF usual SBJ win ABS Frank
    'What$_i$ is it usual that Frank wins t_i?'

As Chung argues, these facts can be accounted for by positing a flat S-structure configuration, and an ECP which incorporates some slight revisions in superscript assignment such that it can be extended for VSO languages. With these mechanics, "both subject and object will be governed by the predicate on which they depend," and both "may have 'distant' antecedents as long as they are linked to those antecedents by a co-superscripted chain of predicate and S"s," (p.20), taking advantage of Kayne's ECP's percolation projection option. This conclusion can be illustrated with the tree diagram below for sentence (18).

(19)

```
                          S'ᵢ
                         /   \
                     COMP      S
                       |      /  \
                     NPᵢ     /    \
                    /  \    / \     S'ⱼ
               ko e ha: INFL V    /  \
                 what?   |   |   COMP   S
                        kua mahani |   /  \
                       PERF usual  ke /    \
                                 SBJ Vⱼ  NP    NPᵢ
                                     |   / \    |
                                    mua a  Frank e
                                    win ABS Frank
```

The co-superscripting of the percolation projection for the governor of the empty category (the verb <u>mua</u>) allows its antecedent (the wh-phrase <u>ko e ha:</u>) to be distant, as long as it is contained in this percolation projection. This is crucially dependent on a flat structure in which the verb governs both its subject and object. Thus, for Niuean

as well as Chamorro, a flat S-structure corresponding to surface order is motivated. Is such an analysis sufficient for the Raising phenomena, (and other Binding facts), or is an additional structure required?

One of the major points of Chung's paper is the postulation, in addition to the flat S-structure given above, of an abstract structure which contains a VP used for defining government relationships for the purposes of the Case and Binding theories. Chung shows that despite the symmetricality of objects and subjects with respect to the ECP, objects and subjects are asymmetrical for the purposes of Case and Binding, just as in strictly configurational languages (i.e., languages with a surface VP). In particular, she shows that surface phenomena treat NPs marked with abstract Nominative Case differently from those with abstract Objective Case; and that an NP trace in object position has a different governing category from one in subject position, thus showing that for both Case and Binding, subjects and objects need to have different governors.

In arguing for an abstract VP structure for Case assignment, Chung shows that subjects and objects, contrary to the ECP case, must be distinguished so that surface filters in the language, which she analyzes as looking at abstract Case, will apply properly.

There is one filter that I know of in Niuean which could be said to do the same kind of thing. With one certain construction, a subject of a verb which has been nominalized can optionally surface as a possessive modifier of the nominalized verb. In this case, the direct object of the nominalized verb cannot surface with its normal absolutive case marking, but must have an alternative case, which Seiter calls Fake Accusative Marking (see example (20) below). Although I will not go into it in the detail with which Chung discusses the relevant surface filters in Chamorro, it is clear that this filter too needs to refer to abstract Case to distinguish the appropriate direct object targets.

> (20) a. e uta e koe a Salati ke he kifaga
> ABS take ERG you ABS Salati to show
> 'your taking Salati to the show'
>
> b. e uta haau i a Salati ke he kifaga
> ABS take your ACC PERS Salati to show
>
> c. *e uta haau a Salati ke he kifaga

Note that in Chung's sentences, Chamorro does not have overt morphological case, and in Niuean the overt morphological case is absolutive-ergative and not nominative-objective, which is the proposed abstract Case, yet both of these languages do need to refer to abstract Case to pick out subjects from objects. Furthermore, note that in my proposed analysis for Niuean I assumed abstract Case assignment at D-structure and morphological case assignment at PF. If this is assumed then the role of distinctive abstract nominative and objective Case is even clearer, since many constructions refer to subject, direct object, or both.

Thus, we might assume, following Chung, that an abstract VP is required for Niuean for Case theory, as well as a flat structure for the ECP. The final subtheory to

consider is Binding. Chung (1983a) shows that although there is no morphological difference between pronominals and anaphors in Chamorro, there is a syntactic one. Objects which are anaphorically (but not pronominally) related to subjects need to be mentioned in an exception clause to a surface filter. Furthermore, this difference shows up and is used in the definitions of lawful coreference relations which she posits. Secondly, Chung (1983b) shows that for NP trace, the governing categories of subjects and objects need to be differentiated, and therefore the governors need to be different. On the basis of these data, Chung concludes that for the Binding Conditions as well as Case theory, government needs an abstract VP structure for Chamorro.

Let us first consider pronominal binding in non-Raising sentences in Niuean. Are there data which would show that the abstract structure with a VP is required for Binding in Niuean? In Niuean, as previously mentioned, there is also no morphological difference between pronominals and anaphors. However, as in Chamorro, there seems to be a syntactic subject/object difference. Seiter (1979) gives three rules of Niuean, Relative Deletion, ko-clefting, and Equi, which obligatorily delete a subject NP under coreference to a higher NP. All three of these rules become optional, however, when the subject in question is locally binding an anaphor. Example (21) shows this for control structures.

```
(21) a.   Fia  manako nakai a    koe
          want want   Q     ABS  you
          [ke  kitia  (e  koe)  a    koe  in  loto  he vai]?
           SBJ see    ERG you   ABS  you  in  middle of water
          'Would you like to see yourself in the water?'

     b.   kua  lali e   tagata na:
          PERF try  ABS man    that
          [ke  nakai ma:    (a  ia)  i   a      ia  ni:].
           SBJ not   ashamed ABS he  AGT PERS   him REFL
          'That man is trying not to be ashamed of himself.'
```

Since this optionality of an overt pronoun refers to subjects as opposed to objects, it may be that for purposes of pronominal binding, Niuean, like Chamorro, requires an abstract VP.

With respect to the binding of NP trace in Niuean, we have seen that in Raising sentences, the embedded subject and object need to have the same governing category, since Raising from either position is acceptable. Since Raising is the only instance of NP movement in Niuean, would positing a flat structure for the binding of NP trace account for the grammaticality of sentences like (5)?

Using a flat structure, both the embedded subject and the object in (5) would have the same governor. However, the Binding conditions, unlike the ECP, refer to the presence of a SUBJECT to determine the correct binding domain. Hence, even with a flat structure, the object's governing category will be the embedded S, since this contains a SUBJECT (the overt subject). However, since the embedded subject is not an accessible SUBJECT to itself, its governing category will again be the whole S. Hence, even

with a flat structure for binding traces, something additional must be stipulated for the Raising of objects to occur. Since it is possible that the abstract structure is required for pronominal binding and Case, then, I will continue to assume it for trace binding as well.

6. Conclusion

In this paper I have presented a potential problem construction for the Government and Binding framework from Niuean. I have discussed several alternative proposed solutions to this problem, each of which requires some special mechanism for Niuean. Although this may be ad hoc, it is also necessary, to account for the typological rarity of the Raising construction exhibited by Niuean.

The overall modification which I suggest is a minimal change in one supportion of the Binding theory, i.e., a parameterization of the definition of SUBJECT. This is in fact a change which has already been proposed in a slightly different form; Anderson (1982) claims that only INFL counts as a SUBJECT for Icelandic pronouns. My claim, then, argues alongside of Anderson that languages may select only certain syntactic subjects to serve as SUBJECTs. With more work on other diverse languages, it can be determined which (if any) syntactic subjects universally function as SUBJECTs, and how a parameter of SUBJECThood is scaled, and whether [+ Tense] INFL universally functions as a SUBJECT, or if it too is selectively chosen by languages. This type of cross-linguistic analysis of a range of data is intended to eventually bring linguistic theory to a greater understanding of what is Universal Grammar.

FOOTNOTES

*. Most of the data in this paper is from Seiter (1979, 1983, personal communication), and I would like to thank Bill Seiter for his help in this area. I would also like to gratefully acknowledge the assistance of Jerry Malumaleumu and Su'eifo Luga Punimata, who provided me with the rest of the data. The funding for my data collection came from a grant by the Academic Senate, UCSD. Acknowledgements and thanks are also due to the linguists who commented on earlier versions of this work and offered much constructive criticism, especially Sandra Chung, Ed Klima, David Perlmutter, and Sally Rice; however, the views expressed here are not necessarily theirs. Juliette Levin and Diane Massam have also provided comments and discussion of earlier versions of this work. The present paper is a combined and slightly revised version of Lillo-Martin (1983a and b). Levin and Massam have continued working on Niuean and have written much more on this topic since the original version of this paper was written. In addition, several relevant areas of the Government and Binding theory have also undergone revisions in this time. The reader is referred to Levin and Massam's more recent works for updated analyses.

1. These authors do not agree as to where each structure is realized, but all do posit these two structures.

2. The following abbreviations are used in the glosses:

ABS	absolutive	PERS	personal article
DIR1	directed toward speaker	PL	plural
DIR3	directed toward 3rd person	PRED	predicate
ERG	ergative	PST	past
EX	exclusive	RCPR	reciprocal
FUT	future	REFL	reflexive
NFT	nonfuture	SBJ	subjunctive
OBL	oblique	UNS	unspecified tense
PERF	perfective		

Since sentences with raised complement objects have a slight difference in focus, emphasis, and topicality, I have followed Seiter (1979) in translating them with raised passive subjects.

3. Much has been said about the use of AGR versus TNS in the specification of the domains of Binding (e.g., George and Kornfilt 1982, Harbert 1982, Anderson 1982). Languages differ in their representation of finiteness, depending much on the verbal morphology. In Niuean, most verbs show no person and number agreement. I will thus use the presence of TNS (rather than AGR) in INFL for government, and I will consider the subjunctive marker as tenseless.

4. Seiter claims that Niuean Raising is bounded, although he gives no examples of the sort required that are not complicated by other facts. The sort of sentence that would be counter to his claim would be one such as (i).

(i) Kua   manamanatu e   Sione
    PERF think   ERG John
    [e   tama e$_i$ to   maeke
     ABS child this FUT can
     [t$_i$ ke lagomatai he ekekafo t$_i$]].
      SBJ help   ERG doctor
     'John thinks the child could be helped by the doctor.'

If (i) is grammatical, it could be analyzed as movement of the most deeply embedded object NP, e tama e$_i$, to the most deeply embedded COMP, and then moving via COMP-to-COMP movement to the next COMP up. If this sentence is ungrammatical, however, it argues against the movement-to-COMP analysis of the Raising sentences in (1)-(5).

5. Since this morphological case assignment is carried out at PF, the transitivity of the verb refers to S-structure.

6. A possible alternative schema would involve ordering. If we can stipulate that once ABS is assigned within a clause it cannot be assigned again, and we can extrinsically order the subparts of the rule, then we can come up with a schema like (9′).

```
(9')  (i)    Acc NP is ABS
      (ii)   Nom NP is ABS or ERG

Cond:  (a)   ABS is only assigned once
       (b)   (i) before (ii)
```

7. The morphological case rules which need to check for transitivity of a clause must be allowed to see a trace as an object for purposes of assigning ERG.

8. This [-Tense] marking is contrasted with the [0 Tense] marking of INFL in control clauses in Levin and Massam's analysis. According to this analysis, control verbs delete the tense of the embedded INFL, thus prohibiting it from assigning Case.

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